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10 October 2016

**The Early River Thames:
The Iron Age and Before**

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**Introduction**

It is commonplace to regard the Thames as the capital’s ‘grandest street’ – a superhighway for royal, national and civic ceremony and celebration. For the river provides a very public stage for displays of pageantry, power and protest. It has also acted – and continues to act – as an inspiration for artists, writers, poets and musicians. The river’s status is underpinned by iconic images: the paintings of Canaletto and J M W Turner; the photographs of Henry Taunt and of the Luftwaffe flying over London Docks; New Year’s Eve fireworks over the London Eye; and of course the opening and closing titles of East Enders …

Londoners chart their way round their city by the Thames and it is no coincidence that the river is the only natural feature that appears on the map of the London Underground. And this, of course, underlines the ingrained North-South divide which finds its sharpest expression amongst the tribalism of the footballing fraternity. The peculiarly intense antipathy between Arsenal and Tottenham fans may owe more than a little something to the fact that (Woolwich) Arsenal were originally from south of the river.

But there is an important up-river/down-river dichotomy too: one which, as we will see, has a particular relevance to our story. Up-river the non-tidal Thames of Sunday supplements, privilege and lazy sunny afternoons is exemplified by Jerome K Jerome’s *Three Men in a Boat* (1889) and by the Eton College Procession of Boats held each June 4th on the anniversary of George III’s birth. Down-river the tidal Thames is dominated by politics, industry, disease and tragedy variously laid out in the writings of Dickens, by Christopher Nevinson’s picture *Winter, 1928* in the collections of the Museum of London and by the *Princess Alice* disaster of September 3rd 1878 – the latter resonating down into our own times with the tragedy of the *Marchioness* in 1989.

**The River’s Tale**

*‘Twenty bridges from Tower to Kew*

*(Twenty bridges or twenty-two)*

*Wanted to know what the river knew*

*For they were young and the Thames was old*

*And this is the tale that the river told … ’*

In writing *A School History of England* in 1911, C R L Fletcher invited Rudyard Kipling to contribute a series of poems to counterpoint the text. This Kipling duly did, starting off with *The River’s Tale* – in effect a guide to the history of England as encapsulated by the Thames. But where he thought Fletcher’s text dawdled Kipling proffered some advice too: ‘The only thing I suggest is shortening up that fascinating animal Neolithic man, and giving the kids more about the Romans.’ This was, and to some extent was to remain, a familiar refrain in the capital, as archaeologists prioritised the study of Roman Londinium above other periods and places. But Fletcher’s instinct to give equal weight to earlier times was sound and this contribution explains why. In it we will briefly explore the Thames as a shaper of landscape; as a provider of resources; as an artery of communication; as a boundary both physical and psychological; and as a sometime sacred stream requiring propitiation.

Greater London might be a modern political convenience, but it does have a geographical identity. It is bounded to the west by the valleys of the rivers Colne and Mole with the Bagshot Table and the upper reaches of the Thames Valley beyond; to the north by the London Clay heights and the Chiltern Hills; to the east and south-east by the Essex boulder clays, the Darent valley and the greater Thames estuary; and to the south by the chalk escarpment of the North Downs. Within this area settlement has concentrated along the Thames and its tributary streams and on the expanses of fertile free-draining gravel terraces upstream and downstream of the city. It is the river that gives the region its focus – a focus that in prehistory expanded and contracted with its shifting tidal head.

**The Thames as a shaper of landscape**

*‘Down I come with mud in my hands*

*And plaster it over the Maplin Sands.*

*But I’d have you know that these waters of mine*

*Were once a branch of the River Rhine,*

*When hundreds of miles to the east I went*

*And England was joined to the Continent.’*

The Thames is an Ice Age river, whose headwaters once extended into north Wales, and which originally formed a tributary of the mighty now-gone Bytham River – the latter the largest river in Britain’s history which flowed from the English midlands through East Anglia and out into the North Sea basin. The Anglian glaciation around 480,000 years ago destroyed the Bytham, and shifted the Thames south into its current valley. Thereafter the river’s course and level adjusted in response to complex fluctuations in SE England’s uplift and subsidence (isostatic change) and to changes in global sea levels (eustatic change), leaving behind flights of gravel terraces which have been the subject of detailed mapping and study (Bridgland 1994; Bridgland et al 1995; Gibbard 1985; 1994). Broadly speaking, the higher the river terrace in altitude, the older it is likely to be.

A good example of the way in which the Thames has shaped the local landscape can be seen in Trafalgar Square. Here two of the river’s gravel terraces – each representing a different phase within the development of the valley – are clearly visible, and have produced finds attributable to very different phases within the Ice Age. The higher, earlier, terrace incorporates some of the most important – though not now the earliest – sites in the country as at Stoke Newington, Yiewsley and Creffield Road, Ealing, and includes a group of well-preserved hand-axes located on the site of the former Regent Palace Hotel in Glasshouse Street (the latter immortalised in John Betjeman’s poem *The Flight from Bootle*) (Wymer 1968, 285). These, like the thousands of others recovered from the terrace gravels, were used to butcher animal game, and they are likely to be around 400,000-300,000 years old. The lower terrace contains no flint tools, but incorporates a rich and diverse animal fauna that includes species such as lion and hippo, indicative of a warm climate, high relative sea level and a consequent British island status, which may account for the absence of human groups (and their flint tools) in the valley. These deposits date to around 110,000 years old. Caroline Juby (2011) has recently reviewed the regional evidence, and integrated the lithic and faunal data for the first time.

The capital can justifiably claim to be the cradle of Palaeolithic research. Because it was here in around 1690, opposite Black Mary’s when ‘digging for gravel in a Field near to the Sign of Sir John Old-Castle in the Fields, not far from Battlebridge and an old river now drained’, that London apothecary John Conyers discovered the remains of an elephant with which was associated a flint hand-axe correctly identified as a product of human manufacture. (Wymer (1968, 289) notes the find spot as lying ‘in the present King’s Cross Road near Granville Square, 200 yards east of Gray’s Inn Road (ex Gray’s Inn Lane)’.) The hand-axe survives in the collections of the British Museum, and was first brought to notice in 1715 by ‘Honest John Bagford’, a London bookseller and antiquary (Gatch 1986, 166). It was described at the time as a ‘lance like unto the head of a spear … with an attached shaft of good length’ and interpreted as a weapon deployed by an ancient Britain against the elephants of the invading Roman emperor Claudius in AD 43! Direct traces of the original makers and users of these tools are exceedingly rare, but they include three joining fragments of the skull of an early Neanderthal woman around 400,000 years old found in the former course of the river at Swanscombe in 1935, 1936 and 1955 (Wymer 1964; Dinnis and Stringer 2013, 58–61).

In addition to the gravel terraces other transformations wrought on the landscape by the river are detectable in the expanses of drowned forest that fringe the channel. These ‘lyonesse surfaces’ were first charted by Clement Reid as long ago as 1913 though Pepys’ diary records his being shown ‘12 feet underground … perfect trees over-covered with earth’ at Blackwall in September 1665; John Perry noted others exposed by the Dagenham Breach further downstream in 1771. Stretches of drowned forest of Neolithic and Bronze Age date have since been recorded at Erith yacht club, at Purfleet, Wennington and at Chelsea, as well as Bankside (eg Seel 2000). The mix of evergreen yew, oak and alder trees within these ancient forests is of particular note, and appears to have no modern British equivalent (eg Rackham and Sidell 2000, 23). Moreover the drowning of expanses of riverside woodland would have been readily apparent within the span of a single human lifetime. Such changes were brought about by a general rise in mean sea level and were earlier much in evidence across the wider North Sea basin, where the progressive inundation of the Northsealand/Doggerland land bridge during the mid-Holocene had catastrophic implications for local Mesolithic hunter-gatherer communities (see Coles 1998a; Gaffney et al 2009; Bradley et al 2011; Sturt et al 2013). Flood myths are present in many societies, and may well have had a solid basis in fact (Leary 2015). The reaction of human communities to the later, Bronze Age, expansion of the Thames estuary is returned to in the final section of this paper below.

Other local changes in river regime have been charted by the mapping of silted former channels within the floodplain, one of which – a substantial relict channel of probable mid Devensian age containing traces of a later mis-fit stream (possibly the Crane) – was re-purposed into an ornamental lake in Syon Park by ‘Capability’ Brown in the mid-18th century (Corcoran et al 2012). Back channels, ox-bows and cut-offs were also modified by the activities of beaver (Coles 1992), and traces of their presence in the form of lodges and/or gnawed timber have been found at Eton Dorney, Runnymede Bridge and at Movers Lane on the A13 (Stafford et al 2012, 79–81). There is place-name evidence too: an estate boundary running along the ‘beaver streamlet’ at Battersea is mentioned in a charter of AD 957 (Sawyer 1968, S645) for example. Such animals would have been hunted for their fur, and are one of a number of riparian resources available to human communities along the river.

**The Thames as a provider of resources**

*‘The earliest Cockney who came my way …*

*Was death to feather and fin and fur.*

*He trapped my beavers at Westminster.*

*He netted my salmon, he hunted my deer,*

*He killed my heron off Lambeth pier.’*

These days the Thames is regarded as one of the cleanest urban rivers in Europe and an ‘ecological superhighway’. Surveys show that it is home to over 125 different fish species including salmon. This situation has been brought about by over half a century of diligent curation on the part of various river authorities. For up until the end of the 1950s the river was biologically dead between Richmond and Gravesend (Wheeler 1979). This deterioration in water quality had been noticed since at least the early part of the 19th century, with the progressive fall in salmon from over 3000 a year around 1810 down to the last fish supposedly caught at Putney in June 1833 (Yarrell 1836; Wheeler 1979, 52 and 59). Satirists were quick to comment, and William Heath’s ‘Monster Soup’ cartoon of 1828 ingeniously linked the state of Thames water supplied to Londoners with new-fangled microscopes and the drinking of tea by genteel society. The Reverend Sydney Smith (1834), never short of a quotable one-liner, opined that ‘He who drinks a tumbler of London water, has literally in his stomach more animated beings than there are Men, Women and Children on the face of the Globe.’

The medieval river, however, teemed with fish, as disputes over the number, siting and use of fishing weirs or kiddles and the mesh-size of nets testify (eg Thacker 1914, 21–4). Indeed one of the key clauses in Magna Charta (AD 1215) refers specifically to the removal of fish weirs from the Thames and the Medway. Fisheries were an important element of river life and archaeological evidence for Saxon and medieval fish weirs is plentiful, with over thirty structures recorded along the London Thames (eg Cowie and Blackmore 2008, 115–24; Cohen 2011); many were owned by the church (Cowie and Eastmond 1997, 92). The three salmon fisheries at Kingston assessed in Domesday Book were even commemorated in the royal borough’s ancient coat of arms. The river appears to have been exploited in the Roman period too if the evidence for locally made ‘whitebait’ *garum* from Peninsular House near Billingsgate is anything to go by (Bateman and Locker 1982; Locker 2007). A possible fish trap of late Roman or early Saxon date has been recorded at Shepperton too (Bird 1999).

The prehistoric river must have been similarly well stocked with fish, but archaeologically we have only limited evidence for their exploitation after the close of the Mesolithic around 6000 years ago. (Mesolithic uniserial antler harpoons or fish leisters have been found in the river at Battersea and Wandsworth.) So far only two later prehistoric structures have been interpreted as possible fish traps in the London area, and neither identification is very secure: they comprise parts of a Bronze Age wattle structure at Hampton Wick and an Iron Age stake-built structure at Nine Elms, Vauxhall (Cohen 2011, 132). Despite rigorous sampling few fish bones have turned up on Neolithic or Early Bronze Age riparian sites either (see Serjeantson 2011, 47–9), one species excepted. For there are no fewer than five instances of pike – a rapacious carnivore – being deliberately buried in unexpected contexts. Thus pairs of pike jaws were placed in ditches surrounding Neolithic mortuary or funerary deposits at Manor Farm, Horton on the Colne (Serjeantson in Ford 2003, 49) and at Barrow Hills, Radley (Levitan and Serjeantson in Barclay and Halpin 1999, 239), while another pike bone was placed ‘in front of the body between the arms and legs’ of a Neolithic burial at Eton Dorney (Allen et al 2004, 91). The jaw bone from Runnymede Bridge belonged to a very large prize fish of nearly 50lb weight (Serjeantson 2011, 78). It is difficult to escape the conclusion that this species had a special – perhaps totemic – status for prehistoric riparian communities.

The apparent avoidance of fish/marine resources from the Neolithic onwards receives some support from analyses of dietary change by means of isotopic bone chemistry. For this has shown not only a narrowing of the resource base to the use of marine foods in Late Mesolithic hunter-gatherer communities – a process which seems to have started in the Late Upper Palaeolithic (eg Richards et al 2005) – but also an extreme narrowing of the resource base to agricultural and pastoral foods amongst early Neolithic farmer groups (eg Richards and Hedges 1999a and b; though see Milner et al 2004 for a contrary view). In other words, it would appear that hunter-gatherers existed on a diet rich in fish and marine mammals, while farmer communities consumed mostly meat and cereals.

Was this avoidance of fish because of ‘ecological conditions, different economic options, a lack of economic specialisation, a lack of technology, or other reasons’ (Dobney and Ervynck 2007, 403)? It is possible that there were taboos against the exploitation of fish from the Neolithic period (eg Thomas 2003) – at least until Gallo-Roman tastes for sea food began to be adopted by sections of society towards the end of the Iron Age – most notably at the Late Iron Age proto-urban site at Silchester (Fulford and Timby 2000, 550–1). Moreover, in a survey of food taboos past and present (Simoons 1994), it was suggested that fish were avoided because of the medium in which they live, ie that water itself was regarded as sacred – a point we will return to below.

**The Thames as an artery of communication**

*‘While down at Greenwich, for slaves and tin,*

*The tall Phoenician ships stole in,*

*And North Sea war-boats, painted and gay,*

*Flashed like dragon-flies, Erith way’*

‘No Thames, no London’. The financial centres of the City and Docklands are in riparian locations and hark back to a time when London was the centre of a global empire built on trade, and the Thames was the gateway to the world. The Pool of London was the pulsing heart of empire through which goods and people passed. As well as an artery of trade and commerce the Thames was also a royal highway (see Doran and Blyth 2012): all of Henry VIII’s major ‘standing houses’ (Greenwich, Bridewell, Whitehall, Richmond, Hampton Court and Windsor) were on the river, for example. Latterly, of course, it has become a river of leisure and tourism.

The Thames and its tributaries were equally important as arteries of communication following Britain’s final physical separation from the continent around 6,500 BC. For the valley offers a highway deep into the heart of southern lowland Britain for long-distance and cross-channel voyagers bearing novel ideas, subsistence practices and technologies. Imports such as the early Neolithic Alpine jade axe from the river at Mortlake (eg Pétrequin et al 2011), or the Late Bronze Age/Early Iron Age Scandinavian shaft-hole axe from the Thames at Syon Reach (Macdonald and O’Connor 1979) are easily identified. Foreign travellers themselves are less easy to ‘source’, though chemical isotope analyses have identified incomers from central Europe at Amesbury and Boscombe in Early Bronze Age Wessex (Fitzpatrick 2011, 188–90), and from Scandinavia and possibly south west Iberia/North Africa on the Isle of Thanet in Late Bronze Age Kent (McKinley et al 2014, 143–4). We might well suspect that the woman buried in a wood-lined grave radiocarbon dated to 4220–3970 cal BC at Blackwall (Coles et al 2008; Sheridan 2010, 98) is a first generation ‘isotopic alien’ too. Traces of the craft by which such voyagers arrived are rare, however.

The Thames was renowned as a centre for shipbuilding and repair from at least the 16th century and it seems likely that this would have been so earlier in the medieval period and very probably in prehistory too. Few traces of prehistoric boats have been found within the greater Thames, for reasons which may be connected with fluvial taphonomy and survival – or simple serendipity. A single dug-out canoe was located in a drainage ditch in the Erith Marshes near Belvedere in the 19th century (Spurrell 1885). This was said to have been associated with a flint axe and a beautiful scraper. Such craft are only likely to have plied in-land waterways and creeks, however, and have been colourfully described as ‘personal run-abouts’. Other similar vessels have been located at Hasholme on Humberside (Millett and McGrail 1987) and most recently at Must Farm in the fens near Peterborough.

Coastal or sea-going craft are likely to have comprised hide-boats and, from c 2000 BC, sewn-plank vessels (eg Van der Noort 2006, 274–5). Not surprisingly no hide-boats have survived, although there are a number of sewn-plank craft. As might be expected these have a markedly coastal distribution. They include vessels from North Ferriby and Brigg on Humberside, and from Goldcliff on the Severn estuary, though the best known is probably the Dover boat (Clark 2004) – the latter perhaps powered by oars of the sort uncovered in the Hullbridge Basin at Canewdon (Wilkinson and Murphy 1995, 152–7). Later still, high-sided sail-powered merchantmen are depicted on bronze coins of Cunobelin (AD 10–40) and must have been a familiar sight in estuarine waters. The Blackfriars ship, a flat-bottomed merchantman of the 2nd cent AD, belongs to this same family of Romano-Celtic craft (Marsden 1967).

The importance of the Thames as an artery can also be gauged from the numbers of prehistoric settlements that existed along its banks. Programmes of intensive archaeological fieldwork conducted on the river terraces since the 1970s and now achieving publication have thrown much new light on these, and on the various ways in which their inhabitants transformed the local landscape both upstream (Framework Archaeology 2010; Hayman et al 2012; Powell et al 2015) and downstream (Howell et al 2011) of the capital. Other sites lie within the Thames floodplain (Stafford 2012) and in the floors of tributary valleys such as the Lea to the east (Powell 2012) and the Colne to the west (Lewis and Rackham 2011; Jones 2013). Together these sites allow us to chart the inhabitation and exploitation of large swathes of landscape from the human re-colonisation of Britain around 13,000 years ago down to the arrival of the Romans in AD 43. They encompass Upper Palaeolithic and Mesolithic hunter-gatherer sites in the valley floors, houses and communal earthen monuments constructed by Neolithic communities on the terraces, and the settlements, field-systems and defended enclosures of farmers, metalworkers and weavers that succeeded them in the Bronze and Iron Ages.

One of the most exciting recent developments is the deployment of Bayesian statistics which have been brought to bear on sequences of radiocarbon dates (eg Baylis et al 2011). Two west London sites – a Bronze Age flat grave cemetery at the Western International Market site in Hayes, and an unenclosed Iron Age settlement at Stockley Park, Dawley – have been the principal local beneficiaries so far. From this exercise we now know that the Hayes cemetery was used between 1465 and 1190 cal BC, with an interment made every 7.5 years (Peter Boyer and Barry Bishop pers comm). And that the Dawley settlement was occupied for two to three generations between 495 and 420 cal BC, and re-occupied for a further one or two generations between 400 and 335 cal BC (Nick Elsden pers comm). We have here two sites within the wider landscape where memory was focused and commemorated. Furthermore we are now able to reduce a chronology formerly calibrated in millennia and centuries to one that speaks in terms of individual human generations.

**The Thames as a boundary**

*‘He fought his neighbour with axes and swords*

*Flint or bronze, at my upper fords’*

At various times the river appears to have acted as a boundary, both physical and psychological. A barrier variously traversed by ferries, bridges and fords. The evidence sharpens in later prehistory as coin distributions hint at political affiliations that appear to respect the river (eg Lambrick 1998). Moreover Caesar records an opposed crossing of the Thames at a fortified ford somewhere in the London area during his second expedition in 54 BC. Numerous claims to have located its site have been made following Bede’s interpretation of wooden posts in the Thames in the 8th century (Bird 1999, 117–8). These range from the Coway Stakes at Walton-on-Thames down to Westminster – where labour peer Lord Rufus Noel-Buxton attempted, unsuccessfully, to ford the river at low tide in 1952 (eg Wright 1999, 184–92). (It is likely that most of the wooden stakes recorded along the tideway belong to fish weirs rather than Cassivellaunus’s defended ford.)

Late Iron Age political manoeuvring, as evidenced by coin distributions, is inevitably linked with the search for an Iron Age precursor to London. Caesar makes no mention of any major settlements (‘oppida’) in the area in the mid-50s BC, yet archaeology has demonstrated the existence of large enclosed sites along the lower Thames valley at Uphall Camp, Ilford, and Woolwich Arsenal. John Kent’s suggestion – again based on coin distributions – that there may have been a major centre somewhere on the Thames west of London (Kent 1978) also looks prescient in the context of finds coming to light in the Barn Elms/Putney reaches. But the evidence, such as it is, suggests that these sites had fallen from use by the 80s BC and therefore prior to Caesar’s expeditions in mid-century.

The function(s) that these various settlements performed is likely to have varied according to circumstance and local requirements. The emerging Barn Elms/Putney/Fulham complex – served by a ferry at the time of Domesday Book and after (Tucker 2010, 78–83) – may have guarded an important river crossing, for example. And here the extensive settlement traces close to the confluence of the Beverley Brook and the Thames on the Surrey bank, and the date and status of the earthworks that encircle Fulham Palace on the Middlesex bank are not the least interesting of the many questions raised. Uphall Camp may have performed a similar function at the up-stream navigable limits of the Roding, though its interior appears to have been given over to intensive domestic and craft activity (Greenwood 2001). The heavily fortified site at Woolwich Arsenal may have something in common with the ‘enclosed oppida’ in the valley floor of the upper Thames (eg Lambrick 2009, 361–3). Woolwich dominates the down-stream approaches to the inner Thames estuary and was clearly a major site. Could those massive ditches that surround it have been intended to keep people *in* rather than out? Was this some sort of slave entrepot, geared to servicing the demands of the rapidly expanding Roman empire across the channel?

Be this as it may, one thing is certain: important though these various sites clearly were none can be considered as a direct precursor to Roman London. For this was a wholly new foundation that variously served military, mercantile and latterly administrative needs, though its original function and status are the subjects of continuing and lively debate (eg see Merrifield 1983; Creighton 2006; Sheldon 2014; Wallace 2014 etc). Despite centuries of claims and decades of intensive archaeological excavation no trace of any major earlier settlement has yet come to light beneath Londinium itself (see Merriman 1987; Holder and Jamieson 2003) – and it seems unlikely it ever will. But one final point can be made. Richard Coates (1998) has reconstructed a plausible etymology for the origins of the place-name Londinium suggesting that it derived from a much earlier, perhaps Indo-European, place-name *\*Plowonida* – which can be rendered as ‘river that is difficult to cross’, ‘boat river’ or ‘flooding one’. This nod to the natural difficulties posed by the tidal Thames to the communities who lived along its banks and plied its tricky estuarine reaches is one returned to in the final section below.

**The Thames as a sacred stream**

*‘I walk my beat before London Town,*

*Five hours up and seven down.*

*Up I go till I end my run*

*At Tide-end-town, which is Teddington.’*

An unparalleled trove of finds has been recovered from the river over the last two centuries or more. So many that distribution maps of prehistoric objects are often overwhelmed by finds from the Thames. Early discoveries were only occasionally recorded, however, eg the recovery of a ‘gold torc’ weighing 50 shillings silver by John Ruge of Isleworth which was surrendered to the Abbess of Syon in 1467 (Mattingly 1983). But many were disturbed during bridge and embankment construction (eg those at Westminster Bridge (1746) and Kingston Bridge (1828)) and the pace quickened still further during the building of Rennie’s new London Bridge in the heart of the metropolis in the 1820s, and the subsequent removal of the piers of the old London Bridge through the 1840s (Cotton 1999). Large private collections were amassed by driven individuals such as Thomas Layton and Canon William Greenwell, whose competitive streaks were ill-concealed (eg Wilson 1984, 30). These days a constant stream of finds from the foreshore continues to be reported to the officers of the Portable Antiquities Scheme.

But how and why did these objects find their way into the river? Suggestions have included casual losses from boats; battles at fords (such as that described by Caesar in 54 BC); the erosion of river-side settlements and burials; and ritual offerings made as part of customary, seasonal or funerary rites. Influential work by Torbrügge (1971) on the continent led British archaeologists to focus hard on the ritual aspects of deposition in watery places (eg Merrifield 1984; Bradley 1990), and various suggestions have been made as to the motivations that lay behind such offerings. Some, it was argued, represented the disposal of war booty, as mentioned by classical authors; others could have been cast into the water to mark boundaries, an undertaking recorded in Saxon estate records (eg Sawyer 1968, S645); human skulls – many dated to the latter part of the Bronze Age (eg Schulting and Bradley 2013) – could suggest that some of the many weapons were cast into the river with their owners; while others may have been offered to the river during competitive tournaments of value (‘potlatch’).

A further possibility, given resonance by current concerns, may be linked to environmental change. For a phase of sharpening global warming, climate change and relative sea-level rise occurred during the second millennium BC. Within the lower Thames valley this would have had a number of consequences: the submergence and loss of land; the erosion of deposits; increased flooding and storm damage; saltwater intrusion into aquifers; and rising water tables. Other impacts include: changes in tidal regimes; changes in river flow and dynamics; reduced territory; and the loss of access to riparian resources including fresh water (see Leary 2015, 46). Such inundation events had profound effects on the landscape (forest and vegetation die-back), and on resident animal and human populations. The loss of place and of ready access to ancestral lands laden with meaning and memories would have been profoundly disorientating.

Drowning of riverside forests is one result of estuarine expansion that has already been touched on. Another is the thick deposit of river alluvium that seals traces of Bronze Age ard marks on the low-lying sand islands of North Southwark and Bermondsey (eg Sidell et al 2002, 33–44). (It is perhaps no coincidence that field systems are laid out on the higher gravel terraces at about this time.) Lacking the ability to deliver engineering solutions in the face of environmental change, prehistoric communities were obliged to adopt a combination of fight and flight as the tidal head moved up and down the river in response to climatic fluctuations. The evidence of diatoms (unicellular algae sensitive to changes in water salinity) suggests the river’s tidal head lay upstream of Westminster in the Middle/Late Bronze Age (Sidell et al 2000), though by the Roman period it seems as though the tidal head had receded to a point closer to the City. It was to fall further in the later Roman period (eg Brigham 1990, 147–9) before turning again to move back up the valley (eg Goodburn and Davis 2010, 10–13).

Wooden brushwood track-ways represent a very practical attempt to maintain access across the floodplain at a time of rising river levels (see Meddens 1996; Carew et al 2009). These sometimes incorporate evergreen species such as yew which may have carried spiritual significance for Thames-side communities, and they are also occasionally reinforced by placed deposits, such as the inverted pottery Beaker from Woolwich Manor Way (Stafford 2012, 63 and 165, Fig A2.1, no 17). (This sort of devotional activity is brought still more sharply into focus by the deposition of the Dagenham Idol further out in the floodplain – itself fashioned out of evergreen Scots Pine or yew wood and radiocarbon dated to 2351–2139 cal BC (Coles 1998b, 164).) If the brushwood trackways are a technical solution to combat the rising tide, the deposition of Bronze Age metalwork – much of it composed of edged weapons and spearheads – could be interpreted as an attempt to harness sympathetic magic to achieve the same end. (Such attempts were not confined to the Thames, but are evident in other rivers emptying into the North Sea basin, and beyond (eg see Field 2007).)

The metalwork is potentially even more useful because it is tightly dated (Needham et al 1997). And plotting its distribution has suggested that different localities were the focus of deposition at different stages within the latter part of the period (eg Needham and Burgess 1980, 452, Fig 7). It has been suggested that the metalwork could be used as an ‘environmental proxy’ to indicate the fluctuating position of the tidal head at various times within the later Bronze Age (Cotton 2012). Further work on the diatoms in the relevant reaches will be required to confirm or deny this of course, but it remains an intriguing possibility. It is possible too that the place-name *\*Plowonida*, reconstructed from the Roman name for London (Coates 1998), was a name originally attached to the moving tidal head – and that it was only finally anchored in position once the Romans had founded their new settlement at the point where the tide turned in the middle of the first century AD. Ironically, it seems that the Roman bridging point eventually became the focus of ritual observance in its own right (Rhodes 1991, 179, 183–4; Creighton 2006, 95, 106).

**Some future directions of travel**

*‘But the Roman came with a heavy hand,*

*And bridged and roaded and ruled the land,*

*And the Roman left and the Danes blew in –*

*And that’s where your history-books begin!’*

This contribution has sought to provide a simple *tour d’horizon* on the ways in which the prehistoric river impacted on the landscape, and on the ways in which it was used by the communities who plied its tidal and non-tidal reaches and lived along its banks. I have briefly sketched the ways it influenced the landscape in responses to dynamic changes in climate, sea level and crustal subsidence, the natural resources it offered and its functions as an artery, boundary and sometime sacred stream.

Future work will undoubtedly address many of the issues and questions touched on here. The Thames Tunnel enabling works are already making a contribution; likewise the community-based Thames Discovery Programme and its national off-shoot CITiZAN. Moreover, finds reported from the foreshore to the national Portable Antiquities Scheme by mudlarkers and others show no sign of abating and these have their own unique contribution to make – especially if accompanied by precise details as to circumstance, location and context. It is no surprise either that the Thames figures as a priority subject area in the *Strategy for researching the historic environment of Greater London* (Rowsome and Baker 2015), or that prehistory should form the focus of a number of the research priorities adduced (eg RP4–11).

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**References**

Allen, T, Barclay, A and Lamdin-Whymark, H, 2004 Opening the wood, making the land: the study of a Neolithic landscape in the Dorney area of the Middle Thames Valley, in J Cotton and D Field, (eds), *Towards a New Stone Age: aspects of the Neolithic in south-east England*, York: CBA Research Report 137, 82–98

Barclay, A and Halpin, C, 1999 *Excavations at Barrow Hills, Radley, Oxfordshire. Volume I: The Neolithic and Bronze Age Monument Complex*, Oxford Archaeological Unit, Thames Valley Landscapes Volume 11

Bateman, N and Locker, A, 1982 The Sauce of the Thames, *London Archaeologist* 4 (8), 204–207

Baylis, A, Van der Plicht, J, Ramsey, C B, McCormac, G, Healy, F and Whittle, A, 2011 Towards generational time-scales: the quantitative interpretation of archaeological chronologies, in A Whittle, F Healy and A Baylis, *Gathering Time. Dating the Early Neolithic Enclosures of Southern Britain and Ireland*, Oxford: Oxbow Books, 17–59

Bird, D G, 1999 Possible late Roman or early Saxon fish weirs at Ferry Lane, Shepperton, *Surrey Archaeol Colls* 86, 105–123

Bradley, R, 1990 *The Passage of Arms: An archaeological analysis of prehistoric hoards and votive deposits*, Cambridge: Cambridge University Press

Bradley, S L, Milne G A, Shennan, I and Edwards, R, 2011 An improved glacial isostatic model for the British Isles, *Journ of Quaternary Science* 26 (5), 541–552

Bridgland, D R, 1994 *Quaternary of the Thames*, London: Chapman and Hall

Bridgland, D R, Allen, P and Haggart, B A, (eds), 1995 *The Quaternary of the Lower reaches of the Thames. Field Guide*, Durham: Quaternary Reserarch Association

Brigham, T, 1990 The Late Roman Waterfront in London, *Britannia* 21, 99–183

Carew, T, Meddens, F, Batchelor, R, Branch, N, Elias, S, Goodburn, D, Vaughan-Williams, A, Webster, L and Yeomans, L, 2009 Human-environment interactions at the wetland edge in East London: trackways, platforms and Bronze Age responses to environmental change, *Trans London Middx Archaeol Soc* 60, 1–34

Clark, P, (ed), 2004 *The Dover Bronze Age Boat*, London: English Heritage

Coates, R, 1998 A new explanation of the name of London, *Trans Philological Soc* 96:2, 203–229

Cohen, N, 2011 Early Anglo-Saxon fish traps on the River Thames, in S Brookes, S Harrington and A Reynolds, (eds), *Studies in Early Anglo-Saxon Art and Archaeology: Papers in Honour of Martin G Welch*, BAR (British Series) 527, 131-138

Coles, B, 1992 Further thoughts on the impact of beaver on temperate landscapes, in S Needham and S C Macklin, (eds), *Alluvial archaeology in Britain*, Oxford: Oxbow Monograph 27, 93–99

Coles, B, 1998a Doggerland: a Speculative Survey, *Proc Prehist Soc* 64, 45–81

Coles, B, 1998b Wood Species for Wooden Figures: A Glimpse of a Pattern, in A Gibson and D Simpson, (eds), *Prehistoric Ritual and Religion: Essays in Honour of Aubrey Burl*, Stroud: Sutton Publishing, 163–173

Coles, S, Ford, S and Taylor, A, 2008 An early Neolithic grave and occupation, and an early Bronze Age hearth on the Thames foreshore at Yabsley Street, Blackwall, London, *Proc Prehist Soc* 74, 215–233

Corcoran, J, Nicholls, M and Cowie, R, 2012 The geoarchaeology of past River Thames channels at Syon Park, Brentford, *Trans London Middx Archaeol Soc* 63, 1–18

Cotton, J, 1999 Ballast-heavers and Battle-axes: the ‘Golden Age’ of Thames finds, in A Coles and M Dion, (eds), *Mark Dion: Archaeology*, London: Black Dog Publishing, 58–71

Cotton, J, 2012 Placating \*Plowonida: long-term patterns of votive deposition? Paper delivered to Prehistoric Society day conference *The Long View: Place and Prehistory in the Thames Valley*, February 2012, Society of Antiquaries of London, Burlington House

Cowie, R and Blackmore, L, 2008 *Early and Middle Saxon rural settlement in the London region*, MoLAS Monograph 41

Cowie, R and Eastmond, D, 1997 An archaeological survey of the foreshore in the Borough of Richmond upon Thames: part 1, time and tide, *London Archaeologist* 8 (4), 87–93

Creighton, J, 2006 *Britannia: The creation of a Roman province*, London: Routledge

Devoy, R J, 1980 Post-Glacial Environmental Change and Man in the Thames Estuary: A Synopsis, in F H Thompson, (ed), *Archaeology and Coastal Change*, London: Society of Antiquaries of London, Occasional Paper 1, 134–148

Dinnis, R and Stringer, C, 2013 *Britain: One Million Years of the Human Story*, London: Natural History Museum

Dobney, K and Ervynck, A, 2007 To fish or not to fish? Evidence for the possible avoidance of fish consumption during the Iron Age around the North Sea, in C Haselgrove and T Moore, (eds), *The Later Iron Age in Britain and beyond*, Oxford: Oxbow, 403–418

Doran, S with Blyth, R J, (eds), 2012 *Royal River: Power, Pageantry and the Thames*, London: Royal Museums Greenwich

Field, D, 2007 Neolithic Geography and *La Manche*, *South East Research Framework resource assessment seminar (www.kent.gov.uk)*

Fitzpatrick, A P, 2011 *The Amesbury Archer and the Boscombe Bowmen. Bell Beaker burials at Boscombe Down, Amesbury, Wiltshire*, Wessex Archaeology Report 27

Fletcher, C R L and Kipling, R, 1911 *A School History of England*, Oxford: Clarendon Press

Ford, S, 2003 Manor Farm, Horton, in S Preston, (ed) *Prehistoric, Roman and Saxon Sites in Eastern Berkshire: Excavations 1989–1997*, Thames Valley Archaeological Services Monograph 2, 12–73

Framework Archaeology, 2010 *Landscape Evolution in the Middle Thames Valley. Heathrow Terminal 5 Excavations Volume 2*, Framework Archaeology Monograph No 3

Fulford, M and Timby, J, 2000 *Late Iron Age and Roman Silchester. Excavations on the site of the Forum-Basilica 1977, 1980–86*, Britannia Monograph Series No 15

Gaffney, V, Fitch, S and Smith, D, 2009 *Europe’s Lost World. The Rediscovery of Doggerland*, York: CBA Research Report 160

Gatch, M McC, 1986 John Bagford, Bookseller and Antiquary, *British Library Journal* 12v (2), 150–171

Gibbard, P L, 1985 *The Pleistocene History of the Middle Thames Valley*, Cambridge: Cambridge University Press

Gibbard, P L, 1994 *The Pleistocene History of the Lower Thames Valley*, Cambridge: Cambridge University Press

Goodburn, D with Davis, S, 2010 Two new Thames tide mill finds of the 690s and 1190s and a brief up-date on archaeological evidence for changing medieval tide levels, in J A Galloway, (ed), *Tides and Floods: New research on London and the tidal Thames from the middle ages to the twentieth century*, Centre for Metropolitan History Working Papers Series, No 4, 1–13

Greenwood, P, 2001 Uphall Camp, Ilford – an up-date, *London Archaeologist* 9 (8), 207–216

Hayman, G, Jones, P and Poulton, R, 2012 *Settlement Sites and Sacred Offerings. Prehistoric and later archaeology in the Thames valley, near Chertsey*, SpoilHeap Publications Monograph 4

Holder, N and Jamieson, D, 2003 The Prehistory of the City of London: Myths and Methodologies, *Archaeol J* 160, 23–43

Howell, I, Swift, D and Watson, W, 2011 *Archaeological landscapes of east London. Six multi-period sites excavated in advance of gravel quarrying in the London Borough of Havering*, MOLA Monograph 54

Jerome, J K, 1889 *Three Men In a Boat. (To Say Nothing of The Dog)*, Bristol: J W Arrowsmith

Jones, P, 2013 *Upper Palaeolithic Sites in the Lower Courses of the Rivers Colne and Wey. Excavations at Church Lammas and Wey Manor Farm*, SpoilHeap Publications Monograph 5

Juby, C, 2011 *London before London: Reconstructing a Palaeolithic Landscape*, PhD thesis submitted to Royal Holloway, University of London

Kent, J, 1978 The London area in the late iron age: an interpretation of the earliest coins, in J Bird, H Chapman and J Clark, (eds), *Collectanea Londiniensia: Studies in London archaeology and history presented to Ralph Merrifield*, LAMAS Special Paper 2, 53–58

Lambrick, G, 1998 Frontier territory along the Thames, *British Archaeology* 33, 12–13

Lambrick, G, with Robinson, M, 2009 *The Thames Through Time. The Archaeology of the Gravel Terraces of the Upper and Middle Thames. The Thames Valley in Late Prehistory: 1500 BC – AD 50*, Oxford Archaeology, Thames Valley Landscapes Monograph No 29

Leary, J, 2015 *The Remembered Land: Surviving Sea-level Rise after the Last Ice Age*, London: Bloomsbury Academic

Lewis, J S C with Rackham, J, 2011 *Three Ways Wharf, Uxbridge. A lateglacial and Early Holocene hunter-gatherer site in the Colne valley*, MOLA Monograph 51

Locker, A, 2007 *In piscibus diversis*; the Bone Evidence for Fish Consumption in Roman Britain, *Britannia* 38, 141–180

Macdonald, J and O’Connor, B, 1979 A Foreign Stone Axe from the Thames at Syon Reach, Middlesex, *Trans London Middx Archaeol Soc* 30, 176–179

Marsden, P, 1967 *A Ship of the Roman Period from Blackfriars, in the City of London*, Guildhall Museum

Mattingly, J, 1983 Medieval Treasure Trove Cases: A Lost Gold Torc from Isleworth? *Trans London Middx Archaeol Soc* 34, 179–185

McKinley, J, Leivers, M, Schuster, J, Marshall, P, Barclay, A J and Stoodley, N, 2014 *Cliffs End Farm, Isle of Thanet, Kent. A mortuary and ritual site of the Bronze Age, Iron Age and Anglo-Saxon period*, Wessex Archaeology Report 31

Meddens, F M, 1996 Sites from the Thames Estuary Wetlands, England, and their Bronze Age use, *Antiquity* 70, 325–334

Merrifield, R, 1983 *London City of the Romans*, London: Guild Publishing

Merrifield, R, 1987 *The Archaeology of Ritual and Magic*, London: Guild Publishing

Merriman, N, 1987 A Prehistory for Central London? *London Archaeologist* 5 (12), 318–326

Millett, M and McGrail, S, 1987 The Archaeology of the Hasholme Logboat, *Archaeol J* 144, 69–155

Milne, G, 1985 *The Port of Roman London*, London: B T Batsford Ltd

Milner, N, Craig, O E, Bailey, G N, Pederson, K and Andersen, S H, 2004 Something fishy in the Neolithic? A re-evaluation of stable isotope analysis of Mesolithic and Neolithic coastal populations, *Antiquity* 78, 9–22

Needham, S and Burgess, C, 1980 The Later Bronze Age in the Lower Thames Valley: The metalwork evidence, in J Barrett and R Bradley, (eds), *The British Later Bronze Age*, BAR (British Series) 83, 437–469

Needham, S, Ramsey, C B, Coombs, D, Cartwright, C and Pettitt, P, 1997 An Independent Chronology for British Bronze Age Metalwork: The Results of the Oxford Radiocarbon Accelerator Programme, *Archaeol J* 154, 55–107

Pétrequin, P, Sheridan, A, Cassen, S, Errera, M, Gauthier, E, Klassen, L, le Maux, N, Pailler, Y, Pétrequin, A-M and Rossy, M, 2011 Eclogite or Jadeitite: The two colours involved in the transfer of alpine axeheads in western Europe, in V Davis and M Edmonds, (eds) *Stone Axe Studies III*, Oxford: Oxbow Books

Powell, A B, 2012 *By River, Fields and Factories: The Making of the Lower Lea Vallery. Archaeological and cultural heritage investigations on the site of the London 2012 Olympic and Paralympic Games*, Wessex Archaeology Report 29

Powell, A B, Barclay, A J, Mepham, L and Stevens, C J, 2015 *Imperial College Sports Ground and RMC Land, Harlington. The development of prehistoric and later communities in the Colne Valley and on the Heathrow Terrace*, Wessex Archaeology Report 33

Rackham, J and Sidell, J, 2000 London’s Landscapes: The Changing Environment, in *The archaeology of Greater London. An assessment of archaeological evidence for human presence in the area now covered by Greater London*, Museum of London, 12–27

Reid, C, 1913 *Submerged Forests*, Cambridge: Cambridge University Press

Rhodes, M, 1991 The Roman coinage from London Bridge and the development of the City and Southwark, *Britannia* 22, 179–190

Richards, M P and Hedges R E M, 1999a A Neolithic revolution? New evidence of diet in the British Neolithic, *Antiquity* 73, 891–897

Richards, M P and Hedges, R E M, 1999b Stable isotope evidence for similarities in the types of marine foods used by late Mesolithic humans on the Atlantic coast of Europe, *Journ Archaeol Science* 26, 717–722

Richards, M P, Jacobi, R, Cook, J, Pettitt, P B and Stringer, C B, 2005 Isotope evidence for the intensive use of marine foods by Late Upper Palaeolithic humans, *Journ Human Evolution* 49, 390–394

Rowsome, P and Baker, D, (eds), 2015 *A strategy for researching the historic environment of Greater London*, London: Museum of London

Sawyer, P, 1968 *Anglo-Saxon Charters: An Annotated List and Bibliography*, London: Royal Archaeological Institute (Royal Historical Society)

Schulting, R J and Bradley, R, 2013 ‘Of Human Remains and weapons in the Neighbourhood of London’: New AMS 14C Dates on Thames ‘River Skulls’ and their European Context, *Archaeol J* 170, 30–77

Seel, S, 2000 The Erith Buried Forest, in J Sidell and A Long, (eds), *IGCP 437: Coastal environmental change during sea-level highstands. The Thames Estuary: Field Guide*, Environmental Research Centre, University of Durham: Research Publication 4, 33–39

Serjeantson, D, 2011 *Review of Animal Remains from the Neolithic and Early Bronze Age of Southern Britain (4000 BC – 1500 BC)*, English Heritage Research Department Report series No 29–2011 (ISSN 1749–8775)

Sheldon, H, 2014 Roman London: Early myths and modern realities?, in J Cotton, J Hall, J Keily, R Sherris and R Stephenson, (eds), *‘Hidden histories and records of Antiquity’: Essays on Saxon and Medieval London for John Clark, Curator Emeritus, Museum of London*, LAMAS Special Paper 17, 6–13

Sheridan, A, 2010 The Neolithization of Britain and Ireland: The ‘Big Picture’, in B Finlayson and G Warren, (eds), *Landscapes in Transition*, Oxford: Oxbow Books, 89–105

Sidell, E J, Wilkinson, K N, Scaife, R G and Cameron, N, 2000 *The Holocene evolution of the London Thames: archaeological investigations (1991–8) in advance of the London Underground Limited Jubilee Line Extension*, MoLAS Monograph 5

Sidell, J, Cotton, J, Rayner, L and Wheeler, L, 2002 *The prehistory and topography of Southwark and Lambeth*, MoLAS Monograph 14

Simoons, F J, 1994 *Eat Not This Flesh* (2nd ed), Wisconsin: University of Wisconsin Press

Spurrell, F C J, 1885 Early Sites and Embankments on the Margins of the Thames Estuary, *Archaeol J* 42, 269–302

Stafford, E, with Goodburn, D and Bates, M, 2012 *Landscape and Prehistory of the East London Wetlands: Investigations along the A13 DBFO Roadscheme, Tower Hamlets, Newham and Barking and Dagenham, 2000–2003*, Oxford Archaeology Monograph No 17

Sturt, F, Garrow, D and Bradley, S, 2013 New models of North West European Holocene palaeogeography and inundation, *Journ Arch Science* 40, 3963–3976

Thacker, F S, 1914 *The Thames Highway. Volume I: General History*, New York: Augustus M Kelley

Thomas, J, 2003 Thoughts on the ‘repacked’ Neolithic revolution, *Antiquity* 77, 67–74

Torbrügge, W, 1971 Vor- und frügeschichtliche Flussfunde, *Bericht der Römische-Germanischen Kommission* 51–52, 1–146

Tucker, J, 2010 *Ferries of the Lower Thames*, Stroud: Amberley

Van der Noort, R, 2006 Argonauts of the North Sea – A Social Maritime Archaeology for the 2nd Millennium BC, *Proc Prehist Soc* 72, 267–287

Wallace, L M, 2014 *The Origin of Roman London*, Cambridge: Cambridge University Press

Wheeler, A, 1979 *The Tidal Thames: History of a River and its Fishes*, London: Routledge, Kegan Paul

Wilson, D M, 1984 *The Forgotten Collector. Augustus Wollaston Franks of the British Museum*, London: Thames and Hudson

Wilkinson, T J and Murphy, P L, 1995 *The Archaeology of the Essex Coast, Volume I: The Hullbridge Survey*, East Anglian Archaeology 71

Wright, P, 1999, *The River. The Thames in Our Time*, London: BBC Publications

Wymer, J J, 1964 Excavations at Barnfield Pit, 1955–60, in C D Ovey, (ed), *The Swanscombe Skull*, Royal Anthropological Institute, 19–60

Wymer, J, 1968 *Lower Palaeolithic Archaeology in Britain, as represented by the Thames Valley*, London: John Baker Publishers Ltd

Yarrell, W, 1836 *A History of British Fishes* 2 volumes (3rd edition 1859), London: John Van Voorst

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