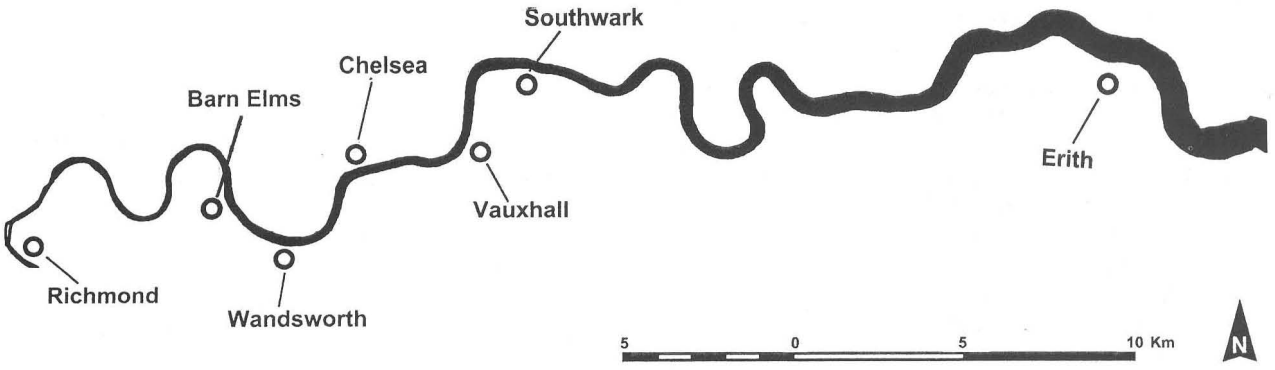

Fig 1: map of the survey zone with places mentioned in the text.

The archaeology of the Thames: prehistory within a dynamic landscape

Fiona Haughey

WHEN THINKING of prehistoric landscapes, Stonehenge and the numerous monuments that dominate the open grasslands of Salisbury Plain form one picture that springs to mind. With a little more imagination it is possible to visualise trackways leading across the early wetlands that have been discovered on the Somerset Levels or at Flag Fen[1]. When looking at the Thames valley in the Greater London area, the vista is restricted and discussion centres on a small area in the middle. Most people are familiar only with the islands of Westminster and Southwark, and the City waterfront lying waiting for the Romans to begin construction of their port. The great conurbation that sprawls across the middle Thames basin masks the broader view. Thousands of years of ploughing, horticulture and excavation (of ditches, pits, building foundations, brickfields, industrial tanks, and docks) has all but obliterated London's prehistory. Reconstruction of this prehistoric landscape is akin to doing a jigsaw puzzle, consisting merely of a few unconnected pieces with no guiding picture available on the lid.

The Thames basin is arguably one of the most used and congested landscapes in Britain. Archaeologically speaking it incorporates a number of different physiographic zones of which the higher Thames terrace gravels are amongst the best known and now most extensively explored. They are well drained by the tributaries of the Thames and have been shown to have been inhabited from the Palaeolithic onwards[2]. However, following the notable campaign conducted within the modern non-tidal Thames floodplain at Runnymede Bridge[3], recent work has sought to focus on a range of deeply-sealed sites situated further downstream in central London and beyond[4]. The Thames Archaeological Survey (TAS) has successfully extended such work out onto the modern inter-tidal zone, and has begun to provide an archaeological context for the rich historic collections of artefacts

1. J. & B. Coles *Sweet Track to Glastonbury.* London (1986); F. Pryor *Flag Fen* (1991).
2. *London Assessment Document*, MoLAS forthcoming.
3. S. Needham *Excavation and salvage at Runnymede Bridge, 1978: the Late Bronze Age waterfront site* (1991).
4. N. Merriman 'Predicting the unexpected: prehistoric sites recently discovered under alluvium in central London' *in* S. Needham & M. Macklin (eds) *Alluvial archaeology in Britain* (1992) 261-7; F. Meddens 'Sites from the Thames estuary wetlands, England, and their Bronze Age use' *Antiquity* 70 (1996) 325-34.
5. R. Smith 'Specimens from the Layton Collection in Brentford Public Library' *Archaeologia* 69 (1918) 1-30; G. F. Lawrence 'Antiquities from the Middle Thames' *Archaeol J* 86 (1929) 69-96.

dredged from the river during the 19th and 20th centuries[5].

The Thames has carved a trench right across the conurbation flowing from west to east. It is more than 4m deep in places, now exposing numerous previously unknown prehistoric sites (Fig. 1). The Thames is the dominant feature in the landscape and as such dictated the use and development of the surrounding area throughout early prehistory. Work by Milne *et al*[6] has revealed that, with the ever-expanding tidal range and modern levels of erosion, prehistoric land surfaces previously covered by both water and later depositions are now being revealed on the foreshore at low tide.

The dredging undertaken over the last 150 years to improve access for shipping has exacerbated rates of erosion in the inter-tidal zone. Repeated clearance of the central channel has caused a more rapid erosion of previously buried land surfaces[7]. This, taken with the encroachment begun in the Roman period resulting in a narrowing of the river, appears to have accelerated the stripping of the foreshore over the last 50 years and continues today. Also, with each alteration to its flow, caused by constructions within the river, a new pattern of localised erosion developed. Records produced over the last few years, by London's archaeological societies, students from University College London and others, as part of TAS, show that a range of prehistoric sites lie exposed along the foreshore between Teddington (with its artificial tidal head) and Erith after which the river becomes increasingly estuarine in character.

Peats, clays and woodlands

Some of the earliest deposits are peats and clays, with well preserved organic inclusions, which outcrop intermittently along both banks of the Thames. The length of exposures varies from less than 1m to more than 1km. Erosion is gradually both exposing and stripping away these materials. The peat beds represent wetlands that have previously swamped the wooded prehistoric landscapes adjacent to the river. Now stumps, root systems and trunks lie once more exposed on the foreshore and are, under current conditions, in danger of being eroded away completely, as the Thames continues to denude the inter-tidal zone. In some places exposures are small, a few stumps here and there, but in others root systems and complete trees spread along the foreshore for hundreds of metres.

On two sites near Richmond exposures have been dated to the early Mesolithic[8]. Between Hammersmith and Wandsworth, deposits are exposed over a distance of more than 1km. At Barn Elms, roots or stakes of Late Upper Palaeolithic/Early Mesolithic and Neolithic date penetrate the peats[9]. Flint flakes and animal bones, including possibly one from an aurochs, have been recovered from the site during the survey, and a log boat, a hoard of potin coins and other Iron Age artefacts have been recorded on this stretch of the river in the past. At Wandsworth, peats, dated to the Late Upper Palaeolithic to Mesolithic, are covered by a sequence of later deposits. A considerable assemblage of Bronze Age artefacts have been found in the past and the area now seems to be producing flint and pottery of Neolithic and early Bronze Age date. The beds at Chelsea, dated to the Neolithic period[10], are associ-

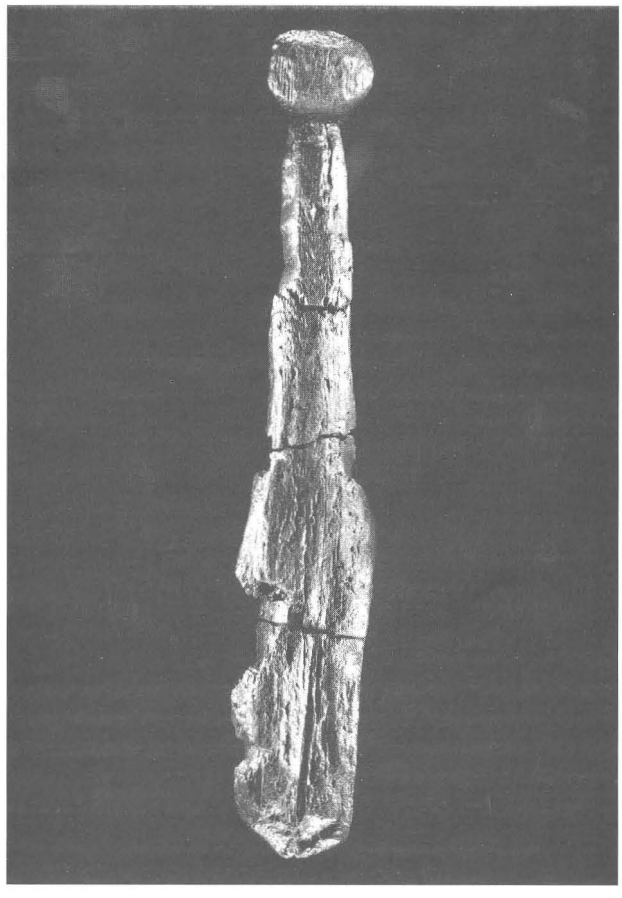

Fig 2: the Chelsea Neolithic 'beater'.

6 . G. Milne, R. Batterbee, V. Straker & B. Yule 'The River Thames in London in the mid 1st Century AD' *Trans London Middlesex Archaeol Soc* 34 (1983) 19-30.

7 . Prof. John Pethick, University of Newcastle, *pers comm.*

8. TAS zone FMR12: GU-5729 7000-6540 BC cal; GU-5730 7040-6540 BC cal.

9. GU-5627 7890-7040 BC cal; GU-5626 4790-4500 BC cal.

10. OXA-7033 3700-3370 BC cal (top); OXA-7034 3940-3650 BC cal (bottom).

Fig 3: the prehistoric forest at Erith.

ated with the remains of a forest and a scatter of prehistoric artefacts including pottery, flint flakes, burnt flint pebbles, animal bone and a complete and well preserved 'beater' (see below) (Fig. 2).

The typical drawing of Roman London includes the 'Southwark Islands', cut off in a straight line at the modern river's edge. Recent work has shown that the northern edges of these islands can still be traced on the foreshore at low tide, extending 50m or so out into the Thames. Exposed here too are the remains of prehistoric mixed woodland on what may have been an eyot or island, in a very fragile condition and eroding rapidly. As yet only one exposure, on the larger island, has been dated[11]. This stretch of the river also has a history of Mesolithic Thames picks recovered from both the bed and the foreshore, the most recent example being found during the last year. Erith has a mixed forest over a kilometre in length, which includes several phases of forest growth of probable Neolithic date (Fig. 3). This site is suffering from heavy erosion as whole trunks are disappearing with the encroaching tide. Again, prehistoric pottery and flints are recovered on every visit to the site.

A close examination of these locations gives a unique opportunity to study prehistoric woodlands at first hand. Hitherto pollen analysis with its inherent failings has been the only tool available to aid discussion as to the make-up of forests. Work is currently in process examining the evidence found at Erith where the actual prehistoric trees and their species can be compared with the results obtained from pollen analysis alone[12].

Structures

The largest prehistoric structure recorded so far on the Thames foreshore[13] is the so-called bridge at Vauxhall dated to the middle Bronze Age[14] (illustrated on the front cover). It comprises 20 substan-

11. TAS zone FSW12: Beta-114003 3350-2750 BC cal; Beta-110971 770-390 BC cal.

12. By Sophie Seel, from the Institute of Archaeology, University College London.

13. There has been a Bronze Age platform uncovered during a dryland excavation at Atlas Wharf on the Isle of Dogs on an old channel of Thames but this, while quite remarkable, is not actually on the current foreshore (D. Larkin 'Atlas Wharf on the Isle of Dogs' *Archaeology Matters* no 2 (1998) 1).

14. Beta-122970 1750-1535 BC cal; Beta-122969 1605-1285 BC cal.

tial timbers in two rough rows leading straight out into the river. It is *c.* 4m wide and *c.* 18m in length, and uses timbers up to 0.6m in diameter in its construction (Fig. 4). Some of the timbers lean inwards and appear to have been deliberately set at an angle. The nearest parallels can be found at the Eton rowing lake, Dorney in Buckinghamshire. This site, located in a bend of the non-tidal Thames, was once a series of channels and islands. Crossing from the mainland to one of these islands, on which there are inhumations, are a series of bridges, dated to the Bronze Age[15].

The Thames appears to have a dearth of one particular type of prehistoric feature -- the fish-trap. Mesolithic examples are found scattered in abundance over northern Europe[16] but those recorded on the Thames are mostly of Saxon date.

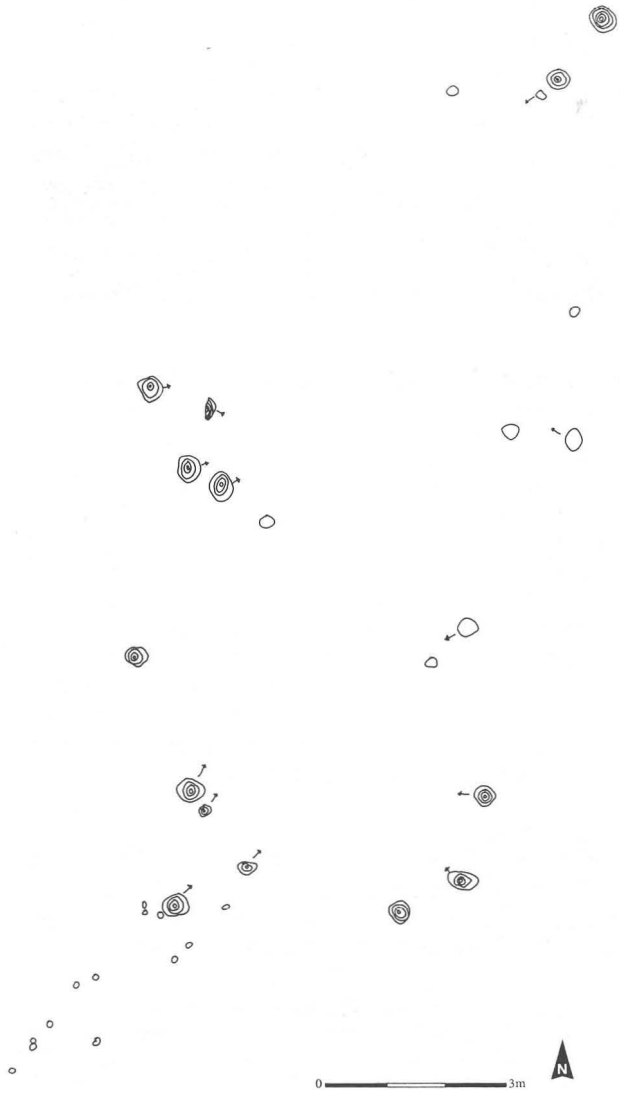

Fig 4: plan of the 'bridge' at Vauxhall.

There are, however, two features that may be fish-traps or at least hurdle-built structures. One (as yet undated) is eroding out of the soft riverbank at Erith. It comprises 4/5 parallel rows of small stakes with wattle visible between those on several rows. The other contender is that found at Vauxhall which has two roughly parallel rows of small stakes, with possible wattle between some of them. It appears to be anchored to two of the timbers which form part of the other large structure and two of the stakes have been dated to the late Bronze Age/early Iron age[17]. They are set in lines at an angle to the foreshore and it has been suggested that they form the inshore half of a fish-trap with the return half having eroded away (Fig. 4). Erith too, is the site of a trackway as yet undated (Fig. 5). It is similar to those at Beckton found under the alluvium[18] and the *toghers* in Ireland excavated from under peat[19].

Artefacts

Over the last 150 years, many thousands of prehistoric artefacts have been recovered from the river and its foreshore. These were often bought by antiquarians[20] and many of these collections have formed the basis of those in museums such as the Museum of London and the British Museum. One of the main problems with this wealth of material has been its apparent lack of provenancing, thereby losing most of its archaeological value. Research[21] is currently being undertaken to re-examine these artefacts for both location and context. A catalogue of the finds which has been assembled from museums and private collections all over Britain as well as abroad, is now over 5000 entries strong. Only those items that it is possible to locate within the TAS foreshore zones are being included and many of these can also be placed within a context. The result of this research will be a huge body of

15. T. Allen & K. Welsh 'Eton Rowing Lake, Dorney, Buckinghamshire. *South Midlands Archaeol* 26 (1996) 23-9.
16. E.-M. Mertens 'Holzerne Fischfanggerate und ihre Bedeutung fur die Okonomie des Mesolithikums' in N. Couard & C.-J. Kind *Aktuelle Forschungen zum Mesolithikum (Current Mesolithic Research)* (1998) 43-56.
17. GU-5724 780-170 BC cal; GU-5723 790-390 BC cal.
18. F. Meddens *op cit* fn 4.
19. B. Raftery 1996 *Trackway excavations in the Mountdillon bogs, Co. Longford, 1985-1991.* Dublin, Irish Archaeological Wetland Unit.
20. Examples include Layton, Lloyd, Greenwell, Sturge and Crooke; G. F. Lawrence published the first 'catalogue' of Thames finds under the heading of 'Antiquities from the Middle Thames' *Archaeol J* 86 (1929) 69-96.
21. By the author, at the Institute of Archaeology, University College London.

data that will aid interpretation of the prehistoric periods in and near the Thames.

What is immediately apparent is that while many of these artefacts may have been recorded as coming out of the river, there is no guarantee that they originally went into the Thames or its channels. A closer look at the locations when compared with the environmental data that is being assembled, give a different picture than that which was previously accepted. Further work will also seek to address the popularly held notion that most finds from the river are votive[22]. These artefacts, together with a few reliable records made by antiquarians and collectors, indicate the quantity of prehistoric sites that have already been lost to dredging and erosion.

As eroding continues, prehistoric artefacts are still being recovered from the foreshore. Many of them are made of flint (such as picks, axes, blades and flakes), antler (picks, maceheads and handles) and ceramic. Metalwork is now less common -- the most well preserved of the recent finds are two MBA spearheads recovered in 1993 at Vauxhall. These were found between the piles of the 'bridge' and are on display in the prehistoric gallery at the Museum of London[23]. Organic artefacts are rare and well-preserved examples even more rare, but a wooden 'beater' of Neolithic date[24] was recovered from the peat at Chelsea in 1997. This is a unique find for the Thames. It is in excellent condition and appears to be complete. It is *c.* 0.7m long and looks very similar in design to a rounders bat (Fig. 2). It has been suggested that it might have been used as a fisherman's 'priest' or beater to kill large fish[25]. The beater is currently being conserved at the Museum of London.

Discussion

The three-year survey of the foreshore by TAS is now complete, although local groups will continue to monitor erosion and identify newly exposed sites. This then, is what has been recovered and recorded thus far on the Thames. Taking all this new information into account, the archaeology of the Greater London region can now be viewed from a different perspective. Instead of looking at, or indeed over, the river when considering the prehistory of the area, it should be recalled that the Thames governed the lives of the earliest inhabitants. It was a source of food, water and building materials such as reeds and adjacent timber. It was used for transport and a trading route. It can be seen as the driving force and primary reason behind the settlement of the region. The London Basin, like the Humber Wetlands, needs to be "approached as a continuous archaeological landscape in a dynamic environment"[26].

The threats to the Thames' prehistory are in no way as intense as those that prevailed in the Somerset Levels and the bogs in Ireland where vast areas of peat have been machined out, but they are very real and cannot be ignored. Development affects both the inter-tidal zone and dryland sites alike in London. With the additional powers held by the Environment Agency under the Water Resources Act 16(1) of 1991, the Thames foreshore is even better protected within the planning system than those on dry-land sites. This, however, still leaves unanswered the question concerning those sites that are unlikely to be dealt with through

Fig 5: the trackway at Erith.

22. R. Bradley *The passage of arms.* (1990) 24.
23. Museum of London accession numbers 94.215/1-2.
24. Beta-117088 3530-3340 BC cal.
25. Damian Goodburn *pers comm.*
26. R. Van de Noort & S. Ellis *Humber Wetlands Survey First Annual Report (1994-95)* (1995) 6.

the planning process. Each successive tide will strip away more of the foreshore thus gradually revealing and then removing the prehistoric layers until the archaeologically sterile river gravels are reached. In places this has already happened, for example, at Syon Reach, where the northern foreshore, which was the scene of work by Wheeler, Noel Hume, Canham and Laws[27], now has only the remains of a 16th-century jetty and a small peat exposure. One commodity not in abundance in the inter-tidal zone is time. The peat-beds and the smaller structures are actively eroding and the prehistoric woodlands are in a very fragile state. Artefacts are still visible on the foreshore but these too are gradually diminishing in number.

What is to be the fate of these important archaeological sites? Clearly they warrant more detailed investigation and recording. Work on some sites, where redevelopment is imminent, is likely to be undertaken as part of the planning process. What of those where natural erosion is the primary threat? Priorities need to be stated concerning the need to excavate, to conserve, to undertake contour, sediment, pollen and woodland surveys and to preserve these sites. The materials recorded so far are only the tip of the iceberg. What is not known is what survives below the gravel agradation higher up the foreshore, which protects the prehistoric layers from the effects of the tidal race.

While organic clays and peats have been the subject of some attention the same is not true of the many exposures of gravel, sand and silt, often high in organic or mollusc content, and also likely to be of prehistoric date. Stratigraphic sequences survive on many sites. A small amount of coring has been undertaken on the foreshore but this is only a fraction of that which is necessary to obtain a sedimentalogical profile for this stretch of the Thames. Work has been undertaken by Bates *et al*[28] south of Tower Bridge, and in Westminster and north Southwark by the Museum of London Archaeology Service[29] but a complementary undertaking upstream is urgently needed. Devoy and Tyers'[30] interpretation of peats recorded at Tilbury is too often used on any found further upstream without consideration of how pertinent this might be[31] but no other alternative has yet been proposed. A series of cores and radiocarbon dates from all the peat beds along the river would be able to set a chronology more relevant to the urban Thames.

A workable research agenda for the prehistory of the Greater London Thames requires urgent consideration, to complement those currently under production for the lower estuary and for London as a whole[32]. In 1976 a report on the archaeological needs of Greater London posed the question 'Time on our side?'[33]. When considering the Thames intertidal zone, more than 20 years on, the answer is clearly still an emphatic No!

There are plans to have more articles about the work being undertaken on the river Thames in future issues of *London Archaeologist.*

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27. R. E. M. Wheeler in 1928 ('Old Brentford' *Antiquity* 3 (1929) 20-32); I Noel Hume in 1955 (*Treasures in the Thames.* (1956)); R. Canham in 1966 (*2,000 years of Brentford* (1978)); A. Laws in 1978 (unpubl archival record SF78, Museum of London).

28. M Bates & A Barham 'Holocene alluvial stratigraphic architecture and archaeology in the Lower Thames area' *in* D Bridgland, P Allen & A Haggart (eds) *The Quaternary of the lower reaches of the Thames.* Cambridge, Quaternary Research Assn. (1995) 85-98.

29. Jane Sidell *pers comm.*

30. R. Devoy 'Flandrian peat level changes and vegetational history of the lower Thames estuary' *Phil Trans Royal Soc London B* **285** (1979) 355-407; I. Tyers 'The prehistoric peat layers (Tilbury IV)' *in* P. Hinton (ed) *Excavations in Southwark 1973-76, Lambeth 1973-79* London Middlesex Archaeol Soc/Surrey Archaeol Soc (1988) 5-12.

31. Tony Barham, *pers. comm.*

32. *Thames Estuary Management Plan* (TEMP) for the lower Thames and estuary; *London Assessment Document* (LAD) for London as a whole.

33. W F Grimes *et al* s.d. *Time on our side?* London, Dept of the Environment.