

Chapter 2

Iron Age and Romano-British Rural Settlement in North West England

theory, marginality and settlement

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In the last 15 years rural settlement sites and material culture of the late prehistoric and Romano-British era have started to emerge west of the Pennines and south of the Lake District. The range of material that has come to light is varied and in some cases spectacular. From pottery and farmsteads (Fig 2.2), to gold coins, sculpture (Fig 2.1) and bog bodies our perceptions of the period in this area are starting to change. However, we have been, and still are, hampered by our own prejudices; in the assumption that the North West is an archaeologically backward area; by the perceived difficulties of recovering the evidence itself; and by the interpretations we have put upon the evidence. J D Marshall writing in the Lancashire volume of the City and County Histories series in 1974 noted that 'Lancashire as a whole was thinly settled in pre-history, and the region was plainly inhospitable' (Marshall 1974, 13). This opinion was echoed later by



Fig 2.1: Iron Age bull's head escutcheon, a recent metal-detector find from near Crewe, Cheshire. Scale 1:2. Copyright Cheshire Museums.

Hartley and Fitts (Hartley & Fitts 1988, 68-70) and a similar view was expressed 13 years later for the Cheshire evidence (Petch 1987). Kenyon could state in 1991 that 'the North West remained a largely aceramic, impoverished, cultural backwater' in the prehistoric period and that this was reflected during the Roman period in a lack of 'Romanisation in the form of recognisable urban settlements or villa estates' over much of the region (Kenyon 1991, 28, 53). A similar view was expressed by the finds specialists in the published excavation report for Beeston Castle (Royle & Woodward 1993, 74) and has recently been echoed by Crosby who observed that 'Cheshire, not quite on the frontier but certainly on the economic margin of the empire, probably retained many of the characteristics of pre-Roman farming systems' (Crosby 1995, 26). Higham has even suggested that iron working was not introduced into Cheshire until after the Roman conquest (Higham 1993, 28), whilst Haselgrove has recently written that the 'Iron Age in Lancashire is poorer than for almost any other part of the country' (Haselgrove 1996, 61).

Two themes emerge from these views. Firstly, that the climate and physical geography of the region made the area marginal for early settlement. Secondly, that this in turn led to the archaeological remains of the late prehistoric and Romano-British era in the North West being sparse and the material culture of poor quality. The first theme is perhaps the key point of interest, for climatic marginality implies change, which suggests that the local communities of the region could have exhibited some form of stress during this period which might be recoverable archaeologically. This paper will therefore attempt to assess how valid these two assumptions are by reviewing our current state of knowledge. Both periods will be treated as two halves of one continuum separated by the pivotal act of the Roman conquest during the AD 70s AD (Shotter 1997). This will provide a period of nearly a millennium which should allow a sufficiently large mass of data to be studied.

Defining the Geographical Area Under Study

However, before we can begin to assess how climatic marginality might have effected the archaeology of the

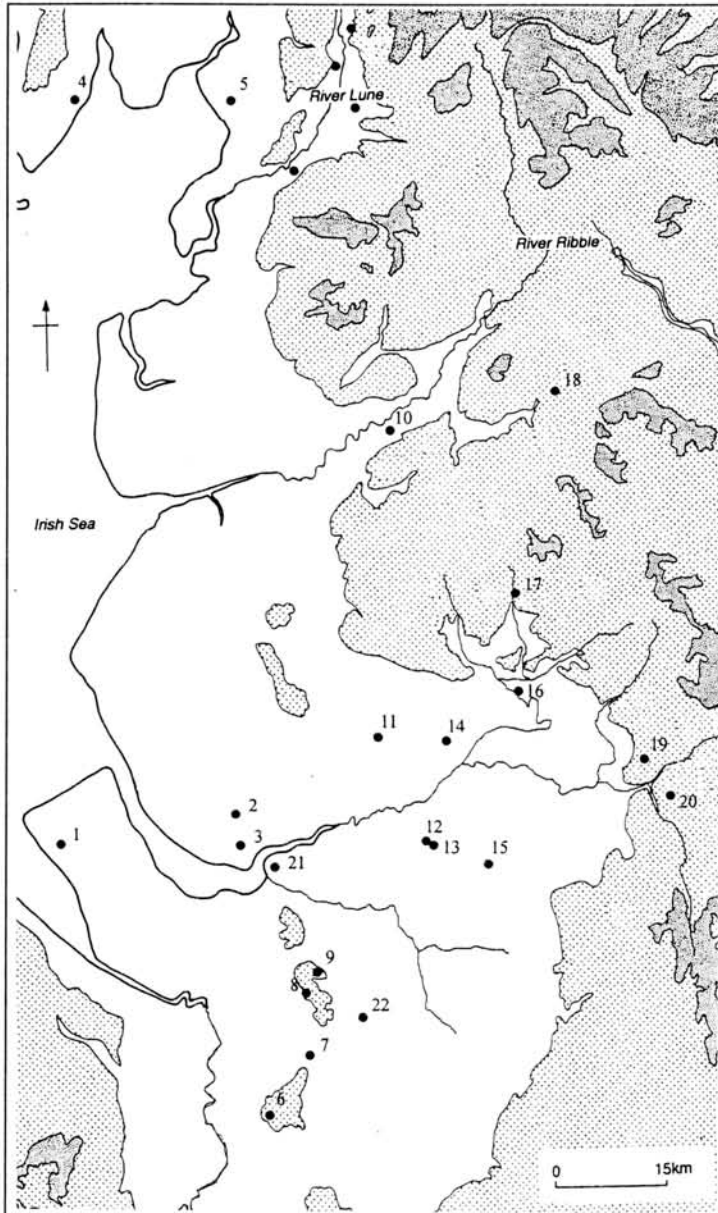


Fig 2.2: Distribution of known late prehistoric and Romano-British enclosure sites in the North West (excluding Cumbria). Note the area between 100m AOD and 250m AOD the theoretical agriculturally marginal area during the Iron Age (contours at 100m and 400m intervals).

Key:

- (1) Irby; (2) Tarbock; (3) Halewood;
- (4) Skelmore Heads; (5) Warton Crag; (6) Maiden Castle; (7) Beeston Castle; (8) Kelsborrow; (9) Eddisbury; (10) Portfield Castle; (11) Southworth, Winwick; (12) Legh Oaks I; (13) Legh Oaks II; (14) Great Woollen; (15) Tatton Park; (16) Rainsough; (17) Castlesteads; (18) Castercliffe; (19) Werneth; (20) Mellor; (21) Halton Brow; (22) Eaton-by-Tarporley Roman villa.

late prehistoric and Romano-British period in the North West we have to arrive at a consistent definition of the area under discussion. We can not easily compare, for instance, the statements of the archaeologists and historians quoted above because their terms of reference do not match. They were each talking about a different geographical entity; the modern counties of Lancashire or Cheshire, the historic County Palatines of Lancashire and Cheshire; or even Lancashire and Cumbria taken together. This lack of a common geographical reference extends elsewhere amongst the archaeological profession, even to English Heritage sponsored initiatives. The North West Wetlands Survey, for instance, ranges from Cumbria in the north, through Lancashire, Merseyside, Greater Manchester, and Cheshire, to Shropshire and Staffordshire in the south. The term North West is itself a largely 20th century invention, and means different things to different groups depending on their point of view, politically and geographically.

We need to turn away from these modern

administrative boundaries, with their own in built constraints, and seek coherent geographical areas if we are to begin to understand the impact of the climate of the area on the quality of archaeological material from west of the Pennines. If we look at the topography of this area we can see that between the north Midlands plain and the Cumbria hills the landscape is dominated by a series of river valleys running east to west into the Irish Sea; the Dee, Gowy, Weaver, Mersey, Alt, Douglas, Ribble, Wyre and Lune. This has led to a great deal of topographical fragmentation since these valleys are divided by prominent ridges and hills, especially north of the Ribble where the Lancashire plain is reduced to a narrow strip a few kilometres wide. However, some coherence can be seen in the catchment area of the River Mersey and its estuary. The Mersey Basin, as geographers have long called this area, encompasses most of the land south of Wigan and north of Nantwich and includes the Gowy, Weaver, Sankey, and Mersey rivers; an area roughly 80 km by 70 km. It is surrounded on three sides by hills; the Rossendale

Years BC/AD	9000	8000	7000	6000	5000	4000	3000	2000	1000	BC	AD	1000	
Pollen zone	III	IV	V	VI		VIIa		VIIb		VIII			
Major vegetation	Tundra	Tun. and shrub	Birch Pine Hazel	Pine Hazel	Pine Hazel Elm Oak	Lime Elm Oak Alder	Oak Alder (Heather, grasses and herbs increasing)		Decline of woodland and rise of shrubs and grasses Appearance of cereal pollen				
Clearance and agriculture	None	Little evidence of forest disturbance			Frequent forest disturbance Hunting and gathering			Small scale forest clearance and pastoralism	Forest regeneration	Major forest clearance Mixed farming	Fo. regen. Mi. fa.	Fo. cl. Mi. fa.	
Soils	Profiles not stable	Maturing soil profiles base-rich			Stable base-rich forest soils			Increasing acidity, podzolization and erosion					
Average summer temperature (degrees centigrade)	0	Rise to 12		12	Rise to 16.5 (Climatic Optimum)		Decline to 15	Rise to 17 (post-glacial high)	Decl. to 14	Steady rise to 15	Decl. to 14	St. rise to 16	
Wetlands	Start of mossland formation in lowland basins (Ashton Moss)				Start of upland blanket peat			Expansion of blanket peat (Featherbed Moss)		Very rapid peat gr.	Weathering of peat profiles		Rapid peat growth
Archaeology	Upper Late Palaeolithic	Early Mesolithic		Late Mesolithic			Late Mesolithic/ Early Neolithic	Late Neolithic/ Early Bronze Age	Late Bronze Age/ Iron Age		R B	Pre-Conquest	Norman
Years BC/AD	9000	8000	7000	6000	5000	4000	3000	2000	1000	BC	AD	1000	

Table 2.1: Time-chart showing the development of the Mersey Basin landscape from 9000 BC to c AD 1250 with reference to the palaeo-environmental and archaeological evidence (after Nevell 1992, 14).

uplands and its outliers around Wigan to the north and north west, and the Pennines to the east and south-east as far as Congleton and this catchment area runs westwards as far as Liverpool, Chester and the Wirral. These geographical features define an area that is roughly bowl shaped; the very area where most of the new finds of the last 15 years have come from; the bog bodies, the metalwork, the pottery and above all the settlement sites. It is this area that the rest of this paper will focus upon.

A Model for Climatic Marginality

How valid is the assumption that the environment of this region was hostile to settlement in the late prehistoric and Romano-British periods?

The dramatic effect of fluctuations in annual mean temperature on local agricultural conditions is being increasingly recognised by geographers and archaeologists alike (Kenyon 1991, 14-5; Parry 1978, 100-2). The link between climatic deterioration and the abandonment of cereal cultivation at higher altitudes was first extensively explored in this country by Dr M L Parry, who established the climatic limits for the cultivation of oats in the Lammermuir Hills in south-east Scotland (Parry 1975). These climatic limits were based upon mean summer temperature, annual rainfall, and wind speed. He observed that a change in any of these factors led to a change in the altitudinal limits for cultivation. On this basis he was able to map

the probable cultivation limit at various stages of the climatic cooling period between AD 1300 and AD 1700. How far are Parry's theories applicable to the North West, and might they help in assessing how agriculturally marginal the region was in the late prehistoric and Romano-British era? As long ago as the early 1960's Crowe estimated that the altitudinal lapse rate for the North West, the amount by which the annual mean temperature drops with increased height, was in the order of 70m for every 0.5 degrees centigrade. Using Crowe's figures as a guide it is possible to assess the impact of the climatic changes charted by Lamb in the first millennium BC (Lamb 1982, 141) on the North West.

According to Lamb the climate of England declined sharply at the end of the second millennium BC, with a fall in mean annual temperature of around 2 degrees centigrade. Thus from being c 1.5 degrees above the mid-twentieth century average (c 15.5) around 1200 BC, by c 750 BC the annual summer temperature of Britain had fallen to 0.5 degrees below the twentieth century average (Table 2.1; Lamb 1982, 55). This was coupled with an increase in the prevailing westerly winds, and consequently in rainfall. Temperatures declined by a further c 0.5 degrees until around 150 BC when they began to rise slowly, reaching twentieth century levels around the beginning of the first century AD and peaking in the third century at around 0.5 degrees above the mid-twentieth century average. Such figures are undoubtedly crude but it is not so much the

absolute temperatures that are important in the assessment of the impact of climatic change on the local environment, but rather the pattern of fluctuation.

In the Mersey Basin and elsewhere west of the Pennines, the effect of these climatic changes on the altitudinal limit of cultivation, and by implication permanent settlement, would have been particularly severe. The mid-twentieth century marginal limit for cereal cultivation lies between 200m and 250m AOD (Crowe 1962, 44). Using Parry's model suggests that around 1200 BC the altitudinal limit for cereal cultivation may have been as high as 460m AOD, but by c 150 BC the c 2.5 degrees fall could have reduced this limit to as low as 110m AOD. Certainly land above this level would have been marginal for cereal cultivation. The recovery in temperatures after c 150 BC would have restored the limits for cereal cultivation to their mid-twentieth century levels, between 200m and 250m AOD. Therefore, theoretically for most of the first millennium BC all year round settlement above c 110m AOD within the Mersey Basin would appear to have been filled with risk.

Having demonstrated the theoretical basis for climatic change and agricultural marginality in the later prehistoric and Romano-British period how far does the local palaeo-environmental evidence support this model? We are fortunate in the North West in having a large number of natural palaeo-environmental deposits available for analysis, in particular lowland peat bogs and upland blanket peat deposits, many of which have been studied in the last two decades. It should thus be possible to assess the impact of these climatic changes on the local vegetational history of the Mersey Basin by studying these local sources.

Agriculturally, we have hypothesised that the most marginal areas along the western Pennine fringe would have been land between 110m and 250m AOD zone. In the southern Pennines a number of studies have been undertaken of the blanket peat deposits above this zone. These indicate that the climatic deterioration of the early first millennium BC dramatically increased the rate of upland peat growth, which inundated most areas above 300m AOD that might have been used for pasturing in the Neolithic and Bronze Ages (Tallis 1991; Tallis & McGuire 1972; Tallis & Switsur 1973). Furthermore, the palaeo-environmental evidence indicates that blanket peat formation permanently replaced the heathland and scrubland that existed before c 1200 BC, so that the recovery in temperatures and decline in rainfall in the first part of the first millennium AD, the Romano-British period, would have halted but not reversed these effects (Tallis 1997; Tallis & Livett 1994; Tallis & Swistur 1990).

Changes in the vegetational history of the lowland areas of the Mersey Basin, below the 200m to 250m AOD zone, were not as severe, but the peat bog deposits studied from Ashton Moss, Chat Moss, Lindow Moss, Risley Moss and Wymbunury Mosses also reflect the fall and rise in temperature and the variations in rainfall during the late prehistoric and Romano-British periods.

An Eco-deterministic Model of Settlement

It has been shown that the palaeo-environmental deposits of the Mersey Basin preserve evidence for climatic change during this period. However, they also show something else; evidence of anthropogenic changes to the vegetation of the Mersey Basin in the form of woodland clearance episodes, which allows us to suggest a reconstruction of the impact of changing settlement trends on the landscape of the area.

In using the palaeo-environmental evidence to assess the impact of humans on the Mersey Basin certain problems arise. The first of these is that only a few of the pollen diagrams studied in the region have been the subject of detailed radio-carbon assays. This means that we have to rely on comparison with other dated pollen diagrams in order to identify the first millennium BC and early first millennium AD clearance episodes in all the diagrams from the Mersey Basin. Birks' comparison of the pollen diagrams from Holcroft and Lindow Mosses with those from northern Lancashire has recently been strengthened by a newly carbon-dated pollen diagram from Lindow Moss and the research work of the North West Wetlands Survey (Hall *et al* 1995; Leah *et al* 1997; Oldfield *et al* 1986). Birks (Birks 1965, 309-11) found two features common to all the North West peat pollen diagrams which delineated the late prehistoric and Romano-British eras. The first was a major recurrence surface, or bog regeneration phase, from the early first millennium BC, dated in the Mersey Basin at Chat Moss to the years 795-595 BC (695 ± 100 BC, Q 683) and at Lindow Moss to the years 580-420 BC (500 ± 80 BC, BM 2400). In northern Lancashire it was dated to the period 930-690 BC at Pilling Moss (810 ± 120 BC, Q 68). The second was a further major recurrence surface dated at Helsington Moss in the central Pennines to the years AD 326-526 (426 ± 100 , Q 83; Godwin & Willis 1960, 62-72). This is visible in all mossland pollen samples from northern England where the peat stratigraphy survives that late (Oldfield 1963, 23). Thus, within the pollen record of the region the mid-first millennium BC to mid-first millennium AD is bracketed by two distinctive environmental phases. Whilst this provides a broad framework within which to work, exact dating, such as whether an increase in cereal pollen belongs to the late prehistoric or Romano-British period, is difficult.

The second major problem is how far the pollen evidence from mosses can be used as a guide for a whole region. This has been covered in great depth by Turner (Turner 1983, 67-73) who discusses the size of the pollen deposit and its significance; for instance the balance between local and regional pollen varies with the size of the deposit and the position of the sample. Generally local pollen represents the vegetation within a 1 km radius of the sample, whilst regional pollen, which to be truly representative needs to be taken from the centre of the deposit, can characterise the vegetation of an area up to 5 km radius from the sample.

Within the Mersey Basin this environmental



Fig 2.3: Eddisbury hillfort looking north, showing the surviving earthworks. This site was abandoned sometime in the late first millennium BC.

evidence, overwhelmingly from mossland deposits, but also including samples from archaeological contexts, can be used to reconstruct the environmental history of the period. Of the main mossland and lake deposits studied within the Mersey Basin (Cowell & Innes 1994; Hall *et al* 1995; Leah *et al* 1997) there are only seven dated pollen cores that having a bearing on this period from the lowland areas of the Basin; two from Chat Moss, two from Lindow Moss, one from Holcroft Moss, one from Knowsley Park Moss and one from Simonswood Moss. Although seven detailed pollen cores have been published from the upland regions fringing the study area to the north and east (three from the southern Pennines and four from the Rossendale uplands) only three, one from Rossendale at Deep Clough and two from the southern Pennines, at Rishworth Moor and Featherbed Moss, impinge on the Mersey Basin. These diagrams provide regional environmental data concerning two key areas within the Mersey Basin. Firstly, the lower Mersey terraces around Warrington. Secondly, the 110m-250m AOD zone which, it has been argued, was marginal arable land throughout the first millennium BC.

The seven dated lowland pollen diagrams testify to wide ranging landscape changes in the mid to late first millennium BC. Four diagrams, Holcroft (Birks 1965, 302-4), Chat Moss A and B, (Birks 1964, 37-41) and Lindow Moss I (Birks 1965, 305-7) each record three major and prolonged episodes of woodland clearance in the period *c* 795 BC to *c* AD 526. Without firm dating evidence it is difficult to ascribe these episodes to particular periods within this era, although the final clearance in each diagram is terminated by the recurrence surface or regeneration phase dated at Helsington Moss to the period AD 326-526 and is thus taken to be late or sub-Roman in origin.

Lowland Settlement Trends During the First Millennium BC

Having established the chronological framework of our eco-deterministic model of settlement trends, we can now look in detail at this palaeo-environmental evidence. All the lowland diagrams show a broadly similar developments in the regional vegetation of the lowland areas of the Mersey Basin, with the two earliest episodes of woodland clearance, probably assignable to the mid and late first millennium BC, separated by a short phase of woodland regeneration. The first of these episodes was characterised by sustained woodland clearance and an absence of cereal pollen, suggesting pastoral farming. This occurs in most of the diagrams of the Mersey Basin immediately after the early first millennium BC recurrence surface dated to the period 795-420 BC. At Chat Moss A and B, pollen diagrams indicate major forest clearance beginning with this recurrence surface. The details from Chat Moss showed a severe decline in oak woodland and a corresponding rise in bracken and plantain frequency. Ash and willow pollen became important, and beech became a major woodland component from this time onwards. In sample A (SJ 7180 9600), from the middle of the moss, tree and shrub pollen fell to 58% of total dry land pollen, with herbaceous pollen accounting for the remaining 42%, whilst in sample B (SJ 7035 9480), which was closer to the western edge of the moss, these figures were 66% and 34% respectively.

Similar patterns can be seen in published diagrams from Holcroft and Lindow Mosses, and an unpublished diagram taken from Risle Moss (Leah *et al* 1997). At Holcroft Moss (SJ 6740 9335), Birks' phase C3, which once more occurs immediately after the first millennium BC recurrence surface, was characterised by pastoral type clearance with increased representation of

Plantago Lanceolata, *Rumex* and other grass pollen. Tree and shrub pollen accounted for 72% of the total dry land pollen, with herbaceous pollen accounting for the remaining 28%. The Lindow Moss I sample also indicated woodland clearance immediately after the early first millennium BC recurrence surface. This too was characterised by a sharp rise in herbaceous dry land pollen, to 35%, with tree and shrub pollen accounting for the remaining 65% of pollen. Once more increases in weeds such as *Plantago Lanceolata* and *Rumex* suggested pastoral activity.

Similar phases of pastoral type activity are recorded from a number of small palaeo-environmental samples on the northern and eastern fringes of the Mersey Basin. A pollen diagram from Simonswood Moss on Merseyide (SJ 445 996) saw intensive clearance activity associated with traces of cereal pollen in the years following the period 1154-780 BC (2730 ± 100 BP; Birm-1220; Cowell & Innes 1994). A similar episode, but with not traces of cereal pollen, was noted at Knowsley Park Moss to the south (SJ 455 961) during and shortly after the years 930-790 BC (2670 ± 60 BP; Birm 1176; Cowell & Innes 1994). In the Pennine

foothills fringing the eastern edge of the Basin a small basin mire on Godley Brook at Godley Hill in the Longdendale valley (SJ 9680 9515) has produced a clearance phase dated to the years 810-415 BC (2530 ± 60 BP; Beta-111472; Ogle, Robinson & Shimwell 1997).

A brief period of forest regeneration was followed by the second phase of woodland clearance within the Mersey Basin, during the late first millennium BC. This was characterised by a period of highly intensive agricultural activity, involving major deforestation, high levels of weed pollen, and, for the first time, the introduction of cereals (and possibly hemp/hops) in high quantity. This period of intense land use has only been dated at Lindow Moss II (SJ 8200 8050), where this major clearance episode occurs after 430-250 BC (340 ± 90 BC; BM 2401). During this phase tree and shrub pollen fell to 74%, herbaceous pollen rose to 23% and cereal pollen accounted for 3% of the dry land pollen total. Significant increases in the relative frequency of gramineae, *Plantago Lanceolata*, and *Rumex* pollen, coupled with wheat pollen and possibly barley oats suggested to Oldfield that this phase, around



Fig 2.4: Castlesteads promontory enclosure in the Irwell valley to the north of Bury. An escarpment edge site from the late Iron Age. Note the single ditch cutting off the promontory in the centre of the photograph.

Table 2.1: Late Prehistoric & Romano-British Sites in the Mersey Basin

Name of Site	Area in Hectares	Period of Activity	Height Above Sea Level	Number of Ditches
Beeston Castle	4ha	LBA - Mid-Iron Age	100m AOD	2
Brookhouse, Halewood	?	Iron Age/RB	20m AOD	2
Castlesteads	1.1ha	Late Iron Age	110m AOD	1
Eddisbury	3.5ha	Iron Age	150m AOD	3
Great Woolden	1.1ha	Late Iron Age-RB	20m AOD	2
Halton Brow	1.68ha	RB	70m AOD	1
Hangingbank	1.23ha	RB	230m AOD	2
Irby	0.88ha	Iron Age-RB	60m AOD	1
Kelsborrow	3.3ha	Iron Age	170m AOD	2
Legh Oaks I	0.1ha	Iron Age	60m AOD	1
Legh Oaks II	0.31ha	RB	60m AOD	1
Maiden Castle	0.7ha	Iron Age	211m AOD	2
Mellor	2.2ha	Late Iron Age-RB	220m AOD	2
Rainsough	0.96ha	Late Iron Age-RB	65m AOD	1
Winwick	1.27ha	RB	25m AOD	1
Tarbrook	?	RB	20m AOD	1
Tatton Park	0.45ha	late Iron Age-RB	40m AOD	open

Lindow Moss, witnessed major forest disturbance, burning and occupation for farming over a period of centuries (Oldfield et al 1986, 84). Birks' evidence for the same period from Lindow Moss I (SJ 8235 7965) was not as emphatic, but nonetheless indicated major woodland clearance, with rises in herbaceous pollen and high values of *Artemisia* and *Chenopodiaceae* pollen and isolated grains of *Linum* pollen suggesting nearby arable activity (Birks 1965, 310).

Samples from Chat Moss A, in the middle of the moss (SJ 7180 9600), and from Chat Moss B, on the western edge, near the Glazebrook valley (SJ 7035 9480), also record cereal pollen for the first time from broadly contemporary clearances dated by Birks to the late first millennium BC (Birks 1964, 33-4). Both are characterised by a decline in shrub pollen, to 30% in Chat Moss A and 24% in Chat Moss B, coincident with a decline in tree pollen to 33% in each diagram. High values of dry land herb pollen were recorded, with these rising to 34% in Chat Moss A and 40% in Chat Moss B, and for the first time cereal-type pollen is recorded in significant numbers, accounting for 3% of the total dry land pollen in each sample. This latter figure suggests that some arable farming was being practised nearby. The contemporary clearance from Holcroft Moss (SJ 6740 9335), Birks' C4 clearance phase (Birks 1965, 304) is less distinctive, with declines in tree and shrub pollen to 48% and 17% respectively, and a rise in herb pollen frequencies to 35%. There was very little indication of plants associated with cultivation activity, although the high values of *Artemisia* and *Chenopodiaceae* pollen as well as the isolated grains of *linum* suggest some arable activity in the vicinity of the moss (Birks 1965, 310).

A pollen diagram from Simonswood Moss on Merseyside (SJ 445 996) saw similar intensive clearance activity, associated with cereal pollen levels above 1% of total land pollen counts, beginning in the

period 790-257 BC (2380 ± 80 BP; Birm-1221; Cowell & Innes 1994).

Upland Settlement in the First Millennium BC

In contrast to these lowland pollen samples, which each indicate a two phase development of agriculture in the Mersey Basin during the mid to late first millennium BC, the three diagrams from the uplands of the region indicate sustained forest clearance from the mid-millennium in the Rossendale area, but only from the late first millennium elsewhere in the southern Pennines. The first of these samples comes from the Rossendale uplands. This sample, from Deep Clough A (SD 777 169), lies at the head of a small tributary stream of the river Irwell, draining eastwards from the watershed between Holcombe Hill and Harcles Hill at 340m OD (Tallis & McGuire 1972, 727). Here Tallis and McGuire dated two clearance episodes, C3 and C4, to the periods *c* 690-500 BC and *c* 350 BC to AD 290. These calculations were based on relative dates derived from an assumed steady rate of peat accumulation above the single carbon dated sample of 1710-1470 BC (1590 ± 120 BC, Birm 147; Tallis & McGuire 1972, 736-7). Whilst these figures can not be considered as wholly accurate because of this assumption, there are no external factors casting doubt on their assumptions. Episode C3, *c* 690-500 BC, witnessed a substantial decline in tree pollen. Before this date tree pollen accounted for 75-80% of the total dry land pollen, being dominated by *Quercus*, *Alnus*, and *Corylus* pollen, with smaller amounts of *Ulmus* and *Betula*. In C3 tree pollen fell to 44%, shrub pollen fell to 6%, whilst herbaceous pollen dominated the spectra, with 49%. Cereal pollen did not occur.

After a short period of partial woodland regeneration, a second major woodland clearance, C4, lasting until the middle of the Romano-British period and beginning

around c 350 BC can be detected. Tree pollen again fell, this time to 53%, but herbaceous pollen only rose to 26%. The two chief characteristics of this sample was the rise of shrub pollen to 19% and the appearance of cereal pollen in significant quantities, 2%, half way through the clearance episode. Tallis and McGuire ascribe the upsurge in shrub pollen, particularly *Calluna* and *Plantago* values, to an increase in site moisture possibly as the result of climatic deterioration around the middle of the first millennium BC, coupled with a rise in soil erosion. The steep rise in grass pollens in both C3 and C4 indicates substantial woodland clearance in the mid to late first millennium BC, whilst the absence of cereal pollen in C3 suggests that the Rossendale uplands may have been used only for summer pasturage in the mid first millennium. The occurrence of cereal pollen in C4 may suggest the introduction of arable farming on the flanks of the Rossendale uplands. Though the exact timing of phase C4 can not be fixed, the first occurrence of this pollen suggests a first century BC or first century AD context.

This evidence is compatible with the samples from Rishworth Moor (SD 988 173), where four radio-carbon assays provide a secure framework for the many clearances observed. Here, sustained forest clearance did not occur until after 570-370 BC (470 ± 100 BC; GaK 2824). This was characterised by a great increase in the variety and quantity of non-arboreal pollen, coupled with a corresponding decrease in tree pollen values. These changes culminated around 50 BC - AD 110 (30 ± 80 AD; GaK 2825), with tree pollen accounting for 15% of the total, shrub pollen 10%, and herbaceous pollen the rest. For the first time cereal pollen occurred, although it accounted for less than 1% of the total, perhaps reflecting the impact of an ameliorating climate and the consequent rise in the marginal limit for cereal agriculture in this area (Bartley 1975, 378).

A similar contemporary pattern of clearance can also be seen from the Featherbed Moss pollen diagram. This pollen diagram suggests irregular and spasmodic changes in the tree pollen during the middle of the first millennium BC. This activity was not sufficient to make any great change on the overall intensity of the woodland, and since there was an absence of cereal pollen the inference is that the uplands in the vicinity were used only for summer pasture (Tallis & Switsur 1973, 726-7). Sustained forest clearance did not occur until after 351-251 BC (301 ± 50 BC, Q 854) when grass pollen rose to 54% of the total dryland pollen sample, and tree pollen fell to only 30%. This large clearance activity was maintained until the end of the first millennium BC, by which time traces of cereal pollen, though less than 1%, are first detectable (Tallis & Switsur 1973, 726).

Settlement Trends During the Romano-British Period

Seven dated pollen diagrams are available for this period within the study area, and all record major and

sustained woodland clearance over many centuries at the end of the first millennium BC and during the first centuries of the first millennium AD. These clearances appear to be broadly chronologically coincident across the Basin, and form the third significant period of palaeoenvironmental disturbance after the recurrence surface of 795-595 BC. The end of this third phase of clearance activity is marked by a second recurrence surface which is radio-carbon date to the year 326-526 AD (Godwin & Willis 1960, 62-72).

Five pollen diagrams indicate a major upsurge in agricultural activity in the centuries immediately before the c 326-526 AD recurrence surface. The Chat Moss A and B diagrams suggest that the strongest increase in agricultural activity took place within the middle reaches of the Mersey valley. At Chat Moss B tree, shrub, and grass pollens were all roughly equal at around 30%, whereas cereal pollen leapt to 12% of the total dry land pollen sample. At Chat Moss A grass pollen rose to 69% and cereal pollen to 5% of the total dry land pollen sample. This palaeoenvironmental evidence is supported by similar findings from Holcroft Moss, where grass pollen rose to 41% but cereal pollen only rose to 3% of total dry land pollen. The evidence for substantial woodland clearance from Lindow Moss I is equally strong, with grass pollen reaching 46% of the total dry land pollen sample, and cereal pollen accounting for 4%. These figures mark the pre-Norman Conquest peak of cereal pollen in the Mersey Basin. A similar episode was noted at Knowsley Park Moss on Merseyside (SJ 455 961) where a large sustained clearance episode began shortly before the period AD 240-440 (1680 ± 50 BP; Birm 1176; Cowell & Innes 1994).

This evidence is supported by two palaeolimnological studies in Cheshire. The first, from Peckforton Mere (SJ 5310 5575) near the Central Cheshire Ridge, indicated a period of rapid soil erosion thought to date from the Romano-British period (Schoenwetter 1982). The second, from Rostherne Mere in northern Cheshire (SJ 7440 8400), began sometime between 366 BC and AD 60 (2090 ± 70 BP; SRR-1891; Leah *et al* 1997) when a pronounced rise in soil erosion is thought to indicate intensive local clearance activity.

The upland pollen diagrams from the fringes of the Mersey Basin also indicate an upsurge in activity during this period, but of a different nature. The pollen diagrams from Deep Clough A, at 340m OD, and from Rishworth Moor, at 410m OD, both indicate the continuance of the substantial woodland clearance seen towards the end of the first millennium BC, and the dominance of grass pollens indicative of an open landscape perhaps used for pastoral farming. At Deep Clough A, although cereal pollen does occur in the Roman period the quantities are so small, less than 1% of the total dry land pollen, that Tallis and McGuire argued that this related to the lower flanks of the Rossendale hills, rather than to the immediate locality of Deep Clough A (Tallis & McGuire 1972, 723). Likewise cereal pollen occurs at Rishworth Moor, but

again only in minute quantities well below 1% of the total dry land pollen sample. (Bartley 1975, 378). The extent of upland woodland clearance in this area by the beginning of the Roman period is indicated by a pollen sample carbon dated to 50 BC to AD 110 (30 ± 80 AD; GaK 2025) which shows that tree pollen accounted for only 15% of the total dry land pollen, shrub pollen 10% but grass pollen 75%. Extensive upland woodland clearance is also indicated from Featherbed Moss. Between 128-28 BC (78 ± 50 BC; Q 853) and AD 500-600 (550 ± 50 ; Q 852) there occurred the largest post-glacial sustained clearance of woodland in this part of the southern Pennines. During this phase tree pollen fell to 23% and grass pollen rose to 58% of the total dry land pollen sample. Most striking was the appearance for the first time of cereal pollen, which held steady at just below 2% of total dry land pollen throughout this period.

Although there is very little excavated archaeological evidence to indicate the continued presence of rural settlements in the Mersey Basin after *c* AD 200, the evidence supplied by palaeoenvironmental material and coin-loss indicate little change in the level of rural activity within the Mersey Basin during the third and fourth centuries AD.

Palaeoenvironmental evidence from Chat Moss and Lindow Moss both indicate the continuance of early Roman clearances, with their significant levels of cereal pollen, until the recurrence surfaces of the fifth century AD (Howard-Davis *et al* 1988, 24). The continuing strength of lowland agricultural activity in the third and fourth century is also suggested by the pattern of coin loss in the Mersey Basin during these centuries. More significantly, two upland pollen diagrams from the northern and eastern fringes of the Mersey Basin, appear to provide some evidence suggesting a decline in agricultural activity above *c* 300m OD in the Mersey Basin after *c* AD 290. In central Rossendale, the Deep Clough A site, at 340m OD, indicates that the regeneration of the forest cover occurred after *c* AD 290 (Tallis & McGuire 1972, 727). At Featherbed Moss, at 500m OD, regeneration began around AD 280 (Tallis & Switsur 1973, 744), although in both diagrams cereal pollen continued to be present during the fourth centuries. Since both sites lie above the model for the altitudinal limit for cereal cultivation and habitation outlined earlier, they might be thought to act as a sensitive barometer to climatic and social changes.

The palaeo-environmental evidence for the period *c* 795 BC to AD 526 shows in some detail the climatic decline of the early to mid first millennium BC and the subsequent recovery of the late first millennium BC and first few centuries of the first millennium AD. Furthermore, this evidence would also seem to show rises and falls in human activity, indicated by three phases of clearance episodes which culminated in the late first millennium BC with the first occurrence of cereal pollen coincident with sustained forest clearance. This pattern would appear to match the climatic cycle of this period although whether the two are directly related is difficult to prove but superficially the link

seems strong. However, what of our marginality model? The palaeoenvironmental evidence would seem to provide some support for the theory that the 110-250m zone in southern Pennines and its foothills was the most agriculturally marginal area, but the lack of a comprehensive network of dated palaeoenvironmental samples from across the basin means that other marginal areas may not be represented in this date. One further zone of agricultural marginality highlighted by the North West Wetlands Survey is the large basin mosslands of the region, which were not conducive to early settlement in the same way as the Somerset Levels and the Fens. Even so, it is clear that the assumption that the whole of the region was marginal for settlement in some way during this period can not be sustained.

The Archaeological Evidence for Settlement

Having established a model for identifying agriculturally marginal areas in the region, and a model for analysing broader settlement trends, how far does the archaeological evidence support these theories? In particular, is there any evidence for the second assumption outlined at the beginning of this paper that this marginality led to the archaeological remains of this period being sparse and its material culture of poor quality?

The archaeological evidence for settlement during the first millennium BC and early first millennium AD (Iron Age and Romano-British era) is dominated by two types of evidence; earthwork enclosures and cropmark enclosures. The best known of these are the earthwork



Fig 2.5: Leigh Oaks II, a circular enclosure on clay which has produced 2nd century AD pottery. Copyright Dr Nick Higham.

enclosures, most of which were first identified and catalogued by Forde-Johnson (Fig 2.3; Forde-Johnson 1962). He used the hillfort model in his interpretation of these sites, comparing them with the better known sites of the Welsh Marches and South-West of England. Using his criteria there are thirteen hillfort type sites that lie in the modern counties of Cheshire, Greater Manchester, Lancashire and Merseyside, of which eleven are situated within the Mersey Basin (Beeston Castle, Bradley, Burton Point, Castlesteads (Fig 2.4), Eddisbury (Fig 2.3), Helsby, Kelsborrow, Maiden Castle, Oakmere, Rainsough, and Woodhouses). These sites ranged in size from 0.1ha (Burton Point) to 4ha (Beeston Castle), and had a mixture of single and multiple ditches and banks as defences.

The second group of enclosure sites, cropmarks, have been identified by a number of recent surveys by archaeologists from Chester, Liverpool and Manchester. Within the Mersey Basin these number over 50 and more can be expected. These sites are characterised by small single and double ditched enclosures, usually less than 1.5 ha in area, of a type familiar in southern Britain from the late first millennium BC (Nevell 1989a, 31-3; Collens 1994, 22; Cowell 1991a, 50). These cropmarks range in size from 0.1ha to 2.8ha. Stylistically there is no difference between the cropmark sites and the earthwork sites traditionally identified at hillforts, other than topographical location (the earthworks usually lie in the 110-250m AOD zone) and the presence of earthwork banks and ditches in the latter. Within Forde-Johnson's own work he made a distinction between true hillforts above roughly 2.5ha in area which acted as central places and the home of a local chieftain, and smaller sites which he regarded as farmsteads. If we apply this criterion to the Mersey Basin, then of the earthwork enclosures only Kelsborrow (3.3ha), Eddisbury (3.5ha) and Beeston (4ha) can be viewed as true hillforts. How accurate such an assumption might be is open to question, although anthropological parallels (see Matthews this volume) would suggest that such a settlement hierarchy may be recoverable from size alone. The point here is that the earthwork and cropmark enclosures from the Mersey Basin can be treated as broadly one group of site (Table 2.2).

This gives us over 60 sites in the Mersey Basin which morphologically may belong to the late prehistoric and Romano-British periods, although only 18 have produced excavation evidence from this period. Of these twelve can be shown to be late prehistoric in origin (Table 2.2). 13 enclosures can be shown by excavation to have Romano-British phases, and seven have both late prehistoric and Romano-British phases (Castlesteads, Great Woolden Hall, Irby, Mellor, Rainsough and Tatton Park; Table 2.2). There are a further eight enclosures where various types of fieldwork have failed to provide a positive date, although a late prehistoric or Romano-British origin is strongly suspected (Arthill, Bradley, Burton Point, Giant's Seat, Helsby, Oakmere, Rhodes Green, and Woodhouses).

Three topographical sub-groups can be tentatively identified within this group of 26 enclosures. Firstly, promontory settlements, examples of which are beginning to be found along the escarpment edges of the river valleys of the Mersey Basin. Dated examples are known from Castlesteads, Great Woolden, and Rainsough, but other potential examples include a double-ditched cropmark site at Giants Seat in the Irwell Valley, and the cropmark ditched enclosure at Rhodes Green in the Irk valley. Secondly, hilltop sites along the western Pennine fringes and along the Central Cheshire Ridge (Beeston Castle, Eddisbury, Kelsborrow, Maiden Castle, Mellor and Hangingbank). Thirdly, niche sites on or near to the boundary between two different soils types (Irby, Halton Brow, Legh Oaks I & II, Fig 2.5, Tatton Park and Winwick).

We can suggest a climatically deterministic model for settlement constraint in the basin which would see the potential area available for cereal production shrinking but also the upper limit for grazing in this area was being reduced. It may be significant that the few upland univallate hillforts or palisaded enclosures of the southern Pennine uplands, Almondbury, Castercliffe, Mam Tor and perhaps Portfield, (Combes 1982; Combes & Thompson 1979; Cunliffe 1991 344-52; Varley 1976) appear to have been abandoned by the middle centuries of the millennium (Kenyon 1991, 28; Hart 1984, 73-5) and that by the last quarter of the first millennium BC none of the largest hillfort sites in the North West were occupied. Thus, at the hillfort of Portfield, in the Ribble valley to the north of the Mersey Basin, the main period of use for the defences belonged to the period 750-500 BC (Beswick & Coombs 1986, 175-6). Similarly at Castercliffe (also in the Ribble valley, SD 884 388) radio-carbon dates for the ramparts centred on 510 ± 70 BC (S 286; Coombs 1982, 127-8.) whilst in Cheshire the ramparts at Maiden Castle were dated to *c* 390 BC (British Archaeological Abstracts 88/510.) and the main occupation of the hillfort at Beeston Castle spanned the years 765 to 257 BC (Ellis 1993, 85-6).

The best known of the non-hillfort type sites is Great Woolden Hall (SJ 691 936), a promontory double-ditched enclosure in the Glazebrook valley between Salford and Warrington excavated by GMAU in 1986-8. The finds and overall phasing of this site would appear to provide our best guide as to the trends likely to be visible on the other lesser known sites (Nevell 1989b & 1992b).

The earliest activity at Great Woolden was represented by a small assemblage of flint recovered from fieldwalking activities over the enclosure and from the excavations themselves. This material would seem to fit a date sometime in the late Neolithic or early Bronze Age, although it is not clear whether this activity was little more than ephemeral.

The major period of activity (Phases II to IV) were associated with the ditches of the enclosure, which appears to have begun in the latter part of the first millennium BC. This took the form of four structural episodes spanning the first century BC to the late

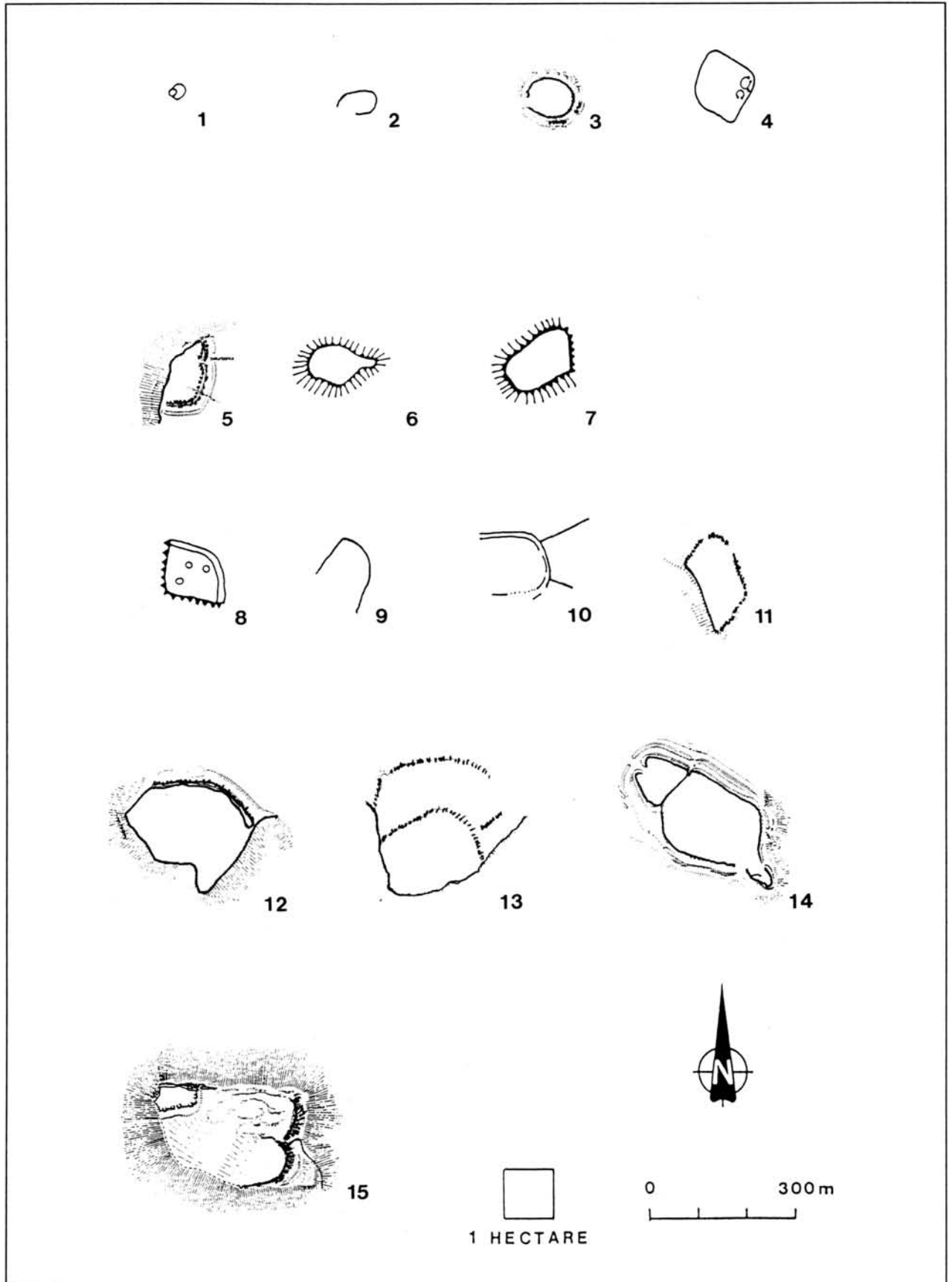


Fig 2.6: Comparative plans of some late Iron Age and Romano-British enclosures from the Mersey Basin. Key: (1) Legh Oaks I; (2) Legh Oaks II; (3) Castercliffe hillfort; (4) Winwick; (5) Maiden Castle; (6) Rainsough; (7) Castlesteads; (8) Great Woolden; (9) Halton Brow; (10) Hangingbank; (11) Portfield Camp; (12) Kelsborrow; (13) Warton Crag; (14) Eddisbury; (15) Beeston Castle. All drawn to the same scale. Sources: Harris 1987; Haselgrove 1996; & Nevell 1992a.

second/early third century AD, starting with a series of rectangular pits in Phase I; moving to a ditched compound containing a hut circle in Phase II; being succeeded by an oval palisaded compound, with a hut, in Phase III (two circular features were located elsewhere within the enclosure by geophysical survey and it is possible that these may represent other structures from Phases II and III); and finally being replaced by a further series of pits in Phase IV. Phases II and III were dated, by radio-carbon samples, to 120 BC - AD 80 (40 BC \pm 25, GrN 16849) and 65-15 BC (20 BC \pm 100, GrN 16850).

The acidic conditions of the site meant that very little palaeo-environmental material survived. However, the presence of burnt sheep bones in Phases II and III, burnt pig bones in Phases II and IV, and rotary quern fragments from Phase III hint at a mixed farming economy.

The final phase of activity at Great Woollen Hall (Phase IV) was represented by second century, local Romano-British wares from the plough soil and from the final fill of the inner ditch; this latter context also produced a radio-carbon date of AD 100-320 (AD 210 \pm 110, GrN 16851). The gap between Phases III and IV may suggest a hiatus in occupation, at least in this part of the enclosure.

How far Great Woollen Hall and the other excavated enclosures genuinely reflect the late prehistoric settlement pattern is unclear (Fig 2.6). The number of sites so far recovered is too low to give anything other than an indication of potential settlement densities, but the concentration of 12 cropmark and excavated enclosure sites around Warrington suggest that we may be dealing with intensive valley occupation in localised areas. Furthermore, it seems probable that during the late prehistoric period the Mersey Basin lay on the interface between the main settlement types of the Iron Age: the hillfort dominated zone to the west and south, the villages and open settlements to the south-east, and the enclosed homesteads of the north and north-east. It is thus possible that many unenclosed settlements, like the recently excavated example at Tarbock in the Sankey valley (Robert Philpott *pers comm*) in eastern Merseyside, and the unenclosed site at Tatton Park, await discovery.

The fragmentary evidence and settlement pattern for the Mersey Basin and the North West (Higham 1980) in general makes it difficult to study in detail the development and spread of settlement during the late first millennium BC and early first millennium AD. Even so a number of general conclusions about the possible social organisation of these sites can be put forward. Although most of the dated sites can be found on the glacial and alluvial deposits of the area the presence of two settlements on the heavy boulder clay of the northern Cheshire ridge (Legh Oaks and Tatton Park) suggests that competition for the lighter, more easily worked, soils was already sufficient to encourage

some communities to colonise these marginal areas. This theory is supported not only by the presence of sites on these clay soils, but by the number and location of the multivallate sites within the Basin. Of the 40 or more examples so far identified, most can be found on the lighter soils of the central Basin lowlands, specifically the first and second terraces of the river Mersey.

North West: An Agriculturally Marginal Area?

The internal evidence from the Mersey Basin is insufficient to indicate whether climatic or social changes might be the cause of this decline in upland activity. The wider trends of climatic change in the British Isles in the middle centuries of the first millennium AD indicate that, after the recovery of the climate in the first century BC/AD to conditions slightly better than the late twentieth century, the climate remained stable for the next four centuries. Apart from a few sharp winters in the middle decades of the third century, the next sharp downturn in the climate did not come until around AD 400 which marked the beginning of a period of colder and wetter summers (Lamb 1982, 56-7). It would thus appear unlikely that climatic conditions were the overriding factor in the regeneration of woodland, and the decline in agricultural activity in the upland areas of the Mersey Basin after *c* AD 290.

Other reasons have to be sought and these may, in part, lie in the permanent decline in demand for agricultural produce needed by the Roman army and its dependants, and environmental degradation. The middle decades of the second century AD witnessed a sharp decline in the garrison of the Mersey Basin. The fortlet at Castleshaw had already been abandoned by the army in the early AD 120's, possibly in response to the manpower needs of Hadrian's Wall, whilst the fort at Middlewich also seems to have been abandoned by this decade (Tindall 1994, 4; Walker 1989, 14). It was during the decade AD 140-50 that the sharpest decline occurred, with the garrison falling from 1,500 men to approximately 500. This was the result of the abandonment of the forts at Melandra Castle and Wigan (assuming the latter site can be interpreted as a fort). From a peak of around 2000 in *c* AD 100 the number of soldiers in the Basin had dropped to *c* 500 by AD 150. Furthermore, it is likely that much of the Roman auxiliary garrison at Manchester was absent during much of the third century AD (Walker 1986, 142-3).

By the later second century this would have reduced the supply demands of the Roman army by 75%. The rise of the Wilderspool settlement and Manchester vicus may have off-set much of this apparent reduction in demand. This may be suggested by the coincidence in the decline in upland activity, beginning in the third quarter on the third century AD, and the sharp decline in activity witnessed at both these settlements in the mid third century AD. A causal relationship is difficult to establish in the absence of excavated upland farmstead

sites, but may be suspected on chronological grounds. Other factors may also have militated against the continued exploitation of these upland pasture zones. In particular the Deep Clough A site indicates that there was significant soil erosion prior to the onset of forest regeneration and renewed peat growth from c AD 280 (Tallis & McGuire 1973, 733). Since such a phenomenon is not apparent in other upland diagrams from the Mersey Basin such an interpretation must remain tentative.

Recent light has been thrown on some of the strains of cereal grain grown in the Mersey Basin during the Romano-British period by the examination of Lindow Man's stomach contents. This revealed the presence of macro-fossils of emmer and spelt wheats, barley, oats, and possibly rye (Brothwell 1986, 92). The growing of spelt wheat and rye is confirmed by the sample from the Lousher's Lane site at Warrington, dating to the third century AD (Hinchliffe & Williams 1992, 167). *Triticum*-type pollen was recognised in the pollen diagram from Knowsley Park Moss. From the enclosure at Irby (see Philpott & Adams this volume) has come cereal grains of barley, spelt, bread wheat, oats and possibly rye. Emmer wheat is recorded from archaeological contexts at an unenclosed settlement at Halewood, Merseyside (SJ 45 86; *Britannia* 28, 422). Although these samples are not large enough to provide a detailed analysis of Romano-British arable practice in the Mersey Basin they do indicate that a range of grain types were known to the local farmers, whilst the remains of chaff from barley, oats and spelt suggest that crop processing was similar to non-mechanised pre-industrial processing techniques.

The assumption that the area west of the Pennines, was in some way hostile to settlement would thus seem to have some climatic basis. Whilst the climatic deterioration during the first three quarters of the first millennium BC coincides with a major period of forest clearance in the lowlands across the region which seems to have been pastoral in character, it also coincides with the abandonment of some of the hillforts in the region. The recovery of the climate at the end of the first millennium BC coincides with renewed forest clearance across the Mersey Basin in both the lowlands and the uplands, this time associated with cereal pollen in both areas, and the emergence of a series of ditched enclosures below the then limit of cereal cultivation between 200m and 250m AOD.

Conclusions

At the beginning of this paper two themes were identified. Firstly, that the archaeological remains of the Iron Age in the North West were considered by scholars to be very sparse and of poor quality. Secondly that this was in some way related to the physical geography of the region which was hostile to early settlement.

It has been shown that part of the first supposition stems from a confusion as to the area under discussion, and partly to the inappropriate use of models from elsewhere in the country. At least within the Mersey Basin the archaeological evidence for rural settlement during the Iron Age and Romano-British period is not of poor quality on those sites which have been excavated. Indeed, three distinct settlement types have been identified (escarpment edge, hilltop and niche site enclosures) in the river valleys of the area, and the first steps taken towards characterising the economic and social background of the period. The nature of the archaeological evidence remains, however, sparse and although part of the apparent paucity of sites and people in the Mersey Basin may be accounted for by the difficulties of site identification, we must conclude that it also reflects, however imperfectly and statistically unsatisfactory, a genuine lower level of population and settlement activity.

Why may be related to the second theme (perhaps of more interest archaeologically); that the nature of rural settlement in the region has been in part determined by the geographical and climatic conditions of the area. This view has received some support for the Mersey Basin where the surviving palaeoenvironmental evidence, the evidence for climatic change in the first millennium BC and early first millennium AD, and the archaeological evidence are converging. There is at least some superficial evidence to suggest a decline in settlement activity in the early part of the millennium coincident with a worsening in the climate of the region. When the climate revived so did the evidence for settlement. However, moving from this observation to proving a causative link will require more evidence than we have at present, although the task should be easier now researchers have realised that there is evidence of the Iron Age to be found. The interest in the future must surely lie in trying to link the evidence we already have for palaeoenvironmental stress with the archaeology of this period.