

# PROCEEDINGS

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MICHAELMAS TERM 1909.

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Monday, 10 November, 1909.

The Rev. Dr STOKES, President, in the Chair.

The Ven. Archdeacon CUNNINGHAM, D.D., F. Brit. Acad.,  
made a communication on

THE PROBLEM AS TO THE CHANGES IN THE COURSE  
OF THE CAM SINCE ROMAN TIMES.

WE are all accustomed to attempt to read the history of a parish church from the building itself, and to note the evidence which is furnished by the fabric as to the various stages of its growth; and there is a not unnatural feeling that it may be possible to apply a similar method to the story of the fens, and to discriminate the later modifications from the natural course of the rivers. To some extent this is feasible; the great channels which convey the main stream of the waters of the Ouse from Earith to Denver are obviously artificial, and such a name as Old Bedford River gives at any rate a suggestion as to the century when these works were carried out. But mere superficial examination will carry us but a very little way: during the last eighteen hundred years great works have been undertaken again and again; the courses which the rivers have taken at different times, and the drains and lodes which have been cut, have left their mark on the face of the country; but they have in many cases ceased to serve their original purpose. They do not now tell us why they were made, or who made them; some of them were doubtless intended to facilitate navigation, some to prevent flooding, and some to render the soil more workable: but in no case do they tell their own story. The works that remain are an extraordinary monument of human labour, but they do not by themselves enable us to say who expended that labour, and what precise object they had in view. The whole affair is so complex, that I may say at once I do not make a pretence of having solved any part of

the problem, but that I only wish to lay before the Society some considerations which should be taken into account in trying to state it. Concentrating our attention on the main course of the rivers, and especially of the Cam, can we distinguish what is artificial, and get any idea of the natural course of the river as it was in Roman times?

From the early part of the seventeenth century, when the work of draining the Great Level of the Fens was taken up by the Bedford family with the view of improving their Thorney estate, there are very complete records, and hence we may go back and take the reign of James I as our starting-point. The condition of the Fens at that time is set before us clearly in Sir William Dugdale's great history of *Imbanking*; he made elaborate collections, and was careful to take a tour through the district personally in 1657, while he was writing his book. Curiously enough that diary was not included in Hamper's *Life of Dugdale*, though it contains a good deal of interesting information as to the antiquities he noted and the crops he passed. He was particularly interested in recent improvements. There was a fair plantation of onions, pease and hempe between Willingham and Earith; near Burwell he came on "fruit trees of all sorts and garden stuffe, likewise woad"; more to our purpose perhaps is his mention of the destructive floods at Wisbech in November, 1613. But it is a pity that the journal of so great a man written in his own hand, should have been left in oblivion among the Lansdowne MSS. in the British Museum<sup>1</sup>. Elaborate as his work on embanking is, Dugdale did not by any means make use of all the material he had collected, which has been preserved among the *Harl.* MSS.<sup>2</sup> The very accurate survey of the Fens, which was made (possibly) by Hayward in July, 1605, is invaluable to the student of rural economy in Cambridgeshire. It gives a detailed description and rough valuation of the Fens in their "drowned" state, when they afforded pasturage in summer. Great herds of milch kin appear to have existed in many of the villages; at Soham there were three of 700 each. In fact, there is a great deal of material for obtaining detailed knowledge of the Fens as they

<sup>1</sup> Lansd. mss. 722.

<sup>2</sup> *Harl.* mss. 5011.

were in 1600: map I. may be taken to represent the state of affairs then existing, except that the great lakes, Whittlesea Mere, Ramsey Mere, Stretham Mere, Soham Mere and others are not marked; they are not needed in connexion with a discussion as to the probable course of the rivers.

I. *The Historical Line of Argument.* The information in regard to the history of the Fens which has been put on record has been so carefully collected by Dugdale that it is unnecessary to do more than summarise his results; so far as I know they have never been seriously called in question.

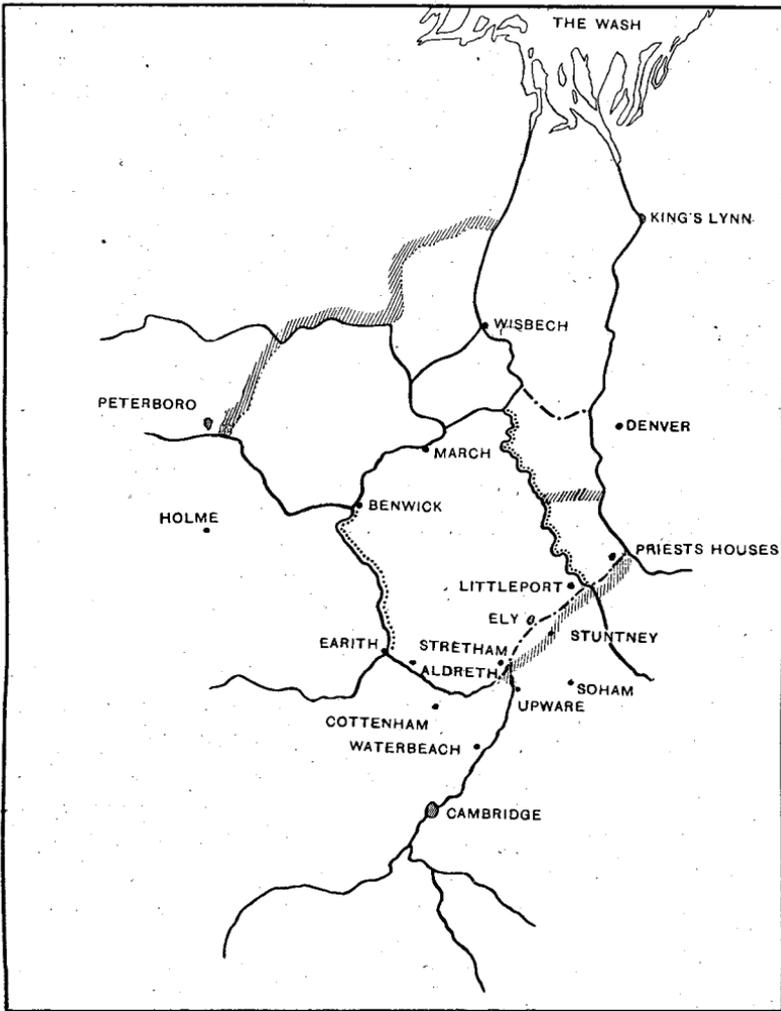
Dugdale insists that the channel of the Ouse, as we call it, which runs from Littleport to Priests Houses is artificial, and that the original course of the southern branch of the Ouse, along with the Cam, was from Littleport by Welney and Outwell to Wisbech; while the northern branch ran by Benwick and March to Outwell and Wisbech<sup>1</sup>. According to him the whole of the Ouse and the Cam formerly discharged themselves into the sea at Wisbech, whereas they now discharge at Lynn. Hobart and the Commissioners who tried to deal with the "drowned" land by a large scheme under James I, found that all the old drains had been cut with a view to carrying the water towards Wisbech, and that they were practically useless for assisting to convey water rapidly to the sea at Lynn.

It is probable that this change began in 1236<sup>2</sup>, when there was a great storm at Wisbech. The outfall to the sea was blocked up, and despite the opposition of some persons who (1292) desired by means of dams to force back the rivers to go by Wisbech<sup>3</sup>, it seemed necessary to accept the inevitable, and to facilitate the course of the water to Lynn. A new channel was formed from Upwell to Denver, while the south branch of the Ouse was carried from Littleport to Priests Houses. At all events the practice of navigation by Upwell and Denver was firmly established in 1302 and complaint was made of an interruption to traffic, which had rendered it necessary for

<sup>1</sup> Badeslade, *Lynn*, p. 72, Hayward's Map. Sir Wm. Dugdale, *Imbanking*, pp. 175, 372.

<sup>2</sup> Holinshed, *Chronicle* II. 380.

<sup>3</sup> Wm. Watson, *Wisbech*, 25, 29.



----- New channels opened.  
..... Old channels silted up.

The boundaries of the Isle of Ely are shown by the rivers and hatching.

MAP I. Changes in the Cambridgeshire Rivers after the stoppage of the outfall at Wisbech in 1236.

boats coming from Holme to go round by the Welney river and Littleport on their way to Lynn, one of the new channels having been stopped while the other was available; both had been in common use before this date. It appears that these channels were made some time in the thirteenth century, and that the blocking of the outfall at Wisbech, presumably about 1236, had initiated a series of very considerable changes. Among other results, it would seem that the waters of the Nene were held up to such an extent that they began to force their way, in the reverse direction, along the channel of the Ouse from Benwick to Earith<sup>1</sup>. The old course of this West Water, as it was formerly called, is now completely silted up, but it can be traced along the boundary between Huntingdonshire and the Isle of Ely. The continuous lines on the map show the course of the rivers Ouse and Cam, as they probably ran<sup>2</sup> before the outfall at Wisbech was stopped up; the channels which have silted up are distinguished by dots, and the broken lines mark the new channels.

Here in passing we may note one curious problem which arises from conflicting evidence. For more than two centuries after 1236, Wisbech seems to have been cut off from the main routes of internal trade and to have had its access to the sea much interfered with. If it had sunk into insignificance, like Winchelsea or Cley, there need have been no cause for surprise; however, the church and cellarage give evidence of its having been a flourishing place, and the records of Holy Trinity Guild, of which the first accounts date from 1379, with the menu of the Feast in 1460 and the evidence of the augmentation of the establishment in 1475, show that there was a body of prosperous merchants there. There may have been communications by the Nene and the Welland, but there was very little trading communication between the Bishop's port and the episcopal city.

II. *Geographical and Archaeological Evidence.* It may, perhaps, be taken for granted that the English settlers who formed villages and carried on tillage and pasturage, would

<sup>1</sup> Badeslade, *Navigation of Lynn*, p. 6.

<sup>2</sup> On the course from Earith and Upware to Ely, see below, pp. 81, 84.

accept physical obstacles to communication as natural boundaries. They could not conveniently pasture their cattle in common and work their land collectively, if it was intersected by a river. Where the large channel of a river cuts across a parish, there is reason to believe that the water-course is artificial, and of later date than the English settlement. The present course of the Cam or of the Ouse cuts across the parishes of Waterbeach, Wicken, Stretham, Ely and Littleport, and it is hardly conceivable that the water of the rivers ran along its present channels in the sixth century. The question remains, if the rivers did not take their present course, how did the earlier channels run? There are two possible alternatives, and the water of the Cam probably flowed first in one, and afterwards in the other.

An old river course has been traced by Mr Cole Ambrose along the line of the boundary between Ely and Stuntney, about three quarters of a mile south of the present Ouse; and the quantity of remains that has been dug up, renders it practically certain that the Romans had a quay at Stuntney. This channel has long been completely silted up, and it may be difficult to get evidence to show the approximate date at which it became impracticable for navigation.

There was also in historic times another channel along which the main body of the water of the Cam appears to have been conveyed. There is much evidence which goes to show that at one time it must have turned, about Clayhithe or Upware, and flowed past Cottenham and Aldreth to join the Ouse at Earith and proceed by way of Benwick to Wisbech. This implies that the water in the Old West River from Aldreth to Earith would flow in the opposite direction from that which it has taken for many hundred years, but as there is no fall to speak of, this is not a serious difficulty<sup>1</sup>. The tradition that the water had taken this course was put on record by Dugdale. "The river of Grant passing from Beche to

<sup>1</sup> The flow of the brooks, from Longstanton and Westwick that fall into the Ouse and West River rather favours this view as to the natural course of the water. There are many careful remarks on the direction taken by the brooks and rills of the district in the account of the Fens in the British Museum *Harl. mss.* 5011.

Char Fen in Cottenham and so into the Ouse was diverted and by a straight course turned down by another branch of the same river to Harrimere, where it loseth the name<sup>1</sup>." Evidence based on local observation has been recently adduced in support of this opinion by Mr Arthur Bull<sup>2</sup>.

We have thus evidence of the existence of two alternative routes for the Cam in the Waterbeach and Stretham district, besides that which it takes at present. It is reasonable to suppose that the course of which a traditional knowledge had survived is the more recent of the two, and that, after the channel at Stuntney had begun to silt up, the course was diverted from Upware towards Aldreth and Earith. If the river took this course at the time of the English settlement, there is, on the face of it, little difficulty about the boundaries either of the various parishes or of the Isle of Ely<sup>3</sup>—though the precise course of the channels in this region both natural and artificial ought to be thoroughly examined. The line of the river, whatever it may have been, was mentioned as a well established boundary in 1274. In stating the range of the rights of warren attached to Cambridge Castle the jurors in the *Hundred Rolls*<sup>4</sup> trace the line from the Castle at Cambridge along the Huntingdon Road and thence by Belsar's Hill to the river; and then by the great bank to 'Squasslode,' and then by the great bank to Cambridge again. 'Squasslode' has been apparently an insoluble puzzle, as no name at all approximating to it has been preserved. The very interesting papers and maps which have been recently discovered at Stretham have given a clue. I am indebted to the Rev. Evelyn Young for pointing out the Wash Lode<sup>5</sup> as marked on this map, which, through the kindness of the Rev. S. S. Stitt, I am able to show to the meeting. In so far as this line of argument is sound, we are forced to entertain the somewhat startling opinion that no

<sup>1</sup> Dugdale, *Imbanking*, p. 373.

<sup>2</sup> *Transactions of Ely and Hunts. Arch. Soc.* I. 49.

<sup>3</sup> The boundaries as defined in 974 A.D. have remained unaltered, Bentham, *Ely*, p. 79.

<sup>4</sup> *Rot. Hund.* II. 407, 452.

<sup>5</sup> West Water and Wash Lode are both mentioned in the description of the Fens in *Harl. mss.* 5011.

main river flowed past Ely in the early middle ages, though it is of course quite probable that it would, like Holme and Reach, be served with lodes—one from Littleport to Turbetsea, and perhaps another from Stretham Mere to Ely. After the outfall at Wisbech was damaged in 1236, if not before, a channel from Earith and Upwell would be needed to take the water by the Ouse and the Cam towards Lynn.

It is worth while to notice in passing that this view is quite consistent with the historical information we possess as to the communication with Ely in the period before the Norman Conquest. We are apt to think of Cnut as rowing past Ely, and suddenly determining to go and hear the monks sing: but Thomas of Ely describes him as on his way to Ely to keep the Feast of the Purification, and his song amounts to no more than that he urged the rowers to hurry on when he heard the monks singing.

It also appears that a lode would serve for the conveyance of S. Eltheldreda's stone coffin from Cambridge; and one which stopped at Turbetsea would render the story of the translation of S. Wihtburgha<sup>1</sup> intelligible, which it hardly is if there had been communication by water all the way to Ely.

There is, moreover, one small piece of historical evidence, which is not only congruent with, but confirmatory of, the opinion as to the course of the river which is suggested by geographical considerations. After the great draining of the Fens, there was much difficulty in many parishes in defining the pasture rights of each village, especially in cases where two or more parishes had intercommoned. It is interesting to notice that precisely similar difficulties had arisen as early as 1298 between Waterbeach and Stretham, the parishes of which the boundaries would be apt to be confused if the old waterway was disused, and a new channel was opened up and enlarged. Mr. Young has found among the Stretham papers an award, by William de Luda, Bishop of Ely, by which the limits of Stretham and Waterbeach respectively are carefully defined. From its form it appears to be a new definition and not an inquisition in which the jurors testified what the boundaries had been.

<sup>1</sup> Bentham, *Ely*, 77.

At all events there was, at the close of the thirteenth century, some uncertainty about the boundaries of the areas which would be affected by the suggested change in the main channels<sup>1</sup>.

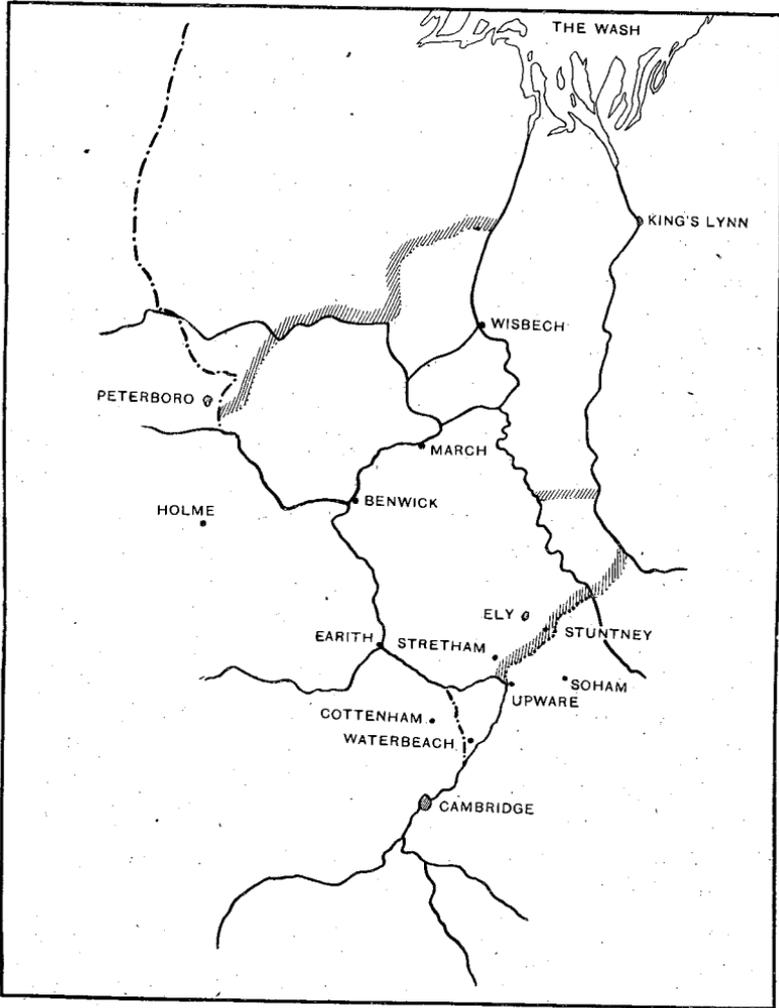
III. *Roman Navigation.* The question as to the probable condition of the south of the Isle of Ely, in Roman times and the succeeding centuries up to the Norman Conquest, is beset with difficulties, and it would be desirable that the observations and inferences of the eighteenth century surveyors should be checked and corrected. There can, however, be little doubt that the communication by road between Cambridge and Ely was interrupted by flooding of some kind. The key to the solution of the problem is, I believe, likely to be found by concentrating attention on the silting up of the channels of the Cam at Stuntney and of the Ouse between Earith and Benwick. I would venture to suggest, as an hypothesis which serves to combine the conflicting evidence into a consecutive story, that the Stuntney channel was silted up during the period of Roman occupation, that the water of the Cam then forced its way, by Stretham Mere to Aldreth and Earith to connect with the Ouse, and that the Romans subsequently set themselves to improve the navigation by this new course. They certainly undertook military works in the fen district<sup>2</sup>, and made a great sea wall, and they would find it advantageous to get facilities for traffic by water such as they had made in the Low Countries<sup>3</sup>. It is not clear indeed that they attempted to navigate the Wash, or had any ports either at Wisbech or Lynn, but Stukeley<sup>4</sup> affirms that they had a great system of internal communication in Lincolnshire—the Car Dyke—and this was apparently linked up so as to give access to the Cambridgeshire waterways. By the Nene it was possible to get to the Ouse; and the Cambridge-

<sup>1</sup> Similar difficulties arose in regard to Ramsey, *Cartulary* (R. S.), i. 215, iii. 40, 42.

<sup>2</sup> Herodian, *Ab excessu divi Marci*, iii. xiv. 5, 6. Compare also Tacitus, *Agricola*, xxxi.

<sup>3</sup> Tacitus, *Annals*, xi. 20.

<sup>4</sup> *Iter. Cur.* 7. Callis, *Reading on Sewers*, p. 101, condemns it as more ancient than profitable, on the assumption that it was made for draining (1622). That subject is very fully discussed by the Rev. C. H. Evelyn White in a Paper in the *Hunts. and Cambs. Archaeological Society's Transactions*, Vol. i. part 1. 55.



..... Old river silted up.  
- - - - - New waterways.

MAP II. Cambridgeshire Rivers in Roman times.

shire Car Dyke is at least suggestive of a canal, which cut off a corner and gave direct communication with the high land of Cambridge, which has been from time immemorial an excellent corn growing country<sup>1</sup>. Before the drainage was carried out there was doubtless a greater head of water in the rivers than at present, and they were more easily available for water carriage; such places as Chesterford, Barrington, Swaffham and Clayhithe, where Roman remains are found, would all be accessible by water; till within the present generation the practice of conveying corn by water from Horningsea survived; and what was the cheapest mode of carriage in the nineteenth century, may well have proved convenient in the third. The broken lines on map II mark waterways which may be most probably attributed to the Romans: these waterways continued to be utilised for traffic at the time of the Norman Conquest<sup>2</sup>; but it seems unlikely that such elaborate engineering works were undertaken by any of the Anglo-Saxon kings. The suppositions, (1) that the Cam flowed from Upware by Stuntney to Littleport, till about 200 A.D., that it was then blocked and forced to find its way by Aldreth to join the Ouse at Earith and continued to take this course—assisted by Roman canalisation—for a thousand years; and (2), that after 1236, the bed of the Ouse at Benwick began to be stopped and the Ouse was diverted to its present course in the Looder Delfe<sup>3</sup> to join the Cam, seem worth offering tentatively as an hypothesis, that is admittedly unproved, but that may nevertheless be worth consideration, since it appears to be in accordance with the facts as at present known.

Professor HUGHES pointed out that all speculation as to the former course of the rivers in the fenland must take account of the two great sources of supply. Besides the rain which falls on the area, the water all comes from the springs issuing from the base of the receding escarpment of the chalk on the east and the waters collected in the impervious basin of the Ouse on the west. The rivers Wissey, Brandon and Lark modify

<sup>1</sup> Stukeley, *Palaeog. Brit.* No. II. 37, 38.

<sup>2</sup> *Laws of King Edward the Confessor*, also *Domesday Book*, I. 298 b.

<sup>3</sup> Looder Delfe or Lorder Delfe is the name given in Hondius' map of 1632 to what is now known as the West Water; and this latter name was then used for the old branch of the Ouse from Earith to Benwick.

the outline on the east, and on the west the Nene and some other smaller streams must be taken account of. But the drainage of the Fens has always been through a net-work of natural, and later of artificial, channels having such a small fall to the north that they have been continually modified, and the direction of the current even reversed, by the outfalls being suddenly destroyed in storm or choked by gradual silting up. In the Backs of the Colleges we see a good example of the sort of thing that has been happening. Sometimes when the locks are closed the stream is seen flowing up towards Queens', and if Trinity bridge were blocked the water would find its way through the net-work of ditches by Queens', King's and Clare and get into the river again opposite Trinity Library, or even down the Bin Brook.

Many of the ditches are part of old river courses, and, in borings in the paddocks, other and deeper channels have been found. That is an example of what the Fen drainage is and has been. Though peat has levelled up the surface there is no part of the Fens which has not been traversed by river channels. Some of the more permanent and important have left such a mark on the geographical features that we can feel certain that they have run where we now see them throughout the period with which we are now dealing, though more or less of the fenland water may at one time or another have been caught by them. The Ely river is one of these. You can see that there is a shore line along the east side of Ely. It was for the water carriage and protecting river that Ely was placed there.

It is very interesting to enquire why and when the courses were anywhere artificially or naturally modified, and he joined in thanking Dr CUNNINGHAM for the suggestive paper which he had given them.

The Rev. F. G. WALKER remarked it had been proved by excavations that the Romans had built the embankment, called "the Wall," which passed through the villages of Walpole, Walton and Walsoken. This was evidently constructed along the shore of the Wash in order to keep the sea from encroaching on the land.

Judging from the plain traces of Roman occupation, which he had found during various small excavations along the banks of the Car-Dyke and in its bed, he had come to the conclusion that the Romans had dug this canal, 60 feet wide, in order to regulate the flow of flood-water coming from upper reaches of the rivers which run into the low-lying district we call the Fens.

This Car-Dyke is traceable from Waterbeach to Lock-spit Hall on the West River; thence to Benwick the course of the old river was utilised. From Benwick to a point just east of Peterborough, and thence on by Bourn, in Lincolnshire, to Tattershall it can still be followed.

In its course it cuts across every river flowing into the Wash, from the Cam at Waterbeach to the Witham at Tattershall. Though its probable primary use was the regulation of the flood-water, it would also have been used for the purposes of traffic.

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