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VOLUME LXIX

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ANCIENT COURSES OF THE GREAT AND LITTLE OUSE IN FENLAND

R. S. Seale

ABSTRACT

A section across the rodham of the Little Ouse N.E. of Ely, first described by Clark (1933), and three more recent sections nearby are investigated. The deposits and erosional features of the Little Ouse and its course within the Fenland in Post-Glacial times before it was finally diverted into its present channel, are described, discussed and compared with a section across a large rodham S.E. of Ramsey. The general features of this latter section are similar to those of the Little Ouse, but larger and appear to belong to a big river, probably the Great Ouse flowing from Bedfordshire, or an important distributary of it. Deposits similar to the post-Neolithic sediments of the Little Ouse appear to be missing so it is concluded that the river, or at least this part of it, was diverted in late Neolithic or early Bronze Age times into the channel occupied by the West Water, which existed in historic times. Evidence that the West Water may be relatively recent is provided by a rodham apparently crossing its course.

INTRODUCTION

The general sequence of the Post-Glacial history of the Fens can be summarised as follows.

Soon after the final retreat of the Ice from East Anglia, peat, assigned to Fenland pollen Zone IV (Godwin 1940) was formed in and adjacent to the deep river channels meandering across the Fens and into the North Sea basin before about 7,500*B.C. (Godwin 1960). It does not, however, appear to have spread over the greater part of the basin, which was then occupied by oak forest, much before 3,000 B.C. (Willis 1961), though there is evidence that there was peat development in Holme Fen about 4,500 B.C. (Godwin and Vishnu-Mittre 1975) and at Queen's Ground in Methwold Fens before 5,000 B.C. (Godwin 1940, 1960).

A marine transgression, during which the Fen Clay (Barroway Drove Beds) was

*According to evidence from tree-ring chronology correlated with radio-carbon dating, most radio-carbon dates given for instance as 2,000, 3,000 and 4,000 B.C. should be about 2,550, 3,780 and 4,870 B.C. respectively (Clark 1975). The dates given in this paper have not been corrected.

deposited, began about 3,000 B.C. in late Neolithic times in the north and by about 2,250 B.C. it had reached its maximum extent. In Glass Moor, half way between Ramsey and Whittlesey, a date of about 2,400 B.C. for cockles found on pine stumps beneath the Fen Clay gives a clear local indication of its onset (Godwin and Vishnu-Mittre 1975). It had begun to retreat in the south by 2,200 and had ended by 2,000 B.C. over much of the Fens (Willis 1961). This transgression engulfed the fen carr and reed or sedge swamp, from which the Lower Peat (that beneath the Fen Clay) was formed. The Fen or Blue Buttery Clay was laid down, from still water, in lagoons, intermittently invaded by tidal water and extending over much of the Fens (Godwin 1978). In the later stages of its deposition, at least, there must have been a great saltmarsh covered by a network of creeks in which coarser silty sediments were deposited, connected to the lower tidal reaches of the rivers draining the basin. Macfadyen (1933) found that such silty deposits near King's Lynn contained foraminifera, more intolerant of less salty conditions than those in finer deposits.

The Fen Clay transgression was succeeded by the formation of the Upper Peat, interrupted in its turn in the northern fens by the Romano-British marine transgression, when alluvium, mainly silty, was deposited both up the channels of the main rivers, and the Roman canals and drainage ditches. This transgression had probably already begun in the pre-Roman Iron Age (Godwin and Vishnu-Mittre 1975).

In historical times the natural drainage pattern was considerably altered by man and the system that once flowed to the sea at Wisbech was diverted eastwards to the outfall at King's Lynn.

GEOGRAPHY

The ancient, now dry, courses of the rivers or creeks are represented by silt ridges ('roddams' Skertchly 1877, 'rodhams' Astbury 1956 or 'roddons' and the closely related 'old runs' and 'old ways') and in the upper reaches of the rivers or canals by deposits of shell marl ('old slades') and deep peat (Fowler 1932, 1933, 1934).

Figure 1 shows the distribution of the largest of the rodhams of the southern Fens. The course of the Cam or 'Ely Great Ouse' (in reality a different river from the Great Ouse draining from the west), Little Ouse and Lark were evidently relatively constant, apart from minor meanders, between Glacial and Roman times when there was widespread diversion (Fowler *ibid.,* Astbury *ibid,* Seale 1975). The former West Water, including Hammond's Eau, marks the mainly natural course of the (western) Great Ouse of probably late Post-Glacial but pre-drainage age. Entering the Fens near Earith, this river flowed in a northerly direction to the west of the Chatteris and March 'islands', joining the existing 'old course' of the River Nene at Benwick and its probable natural course at Flood's Ferry. The combined rivers then continued northwards to join the old Ely Ouse near Wisbech and not near Upwell as stated by Fowler (1934) (R. Evans, private communication). Probably in Roman times (Astbury *ibid,* Salway *et al.* 1970), the loop now partly represented by Hammond's Eau was cut off and the river diverted into a straighter more direct course from a point near Earith to Ferry Burrows (TL 383835). The northern part of this diversion is followed by the B1050 road. In this area the old county boundary between Cambridgeshire and Huntingdonshire ran along this diversion and the course of the natural West Water from Ferry Burrows almost as far as Benwick, indicating that the river was evidently flowing here in early medieval times. It was finally diverted following the construction of the Bedford Rivers in the seventeenth century and has now been replaced as the main channel of the Great Ouse by the New Bedford River or Hundred Foot Drain.

TABLE 1

Explanation of Figs 2-4. (pp. 16-19)

A′	Deep river channel (Early Post-Glacial).
A, A1, A2	Lower Peat.
A3	Clayey band within the Lower Peat.
B′	Erosion channel (Neolithic Age).
B1	Silty or fine sandy estuarine deposits (Neolithic Age).
B2	Calcareous laminated silty clay loam (Late Neolithic Age).
B3	Non-calcareous clay (Late Neolithic Age).
B4	Mixed silty clay and shelly peat (Neolithic Age).
B5	Peat with non-marine mollusca (Late Neolithic Age).
C	Blue Buttery or Fen Clay (Neolithic Age).
D′	Erosion channel (Bronze Age).
D1	Shelly peat or mixed deposits with shells (non-marine) (Bronze Age).
D2	Coarse sandy deposits (Bronze Age).
D3	Non-calcareous clay (Bronze Age? and later).
D4	Calcareous tidal silt (Romano-British).
D5	Thin peaty bands.
E1	Upper Peat.
E2	Disturbed plough layer.
F	Shell Marl (Chara marl or 'white eau').
G	Sandy levees.
H′	Final river channel (before diversion of river to its present course).
J	Cat clay with jarosite mottles.
Y-Z	Thin organic layer.
W-X	Horizontal reference lines based on local water-levels (the same datum in sections V and VI, but different in the others).

RODHAM STRATIGRAPHY

Detailed investigations of the stratigraphy of deposits in and adjacent to the rodhams have been made at a number of sites. Following the discovery in 1931 of a Bronze Age site on a sandy levée of the ancient Little Ouse at Plantation Farm, Shippea Hill, Cambs, borings and excavations were made across the line of the early course of the river here and at the nearby Peacock Farm (Figs. 1 and 2, III) on behalf of the former Fenland Research Committee (Clark 1933, Clark *et al* 1935, Godwin and Clifford 1939, Godwin 1978) and it was found that between the levées there was a deep flat-bottomed channel containing Lower Peat (Fig. 2 III, A), overlain and cut into by silty deposits (B1) that merged laterally into Fen Clay (C). There was further evidence of more recent erosion and deposition above (D1-D4 and E1-E2). Two other sections upstream were investigated (Figs. 1 and 2, I and II) during soil survey in 1963 and a further one downstream in 1972, at Mile End (Figs. 1 and 2, IV). This last section was kindly levelled at the instigation of Mr D. J. Bennett of the Anglian Water Authority. All four sections showed essentially similar features.

Corresponding deep channels have also been found beneath the silty deposits of the Cam or Ely Ouse at the sites of the Dimmock's Cote road bridge near Stretham (TL 537723) and at Prickwillow railway bridge (Fig 1, TL 596828) (Fowler 1934) and beneath the 'old course' of the River Nene at Flood's Ferry (Fig 1, TL 3694) where the bottom of the 'fen clay' was not reached at minus 9 m (27½ ft) O.D., the Lower Peat being replaced here by very fine sandy silt with shells (Godwin and Clifford 1939). Borings to about 5 m in the former courses of the Lark and Snail (Fig 1, Y and Z) failed to reach the bottoms of their buried channels (Seale 1975 p. 169), though in the latter case only 2 km from the old confluence of the two rivers the base of the peat in the channel was found to have been apparently only about a metre or two below O.D. (Fig 1, X). The channel here is less than 100 m wide so it is possible that sand and flints have been washed on to deeper peat.

All four sections (Fig. 1) along the old Little Ouse show the deep peat-filled depression at about -7 m O.D. varying between about 150 and 250 m wide and bounded by sandy levées (Fig. 2, G), parts of which stood out, even during the Fen Clay marine transgression, as islands, occupied, when the climate was relatively dry, by people in three archaeological periods. At Plantation and Peacock Farms Bronze Age implements were found to be younger than the Fen Clay but Mesolithic and Neolithic age tools were correlated with layers in the Lower Peat, later dated by radiocarbon investigation (Clark and Godwin 1962).

DEPOSITIONAL SUCCESSION OF THE LITTLE OUSE

At Old Decoy Farm (Fig. 1, TL 665857) and 6 km still further upstream at Wilton Bridge (TL 724867) beyond tidal influence, Godwin (1940) found that the deep depression of the Little Ouse was entirely filled with peat, the base of which was of Pre-

Boreal age. He showed that erosion around here to a depth of at least minus 20 ft (6 m) O.D. would have been quite possible at this early period, as peat of this age occurs on the bed of the North Sea (Godwin 1934, 1940, 1978). Further downstream Godwin and Clifford (1939) showed that in late Neolithic times, towards, or more probably after, the end of the formation of the Lower Peat, there was a period of erosion when the Little Ouse cut through the Lower Peat and the new channel so formed was later filled, near Plantation Farm, with Fen Clay and silt (Fig. 2 III C and B1). In section II (Fig. 2), assuming that the borings show sufficient evidence, the deepest part of the channel (A') is in the centre of the depression and not near the levées as it appears in the three other sections, though it is possible that closer bores would show the valley floor to be more irregular than is shown in section III. The deepest part at section II and probably also at section I is covered first by peat and not by the later tidal deposits, so it is presumably the original Pre-Boreal erosion channel of the river, which no doubt meandered to and fro across the depression between the sandy levées. The late Neolithic erosion (B'), when the dry Sub-Boreal succeeded the wet Atlantic climatic period, probably cut more deeply than the Pre-Boreal erosion in sections III and IV and perhaps less deeply in I and II. The gradient of the river would therefore have been greater then than in Pre-Boreal times and it may not have reached its base level before it began to silt up. Section I is more complicated than the others as it is near the limit of the maximum Neolithic tidal influence, the eroded channel being filled partly with estuarine silt (B1), and partly with mixed deposits of clay and shelly peat (B4), succeeded by more uniform shelly peat (B5). Further downstream the Neolithic erosion channel was filled with several metres of very calcareous tidal silt loam or very fine sandy loam (B1) best seen at the permanent section IV at Mile End Road. Here the sandy loam was succeeded, as the tidal influence later became weaker, by a metre or so of calcareous laminated silty clay loam (B2), and then by about a quarter to a half metre of non-calcareous clay (B3) merging laterally at a slightly lower level into the upper layers of the Fen Clay, which are very similar and probably contemporaneous. A thin but distinctive band of humose clay, covered by non-humose clay, can be traced laterally for nearly 40 m rising from 1.5 m from the Fen Clay to near the top of the deposits filling the erosion channel (Section IV Y to Z)[1].

The Upper Peat with its oxidised and wasted plough layer (Fig. 2, E1 and part of I respectively) covers all these earlier sediments and is now represented by thin organic deposits in the three seaward sections (including Section III as there has been much wastage since 1933). It was overlain locally by the shell marl of Redmere (Fig. 2, I, F). Only section I shows the possible actual river channel of about the time of the Fen Clay transgression (B4 and 5). At the north-west side of this channel the very steep and sharp junction with the silty clay (which merges laterally into the Fen Clay), evidently

[1]N.E. of Y (Fig. 2 IV) this band probably extends further, but could not be seen as it was below the water-level.

forming the river bank at that time, was clearly visible extending over a metre above the water-line in the ditch[2].

During the Bronze Age the river cut through the Upper Peat and part of the Fen Clay and other deposits to a depth of minus 4.05 m (13.3 ft) O.D. in section III (D′) (Godwin 1940). Evidence for this is well shown in the other sections, in two of which, I and IV (D′), the erosion cut into the top of the sandy levées. Upper Peat of this age stretches far seaward and Godwin estimated that the land was then probably 3 m (10 ft) higher in relation to sea level than now. The fall in gradient at the base of this erosion was much less between, for instance, sections III and IV than that of the Neolithic erosion (B′). As the sea level rose, shelly peat or mixed deposits with shells (D1), or non-calcareous clay (D3) were deposited in or near the sluggish river, to be followed in the channel first by a thin layer of relatively coarse sand (D2), and then by the later calcareous tidal silts (D4) of the present rodham, the final river channel (H′) being filled with shelly peat (sections II and IV) or shell marl (section I), though the highest parts of the rodham were probably never covered by peat. Further intermediate signs of erosion and deposition occur in sections I and IV as buried peat-filled channels, clayey shell marl and non-calcareous clayey deposits, and thin lenticles of peat show within the silts (section IV D5).

On the lower flanks of the Little Ouse rodham a thin layer of acid clay ('cat clay') (J) often extends outwards for a few metres over the Upper Peat (sections I and IV). This was probably deposited from relatively still waters during floods, the coarser sediments having been previously laid down nearer the river. Any calcium carbonate particles would have been similarly sorted so only the finest and therefore most quickly dissolved would have been deposited here. Van der Sluijs (1970) has shown in the Netherlands that decalcification of the marine clays in backwaters where there is only occasional flooding, is contemporaneous with deposition. These areas are above mean high tide level, and so could have been vegetated reedswamp, which not only slowed down the rush of flood-water, but, as the vegetation decayed, also caused extensive leaching of the sediments due to the formation of humic acids. Acidification probably followed the drainage of the Fens when oxidation of sulphides resulted in the formation of the yellow mineral jarosite and sulphuric acid. Similar clay below the watertable in the undrained land of the 'Wash' near Welney is of about neutral pH.

THE ABANDONMENT OF THE OLD LITTLE OUSE COURSE

The Little Ouse was probably partly flowing along the course of its rodham in Saxon times, as the Norfolk-Suffolk county and the Ely-Littleport parish boundaries

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[2]Unfortunately the silty deposits below water were unusually sloppy and came up very badly on the auger (though there was a definite band of peat at the base), so the lower portion of this particular part of the section is therefore somewhat uncertain.

follow it in places, though the present straight portion to Brandon Creek was evidently cut in Roman times (Astbury 1958, Solway *et al* 1970) to take much of the water. By 1604, according to Hayward's map, the Little Ouse was definitely flowing along its present straight channel (Smyth 1727, Armstrong 1766) which was referred to as the Rebeck River in 1574/5 (Dugdale 1662), but several maps (Blaeu 1648, Jansson 1635, Hondius 1632) show a small stream flowing into the old Ely Ouse in the position of the lower part of the Little Ouse rodham which is named Depney Lode on both Hayward's map of 1604 and Sir Jonas Moore's 'Large Map' (1685).

DEPOSITIONAL SUCCESSION OF THE GREAT OUSE (WEST WATER) SYSTEM

In the summer of 1976 a new main drainage channel was excavated across the Fens south-east of Ramsey on behalf of the Anglian Water Authority and parts of this section were examined, and, as in the case of the Little Ouse, borings were made in the bed of the drain, reaching, where possible, the mineral substratum (Figs 1 and 3, section V).

The excavation cuts diagonally across the course of a very large rodham*. As in the Little Ouse sections, there is a corresponding deep peat-filled depression (Fig. 3 A′) associated with the main rodham. Additional evidence of this further in the east was found through a random boring (Fig. 1 W) immediately south of a small 'island' (TL 358819) in Somersham North Fen, where no base to shelly peat had been reached at a depth of 5 m below the surface of the Fen Clay. From the limited evidence available it appears that this is probably a pre-Boreal depression, cut into the Oxford Clay or coarse sandy deposits of the fen floor, and about one and a half times as wide as that of the Little Ouse, though the levées (Fig. 3 G) are less well developed. The lower part of this depression away from the rodham contains peat with small non-marine shells (A1), more characteristic here than in the corresponding parts of the Little Ouse sections. This is succeeded by peat, with wood remains and tree trunks

*At the centre of the rodham the excavation abruptly changes direction from SE-NW to NNE-SSW. Because of this, the section, when reproduced to the same scale as that of the Little Ouse sections, is very long. It has therefore been projected onto a line drawn at right angles to the general direction of the main rodham. The resulting section shows approximately the true proportions of the Ramsey system relative to that of the Little Ouse, assuming that it is also at right angles to the hidden deep depression, which was found beneath the rodham. The boundary between the Lower Peat and the Fen Clay at each side of the section and the small rodham to the south-west are therefore relatively more compressed laterally than the main feature.

scattered through it (A2). A feature not found near the Little Ouse is a thin more or less continuous layer of clay or humose clay in the middle (A3).

The late Neolithic erosion channel below the Ramsey rodham (Fig. 3 B′) was filled with fine sand and loamy sand (B1) to a depth of at least 8 m. It is slightly coarser than the corresponding sand in the Little Ouse section (Fig. 2 IV) furthest downstream, indicating that the sea from which it came was probably nearer, as already suggested by Godwin and Vishnu-Mittre (1975). The base of the channel could not be reached because running sand prevented sampling.

The sand was covered by thin layers of non-calcareous clay or silty clay loam (Fig. 3 B2) with pockets, or a discontinuous band, of peat or loamy peat. The band of peat may be contemporaneous with the thin humose clay of the Little Ouse, section IV (Fig. 2 Y-Z). The top 30 cm of the rodham is calcareous humose silt loam or silty clay loam, probably disturbed and evidently once covered by Upper Peat. Unlike the Little Ouse rodham there is no sign of a final peat-filled river channel or of a Bronze Age erosion channel so it is probable that the water course had already become blocked with sand by then. The magnitude of the deposits associated with the Ramsey rodham indicates that a large river must once have flowed here, probably the Great Ouse itself. It was evidently diverted northwards near Somersham in Bronze Age times along the course of the West Water, in contrast to the Little Ouse which, apart from local meanders, kept an almost constant course from the end of the Devensian Ice Age till the 17th Century.

BACKSWAMP

Though not very far from the big rodham a part of the ditch section away from the deep depression (Figs 1 and 4 section VI) was investigated. It illustrated the typical stratification of the fenland backswamp, consisting of Lower Peat, Fen Clay and Upper Peat. The thin layer of clay, generally humose, corresponding to that in the Lower Peat of the deep depression (Fig. 3 A3) is again represented (Fig. 4 A3), but it is much less continuous. This clay is generally non-calcareous and often associated with sedimentary peat containing non-marine shells. It has not been noticed in deep borings in the fens near Chatteris, so is possibly mainly confined to the deeper depressions of the south-western fens and their immediate neighbourhoods.

Over much of the Ely-Welney basin the Fen Clay is thicker and the Lower Peat correspondingly thinner than in the basin to the west and south of Chatteris, although the top of the Fen Clay is approximately level over the whole area. Section VI (Fig. 4) is probably fairly typical of the greater part of the south-western basin, apart perhaps from the thin clay band in the Lower Peat. While the water was being pumped out, the junction between the Lower Peat (A) and the Fen Clay (C) was clearly seen. A very distinctive feature (more exaggerated in section V (Fig. 3) because of the projection) is its extreme irregularity. Depressions in the top of the Lower Peat *are known to occur* where moderate-sized or large rodhams cross the Fen Clay (Seale 1975, Fig. 10 p. 31), though this does not explain all the small depressions. Because the junction between the Lower Peat and the Fen Clay is generally very deep over much of the Ely-Welney basin it is unlikely ever to be exposed even during major drainage excavations except at the edges where the Fen Clay thins out and where the junction is anyway relatively even; furthermore the nature of the contact in the centre of the basin will not be known until frequent deep borings are made. It is quite probable that the Fen Clay transgression reached the Ely basin some time before it reached the southwestern basin. In the latter area it no doubt flooded first over minor depressions in the surface of the marsh, and where there were creeks the top of the peat was slightly eroded. Quite often the boundary is merging and there are many plant remains such as the reed *Phragmites* indicating that in these places the water only gradually overwhelmed the vegetation. *Phragmites* can however form dense communities in salt marshes as it is very tolerant of brackish conditions (Godwin 1978).

Perhaps the thin clay layer (A3), judging by its relative position in the sections, is about contemporaneous with the base of the Fen Clay of the Ely area and represents a temporary flooding of the river, but this cannot be proved without pollen analysis and radiocarbon dating.

CONCLUSIONS

Since Fowler's extensive research into the history of the fenland waterways, there has been much wastage of the peat and many aerial photographs of the Fens have been taken, bringing to light, in the form of rodhams, much additional evidence that was unavailable to him. The present work is an attempt to add to the knowledge gained by him of the major watercourses in the southern Fenland. Those of the Ely area have recently been mapped and discussed and one or two minor alterations to Fowler's work were found to be necessary (Seale 1975).

The approximate relationships of the various deposits and erosional phases to the main marine transgressions and human culture and activities are summarised in Table 2.

A section across the West Water old way between Old Halves (TL 384815) and Benwick Mere (TL 349892) would be of interest as it might give a date for its inception. If it showed an erosion channel no deeper than about minus 5 m O.D. this would prove that this portion of the river was post-Neolithic. A large rodham appears to cross Hammond's Eau at right angles north-east of Holwoods Farms (TL 395811) and possibly again to the north (TL 384824), implying that it is older than the old way itself. This rodham would probably be contemporaneous with the Fen Clay, but it would be very unlikely for any watercourse to cross right over a pre-existing deep channel if one was there. Possibly this rodham, the southern portion of which has not yet been traced, represents an ancient course of the Great Ouse. North of this area a very wide rodham, of low relief, crosses West Fen west of March about 1 to 2 km west of the 'old course' of the River Nene (the continuation of the West Water). Though it is

Approximate (uncorrected) Date B.C.	Major Historical Features	Climatic Periods	Little Ouse Sections I to IV	Great Ouse Section V	Backswamp Section VI
2000	DRAINAGE AND RECLAMATION	SUB-ATLANTIC (cold and wet)	Old Little Ouse Watercourse totally abandoned		
1000	UPPER PEAT AND MERES	SUB-ATLANTIC (cold and wet)	↑? Silt loam F (Section I) ↓; ↑? Final Channel H' (Sections I, II & IV); Flood deposit J?	Peat Remnant E2	↑
0	ROMANO-BRITISH MARINE TRANS-GRESSION UPPER SILTS IN NORTH-ERN FENS	SUB-ATLANTIC (cold and wet)	Partial Diversion of Little Ouse; Peat bands D5 Section IV ?		
	UPPER PEAT: IRON AGE	SUB-ATLANTIC / SUB-BOREAL		Peat E2 Remnant (Section V)	Peat E2 Remnant
1000 2000	UPPER PEAT: BRONZE AGE	SUB-BOREAL (warm, dry, continental)	Clay D3 and Silt D4 ? Sandy Deposit D2 Shelly Peat D1 ? Erosion of Channel D'	Peat E1 Section V River course abandoned	↓
3000	FEN CLAY: SALT MARSH WITH CREEKS; OPEN WATER LAGOON?	SUB-BOREAL (warm, dry, continental)	Top eroded (Sections II & III) Shelly Peat B5 over Mixed deposit B4 at Section I Silt loam or sandy loam B1 merging outwards to Fen Clay C	Clay B2-3 (Sections IV & V) Peat cont. A2? Clay A3 ?	Fen Clay C Humose Clay A3?
4000 5000	LOWER PEAT: NEOLITHIC AGE	ATLANTIC (warm and wet)	Erosion of channels B' Peat A (Sections I-IV)	Peat A2 (Section V)	Peat A Dry woodland outside levées (G)
6000 7000	LOWER PEAT: MESOLITHIC AGE	BOREAL (warm and dry)		Shelly Peat A1 (Section V)	
8000		PRE-BOREAL (cold)	Erosion of channels A' with levées G		

Table 2. Relation between the erosional and depositional features in and near the old courses of the Little and Great Ouse Rivers (modified after Godwin).

wider than the silt deposits of the West Water, it was evidently not noticed by Fowler, presumably because there was more peat in his day. This again was either a very large distributory or the main post-Glacial channel of the river. A Roman canal marked by a moderate-sized rodham runs westwards from the 'Old Nene' towards the island of Coates (TL 385992-335996). It crosses the course of a Roman causeway at an acute angle near Infield's Farm (TL 360994) and appears entirely superimposed on the enormous rodham, which by then probably represented a silted-up channel. A small final channel can be seen on aerial photographs on the eastern convex side of this large rodham north of the March-Peterborough railway.

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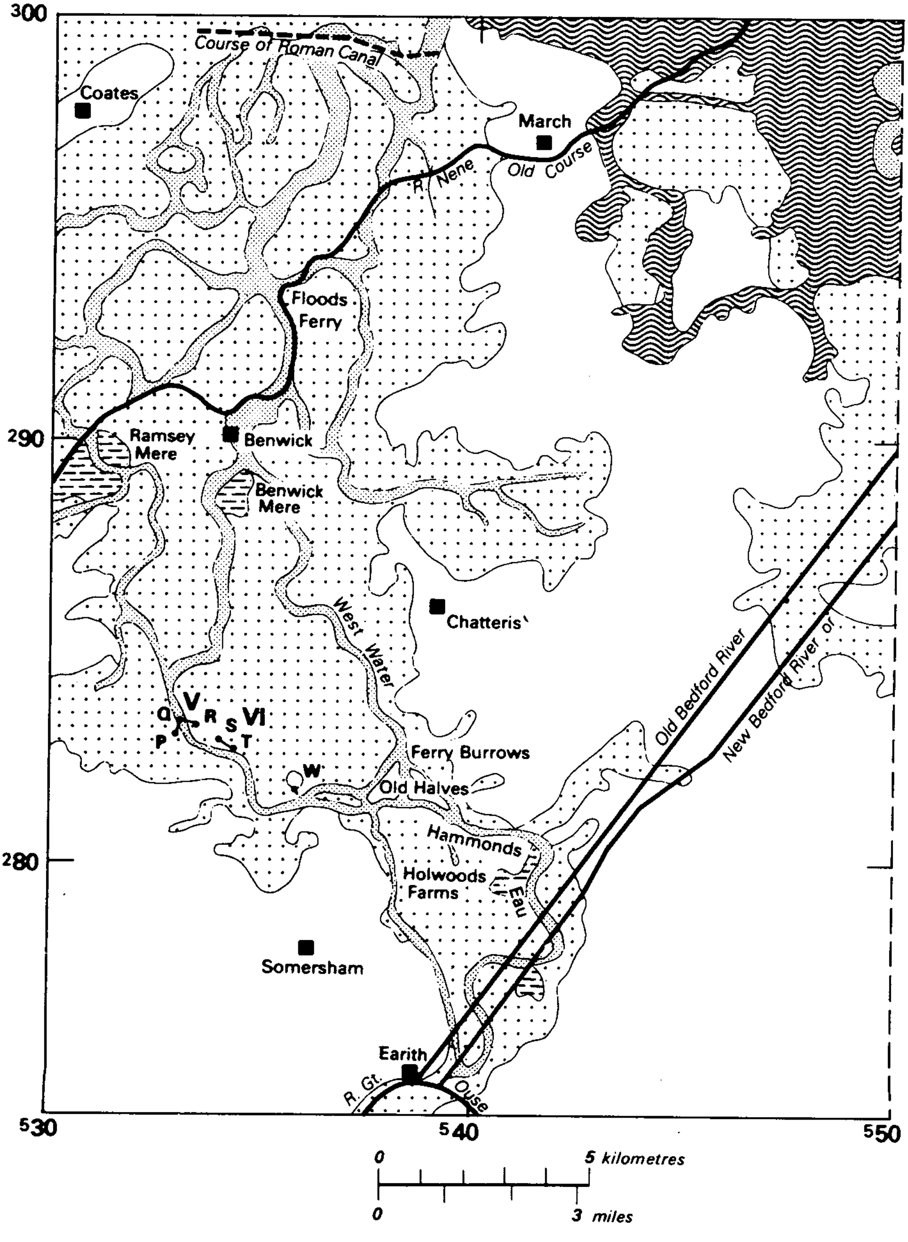


Fig. 1. Post-glacial mineral deposits and principal extinct and existing watercourses around Ely and March, showing positions of sections I to VI and bores W-Z.

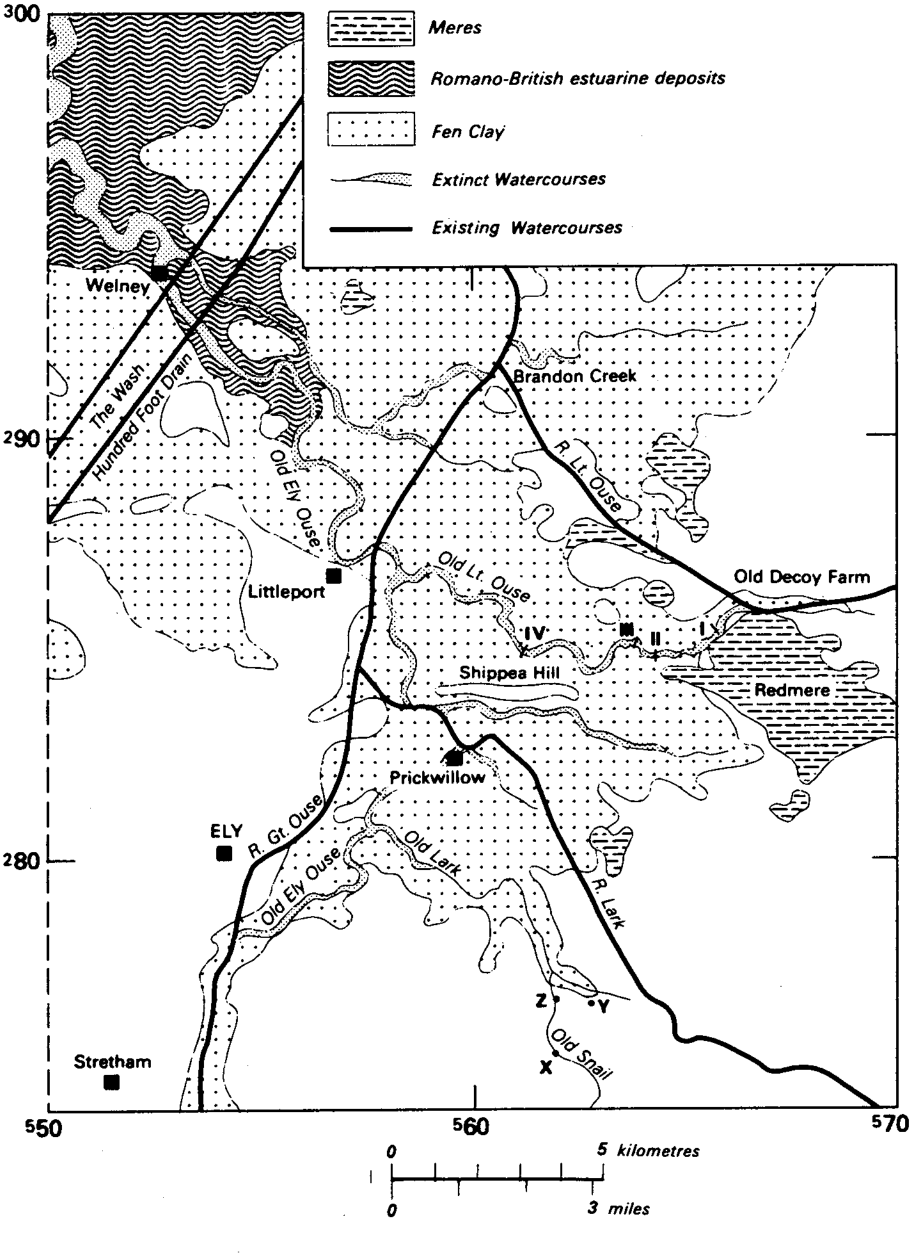
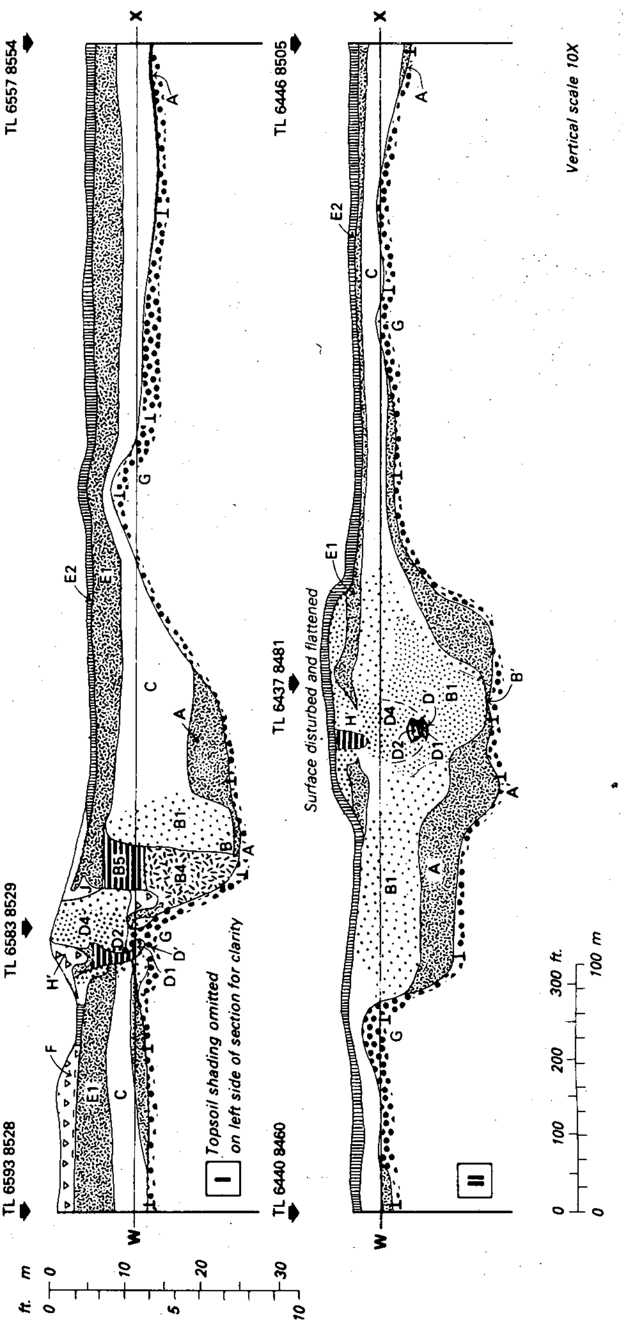

300
290
280
550
560
570
Meres
Romano-British estuarine deposits
Fen Clay
Extinct Watercourses
Existing Watercourses
Welney
The Wash
Hundred Foot Drain
Old Ely Ouse
Brandon Creek
R. Lt. Ouse
Old Decoy Farm
Littleport
Old Lt. Ouse
IV
III
II
I
Shippea Hill
Redmere
Prickwillow
ELY
R. Gt. Ouse
Old Ely Ouse
Old Lark
R. Lark
Z
Y
X
Old Snail
Stretham
0
5 kilometres
0
3 miles

Fig. 1 (cont'd)


TL 6593 8528
TL 6583 8529
TL 6557 8554
TL 6440 8460
TL 6437 8481
TL 6446 8505
W
X
I
II
Topsoil shading omitted
on left side of section for clarity
Surface disturbed and flattened
Vertical scale 10X
ft.
m
A
B1
B4
B5
C
D1
D2
D4
E1
E2
F
G
H
H'
0
100
200
300 ft.
100 m

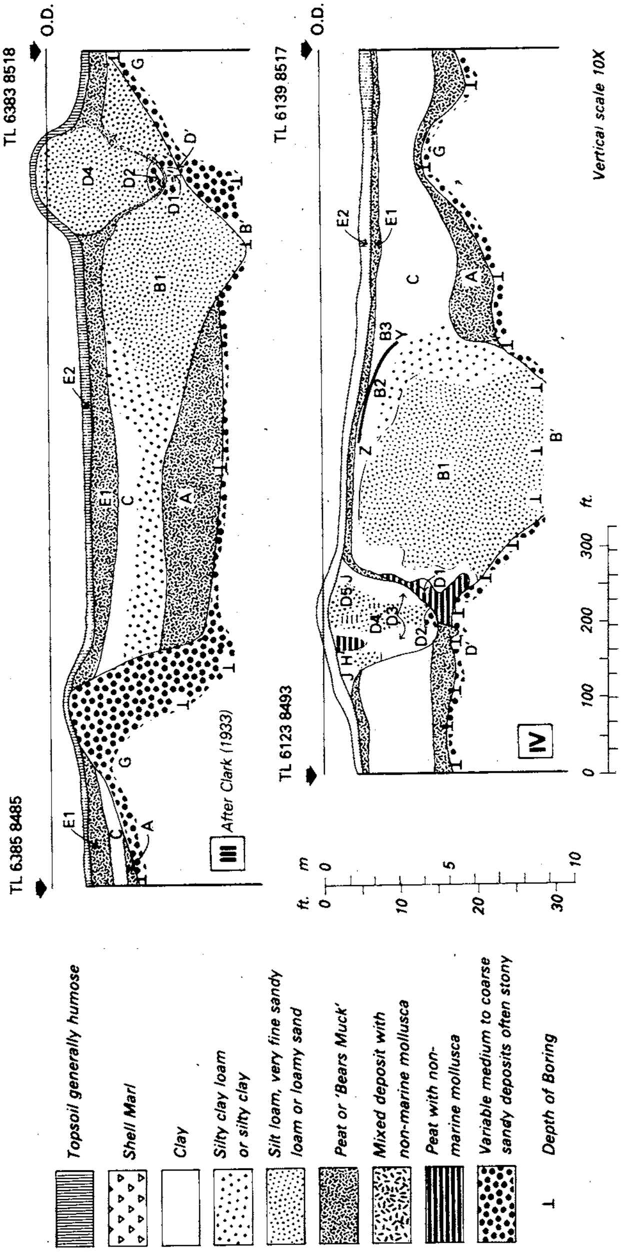


Fig. 2. Sections I to IV across the Little Ouse rodham (for explanation of letters see Table 1, p. 3).

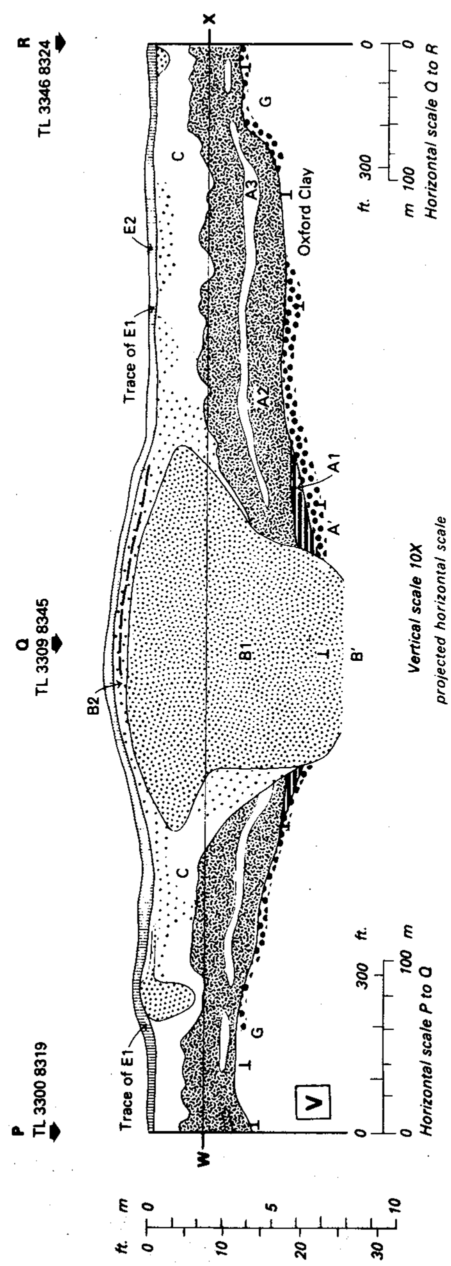


Fig. 3. Section V across large rodham south-east of Ramsey, Cambs., (for explanation see Fig. 2; for positions of P, Q and R see Fig. 1).

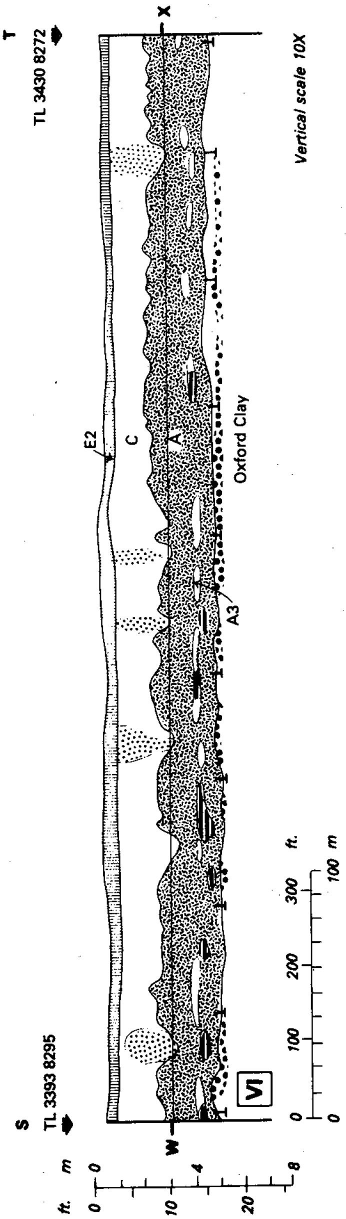


Fig. 4. Section VI of Fenland deposits in Backswamp area south-east of Ramsey, Cambs., (for explanation see Fig. 2; for positions of S and T see Fig. 1).

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