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A LOWER THAMES FORD AND THE CAMPAIGNS OF 54 B.C. AND A.D. 43*

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There is sufficient evidence to establish beyond doubt the existence in early times of a crossing of the lower Thames between Kent and Essex. In its medieval decline this crossing was made by means of a ferry, but we can no longer exclude consideration of the possibility that in earlier times the lower Thames could have been forded, at least during low tides.¹ If such a ford existed, twenty miles east of London, its presence would call for a re-examination of parts of the Roman campaigns of 54 B.C. and A.D. 43.

A century ago it was generally believed that the level of the water in the Thames had been higher in Roman times. W. J. Loftie, in *A History of London* (1883), wrote:

'When London was confined to the hill above the Walbrook, the water of a broad lagoon was stretched in front of it to the south, filling the valley towards the Surrey hills, and washing almost to their feet. Though Camberwell and Peckham may even then have been dry ground, they were on the margin of a vast shallow lake, interspersed with marshes and dotted with islets.'

This picture appears to have been based on an interpretation of the account by Dio Cassius² of the sequel to the Medway battle during the Claudian invasion of A.D. 43: 'Then the Britons fell back from this position to the River Thames, at the point where it enters the sea and forms a large pool at high tide'. If, as Loftie and his contemporaries believed, the flood-plain of the Thames formed a 'broad lagoon' as far west as London, the first possible ford must have been still farther west, so it was supposed that Julius Caesar, and then Aulus Plautius, must have crossed the Thames at Brentford, though the name itself obviously refers to a ford of the Brent, which here enters the Thames.

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¹ S. S. Frere, *Britannia*, 2nd edn., London, 1974, 54, n. 7.

² Dio Cassius, *History of Rome* (translation of LX, 19-22, in D. R. Dudley and G. Webster, *The Roman Conquest of Britain, A.D. 43-57*, London, 1965).

As late as 1924 a geographical study of London³ stated that 'it is generally agreed that Julius Caesar . . . probably crossed the Thames at Brentford', though the author also mentioned 'Mr. Spurrell's theory'. F. J. C. Spurrell had pointed out as long ago as 1885 that the depth at which Romano-British remains were to be found along the banks of the lower Thames showed that the water-level must have been lower, not higher, than it has since become,⁴ and by 1930 Wheeler (later Sir Mortimer) was able to state definitely that 'a quantity of varied evidence combines to show that 2,000 years ago the level of the Thames was upwards of 15 ft. lower than at the present day'.⁵ This has disposed of the 'London lagoon', but if we are to take Dio's words literally theford was where the Thames 'enters the sea and forms a large pool at high tide'. This rules out any point above Gravesend and would seem to place it nearer Lower Hope Point, where the estuary broadens out until it is more than four miles wide at Southend-on-Sea. But how could there have been a ford in the Roman period across an estuary now used by ocean liners and oil-tankers? The change in level noted by Spurrell does not fully explain it, nor does the dredging which now maintains a low-tide fairway of at least four fathoms (about 7 m.).

In attempting an explanation we are really concerned only with the most recent stage of the river's long geological history. Some earlier events are denoted by the remnants of gravel terraces that still line its valley-sides, attributable to the second and third interglacial periods of the Pleistocene. In the final glacial phase the sea retreated and the proto-Thames cut at least one deep channel, well below the depth of its present bed, and then deposited gravel in it. In the subsequent 10,000 years of mainly rising sea-level the 'buried channel' has been covered by the broad band of alluvium within which the modern Thames flows, and neither its course nor its continuity has been fully ascertained. A boring at Cliffe Fort (N.G.R. TQ 707767), due east of East Tilbury on the Kent shore, showed nearly 40 ft. of alluvium overlying the gravel of the buried channel,⁶ so it seems that the alluvium is too thick for the buried channel to affect the present discussion.

In south-east England from the Neolithic period onward the land has on the whole been subsiding relatively to the sea, from local or global causes or both. The sea, advancing up the Thames estuary, has stemmed the flow of the river, thereby forcing it to drop most of its load of clay particles. The fact that the alluvial belt of the Thames valley below London is three or four times as wide as the present channel of the river

³ H. Ormsby, *London on the Thames*, London, 1924.

⁴ F. J. C. Spurrell, 'Early Sites and Embankments on the Margins of the Thames Estuary', *J. Royal Arch. Inst.*, 1885.

⁵ R. E. M. Wheeler, *London in Roman Times*, London, 1930.

⁶ H. G. Dines *et al.*, *Geology of the Country around Chatham*, H.M.S.O., London, 1954.

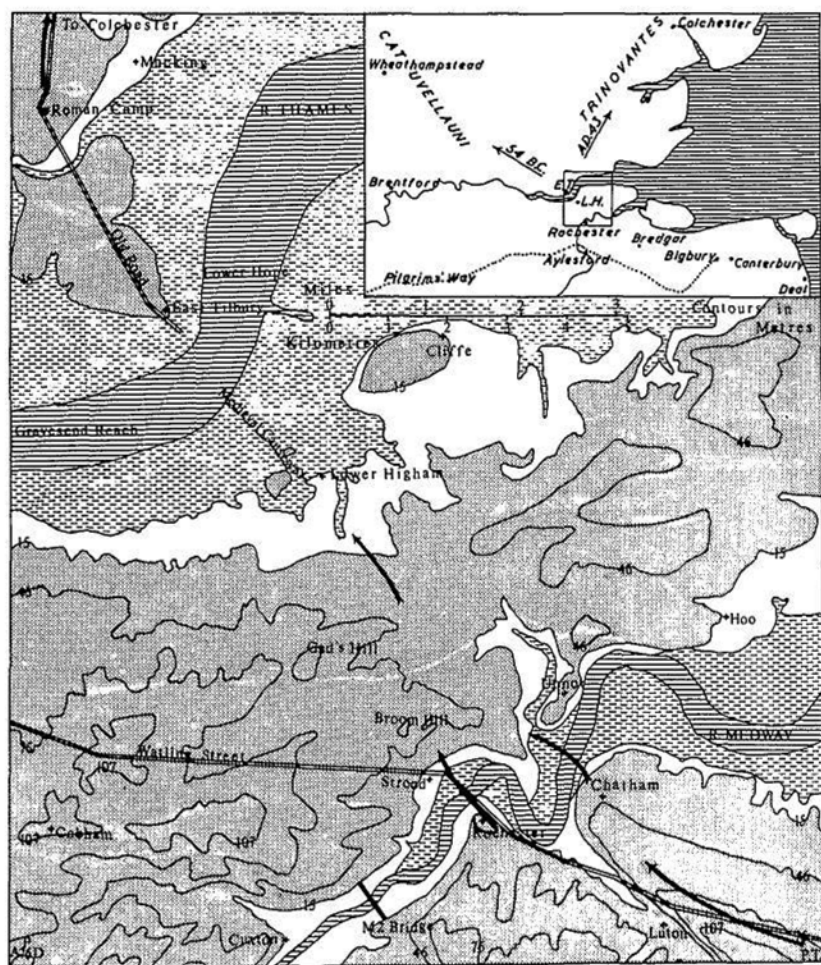


Fig. 1.

shows that deposition has not been confined to the present river-bed but has been spread over the full alluvial width. For century after century high tides have dammed back the seaward freshwater flow, flooding the valley-floor and spreading a fresh film of mud over that of the previous tide. At the ebb the freshwater flow has been resumed and has carried some of the mud down to the sea, but enough has remained for the alluvium to have thickened at an average rate of about a foot a century. It is up to 30 ft. deep at Westminster and 40 ft. or more in the lower river.

Since the thirteenth century A.D., however, the régime of the river has been transformed by the enclosure of the salt-marshes behind sea-walls that have turned them into polders, that is, into economically useful pastures protected from tidal inundation. The piecemeal inking of the north Kent marshes has been fully studied by J. H. Evans, who shows that as a result of this process the river itself is now in a strait-jacket.⁷ The sea-walls that protect the polders (and the Dagenhams and Thamesmeads that have arisen on them) now hem the river in, depriving it of its safety-valve in flood-time. The concentration of its flow has deepened its bed and helped the high tides to run farther upstream.

In any attempt to visualize conditions in late prehistoric times it is perhaps worth noting that if the present sea-level were to fall by only 12 ft. the whole of the wide approach area of the Thames, within a line drawn from Clacton-on-Sea to Margate, would at low tide become a vast muddy delta threaded by outflow channels. It is characteristic of unrestricted tidal rivers in a period of subsidence for the flow of the river to slide easily from one such channel to another, and the probability is that the lower Thames in the Iron Age, flowing through its own alluvium and always tending to be choked by it, was split into a number of shallow inter-communicating streams, such as may be seen today, for example, in the Biesbosch district of the lower Maas in Holland or, on a larger scale, in the lower reaches of the Danube.

Evans (*op. cit.*) records a boring made through the alluvium at Chatham dockyard thus:

'Ground level		+11 ft. O.D.
Alluvial clay	10 ft. thick to	+1 ft. O.D.
Peat	1 ft. thick to	0 ft. O.D.
Alluvial clay	18 ft. thick to	-18 ft. O.D.
Peat	2 ft. thick to	-20 ft. O.D.
Alluvial clay	14½ ft. thick to	-34½ ft. O.D.
Peat	½ ft. thick to	-35 ft. O.D.
Gravel of buried channel.'		

⁷ J. H. Evans, 'Archaeological Horizons in the north Kent Marshes', *Arch. Cant.*, lxvi (1953), 103-46.

He adds:

'Evidence from the Thames . . . confirms that from the Medway and the horizons are in close agreement; for Spurrell recorded the Upper Bed (of peat) in the Lower Thames valley as at just above O.D., the Middle Bed at about 17 ft. and the Lower at 32 ft. below O.D., resting on the gravels of the Buried Channel.'

The peat beds are archaeologically important because they are composed of the remains of land vegetation and indicate periods when subsidence and alluvial deposition temporarily ceased and gave way to a gentle uplift of the land which raised the surface of the mud flats above the reach of the tides and allowed the growth of the vegetation that was eventually to form the peat. Neolithic artefacts have been found in the Lower Peat bed, Bronze Age in the Middle, Iron Age and Romano-British in the Upper. The 10 ft. of alluvium overlying the Upper Peat bed has accumulated since the early Anglo-Saxon period.

While the long-term result of the Romano-British uplift would have been to substitute erosion for the deposition of alluvium, the first effect was to lift the surface of the tidal flats and mud-banks just above the reach of high tide, where they soon became dry enough to bear the weight of men and animals, and desalinated enough to be colonized by land vegetation, including reeds, willow, alder, hazel and oak. Stream courses etched themselves into the dried mud to become more permanent and their low-tide water-level was lowered. The picture that emerges is that of a flat valley-floor laced with stream-channels flowing between densely thicketed 'aits'; it may well have been impassable in winter but negotiable in summer by those who knew the shallow places and the way through the undergrowth – and who knew the tides.

Is it possible to calculate the fordability, or otherwise, of the lower Thames in the Romano-British period from quantitative data? Willcox, in a recent study of the Thames at London in the Romano-British period, has listed no fewer than nine variable factors 'in addition to those of climate, drainage and ecology'⁸ which would be involved in any such computation, and the case of the lower Thames is certainly not less complex. There are too many unknowns and incalculables for a computer to prove positively that the lower Thames could, or could not, be forded at low spring tides in 54 B.C. Definite proof could only be the result of direct archaeological discovery, as when Allcroft claimed to have discovered the Roman ford of the Arun at North Stoke,⁹ or by the finding of an unambiguous reference in some classical text such as the

⁸ G. H. Willcox, 'Problems and possible Conclusions related to the History and Archaeology of the Thames in the London Region', *Trans. London & Middlesex Arch. Soc.*, 1975.

⁹ A. H. Allcroft, *Waters of Arun*, London, 1930.

missing books of Tacitus. Would an assumption that such a ford existed enable us to make better sense of what we already know?

If such a ford existed and was later submerged, its approach-routes would remain, and the ford itself might be replaced by a ferry. Such a ferry existed for many centuries between Lower Higham (N.G.R. TQ 717742) in Kent and East Tilbury (N.G.R. TQ 689770) in Essex, and it is the only known ancient ferry across the Thames below Gravesend.

As to its approach routes in Kent, ancient tracks from the Medway valley, and from Cobham (N.G.R. TQ 670684) and beyond, converge on Higham Upshire (N.G.R. TQ 712715) near Gad's Hill, where they unite to run almost due northward through Chequers Street (Higham railway station) to peter out on the edge of the Thames alluvium at Church Street (N.G.R. TQ 717742), where there is a small church and a smaller inn, formerly called the Ferry Inn, though nearly a mile of Higham Marshes separates it from the riverside. Facing the church is Abbey Farm, where the remains of a small twelfth-century priory were recently excavated.¹⁰ The priory received tolls from the ferry and in 1293 the prioress was found liable for the maintenance of a causeway and bridge leading to the ferry, for by this time the waterway could only be reached by means of a causeway across the marshes. This is still visible and reaches the riverside opposite Coalhouse Point, East Tilbury (N.G.R. TQ 690762).

On the Essex side of the river the approach to the crossing is even more obvious. From the top of the escarpment at Linford, in the parish of Mucking, where a southbound traveller from Colchester or the Midlands would get his first view of the Thames, a single road runs straight down and along a slight ridge to East Tilbury, where a small medieval church perches on a narrow outcrop of the Chalk. Here no marshes separate it from the waterway, which sweeps around Coalhouse Point and into the Lower Hope.

The Mucking escarpment is capped with gravel (Boyn Hill terrace) on which an extensive site has recently been excavated by Mrs. M. U. Jones, F.S.A.¹¹ When the overlying soil had been mechanically removed the surface of the gravel revealed a remarkable complex of marks attributable to features of human settlement ranging in time from the Neolithic to the Anglo-Saxon. The area so far explored (N.G.R. TQ 673803) extends along the top of the escarpment north-eastward from the straight minor road mentioned above. An interim report says:

'After slight evidence for Bronze Age agriculture, the gravel terrace

¹⁰ P. J. Tester, 'Excavations on the Site of Higham Priory', *Arch. Cant.*, lxxxii (1967), 143-61.

¹¹ M. U. and W. T. Jones, 'The Crop-mark Sites at Mucking, Essex, England' (with bibliography), in ed. R. Bruce-Mitford, *Recent archaeological Excavations in Europe*, London, 1975.

came into prominence as the site of a circular bi-vallate earthwork – ‘mini-hillfort’ quite well expresses its 80 m. overall diameter.’

This fort was constructed about the sixth century B.C., when the late Bronze Age was giving way to early Iron Age, and its outer earthwork comes within a stone’s throw of the road where it mounts the escarpment. During the Iron Age this fort fell into decay, but –

‘About the time of the Roman conquest, defensive earthworks were again thrown up where the hillfort had stood centuries earlier. This time surveyors must have had a hand in the building, since the 1½ acre, single entrance, partly double-ditched enclosure is exactly rectangular. A bronze pendant from a first-century Roman legionary’s armour was found within it.’

The coincidence of this ditched enclosure with the previous hillfort site must surely emphasize the stability and importance of the route to the river-crossing which it overlooked. It is too small to have been a marching camp, as defined by Collingwood and Richmond,¹² and its double ditch suggests a less temporary function.

We have, then, a credible route from Kent at Higham across the valley-floor of the Thames to East Tilbury and Mucking, and a suggestion of what the terrain may have been like, so we may turn to an eyewitness, Julius Caesar himself, to see if what he says is consistent with what we have suggested:

‘On learning the enemy’s plan of campaign, Caesar led his army to the Thames in order to enter Cassivellaunus’ territory. The river is fordable at one point only, and even there with difficulty. At this place he found large enemy forces drawn up on the opposite bank. The bank was also fenced by sharp stakes fixed along the edge, and he was told by prisoners and deserters that similar ones were concealed in the river-bed. He sent the cavalry across first and then at once ordered the infantry to follow. But the infantry went through with such speed and impetuosity, although they had only their heads above water, that they attacked at the same moment as the cavalry. The enemy was overpowered and fled from the river-bank.’¹³

There appears to be nothing inconsistent here, but we may prefer to suspend judgment. However, after Caesar had crossed the Thames, Cassivellaunus gave up all hope of defeating him in a pitched battle and adopted what we should now describe as guerrilla tactics. This encouraged the Trinovantes of (approximately) Essex, whom Cassivellaunus had recently conquered, to turn to Caesar:

¹² R. G. Collingwood and I. Richmond, *The Archaeology of Roman Britain*, London, 1969.

¹³ Julius Caesar, *The Conquest of Gaul*, tr. S. A. Handford, Harmondsworth, 1951.

- . 'Envoys arrived from the Trinovantes, about the strongest tribe in south-eastern Britain. . . . The envoys promised to surrender and obey Caesar's commands . . . Caesar demanded forty hostages and grain for his troops. . . . The Trinovantes promptly sent the required number of hostages and the grain.'

If Caesar was indeed on his way from Brentford to St. Albans the hostages and grain could only have reached him from the Trinovantes after a long journey across Catuvellaunian territory, and would simply have invited capture. If, on the other hand, he had crossed at East Tilbury he would have been in Trinovantian territory as he started on his westward advance, which would have made the transaction more practicable – and much more likely to have happened.

In the invasion of A.D. 43 under Aulus Plautius the position of the Thames ford may have influenced the antecedent campaign in Kent and the battle for the crossing of the Medway. Here we have to rely on the account by Dio Cassius (*op. cit.*). By A.D. 43 the rule of the Catuvellauni extended over Essex and most of Kent, and Colchester had become the seat of their kings. When Caesar had advanced on Cassivellaunus' stronghold there was not much difference, in terms of mileage, between a Thames crossing at Brentford or at East Tilbury, but a march on Colchester from east Kent was a very different matter and the Tilbury crossing would have saved a good fifty miles.

This time the landing was unopposed, and A. R. Burn has given his reasons for thinking that the Roman army followed the Pilgrims' Way and arrived on the Medway at Aylesford,¹⁴ with which Dudley and Webster agree.¹⁵ Yet it seems unlikely that the retreating Britons would have gone this way, at the risk of being cut off from retreat across the Thames, and still less would the Romans have allowed themselves to be drawn into the Weald. We must prefer the assumption of Collingwood, Frere and others that they advanced along the productive lowland of north Kent and that Watling Street has perpetuated their route. Indeed, in 1957 a man digging at Bredgar, close to Watling Street, came upon a hoard of thirty-four *aurei* of which the three latest coins had been minted in A.D. 41–42 – probably the pay of an officer, hidden but never reclaimed.¹⁶

Dudley and Webster disagree with Burn about the Medway crossing-point; they put it nearly six miles downstream from Aylesford near the site of the modern M2 bridge just south of Rochester. According to Dio, 'the Britons supposed that the Romans would not be able to cross it without a bridge and so had encamped carelessly on the opposite bank'.

¹⁴ A. R. Burn, 'The Battle of the Medway', *History*, xxxix, 1953.

¹⁵ D. R. Dudley and G. Webster, *The Roman Conquest of Britain, A.D. 43–57*, London, 1965.

¹⁶ *Arch. Cant.*, lxxii (1958), 221.

This could mean that the Britons had destroyed a bridge at Rochester after retreating across it, though no direct evidence of a pre-Roman bridge has yet come to light. They were now encamped in the hilly Strood area west of the Medway.

The westward march of the Roman force through north Kent would naturally have brought them to Chatham Great Lines, that open plateau overlooking the Medway which has long been used for military manoeuvres. On the left, the deep Luton valley led down to the Rochester crossing. In front, the Medway flowed northward before turning east to enclose the low-lying land now occupied by Chatham dockyard. Across the river at Upnor there was a broad gap in the hilly background, and from the Great Lines one could see right across the neck of the Hoo Peninsula and over the Thames to the high ground at Mucking.

At this point the location of the Thames crossing again becomes relevant. If the Britons were indeed likely to retreat on Brentford, thirty-five miles to the west, a Roman crossing at some easy ford upstream of Rochester might be worth considering, but if their line of retreat was through East Tilbury they might be cut off from it, if the Romans crossed the Medway as far downstream as possible.

It would not be unfair to assume that if the Thames could be forded at East Tilbury the smaller Medway could be forded at Chatham, but some confirmation is available from the large-scale chart prepared by de Gomme in 1669, after the Dutch raid on the Medway, of which a copy may be seen at Upnor Castle. Between Rochester bridge and Hoo the undredged river shows low-tide soundings that range from 19 ft. down to 12 ft., which leaves little room for doubt that this part of the Medway could have been forded, at least at low tide, before the post-Roman subsidence.

To return to Dio's account of the Medway battle:

'He (Aulus Plautius) therefore sent across Gallic troops who were trained to swim with full equipment across the swiftest of rivers. Surprise was achieved against the enemy by this attack ...'

And the Gauls caused havoc among the British chariots by shooting at the horses.

'At this point Plautius sent over Vespasian... This force also succeeded in crossing the river and killing many barbarians, who were not expecting them.'

If, as seems probable, the Gallic swimmers were sent across from what is now the Chatham dockyard shore they would have threatened a British line of retreat towards Tilbury, and this would have drawn their chariots down from the hills around Strood and so have allowed Vespasian to

lead the legionaries across the river from Rochester. Even so, it took the Romans another day to dislodge the Britons.

'Then the Britons fell back from this position to the River Thames, at the point where it enters the sea and forms a large pool at high tide. Knowing the firm ground and the fords with much precision, they crossed the river without difficulty; but the Romans were not so successful. However, the Celts (auxiliaries) swam across again and some others got across by a bridge a little way upstream, after which they assailed the barbarians from several sides at once and cut down many of them. In incautiously pursuing the remainder they got into swamps from which it was difficult to make their way out and so lost a number of men.'

The plural 'fords' and the reference to a bridge suggest a route that had to cross stream after stream, of which one was bridged, and the fact that the auxiliaries again had to swim could be a sign that they were caught by a rising tide. As with the quotation from Caesar, the reader may judge whether it is consistent with the interpretation we have suggested, or whether it is still possible to give credence to the Brentford theory.

The legions were now over the Thames and, if our supposition is correct, were within forty miles of the enemy capital, Colchester. This was the moment for Plautius to send to Rome for the Emperor and the elephants. So he halted his army and encamped — Where, if not on the first high ground, at Mucking? The force he commanded would have needed a marching camp of about 160 acres and no enclosure of this size has yet been identified. Yet, the 1½-acre rectangular ditched enclosure, within which the bronze 'handle' from a first-century legionary's helmet has been found, can hardly be regarded as devoid of military significance.

In the early Anglo-Saxon period subsidence was resumed. The tides were advancing farther up the Thames and the vegetation of the valley-floor, disappearing beneath renewed deposits of mud, was becoming the Upper Peat bed of today. In the accounts of 1066 there is no hint that any army, either that of Harold in his dash from York to Sussex or of William in his probings around London, made any attempt to cross the lower Thames, and we may assume that if a crossing still existed it was by means of a ferry.

It is hard to say how long the ferry itself survived. It must have ceased before Hasted published his *History of Kent* in 1778, but he has preserved an ancient oral tradition:

'Plautius, the Roman general under the Emperor Claudius, in the year of Christ 43, is said to have passed the river Thames from Essex into

Kent (*sic*), near the mouth of it, in pursuit of the flying Britons. . . . The place of this passage is by many supposed to have been from East Tilbury, in Essex, across the river to Higham (by Dr. Thorpe, Dr. Plott and others).'

The Brentford theory was based on a mistaken view of the prehistoric state of the Thames valley; the alternative outlined above is believed to fit the facts and it is hoped that it may stimulate further investigation along the route from Rochester to Colchester, *via* Higham and East Tilbury.