ASPECTS OF SOCIETY AND SETTLEMENT IN WALES AND THE MARCHES,
500 B.C. TO A.D. 1100

A Thesis Submitted for the
Degree of Doctor of Philosophy
under the Committee for Archaeology

Myfanwy Lloyd Jones

The Queen's College

Trinity Term 1983
CONTENTS

List of Maps

List of Figures

Abstract

Acknowledgements

Chapter 1: Introduction 1

Chapter 2: Wales and the Marches: the Physical Background 4

Chapter 3: The Later Prehistoric Period 21

Chapter 4: The Roman Conquest of Wales 59

Chapter 5: The Roman Occupation of Wales and the Marches 72

Chapter 6: Late Roman Britain and its Aftermath 109

Chapter 7: The Post-Roman Period 128

Chapter 8: The Population of Wales and the Marches 153

Chapter 9: Agriculture, Animal Husbandry and Land Use 173

Chapter 10: Trade, Industry and the Growth of a Market Economy 211
<table>
<thead>
<tr>
<th>Appendix 11: Hagiography</th>
<th>470</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appendix 12: The Evidence of Church Dedications’</td>
<td>474</td>
</tr>
<tr>
<td>Appendix 13: The Erw Assessment and the Food Renders</td>
<td>479</td>
</tr>
<tr>
<td>Appendix 14: The Theory of Rank Size</td>
<td>484</td>
</tr>
<tr>
<td>Appendix 15: An Equation to determine the Rate of Population Growth</td>
<td>486</td>
</tr>
<tr>
<td>Appendix 16: Key to Map 27: The Evidence for Bronze Age Agriculture</td>
<td>489</td>
</tr>
<tr>
<td>Appendix 17: Key to Map 28: Iron Age Grain</td>
<td>490</td>
</tr>
<tr>
<td>Appendix 18: Key to Map 29: Roman Grain</td>
<td>492</td>
</tr>
<tr>
<td>Appendix 19: Key to Map 30: Post-Roman Grain</td>
<td>494</td>
</tr>
<tr>
<td>Appendix 20: Key to Map 31</td>
<td>495</td>
</tr>
<tr>
<td>Appendix 21: Key to Map 32: Sites with Cervid Remains</td>
<td>496</td>
</tr>
<tr>
<td>Appendix 22: Key to Map 33: The Distribution of VCP</td>
<td>497</td>
</tr>
<tr>
<td>Appendix 23: Liber Landavensis and the pre-Norman charters</td>
<td>499</td>
</tr>
<tr>
<td>Appendix 24: Key to Map 36: Iron Age Sites in the Vale of Glamorgan</td>
<td>503</td>
</tr>
</tbody>
</table>
Appendix 25: Key to Map 37: Roman Sites in the Vale of Glamorgan 505

Appendix 26: Key to Map 38: Post-Roman Sites in the Vale of Glamorgan 507

Appendix 27: Key to Map 40: Iron Age Gower 509

Appendix 28: Key to Map 41: Roman Gower 511

Appendix 29: Key to Map 42: Post-Roman Gower 512

Appendix 30: Key to Map 46: Blaenau Morgannwg in the Iron Age 513

Appendix 31: Key to Map 47: Blaenau Morgannwg in the Roman Period 515

Appendix 32: Key to Map 48: Blaenau Morgannwg in the Post-Roman Period 516

Appendix 33: Key to Map 52: Caernarfonshire Hillforts 518

Appendix 34: Maps 53 to 58 520

Appendix 35: Key to Map 59: Post-Roman Caernarfonshire 521

Appendix 36: Key to Map 60 523

Appendix 37: Key to Map 62: Herefordshire Hillforts 524

Appendix 38: Key to Map 63: Roman Herefordshire 526
Appendix 39: Key to Map 65: Post-Roman Monuments and Estates in Herefordshire

Appendix 40: The Welsh Lawbooks

Table 1: Faunal Remains from Sites listed in Appendix 20, by Percentage

Bibliography

Abbreviations and Editions
LIST OF MAPS

1. Wales and the Marches: the geographical regions

2. Wales and the Marches: county boundaries prior to the reorganisation of April 1974

3. Wales and the Marches: county boundaries after the reorganisation of April 1974

4. Wales and the Marches: relief and major rivers

5. Wales and the Marches: average annual rainfall


7. Wales and the Marches: Late Bronze Age hillforts and weapon hoards

8. Distribution of hillforts in Wales and the Marches

9. Tribes of the Late Iron Age in Wales and the Marches

10. Wales and the Marches: Late Bronze Age metalwork and later tribal dispositions

11. Roman marching camps in Wales and the Marches

12. Roman military sites of Scapulan date in Wales and the Marches
13. Roman military sites of Frontinian date in Wales and the Marches

14. Roman military sites in Wales and the Marches in use circa A.D. 80

15. Roman military sites in Wales and the Marches in use circa A.D. 100

16. Roman military sites in Wales and the Marches in use circa A.D. 130

17. Roman military sites in Wales and the Marches in use in the late 2nd. century

18. Roman military sites in Wales and the Marches in use in the 3rd. century

19. Roman military sites in Wales and the Marches in use in the 4th. century

20. Wales in the 6th. century: possible political units

21. Wales circa A.D. 875: a political map

22. Wales circa A.D. 942: a political map

23. Dedications to Dubricius

24. Dedications to Berthguin, Trichan and Catguaret

25. Dedications to Teilo
26. Early Christian monuments in Dyfed west of the Taf

27. Evidence for Bronze Age agriculture in Wales and the Marches

28. Evidence for Iron Age agriculture in Wales and the Marches

29. Evidence for Roman-period agriculture in Wales and the Marches

30. Evidence for Post-Roman agriculture in Wales and the Marches

31. Livestock husbandry in Wales and the Marches

32. Sites with cervid remains in Wales and the Marches

33. The Distribution of VCP in Wales and the Marches

34. The Distribution of Bronze Age funerary monuments in Glamorgan

35. Soils in the Vale of Glamorgan

36. Iron Age sites in the Vale of Glamorgan

37. Roman-period sites in the Vale of Glamorgan

38. Post-Roman sites in the Vale of Glamorgan

39. Soils of the Gower Peninsula

40. Iron Age sites in Gower
41. Roman-period sites in Gower

42. Post-Roman sites in Gower

43. Bronze Age funerary monuments in Gower

44. Soils of Blaenau Morgannwg

45. Bronze Age funerary monuments in Blaenau Morgannwg

46. Iron Age sites in Blaenau Morgannwg

47. Roman-period sites in Blaenau Morgannwg

48. Post-Roman sites in Blaenau Morgannwg

49. Roman roads and settlements in Glamorgan

50. Roman roads and Post-Roman settlements in Glamorgan

51. Distribution of Early Christian monuments in Glamorgan

52. Distribution of Iron Age hillforts in Caernarfonshire

53. Distribution of Bronze Age funerary monuments in Caernarfonshire

54. Distribution of hut-groups of the Iron Age and Roman period in Caernarfonshire

55. The Bangor Area: soils and settlement in the Iron Age and Roman
56. Soils and settlement in Llŷn

57. Roman roads and settlement in Caernarfonshire

58. Iron Age and Roman-period settlement in Caernarfonshire

59. Caernarfonshire: the Post-Roman period

60. Soils of Herefordshire

61. Herefordshire: the geographical regions

62. The Distribution of Iron Age hillforts in Herefordshire

63. Roman roads and settlements in Herefordshire

64. Herefordshire: Roman roads and place-names in -leah and -tun

65. Roman Roads and Post-Roman Monuments and Estates in Herefordshire
LIST OF FIGURES

1. Plan of Tre'r Ceiri

2. Plan of Tre'r Ceiri interpreted as four self-contained compounds

3. Plan of Moel y Gaer Phase II

4. Plan of Walesland Rath

5. Plan of the hillfort on Conway Mountain

6. Street Plan of Gloucester in the Roman Period

7. Street Plan of Gloucester in the Post-Roman Period
This work falls into two major sections. After a brief introduction (chapter 1), a preliminary chapter describes the landscape and climate of Wales and the Marches and the limitations which they impose upon settlement and agriculture. The history and archaeology of the region is then summarised in five chapters which deal with Late Bronze Age and Iron Age society and economy (chapter 3), the Roman conquest (chapter 4), the Roman occupation and its effects (chapter 5), the Late Roman period and the Roman withdrawal (chapter 6) and the post-Roman period (chapter 7). In the second major section, six chapters discuss broader themes against this background. These themes are the density and growth of the population, the development of agriculture, non-agricultural aspects of the economy of the region, the changing patterns of settlement, the social organisation of the region and the systems of land tenure employed there. It is argued that the population of the region was relatively high throughout the period under study, and did not suffer a decline comparable with that postulated in post-Roman England (chapters 8, 14); that the economy of the region was fundamentally rural and that urban development, foreign to the region, was only achieved under external pressures (chapters 9, 10); that the pattern of settlement expanded as a result of population pressures (chapter 11); that society was fundamentally conservative, retaining in the post-Roman period elements probably derived from the pre-Roman period, for instance the
close dependence of status on the possession of a certain amount of landed property (chapters 12, 14), as a result of which the native elements in the land law limited the powers of the individual to alienate inherited land and stipulated an extended period for the acquisition of land (chapters 13, 14). Particular attention is paid throughout to the effects of the Roman occupation on the development of the region.
ACKNOWLEDGEMENTS

Many people have made the completion of this work possible, and to them my debt, and my gratitude, is greater than may easily be expressed. I would like to thank in particular my supervisors, Professors Barry Cunliffe and Ellis Evans, for their advice and encouragement, and the Provost and Fellows of the Queen's College, where I was for two years the Randall MacIver Student in Archaeology, through whose support, both financial and especially psychological, the completion of this work was possible, and in particular John Matthews, John Prestwich and Jane Rowlandson, from whose advice and discussion I benefitted greatly. I would also like to thank the staffs of all the libraries which I have used, in Oxford, Sheffield and Leeds, and in particular Brian MacGregor and Philip Bartholomew of the Ashmolean, and Professor Barer and the members of the Department of Anatomy in the University of Sheffield for most kindly allowing me access to their word-processor. My thanks are also due to Huw Pryce, for allowing me to read his unpublished prize-winning essay 'Church and Society in the Lives of the Welsh Saints', Dr. Wendy Davies for sending me an offprint of her article on the Latin charter tradition ( Davies W. 1982 ) before this had reached the libraries, and Nicholas Johnson for allowing me to quote from his unpublished M.A. thesis ( Johnson N.D. 1976 ). I wish also to thank all those friends whose hospitality I enjoyed during my visits to Oxford, and last but by no means least my parents and my husband, who have lived with this work for so long.
INTRODUCTION

My primary aim in writing this thesis has been to study the social and economic development of a region over an extended period of time. The region chosen for study is Wales and the Marches, a region defined, following Nash-Williams and Jarrett's definition of 'Wales' (Nash-Williams and Jarrett 1969:1), as the land west of the Severn and Dee: such a geographical definition is more meaningful, when dealing with early periods, than a definition based upon modern national or county boundaries (see map 1). The chronological span of the work extends from the Iron Age to the eve of the Norman conquest. This choice of both a large region and a long period has enabled an examination of the ways in which factors such as population, settlement patterns, types of agriculture and general economy, patterns of land tenure and social organisation varied both with time and within the region, and particular attention has been paid to the effects of the Roman conquest and occupation. Clearly, in these terms, the benefits of studying a large region over such a long period have been great.

There have, naturally, been corresponding disadvantages, created not least by the sheer volume of information available. I have attempted to tackle this problem in two ways. First, I have limited myself to the study of published material alone as any attempt to include unpublished data could only delay the completion of the work unduly whilst rendering it unmanageable in scale. An extensive gazetteer of sites has been compiled and drawn upon in the production of the thesis, though it has not been incorporated into it. Secondly, I have concentrated my discussion of the settlement pattern upon three contrasting areas, in the belief that a more detailed examination of these, the best documented areas, would prove more instructive than an
unwieldy attempt to treat the entire region in this manner. I thus hope to have been able to counter the tendency, often seen in works on Wales and the Marches, to concentrate upon individual sites (as for instance Dinas Powys, Coygan Camp, Midsummer Hill and Whitton; Alcock 1963A, Wainwright 1967, Stanford 1981, Jarrett and Wrathmell 1981), on relatively small areas (for instance Davies E. 1929), and on particular periods or subjects (for instance, Hogg 1965, 1972A and B, Savory 1976A, Stanford 1972 A and B, Nash-Williams and Jarrett 1969), and instead to have viewed the region as a whole.

An introductory chapter providing a summary of the geographical and climatic setting of the study is followed by five chapters which summarise the archaeology and history of the region from the Late Bronze Age to the 11th. century A.D.: these are intended to set the scene for the following six chapters which discuss broader topics, namely population, agriculture, the non-agricultural economy, the changing patterns of settlement, social organisation and the patterns of land tenure, in this regional setting, and which examine the ways in which these altered and developed throughout the period under study. Whilst some such material is discussed in the earlier chapters, detailed discussion of certain aspects of the evidence, for instance the dating of artefacts and the evaluation of the evidence drawn from various literary sources, is relegated to a series of appendices, in order to facilitate the flow of the argument. Similarly, where possible, information has been displayed in the form of maps with associated gazetteers: again, this has been done in the hope of reducing the burden upon the main text, especially in the chapter which deals with settlement patterns.

I have throughout referred to the old counties into which the region was divided prior to the reorganisation of 1974 (see maps 2 and 3). I have done so partly because the old counties, being for the
most part smaller than their successors, provide more precise
indications of the locations of those sites which lie within them, and
partly because the earlier counties are more firmly established in the
archaeological literature by virtue of works such as those of the
Royal Commission on Ancient and Historical Monuments, the volumes of
the Victoria County History of England, and Domesday Book. I have
espoused several other conventions. When quoting from the works of the
Royal Commission, except in the case of the Herefordshire volumes
(R.C.A.H.M. 1931, 1932, 1934), figures in Arabic numerals refer to
the numbers of the monuments and not to those of the pages unless this
is otherwise specified; in the Herefordshire volumes, such numbers
refer to pages throughout. Those Early Christian monuments which
appear in Nash-Williams' corpus (Nash-Williams 1950A) are referred
to by the number which they are given in that work (for instance,
Nash-Williams.22). The numbering and dating of the charters found in
Liber Landavensis follows that of Dr. Wendy Davies (Davies W. 1979B)
unless otherwise stated.

I have attempted to review all relevant literature up to September
1980. Thereafter, although some publications have been read, no
attempt has been made to achieve complete cover.
2.1: Introduction

The physical geography and climate of any region together play an important part in determining the range of patterns of settlement and economy which are suited to that region, and thus in influencing its development. For that reason, the geography and modern climate of Wales and the Marches are briefly described here. The varying requirements of different types of plants and animals are then summarised and related to modern conditions, thus indicating the current agricultural potential of the region, and past variations in climate, and their probable effects on agriculture and settlement, are then discussed. The chapter closes with a brief survey of the processes of soil deterioration, and the respective roles of man and the climate in these processes.

2.2: Topography and Modern Climate

In Fox's classic division of Britain into Highland and Lowland Zones, Wales and the Marches fall almost entirely within the Highland Zone (Fox C. 1947:29). The region is primarily mountainous, and its relief is very varied (see map 4). Exclusive of inland water, its total area is about 25,290 square kilometres; before the formation of Morfa Harlech, which probably developed only after the 13th century (Steers 1946:131-7), and the reclamation of the 1,868 hectares of Traeth Mawr and Traeth Bach in the 19th century (Stapledon 1936:124), it would have totalled about 25,250 square kilometres. Of this total, approximately 56% lies above 152 metres: this upland is unevenly distributed throughout the region, for 99.9% of Anglesey lies below 152 metres, whereas, at the other extreme, only 2.9% of Radnorshire is so low-lying (Stapledon 1936:80). Clearly, therefore,
the agricultural potential of the region varies considerably as a result of differences of elevation alone.

The maritime location of Wales in particular, and its situation in a region of predominantly Atlantic air-masses, influences its weather and general climatic pattern; however, the height and configuration of the land cause marked local differences in the weather which can vary surprisingly within short distances. The maritime nature of the climate ensures moderate temperatures, ample and fairly evenly distributed rainfall, low amounts of sunshine, and frequent hill, and some coastal, fog; the weather is characteristically changeable. The fragmented coastline with its many inlets ensures that no part of Wales is very far from the moderating influence of the sea (Howe 1957:53-7).

As the relief of the region is varied, slope, height and aspect have a very important effect upon local temperatures. Temperature normally decreases with altitude at a rate of almost one degree Centigrade per 150 metres (ibid. 74), but, because of the importance of terrain, soil, vegetation and land use for climate at ground, altitude does not have a direct and simple effect upon such climate and therefore upon agricultural potential. So, on a coastal hill in Cardiganshire, a south-facing slope may be almost half as warm again as a comparable north-facing slope, although it will also dry out more quickly; similarly, it has been shown that, at two points of identical elevation only 0.8 km. apart on the south Lancashire plain, the one on sand and the other on peat, the difference in climate at ground may be equivalent to a difference in elevation of 213 metres or a relative distance from the sea of some 322 kilometres (Taylor J.A. 1975:8), and it is thus clearly difficult to generalise about the agricultural potential of different locations.

Topography is important in its influence upon precipitation as well
as upon temperature. The entire high central core of Wales is wet, receiving over 200 centimetres of precipitation per annum. The mountainous areas of Caernarfonshire and Meirionydd receive an annual rainfall of over 254 cm. per annum, and parts of Snowdonia receive the heaviest annual rainfall, probably up to 508 cm. per annum (Howe 1957:80-1); even this may be an underestimate, as the conventional rain-gauge used in Britain is thought to underestimate rainfall occurring at ground by as much as 10%, an error which is clearly more significant relative to the high rainfall of the Highland Zone than in the lower drier regions (Taylor J.A. 1975:6). Other parts of the region are relatively dry: the extreme west of Gower, the southern part of the Vale of Glamorgan, and the valleys of the Clwyd and lower Dee receive less than 90 cm. of rain per annum (Howe 1957:82; see map 5).

The rainfall of the region is frequent in incidence as well as adequate in volume. Again, a distinction may be drawn between the upland core and the coastal areas: the former has over 225 rain-days, days on which the recorded rainfall is no less than 0.025 cm. per annum, whereas the Vale of Glamorgan, west Gower, the extreme tips of the Pembrokeshire peninsulae, Llŷn, north-west Anglesey and the north-east of Wales have on average only 175 to 200 rain-days a year. Rainfall is heaviest from the beginning of August to February: a distinctive dry spell in the first three weeks of September accommodates the corn harvest, while the hay harvest falls in the dry spell before August. However, the secondary rainfall maximum in August is detrimental to the successful ripening and harvesting of corn crops, especially wheat (ibid. 83-4).

Evaporation and transpiration account for only some 43 to 48 cm. of the annual rainfall aggregate (ibid. 85), and the consequent regular excess of rainfall over evaporation and transpiration causes heavy
soil leaching which leads either to podzolisation or to gleying
( Taylor J.A. 1957:95-6 ). In Wales in general, conditions have
promoted podzolisation, with extensive peat accumulation in the hills.
Locally, the differences in soil type are largely determined first by
the various parent materials and secondly by variations in altitude,
slope and aspect in relation to local climate (especially rainfall),
weathering, soil erosion, and drainage at different times of year
( ibid. 96-7 ). Over half the soils of Wales probably suffer from some
degree of drainage impedance. Soils with seasonal impedance, normally
in winter only, are very common, especially on the gentler slopes
which rise from valley bottoms, or on higher ground with a flat or
gently rolling surface; characteristic parent materials are boulder
clay, hill down-wash and alluvium. Soils with permanent impedance are
typical of low-lying valleys and coastal flats; they are rarely
cultivated, but are generally utilised as summer grazing
( ibid. 107 ).

2.3: Arable Farming

Since plants and animals vary in their needs, they can exploit
different environments; this can be of great importance to the farmer,
who may then choose that combination of plants and animals best suited
to his land. In terms of food production, arable farming represents
the most effective form of land use for, in general, land used for
growing crops can feed roughly ten times as many people as the same
area would feed if it were used to pasture animals. However, though
man can live almost entirely on cereals (Clark C. 1967:128-30), not
all lands are suited to arable cultivation, and, even on suitable
soils, alternate husbandry, namely the alternation of cropping and
grazing, is usually more productive than permanent arable; with care,
that balance of crops and stock may be achieved which is most
productive in any particular area. Climate is important in determining the suitability of different areas for different forms of exploitation. As heavy rainfall tends to threaten the harvest and can encourage the development of acid grassland, areas of lower rainfall are better suited to crops than are areas of heavy precipitation. The critical figure seems now to be about 90 centimetres of precipitation per annum, much more favouring grassland and less favouring cereals (Bradley 1978:30): under current climatic conditions, therefore, the volume of its rainfall renders much of Wales unsuitable for cereal production (see map 5). Temperature is also important: the growing season for cereals begins at 4.4, that for grasses at about 6, degrees Centigrade (Parry 1978:80): for cereals, an accumulated temperature of about 1,100 day-degrees above this threshold seems the minimum requirement, and generally about 1,500 day-degrees are needed, with 1,900 a more reasonable figure for wheat. In terms of its accumulated summer temperature, therefore, much of Wales would seem marginal for cereal cultivation (see map 6), and is likely in the past to have been characterised by precarious agricultural economies which would have been particularly sensitive to changes of climate (ibid. 81, 83-4). The normal limit of cereal cultivation is about 200 metres O.D., at which height the growing season is approximately a month shorter than at sea-level in the same region; although wheat can be grown up to a height of 300 metres and barley as high as 475 metres, a southerly aspect then becomes most important, and topography rather than absolute height forms the major restriction on cereal agriculture (Bradley 1978:30).

Various cereals were available in prehistoric and early Britain. Of the wheats known to ancient man, emmer seems, from the Bronze Age onwards, to have been more important in the Highland than the Lowland Zone: it is well suited to light dry soils, is probably better sown in
spring than in winter, and has a substantially higher protein content than modern bread wheat. Spelt grows on both heavy and light soils, and is very hardy and ideal for winter sowing in north-west Europe (Jones M. 1981:106). Bread wheat, which is typically associated with deep clay loams, is hardy, has a high yield potential and is easily threshed, but is far more vulnerable to birds and fungi than the so-called primitive wheats; it does not compete as well with weeds and needs a more fertile soil than spelt and emmer. Despite the greater investment of labour and fertiliser required to enable it to attain its high yield potential, it seems to have become the dominant wheat in Britain by the Anglo-Saxon period (ibid. 107).

Barley, which can be sown in winter or spring, has a shorter growing season than wheat, though it must be harvested when quite ripe. It prefers deep fertile well-drained loams, but grows well on heavy or light soils and is the cereal most tolerant of saline and alkaline conditions, doing well on calcareous soils; however, it is particularly sensitive to acidity, needing a soil pH of over 6, and gives low yields on sands. Barley can be grown universally in Britain, except where the drainage is very poor or the soil too acid. Oats thrive in moist cool conditions, can be harvested unripe, and tolerate acid and unfertile soils, though they grow best on deep retentive loams and clay loams. They are particularly sensitive to exposure, summer heat and excessive wetness, and are generally better suited to spring than to winter sowing (Bradley 1978:32, Thomas D. 1963:63, Fleming 1976:366, Parry 1981:9-11, Jones M. 1981:105, 108). Rye is very hardy and grows on all soils except heavy clays; it can withstand acidity and low fertility and can tolerate very dry soils better than most British cereals; it is suitable for both spring and autumn sowing (Jones M. 1981:108). This choice of cereals with different qualities thus widens the range of location in which cereal cultivation is
possible.

The question of whether cereals will grow and ripen remains, however, a different question from whether this will prove worth the effort involved; this will clearly vary according to economic conditions. The yield of cereal seems closely related to the leaf area of the plant after the ears emerge, for the grain-leaf ratio forms a measure of the photo-synthetic efficiency of the leaves in producing dry matter for the grain; here, radiation, temperature, soil status and shelter all seem critical factors (Thorne 1966:89). In Snowdonia, the dry matter production of Festuca-agrostis falls off rapidly with increasing altitude: at 365 metres, it produces 391 grams of dry matter per square metre, at 560 metres 199 grams and at 915 metres only 78 grams (Perkins 1967:80). Clearly, therefore, under current climatic conditions, high-altitude cereal cultivation must be seen as unproductive if sufficient suitable land is available at lower levels. However, in the past, cereals have been cultivated at high altitudes: so, in north-west Wales, in the Mediaeval period, the land was cropped at heights of up to 305 metres, and cereal pollen of Mediaeval date has even been found at 610 metres at Bwlch-y-fign, albeit in a sheltered natural amphitheatre (Taylor J.A. 1973:306-7). Such high altitude agriculture is generally assumed to form a response to the favorable climatic phase which lasted from about A.D. 1150 to 1300 (Lamb 1977:II:435), though the signs of temporary outfield cultivation and settlement between 350 and 450 metres on the south side of Bwlch-y-groes, described as ‘plough lands’ in a record of A.D. 1352 (Parry 1978:123), indicate that such agriculture may have continued for a while after 1300.

In more recent centuries, as much as two-thirds of Wales itself has come under the plough at some time (Taylor J.A. 1957:98); since only 41% of the country lies below 152 metres, some of this cultivation
evidently took place at relatively high altitudes. By 1934, however, arable land accounted for less than 12% of the total area of Wales, and a considerable proportion of that arable took the form of leys, grass fields of various ages: consequently, by far the greater part of the country was given over to grassland and grazings (Stapledon 1936:4). Under modern economic conditions, the region is clearly far better suited to stock-rearing than to arable farming.

2.4: Pastoral Farming

Climate, in terms of both rainfall and temperature, is important for pastoral as well as arable farming. Modern cattle favour a precipitation range of 90 to 120 centimetres per annum: although areas of higher rainfall may be utilised, the main upland areas are avoided, as temperature is also important, the optimum temperature for milk production being about 10 degrees Centigrade. Beef cattle are less vulnerable to cold than are dairy cattle, and can be grazed upon poorer soils and rather higher ground, though this can lead to competition with sheep (Bradley 1978:31). The cattle of prehistoric and early Britain are likely to have resembled, and indeed to have been hardier than, the surviving older breeds of cattle, which in their turn are far hardier than the modern cross-breeds: thus, though winter housing is important in modern Wales, the early cattle may not have needed to be housed over winter, and may instead have been fed in yards and enclosures, thus explaining the apparent paucity of early byres in the region (Grundy 1970:3-4, Morris P. 1979:47). One hectare of good quality pasture can support four to five modern bullocks per annum; as modern cattle need about ten gallons of water each a day (Bradley 1978:31), convenient access to water sources is important.

Sheep dislike damp, low-lying land where they may be prone to
disease. Despite their general tolerance, they are quite sensitive to temperature, and, in severe conditions, the young may need to be brought down to lowland areas to winter. Their carcass weights seem greater in areas where the climate is better, with more sunshine and less rain: thus, they prefer the drier eastern and northern parts of Snowdonia to the wetter west (Hughes R.E. 1958:169). More sheep may be stocked to the hectare in the areas of lower rainfall, perhaps because, in the wetter areas, the higher rainfall results in lower soil fertility and a poorer vegetation (ibid. 179-180). While one modern Herdwick sheep may graze two hectares of hill pasture a year (Bradley 1978:31), and in Mediaeval Yorkshire sheep would seem to have been allowed three hectares each (Trow-Smith 1957:139), on the Cistercian estate of Aberconwy, on the drier eastern side of Snowdonia, sheep seem to have been stocked at a rate of one ewe or two lambs to about 1.2 hectares; the estate seems also to have supported cattle at a ratio of perhaps one cow to 5.3 sheep (Hughes R.E. et al. 1973:115-6). Sheep and cattle seem to have been more important in the region than swine: this may be the result of the pig’s sensitivity to cold and damp and natural preference for a woodland habitat, making it ill-suited to upland areas (Bradley 1978:31).

In regions with marked seasonal variations in temperature, those dependant upon crops and stock often migrate to exploit distant pastures which may have growth for a few months but which are unable to sustain permanent exploitation. Wales is naturally suited to such movements: the mountain pastures which occupy so much of the country support little growth for six months of the year, and 75% of their growth is concentrated in only three months. Movement of stock forms a natural means of utilising these limited food sources, and transhumance in the form of movement of cattle to the uplands is certainly attested from the 12th. to the 19th. century, and indeed
seems implied by Gildas in the 6th. century (Webley 1976: 20-4, De Exc. 3.3). Sheep were probably as important as cattle in these movements, the poorer documentation only reflecting their lower economic value: certainly, by the beginning of the 19th. century, sheep transhumance is frequently documented (Webley 1976:25). It would be surprising if such practices, which represent a natural response to the environment, were not employed in the prehistoric and early historic periods.

2.5: Past Climates

The critical factors which today distinguish the Highland Zone adversely, in terms of human habitability and agricultural potential, from the Lowland Zone are not the immutable characteristics of position and relief but variable factors: the climate, soils, flora and fauna. As the distribution of Bronze Age material in Britain does not appear to reflect Fox's Highland-Lowland division, which seems, by the first millennium B.C., to be respected by many cultural distributions, the critical point which left some areas unsuitable for habitation and agriculture and which rendered meaningful the distinction between Highland and Lowland Zones may not have been passed until the transition from the Sub-Boreal to the Sub-Atlantic climatic phase (Fowler P.J. 1978:2). Little is known in detail of these climatic changes. Reconstructions of post-glacial climatic changes in Britain have generally neglected the significance of meso- and micro-climatic deviations caused by factors such as altitude, aspect and ground conditions in favour of the macro-climate, which deals with large areas over long periods of time; however, meso- and micro-climatic deviations assume great importance in the Highland Zone, and in particular in the study of vegetation, soils and agriculture. The extreme paucity of meso- and especially micro-
climatic data is therefore most unfortunate.

In broad terms, the dominance of maritime weather in both the Atlantic and the Sub-Atlantic climatic episodes must have induced severe lapses and sharp changes in weather and climate with increasing altitude, although the west coast littorals would have been extremely mild. The intervening Sub-Boreal phase saw the highest extension of tree growth: average temperatures then would seem to have been 1 to 1.5 degrees Centigrade higher than today, allowing the tree-line to extend about 200 to 300 metres higher than at present (Tinsley and Grigson 1981:211). Settlement and agriculture similarly expanded to their maximum elevations in the middle and later Neolithic period and the Early Bronze Age. However, the pollen diagrams suggest that the high altitude woodland was thinning out in almost all upland areas of Britain by the beginning of the Bronze Age (ibid. 231), and thereafter the climatic deterioration, which may have begun as early as about 2400 b.c. (c.3000 B.C.), and have become severe in the second millennium, perhaps at the Early to Middle Bronze Age transition (Burgess 1974:195-7), continued, with intervening periods of better conditions, until the decline became very rapid in the early first millennium B.C., culminating in the markedly cool and wet period between c. 800 and 500 b.c. (c.950-650 B.C.) which denoted the opening of the Sub-Atlantic phase. This decline may have begun earlier in western than in eastern Britain (Tinsley and Grigson 1981:211-2, 216-7); so, Tregaron Bog, which had stopped growing c. 1000 b.c., seems to have begun growing again about 700 b.c. (Turner 1981:257-9), while some earlier deterioration is implied by the recurrence surfaces of about 1250 b.c. at Llanllwch (Thomas K.W. 1965:103, 111). After the deterioration itself had come to an end, the climate remained cooler and wetter than it had previously been (Lamb 1977:II:425).
The effects of this climatic deterioration are likely to have been very great, no less than the effects of the deterioration which ended the Mediaeval climatic optimum c. A.D. 1300 (ibid. 435-8, 449-56). Then, the limits of cereal cultivation in upland marginal areas fell by as much as several hundred feet, causing the abandonment of farms and villages and, because of the resultant pressure on land, the onset of clan troubles and border strife (Burgess 1974:166-7).

The earlier deterioration, which seems to have become severe in the early Penard phase and to have reached its fullest extent by the end of the Hallstatt C phase (Piggott 1972:109-112), in absolute dates about 1200 to 650 B.C., was probably more devastating in its effects because of the more primitive conditions of the time, and is likely to have led not only to the loss of great tracts of marginal arable in upland areas but also to the waterlogging of land at all levels (Burgess 1974:166-7). Prior to this climatic deterioration, cereals seem to have been grown at very high altitudes: in Ireland, agricultural activity on sites in County Antrim ranging in altitude from 180 to 350 metres frequently preceded the initiation of blanket peat deposits c. 1800 B.C., and may indicate subsistence crop growing, although the main upland areas may have been used primarily for grazing; there may also be evidence of Neolithic cereal cultivation at about 450 metres in County Down (Kirk 1974:99-100). In Wales, the unenclosed homesteads located between 150 and 275 metres in the coastal districts of Caernarfonshire are accompanied by small irregular fields ranging from a few square metres to two hectares in area: a number of these fields seem to have been cultivated, as the soil has crept down to rest on their lower walls, though others may have been used as animal pens (Gresham 1941:5-6). The unenclosed hut settlements which occur at even higher altitudes in the same area, at on average about 360 metres O.D., also have fields associated with
them, and the presence of clearance cairns astride the walls of some of these fields may suggest that they were used for agriculture, though stone clearance would also improve the fields for pasture. These settlements, themselves undated, are very similar to examples on Dartmoor which apparently belong to the Early Bronze Age (Griffiths 1951A:64-6, 68-9).

After the onset of the climatic deterioration, the lapse rate of temperature with altitude would be greater than it had been in the Sub-Boreal period, and such high-altitude agriculture is likely to have become unprofitable and even impossible: similarly, high settlements will have been uncomfortable. A fall in temperature of one degree Centigrade can be critical for the growth of certain crops, and for the cropping potential of marginal areas, and the effects of such climatic variation in shortening the growing season and lowering the upper limits of cultivation would be more severely felt in highland than in lowland areas (Fowler P.J. 1981:74-5). Lapse rates would have been lower in the eastern borderland than in the rest of Wales: the agricultural potential there is likely to have remained surprisingly good even above 300 metres (Taylor J.A. 1980:110) although at the same time large areas of the western uplands would have been rendered untenable by the climatic deterioration (ibid. 125). Some indication of the impact of the climatic deterioration on western Britain is perhaps provided by the bog at Tregaron whose average rate of growth at other periods was 1 cm. in 20 years: when it began to grow again, after a break of about 300 years, in about 700 B.C., it now grew at a rate of 1 cm in 3 years (Turner 1964:78, 1981:257), suggesting that the climate in this area at this date was extraordinarily wet. This increased wetness, apparently more pronounced in western than in eastern Britain (Lamb 1981:55-6), must have entailed the avoidance of flat, concave or valley-bottom sites for
settlement because of their marshiness and risk of flooding (Taylor J.A. 1980:125-7), thus severely restricting the range of locations available for settlement.

In general, then, the climate of the Iron Age seems to have been much wetter than hitherto, although there seems to have been a warmer drier episode from about 450 B.C. to about A.D. 450 (Turner 1981:261). Settlement expanded into the lowlands, no doubt in compensation for the loss of many upland areas: this is seen clearly in the Vale of Glamorgan, where settlement expanded from the loams and clay loams onto the poorer sandier soils of the Radyr series (which includes those soils previously described as belonging to the Lisvane and Ellerbeck series: Crampton 1972:29). These sandy soils, previously untouched but now extensively exploited, may have suffered from seasonal drought in the Sub-Boreal period: they would thus have benefitted from the cool wet summers of the Sub-Atlantic period, providing better pasture and appearing more attractive to settlement (Crampton and Webley 1960:392; see also chapter 11).

In the Roman period, a slight improvement in the climate as well, probably, as an increase in the population, may have been responsible for the exploitation of an increased range of soils. From about 150 B.C. onwards, the climate seems to have become gradually milder and drier, until, by the time of the Roman conquest, it was probably much the same as today, while from about A.D. 250 to 400 it seems to have been still warmer and drier, and unusually favourable to agriculture (Lamb 1977:II:424-9, 1981:55-6). Consequently, greater use could probably be made of valley soils: so, for instance, the soils of impeded drainage in the Vale of Glamorgan seem generally to have been avoided until the Roman period (see chapter 11), when the improved climate and the introduction of the heavy plough (see chapter 9) would have enabled their exploitation. Nonetheless, such soils would
still have had a shorter growing season than the lighter soils, as they would have taken longer to warm up in the spring ( Crampton and Webley 1960:393 ).

Later, the climate seems to have reverted to its Iron Age state, with the sharp return of colder summers and generally wetter conditions in the late 500s ( Lamb 1981:57-60, Barber 1981:132 ). This, however, was relatively short-lived: in the 700s, the climate seems to have become more continental, with drier and probably warmer summers, though the winters may have been colder than before ( Lamb 1981:60 ). This more pleasant interlude may have been followed by two hundred years or so of cooler or wetter weather ( Barber 1981:132 ) before, in the 10th. century, with the onset of another more 'continental' episode of dry summers and cold winters ( marked at York by the abundance of bone skates of this date ), the climate began to improve in the build-up to the remarkable warm dry period, the Mediaeval climatic optimum of about A.D. 1150 to 1300 ( Lamb 1981:60 ).

2.6: Soil Deterioration

Soils also changed in the period under study: these changes largely took the form of deterioration, caused by climatic and anthropogenic factors. As the Highland Zone seems to have been more severely affected by the climatic deterioration at the onset of the Sub-Atlantic period than was the Lowland Zone, so too its higher and more steeply sloping ground was more readily affected by soil erosion than the lower and more gently sloping ground of the Lowland Zone. Again, therefore, the Highland Zone was set at a disadvantage relative to the lowland areas of Britain. Under suitable conditions, the removal of soils from exposed areas is easily compensated by continuing soil formation: however, in marginal situations, a change in climate ( at
the most extreme, a single season of extreme climate), or the advent of a new disturbing factor such as man, or a change in the habits of people already resident in the area, can induce soil changes (Limbrey 1975:95-6). In areas of high rainfall, soil clearance, for cultivation or pasture, is inevitably accompanied by soil deterioration due to increased leaching (Tinsley and Grigson 1981:247). Cultivated soils are always more likely to suffer erosion than those under grass or forest, as they are exposed to wind and rain and have no permanent root system to bind them together; on even the slightest slope, the process of cultivation involves soil movement, and the use of larger rather than smaller fields and of a deeper cutting plough increases these effects (Limbrey 1975:125-6).

It is widely accepted that the onset of Atlantic climatic conditions were responsible for the spread of blanket bog: however, the increased wetness of the upland soils need not be due simply to an increase in climatic wetness, for the opening of the forest canopy, as a result of man’s activities, must also have played its part. This may explain some of the differences of date seen in the inception of peat bogs (ibid. 159-60). Other features which may have influenced the dates at which the bogs responded to the increased wetness at the beginning of the Sub-Atlantic period were the soil conditions in the drainage areas which fed the bogs: flexibility in the response of the bogs to the climatic conditions as a result of such factors may then explain the way in which the signs of increasing wetness seem to cover a wide range of dates in the first millennium B.C. and even earlier (ibid. 168). The thin eroded podzols of the upland pastures, over which the blanket bog then spread, may have become wetter because of the increased climatic wetness or because of a relaxation in grazing pressure which allowed the humus to thicken and hold more water. The reduced grazing in upland areas may correlate with the increased use
of lowland pastures late in the period within which the climatic changes are thought to have occurred, as indicated by the pollen evidence for the clearance of lowland forests on a much greater scale from about 400 B.C. on; this in turn is probably due to the increasingly unpleasant nature of the uplands as a result of such climatic deterioration, and to the reduced productivity of the upland pastures as a result of the increased leaching and shortened growing season caused by the cooler wetter climate (Turner 1964:78,83, Limbrey 1975:168).
3.1: Introduction

This chapter surveys the settlement patterns, burial practices and possible religious beliefs, and the social and political structure of Wales and the Marches in the later prehistoric period, and discusses the evidence relating to the possibility of invasion or immigration into the region during that period. The chapter deals primarily with the Iron Age, but the Late Bronze Age is also surveyed as, in cultural terms, there seems no significant break between the two periods: indeed, many elements which became important in the Iron Age have their origins in the Late Bronze Age, and it has even been argued that the political units into which the region seems to have been divided on the eve of the Roman conquest may have assumed that form by the Late Bronze Age (see below, section 11).

3.2: The Late Bronze Age

Perhaps the most important development of the later Bronze Age is the emergence of the hillfort. In the third and second millennia B.C., the pattern of settlement in Britain as a whole seems to have been a pattern of small sites, generally farmsteads and hamlets, interspersed with occasional small villages. Larger settlements do not appear until the Penard period, at the end of the Middle Bronze Age, when hillforts were first constructed; even then, much of the population seems to have continued to live in farmsteads and hamlets (Burgess 1980A: 165). Several hillforts in the northern Marches may have their origins in this period. At the Breiddin, where an undated settlement of some sort preceded the erection of the first hillfort defences (Savory 1976A:244), radio-carbon dates of $828\pm 71$ and $800 \pm 41$ b.c. from the rampart, together with a bronze pin of Late Bronze Age type
found in the upper rampart core, suggest that the defences date to the Late Bronze Age. Occupation of this date in the interior of the hillfort is attested by a radio-carbon date of 868 ± 64 b.c., and by Late Bronze Age metalwork and large quantities of coarse pottery which would seem to belong to the Late Bronze Age or Early Iron Age (Musson 1976:296-8; see Appendix 1). It has been claimed that the defences at Dinorben may be even earlier than those at the Breiddin, on the grounds that they are associated with radio-carbon dates of 895 ± 95 and 765 ± 85 b.c. (Savory 1971A:254-6). However, none of these dates are convincingly associated with the first rampart, and, in more recent excavations, the earliest rampart which was found produced a number of reliable radio-carbon dates which centre on 440, 455, 460 and 500 b.c., suggesting convincingly that the rampart was built in or near the 5th century b.c.; when calibrated, this date would lie in the 8th to 5th century B.C., with a preference for the central part of this time span (Guilbert 1980:337). Either, therefore, Savory’s primary rampart was not represented in the area excavated by Guilbert, or Savory’s dates derive from reused or very aged timbers (ibid. 338). Occupation on the hilltop began early, for an occupation layer which extended under and beyond Savory’s primary rampart yielded a radio-carbon date of 945 ± 95 b.c. (Savory 1971B:7-12, fig.8), while some, if not all, of the five palisade slots found by Guilbert were earlier than the rampart which was dated to the 5th century B.C. (Guilbert 1979A:183-6, 1980:338). However, the date at which the palisade or palisades were superseded by more elaborate defences remains uncertain.

The hilltop settlement at Moel-y-gaer seems also to have Late Bronze Age origins. The hearth of a post-ring round house underlying the first rampart was dated to 620 ± 70 b.c., and packing material found in the foundation trench of the front revetment of that rampart
was dated to $580 \pm 90$ b.c.; the earliest settlement was probably enclosed by palisades (Guilbert 1975A:115). Pottery similar to that found at the Breiddin seems to have been in use throughout the occupation of Moel-y-gaer; unfortunately, such pottery alone can only be dated very broadly, and adds little to the information of the radio-carbon dates (Guilbert 1977:43). The hillfort of Ffridd Faldwyn may also have its origins in the Late Bronze Age, though this is not certain (Guilbert 1975B:207-9); Burgess would date the first defences there, whether they took the form of a double palisade or a box rampart, to the Penard period (Burgess 1980B:268-70). At other sites, there may be evidence for hilltop settlement, but the defences are not dated. So, at Caynham Camp, the pottery evidence has been invoked to date the hillfort to the Late Bronze Age, for an unstratified sherd from the site (Gelling P.S. and Peacock 1970:98 fig.21 C13) has the same temper and rim form as a vessel from the cemetery at Bromfield which has an associated radio-carbon date of $762\pm 75$ b.c. (Stanford 1974A:42). Though this sherd may indicate early activity on the hilltop, it can hardly be held to date the defences; the same seems true of the carbonised grain from Croft Ambrey which is dated to $1050 \pm 200$ b.c., for there is no other evidence for such early activity at this site, (Stanford 1974A:81-2), and calibrated radio-carbon dates suggest that the settlement had its origins in the 7th century (Stanford 1980:98).

Defended hilltop settlements may have developed earlier in the northern Marches than in other parts of the region: elsewhere, the only clear evidence for a Late Bronze Age hilltop fortification comes from Llanstephan Castle, where the rampart and ditch which cut off the promontory have been dated to $520 \pm 70$ and $510 \pm 70$ b.c. (Guilbert 1974:42-4), and from Coed-y-cymdda, where a small hillfort with slight, possibly unfinished, defences, has evidence of Late Bronze Age
occupation (R.C.A.H.M. 1976:II:641, Glamorgan-Gwent Archaeological Trust 1979A:17). The apparent grouping of early fortified sites in the northern Marches may then relate to the intensity of modern interest in the area rather than to any ancient phenomenon; on the other hand, it may be original, as it seems linked to the types of metalwork found in the region at much the same date, for, in the Late Bronze Age, the metalwork hoards of the central and northern Marches are characterised by their high weapon content, in which they seem to contrast with the hoards found in other parts of the region (see map 7). Thus the Guilsfield hoard, dating to about the 10th century B.C., contained thirteen or more spearheads and at least one sword as well as objects such as palstaves (Davies D.G. 1967:103, Savory 1966A:193-4). Slightly later, in the Ewart Park phase of the 9th to 8th centuries B.C., hoards containing spearheads and swords were deposited at Broadward, Bishop's Castle and Willow Moor (Little Wenlock) (Burgess et al. 1972:213, 230-1); a lost hoard of spearheads from Snead (Chitty 1937:131) may also have belonged to this phase. Such assemblages are rare outside the northern and central Marches, the closest parallel being the hoard of eleven spearheads and at least two swords of Ewart Park type from Pant-y-maen, Pembrokeshire (Griffiths 1958:122-3, Burgess et al. 1972:229-30). Other hoards of this date which contain weapons are that from Bodwrog, Anglesey, with two sword fragments (Savory 1975A:112-6), the Princetown hoard containing two socketed spearheads (Savory 1974:92-7), the hoards containing respectively two and three spearheads from St. Fagan's and Llantwit Major (Wheeler 1923A:189, Storrie 1887:151-2), the Penarth hoard with a fragmentary sword (Wheeler 1923A:189) and the famous Llyn Fawr hoard with its iron spearhead and Hallstatt C sword (Crawford O.G.S. and Wheeler 1921:136, pl. IX, Fox C. and Hyde 1939:373-5). Thus, although weapons were occasionally deposited in
hoards outside the central and northern Marches, they do not form such a very high proportion of the objects which compose those hoards: in this respect, only the Pant-y-maen hoard is comparable with those from the Marches. Hoards from other parts of the region are composed almost entirely of non-military objects: for instance, the Llantwit Major hoard, mentioned above, is largely composed of socketed axes, gouges and chisels (Storrie 1887:152-4) while the Cardiff hoard contains socketed chisels and celts, a sickle and two razors (Nash-Williams 1933A:299-300).

It has been suggested that the development in the Late Bronze Age of an interest in defence leading to this emphasis on weapons and to the choice of bleak but secure hilltops for the construction of heavily fortified settlements may have been the result of the climatic deterioration which began in about the 11th century B.C. and culminated in a more serious deterioration in about the 7th. to 6th. century B.C.: this, in combination with an increase in population, is claimed to have created a pressure for land which prompted elements of the population to seek security by military means (Burgess 1974:166-7, Coombs 1975:75-6). At best, however, this is only a partial explanation of the phenomenon as manifested in Wales and the Marches: it fails to explain why the early hillforts and military equipment concentrate in the Marches, which would probably have been the part of the region least severely affected by the climatic deterioration (see chapter 2), whilst if, as is implied, population growth was an entirely internal matter, it should surely have affected all parts of the region alike. It has been suggested that the differential distribution of hillforts is due to the presence in the Marches of an intrusive governing class represented by some artefacts of French Hallstatt derivation: the hillforts are then supposed to have been built under their influence, from which south Wales was probably cut
off by a barrier of dense woodland which seems still to have existed when Offa's Dyke was built (Savory 1977:3-7). There is, however, no real reason to attribute the relatively few objects of foreign manufacture or influence found in the Marches to invasion, albeit on a limited scale, rather than to mechanisms of trade or exchange. As yet, then, there can be no ready answer to the question why large defended settlements emerged in the Marches at a time when the population of the rest of the region was probably still for the most part dispersed in small lightly defended settlements.

3.3: The Iron Age and its Hillforts

The chronology of the Iron Age is not easily established, as datable artefacts are scarce and radio-carbon dates not yet available in large numbers. Pottery, the artefact most commonly used for dating purposes, is absent from much of the region for all or most of the Iron Age: where present, it generally occurs only in relatively small quantities. Moreover, for the most part it seems susceptible of division only into three broad periods: that pottery which is in the Hallstatt tradition belongs to the early period, that which displays La Tène influences to the middle period, while wheel-made wares are late (see Appendix 1). Consequently, the presence of pottery on a site, even in a well-stratified position, is unlikely to provide any close dating evidence for that site. Metalwork, which may again be divided into three major periods which do not necessarily correspond precisely with the equivalent periods in the pottery sequence (see Appendix 2), most often takes the form of chance finds, and is thus again seldom helpful in dating settlement sites. Clearly, then, many sites are susceptible of only approximate dating.

Though it has its origins in the Late Bronze Age, the type of site most readily associated with the Iron Age is the hillfort. Large
numbers of hillforts are known (see map 8) since, because of their often prominent positions and defences, they have attracted a greater measure of attention than smaller unenclosed or weakly defended sites. Excavation and detailed survey has thus tended to concentrate upon these large and prominent sites. Nonetheless, relatively few have been excavated in recent years, and, in those few which have, the area actually excavated has generally been small in proportion to the overall size of the site. This is particularly unfortunate in that agreement has still not been reached concerning the role and function of hillforts: it is not certain, for instance, whether they acted as permanent or seasonal settlements or only as temporary refuges in times of unrest, or even as fortified food stores (Guilbert 1975B:211-3, Cunliffe 1976A:343-4, Bradley 1978:121). Similarly, it is not certain whether their functions remained constant, or varied both with time and from area to area: the latter is perhaps more likely. It is not known what size populations they may have served and what were their potential catchment areas, nor what relationship they enjoyed with other, apparently contemporary, sites of different types which lay in their immediate vicinities.

Some hillforts seem to have been used for permanent occupation as they contain substantial stone or timber structures such as might seem unnecessary if they were used only as temporary refuges in times of unrest: so, for instance, in the northern and central Marches, wherever a sizeable area has been excavated within a hillfort, evidence has been found of intensive building activity which might justifiably be taken to imply the presence of a settled population even though some of the hilltops involved, such as Moel Hiraddug, Moel-y-gaer and the Breiddin, might seem uncongenial sites for settlement (Guilbert 1977:48). The querns found in many hillforts, such as the Breiddin, Moel-y-gaer, Croft Ambrey and Conway Mountain
( ibid. 48, Stanford 1974A:185-6, Griffiths and Hogg 1957:78 ), and the quantities of pottery found in those in the central Marches such as Croft Ambrey and Midsummer Hill ( Stanford 1974A:199-209, 1981:138-148 ), also suggest that the occupation of these sites was more than temporary. That occupation may perhaps have been regular and seasonal rather than permanent, but this is an interpretation which raises a number of problems. Such seasonal occupation assumes the practice of transhumance, which is by no means impossible; in this light the hillfort of Tre’r Ceiri ( fig. 1 ) has been interpreted as a series of conjoined enclosures each surrounded by its own huts and possibly each approached by its own entrance through the defences ( fig.2 ), thus suggesting that the site may have served the needs of several different communities ( Bradley 1978:62-5 ). However, this seems to imply that a number of communities gathered together at Tre’r Ceiri when they moved to exploit the summer grazings whereas, in more recent times, it seems customary for a community which has been nucleated in its lowland winter settlement to disperse on moving to the upland summer pastures rather than vice versa: the nucleation of population in the uplands would not seem to promote the most efficient exploitation of the summer grazings. Consequently, as no large settlements of this date which might have formed the winter dwellings of the transhumant populations are known in the lowlands, and as it seems inherently unlikely that a transhumant population would gather together in the summer months having been dispersed in the winter, this interpretation of the function of hillforts should perhaps be rejected. Transhumance itself remains probable, as an efficient means of utilising the mountain pastures, but is more likely to have been associated with smaller scattered settlements such as some of those known from north-west Wales ( see below ). Furthermore, the location of hillforts does not suggest that their interests were purely
pastoral: nearly all hillforts west of the Severn and Dee lie near cultivable land, for arable farming may be practised in the region at heights of up to 365 metres, while less than a third of the Welsh hillforts lie on or above the 245 metre contour, and all those which are situated above this level lie in broken country, never far from cultivable land. Clearly, then, arable farming is likely to have been important to the inhabitants of these hillforts (Alcock 1965A:188) which are conspicuously absent from the central uplands of Wales which, while remote from arable land, yet provide adequate summer grazing for pastoralists.

Whilst regular seasonal occupation of the hillforts may therefore be unlikely, it has been suggested that the hillfort of Moel-y-gaer at least was occupied only spasmodically in times of unrest: so, the phase II settlement there was abandoned suddenly when some if not all of the buildings were in good repair, and many of the structures were deliberately dismantled, presumably so that their timbers could be reused elsewhere, suggesting a leisurely rather than a forced withdrawal from the site. There then seems to have been a hiatus of some length before the next phase of occupation. Possibly, then, this hillfort was occupied only when some external threat made such a defensive position desirable, and some more convenient site was preferred when times were more peaceful (Guilbert 1975B:211-3). The presence of a planned settlement such as that of Moel-y-gaer phase II must by definition result from a movement of population, since a schematic plan of this type can only be imposed on an empty site: where a sizeable organic settlement has already been occupied by the same people for any length of time, the conversion of that settlement into a planned settlement would cause an impracticable upheaval. A hillfort with a fully integrated internal plan would therefore seem to bear witness to the migration of a whole community, though the
distances involved need not have been great. At Moel-y-gaer, it is not clear whether an earlier population was actually displaced to make way for the second, planned, settlement, or whether the earlier settlement had already been abandoned for other reasons (ibid. 211). The apparent absence at other sites of a regular plan such as that of Moel-y-gaer phase II need not indicate that the conditions under which they were settled were different: sites such as, for instance, Moel Hiraddug and the Breiddin are unsuited to regular planning because of their uneven terrain, as a result of which structures had to be erected on whatever patches of level ground were available, thus producing a rather random plan (Guilbert 1977:41). Similarly, a site which originated as a planned settlement might, with long occupation and repeated rebuilding and expansion, become indistinguishable in plan from a settlement of organic origin.

Even if it is assumed, for simplicity, that all hillforts functioned as permanently occupied settlements, as some of them seem to have done, it is difficult to assess how many might have been in use simultaneously: the general paucity of datable artefacts is particularly unfortunate in this respect, though some areas such as the central Marches are better served than others. It has been assumed that, in the central Marches at least, the population expanded steadily throughout the Iron Age so that, on the eve of the Roman conquest, virtually all hillforts were in simultaneous occupation (Stanford 1972A:308-310, 1974A:230-1): this assumption may be ill-founded, however, for in southern England a tendency has been observed for the number of hillforts in use to decline in the middle to later Iron Age (Cunliffe 1971:59, 1978A:275-6). The most that may be said is that, in Wales and the Marches, such evidence as is available may not perhaps for the most part contradict, though it cannot prove, the assertion that increasing numbers of hillforts came into use in the
course of the Iron Age, until the maximum number was occupied in the Late Iron Age, though the evident break in the occupation of Moel-y-gaer, mentioned above, suggests that undue reliance should not be laid upon this assumption.

Hillforts vary in type and size from area to area. Some may represent village settlements, bearing a size perhaps proportional to the number of their occupants; the size of the community which they represent may perhaps then be estimated from the number of buildings in the interior, or, more doubtfully, from the area enclosed by the defences on the basis of the density of building in the interior known or estimated from more fully excavated sites. There are two principal areas to which these methods have been applied: on the one hand, north-west Wales, where the frequent use of stone for building has resulted in the survival of apparently complete plans of the interiors of a number of hillforts, and on the other the central Marches, where the partial excavation of several hillforts, notably Credenhill, Croft Ambrey and Midsummer Hill (Stanford 1971B, 1974A, 1981) has revealed traces of internal plans considered by the excavator to be regular enough to be applied to the unexcavated parts of those hillforts also.

On the basis of this information, the density of settlement found in the hillforts of the two areas would seem to differ widely. In north-west Wales, in the hillforts of Garn Boduan and Conway Mountain, there seem to have been between 8 and 10 round structures per hectare (Hogg 1962:22); if all these were dwellings housing an average of four persons each, the density of population at those sites may have been between 32 and 40 persons per hectare, representing total populations of about 150 at Conway Mountain and 320 at Garn Boduan. In the central Marches, on the other hand, it has been claimed, on very tenuous evidence, that the hillforts may have contained about 118 rectangular buildings per hectare, and, even if only about half of these were
dwellings, again housing an average of four persons each, the population might then have risen to about 236 per hectare (Stanford 1972A:315), with total populations possibly as high as 900 at Croft Ambrey, 2,000 at Midsummer Hill and perhaps 4 to 5,000 at Credenhill (Stanford 1974A:219-230, 1981:165, 1974A:230). However, these figures should be regarded as hypothetical in the extreme: great uncertainties attend the numbers of buildings postulated for Croft Ambrey, where only about 5% of the total area of the hillfort has actually been excavated (Stanford 1974A:122-3), and for Midsummer Hill, where little more than 1% of the estimated number of buildings has been excavated (Stanford 1971C:6). Thus, the rectangular four-post structures which form the only type of building found at these sites, and which are therefore assumed to have acted as dwellings as well as store-buildings, may in fact only have been used as granaries and stores, or for some other purpose, rather than as dwellings; as at the more extensively excavated site of Moel-y-gaer (fig.3), the interior may have been zoned, and a zone of less closely-packed circular buildings, presumably used as dwellings, may await discovery. If so, the circular buildings would, by virtue of their shape, considerably reduce the density of building, and thus the potential populations, of these hillforts. Such zoning of building types would probably indicate the segregation of activities and functions within the hillfort, and might suggest that there was no place within the settlement as a whole for tenurial distinctions, as otherwise the different building types might be expected to cluster together on parcels of land belonging to the individual families, as they appear to do at Hod Hill (Guilbert 1975B:210, Richmond 1968:fig.2). Communal landholding may then have operated; this would not be surprising, since the hillfort defences bespeak communal effort. Similarly, within a planned settlement, the construction of a large
number of buildings at the same time implies the presence of a large population whose efforts could be coordinated through the direction either of a warrior aristocracy or of a democratic element implicit in the apparent communal use of land (Guilbert 1975:210-211).

Whatever the precise size of the populations which they housed, some hillforts are undoubtedly large and, if the numbers of their occupants bears any relation to their size, they must represent communities of some magnitude. Some, however, may seem too large for such an interpretation: thus, the hillfort of Llanymynech, Montgomeryshire, has an internal area of 56 hectares, and, even if it housed a population no more dense than a conservative 30 persons per hectare, would have needed to draw upon an extremely large territory to maintain its inhabitants. Either, then, such large sites were much less densely inhabited than some smaller sites would seem to have been, or they depended upon something more than local agricultural produce for their subsistence. It has been suggested that Llanymynech may have formed an assembly centre for the local tribe, the Cornovii (Hogg 1975:36), if indeed such large tribal assemblies were held.

More common in the area west of the Severn and Dee than such large hillforts are smaller sites such as would have housed only one or two families, for instance the multivallate hillforts with widely-spaced ramparts found in south-west Wales, in which the innermost enclosures may have been used for habitation and the outer enclosures for corralling stock: these sites occupy hillslope locations, within easy range of extensive upland or coastal grazings and near to water supplies (Fox A. 1953:18-19). In the coastal areas in particular, the smaller sites by far outnumber the larger hillforts, suggesting that, as in the Bronze Age, the most common form of settlement was still the homestead or hamlet rather than any larger focus of population. However, if population does indeed bear a direct relation
to the size of the defended area, it would still seem that the larger hillforts, though less typical of the region, are more significant, for, in all areas except north, and perhaps also south, Pembrokeshire, the total area enclosed by the few large hillforts far exceeds that enclosed by all the small hillforts put together. Consequently, although the commonest type of settlement would seem to have been the single homestead, the majority of the population may have lived in fortified villages (Hogg 1972A:14).

3.4: Unenclosed settlements

Less is known of the smaller enclosed and unenclosed settlements than is known of the hillforts as fewer such sites have been excavated; moreover, unenclosed sites are particularly vulnerable to destruction by later activity and may thus have been more common than would now appear, for chance has played a great part in the discovery of even the few examples which are known. So, the open settlements of Castell Odo phase IA and Coygan Camp phase 3 (Alcock 1961:84-6, Wainwright 1967:20-8) were recognised and excavated only because they underlay later defended settlements; the defended settlement at Cae Summerhouse seems also to have originated as an undefended site (Davies J.L. 1967A:75-7). At Merthyr Mawr, the presence of a settlement of some sort, presumably undefended, is indicated by the Iron Age hearths and artefacts periodically revealed within a fairly small area by the shifting of the sand dunes (Fox C. 1927:52-9). Open settlements were probably in use throughout the Iron Age, for the pottery from Castell Odo and Coygan Camp seems early in date (Alcock 1961:86-7, Wainwright 1967:21-26) and pottery of the middle and perhaps early Iron Age has been found at Merthyr Mawr (Fox C. 1929:146-7, Savory 1946:62, 1952A:170-1, 1954A:304). The chances of discovery would seem biased in favour of the discovery of early
rather than later open settlements since, as has been seen, they are most likely to be discovered when they represent an earlier phase of occupation on a site which was later defended. The size of community represented by these open settlements is not always clear. At Coygan, this phase is represented only by occupation soil associated with early pottery (Wainwright 1967:20-3), thus providing no indication of the number of inhabitants involved. Similarly, at Merthyr Mawr no dwellings or other indications of the form of settlement involved have been found, and, as layers of pure sand separate the hearths, the site may only have been seasonally occupied; if it was permanently occupied, the settlement was periodically overwhelmed by blown sand (Fox C. 1927:59-60). At Castell Odo, the occupation of phase IA seems to have taken the form of a large homestead or small village of timber houses, of which two have been excavated (Alcock 1961:84-6): as they lie on opposite sides of the site, of which only a small proportion has been excavated, there may have been more houses belonging to this phase in the unexcavated areas.

Dispersed open settlements of various types are also known from north-west Wales, where they have been preserved as a result of the local tradition of building in stone. Unfortunately, however, in this area the problems of dating, owing to the absence of pottery and other closely dateable artefacts, are particularly acute, and it is difficult to be certain whether some or any of these settlements in fact belong to the Iron Age. The simplest sites of this kind are circular huts, not associated with either fields or extensive enclosures, which are generally found either alone or in groups of two or three such as may correspond functionally to an isolated farm: as these huts lack any particular distinctive features other than their circular shape, they could have been constructed at any time from the Bronze Age to the fairly recent past. No site of this date has been
properly excavated, and only two have produced any evidence of their date: Roman pottery of the 1st. or 2nd. century A.D. from the hut at Llanystumdwy and two rotary querns from the group of three huts near Penarth (Hughes H. 1928:216-8, R.C.A.H.M. 1960:840) indicate that these sites were in use in the Roman period. It seems likely that similar huts were also in use for some centuries both before and after the Roman period (R.C.A.H.M. 1964:1xxxix-xcii), but it is as yet impossible to differentiate potential Iron Age sites from the remainder. In Caernarfonshire, where their distribution has been most closely studied, such huts are found mostly on uncultivated mountain land, mainly between 180 and 300 metres O.D., though some, like that in Cwm Corun (R.C.A.H.M. 1956:533), are found as high as about 530 metres (R.C.A.H.M. 1964:xc) and may perhaps represent the summer dwellings of transhumant populations (Griffiths 1951B:183); however, it seems probable that this is not the original pattern of distribution but the pattern of survival, as any examples of the type on better, lower, land, such as those at Llanystumdwy and Penarth at 21 and 30 metres respectively, are more likely to have been destroyed by subsequent cultivation than those in remote locations.

Various types of unenclosed hut group associated with enclosures of irregular shape are also found in the same area: a distinction has been drawn between the upland and lowland types. In the upland type, the huts are poorly built and often less than 3 metres in diameter; they are associated with groups of enclosures which range in size from about 30 metres across to four or more hectares in area, and are almost invariably found above 300 metres and often nearer 450 metres, altitudes which would probably have rendered them untenable after the climatic deterioration of the Middle to Later Bronze Age, especially as some of the associated enclosures seem to show signs of former cultivation. Probably, then, these upland hut groups were occupied in
the Early Bronze Age, as were similar sites on Dartmoor (R.C.A.H.M. 1964:xcii-xciv). The unenclosed hut groups of lowland type differ from these in having larger huts, often 6 metres or more in diameter, and being better built than the upland types; their layout is also more compact and less irregular. They could be contemporary variants of the upland type, displaying the results of a greater prosperity due to their location on better land, or could be later in date: settlements of this type probably preceded the enclosed homesteads at Rhostryfan, Cae’r Mynydd and Din Llugwy, all of which were occupied in the Roman period, and thus, unless there was a substantial hiatus between the two phases, the underlying settlements may date to the Iron Age or perhaps the early Roman period (R.C.A.H.M. 1964:xciv-xcv). The lowland hut groups, like the single huts, may represent only a pattern of survival rather than the original distribution, for, despite their name, the majority of sites of this class are found at altitudes between 150 and 290 metres. A third class of unenclosed hut group, the Tre’r Ceiri class, is so called as the small irregular or roughly rectangular huts recall those which characterise the later phases of occupation in the hillforts of Tre’r Ceiri and Corn Fadrun. As these hut groups are associated with enclosures which show no signs of cultivation, they were probably purely pastoral in function (ibid. xcv). Few examples of this class are known: there are three on Mynydd Craig-goch (R.C.A.H.M. 1960:934-6), and similar sites which are less certainly of this type at Llanrhychwyn and Mynydd Anelog (R.C.A.H.M. 1956:572, 1964:1473). Though no other dating evidence relates directly to these sites, the huts of this type at Tre’r Ceiri were in use in the Roman period (Hogg 1962:15-16), perhaps suggesting a similar date for these hut groups. So, the class of unenclosed hut group which seems most likely to have been in use in the Iron Age is the lowland type, though the dating evidence is tenuous. Some
proportion of the huts which were not associated with fields or extensive enclosures were probably also Iron Age in date, though it is impossible to conjecture how many may have been in use then; neither these, nor the lowland hut groups, may be attributed to any particular phase within the Iron Age.

3.5: Small Defended Sites

Small defended sites which are too small to be considered true hillforts are common in the region, especially in the south-west, where their defences are generally of earth, and in the north-west, where they are often of stone. Excavated examples of this class include Castell Odo, Walesland Rath, a site which was excavated because it was typical in terms of its size and situation of many earthworks in Pembrokeshire (Wainwright 1971:48), and Mynydd Bychan, which was excavated because it was not typical of Glamorgan (Savory 1954B:85-6). The inner enclosure at Castell Odo is much the same size as the interior of the earthwork at Walesland, both being about 55 metres in diameter (R.C.A.H.M. 1964:1472, Wainwright 1971:plan facing 48); the site of Mynydd Bychan is slightly smaller, being triangular and roughly 55 by 45 metres internally (Savory 1954B:88), but the defences are more complicated, with a bastion and 'barbican' protecting the entrance (ibid. 92-4). In the earliest phase of the occupation, dated by Lydney-Llanmelin pottery to the Middle Iron Age, these defences surrounded timber-framed houses whose original number is uncertain since the enclosure was not totally excavated: there seem to have been three to five in the eastern part of the enclosure alone (ibid. 94-6). After the demolition or decay of the defences, the settlement was rebuilt in stone, apparently in the mid 1st. century A.D., with at least three and probably four circular buildings set in walled courtyards (ibid. 91, 95-8). At Castell Odo, the inner
enclosure may have contained six or more circular huts, while the outer enclosure probably served as a stock enclosure (Alcock 1961:93-4). At Walesland (fig. 4), in the first phase, dated to 210 ± 90 b.c., the defences contained two or perhaps three circular structures and what seem to have been four extensive peripheral ranges, some of which may have been used as stores, byres and workshops: if all were used as dwellings, the population may have been substantial (Wainwright 1971:99-100), perhaps between 17 and 28. In the second phase, dated to about 85 ± 90 b.c., the defences were strengthened, but the number of internal buildings seems to have been reduced to one circular hut, two six-post structures and a probable lean-to 7.6 metres long: either the population or the level of affluence of the site would seem to have declined (ibid. 101). Similar to Walesland is the slightly larger Iron Age enclosure which preceded the Roman farmstead at Whitton: here, though the earthwork is unusual in being almost rectangular, the defences are also simple, apparently having in phase I a substantial timber structure, perhaps a bridge, over a simple gap entrance (Jarrett and Wrathmell 1981:6-7, 12-13, cf. Wainwright 1971:60). The occupation at Whitton may not have begun until perhaps c. A.D. 30 (Jarrett and Wrathmell 1981:5).

These small defended sites may represent single farmsteads, perhaps housing extended families. Settlements of this type were certainly being constructed in the Middle and Later Iron Age, continuing in use until the Roman conquest and thereafter, though at Walesland there may have been a hiatus between the Iron Age occupation and a reoccupation in the 2nd century A.D. (Wainwright 1971:101). The same may also be true of the stone-walled enclosures of north-west Wales, some of which are comparable in size to these embanked settlements, though many are smaller. These take the form of a hut or group of huts surrounded by a stone wall or disposed in such a way that the huts themselves define
the enclosure. Such sites may be subdivided into concentric sites which do not seem to occur with terraced fields, and enclosed homesteads and other associated structures, including some isolated huts, which do (R.C.A.H.M. 1964:xcv-ciii). Of 285 sites of this type in north-west Wales, only 12 have been excavated relatively recently, although detailed plans exist for 85 (Smith C.A. 1978:38).

Dating is again a problem. The only excavated site of concentric type, Llwyndu-bach, has yielded only a saddle-quern, which had been reused in the outer facing of the central house, probably during repairs to it, and a rubbing stone found just outside it (Bersu and Griffiths 1949:193-4): this might suggest a pre- rather than a post-Roman date for the site. Similarly, at Hafoty Wern-las, the terraced fields associated with an enclosed homestead incorporate two roughly concentric rings, very like the outer rings of a concentric site whose central hut has been dismantled. If, as seems likely, the fields are contemporary with the homestead, which has produced material of the 2nd. to 4th. centuries A.D., then the rings, which seem from surface evidence to predate the field system, are probably pre-Roman, or, at the very latest, date to the very early Roman period (R.C.A.H.M. 1960:1340, 1964: xcvii).

The hut groups which are associated with the terraced fields have been classified in several different ways (Hemp and Gresham 1944:183-196, Griffiths 1951B:175-183, R.C.A.H.M. 1964:1xxxix-ciii). The classification most commonly employed is perhaps that put forward by the Royal Commission in 1964, which distinguishes enclosed homesteads of polygonal plan, where an outer wall constructed in straight sections usually surrounds a group of round and rectangular structures, from thick-walled and thin-walled oval sites, in the former of which the hut walls form a continuous mass with the body of the enclosing wall, whereas in the latter they are generally
free-standing, small compact groups in which the enclosure is formed almost completely by the huts themselves, irregular groups and isolated huts (R.C.A.H.M. 1964:xcvii-ciii). Few of these sites have been excavated, and those few have produced little datable material, but all produced evidence of occupation in the Roman period, chiefly in the 3rd. and 4th. centuries A.D. The type may, however, have its origin in the Iron Age. At Pant-y-saer, a thin-walled oval site, VCP and a saddle-quern were found in the smaller circular hut, and more VCP had been incorporated into the wall of the smaller rectangular annexe. In its dated occurrences in the region, VCP seems to belong to the Middle Iron Age, and the saddle-quern too is likely to be pre-Roman in date, indicating that there may have been two phases of occupation at Pant-y-saer, of which the earlier at least is likely to have been Iron Age in date; the plan of the site also suggests that the rectangular annexes are secondary features (Phillips 1934:10, 22-29, Gelling P.S. and Stanford 1967:84-6). A saddle-quern was also found in the thin-walled oval site of Pen-y-coed, Dwygyfylchi (Newstead 1899:146-8, 150-1, R.C.A.H.M. 1956:257). Further, a series of terraced fields of the type associated with enclosed homesteads seems to predate the Roman road from Caerhun to Segontium near Maen-y-bardd (R.C.A.H.M. 1956:pp. 28-9). There is no reason why such terraced fields should not have their origin in the Iron Age: they reflect the use of a traction plough capable of turning a furrow, a feat within the capacity of the simple bow ard such as is likely to have been in use in Wales by the second half of the first millennium B.C. (Smith C.A. 1978:41-2; see also chapter 9). So, though some of the enclosed homesteads may not have been built until the Roman period, the type is likely to have originated in the Iron Age.
3.6: Caves

Caves were also utilised in the Iron Age. The evidence, unfortunately, is not sufficient to indicate whether they formed only short-term refuges and seasonal habitations, or whether they represented a more permanent feature of the settlement pattern. Occupied caves are particularly common in the Gower, where pottery of the Middle Iron Age has been found in the Bacon Hole (Williams A. 1939A:25-6, Rutter 1948:68, 70), pottery of the Late Iron Age and a pin which may be earlier in date in the Minchin Hole (R.C.A.H.M. 1976:1:12, Savory 1976B:253-4) and Iron Age pottery and a bead in the Culver Hole (R.C.A.H.M. 1976:1:9, Boon 1980A:745-6). Elsewhere, bone tools and coarse pottery of the Late Bronze or Early Iron Age have been found in the Lesser Garth Cave, Radyr (Hussey 1963:8) and Late Bronze Age metalwork, coarse pottery of the Late Bronze to Early Iron Age and a hearth which was apparently in use in the Iron Age in Merlin's Cave, Symonds Yat (Phillips 1931:23, pl. IVa, Savory 1976A:249, Hewer 1925:219-220). If, as was claimed, the bead from the Culver Hole was associated with some of the human remains found there, the site may have been used as a burial place rather than a habitation site in the later Iron Age, but the association is not certain (Boon 1980A:745-6).

3.7: Iron Age Settlement: A Summary

In summary, hillforts seem ubiquitous throughout the region in the Iron Age, though the predominant sizes varied according to area: such variations may reflect differences in the social structure of the different areas, or in their agricultural potential, or both. Open nucleated settlements, though rare, are known from north-west, south-west and south-east Wales, and, in view of the problems associated with their discovery, may have been more common and more widespread
than currently appears. Similarly, although open dispersed settlements are best known in the north-west, owing to the local tradition of building in stone, timber-built structures of similar type are likely to have escaped attention both there and in other areas. So, the timber homestead built within the earlier henge monument at Llandegai (Houlder 1968:220) warns against the assumption that only stone structures are to be expected in that area, while the circular structure 4.5 to 6 metres in diameter which, with its associated occupation layer, preceded the construction of the bivallate enclosure at Woodburn Rath, Pembrokeshire (Vyner 1969:14) indicates that such settlements also existed in other areas. Small embanked settlements are also widespread, and probably share the function of defended farmstead with the stone-walled enclosures which are more common in the north-west.

So, both large and small settlements are known from all areas. In general terms, the larger settlements would seem more common in the eastern part of the region, in particular in the Marches, while the smaller sites which probably housed single family units are more common further west, becoming especially common in Pembrokeshire; such small dispersed sites are particularly frequent in those areas best suited to pastoralism, namely south-west Wales, the Llyn peninsula and the upper Severn basin. The distinctive local size ranges displayed by the defended settlements may point to local thresholds to expansion which differed from area to area. So, for instance, in the central Marches, a number of hillforts increased in area by different proportions in the course of the Iron Age, yet the final enclosures display an optimum size of about 8 hectares (Stanford 1972A:316-7), and similar regional optimum sizes are to be seen further west also (Hogg 1972B:298-303). If there was indeed a fairly regular relationship between the size of a defended settlement and that of its
population, then these regional size ranges may relate to the means by which these populations were supported. There is a practical limit to the number of people which a given area of cleared land can support, and an optimum size, generally a radius of one to two kilometres, for the territory belonging to any settlement; beyond this, it is more efficient to create a new settlement to reduce time spent in travel (Chisholm 1962:148). Unfortunately, there is no reliable method of estimating the total area exploited by a settlement from the size of that settlement alone. However, a parallel from the better-documented Mediaeval period suggests that there was then a fairly regular relationship between the maximum size of a village and the extent of its arable land: on good soils, the maximum area occupied by a settlement seems to have been 7% of the area of its arable, falling to 2.6% on clay (Hall D.N. 1972:62). The regularity of this relationship argues that it was created by population pressures, and that settlements tended to expand to their maximum efficient size before they sent out colonists to settle new land (Bradley 1978:22). Unfortunately, Iron Age fields are not as easily recognised and attributed to their appropriate settlements as are those of the Mediaeval period, so that it is not easy to pursue this parallel in detail, illuminating though that might be; however, the different sizes of settlements found in different areas may indeed be governed largely by economic necessity as determined by the agricultural potential of the different areas as well as by the political systems which operated there.

3.8: Invasion Theories

The emphasis on defence seen in particular in the hillforts of the Iron Age, and the different types of defences found in different areas and at different dates, have led to explanations of the Iron Age in
which a series of invasions is invoked to account for all innovations. A detailed scheme of this type suggests that all univallate hillforts which seem early and are over 0.4 hectares in area are the work of 'Iron Age A' invaders, who, on this interpretation, would seem to have spread along the Marches and thence into Glamorgan and south-west Wales, whilst the walled hillforts of the north-west represent the reaction of the native Late Bronze Age population to this threat (Hogg 1965:115-120). Bivallate and multivallate hillforts are then associated with the later 'Iron Age B' invaders, who are thought not to have gained a foothold in the northern Marches where the deeply inturned hillfort entrances continue in use; however, the bivallate defences which overlie some of the smaller walled forts of the north-west, such as Craigydinas and Pen-y-gaer (Llanbedrycennin) are held to indicate that there was a successful 'Iron Age B' invasion there (ibid. 121-6). More recent work has shown that some of the distinctions which underlie this interpretation are unfounded. For instance, though the walled forts of the north-west were considered to be the products of a different cultural group from the hillforts of the Marches, the hillfort of Moel Hiraddug, though stone-walled, contains numerous rectangular structures and has a sequence of entrances, the later with guard-chambers, very similar to that seen at Dinorben (Davies J.L. 1970:9-10, Guilbert 1979B:516-8), though both rectangular structures and guard-chambers are features more commonly associated with the Marches. The most significant difference between the hillforts of the Marches and the stone-walled forts of the north-west would in general seem to be the more elaborate entrances generally found in the former sites; the difference in building material seems less of a cultural indicator than a natural reaction to the differing resources available in the different areas.

Evidence for immigration or invasion into the region is very
difficult to obtain. A number of criteria for recognising immigration have been put forward (Harding 1974:8-17): the most direct form of evidence, the presence of a new physical type, is, in the absence of more than a very few burials of the period, unavailable, and written records of the period are also lacking. Our ignorance of the burial customs of the Iron Age seems to point to a continuity with the later Bronze Age, whilst the evidence of the settlements, both in terms of settlement types and their location and distributions, is not clear-cut. Although a new language, Celtic, reached the British Isles at some point in prehistory, the date is by no means certain: by the 6th century B.C., when Greek travellers first spread so far afield, the British Isles bore names which seem Celtic, suggesting that that language reached Britain at the latest by the Late Bronze to Early Iron Age transition, and this date has been favoured by some for its introduction (Rivet and Smith 1979:10-11), whilst others would set this earlier, perhaps as early as the Bell Beaker period (Abercromby 1912:98-101, Dillon and Chadwick 1973:18-19). Only the appearance of new artefact types then remains as a potential indication of immigration, and the simple appearance of new material is not enough: the new objects must be paralleled at some distance and within a limited geographical area before immigration rather than other contacts may be invoked (Myhre and Myhre 1972:47, 53, 61).

Artefactual evidence has in the past been used to attribute the inception of the Iron Age to the arrival of continental immigrants, though the grounds for this are slight. Hallstatt innovations in bronze types are limited to swords, razors, horse gear and a series of heavy axes: as these are seldom found in association with 'native' bronzes, it has been suggested that there were two separate metalworking industries serving two separate populations, the one native and the other an invasive warrior aristocracy. However, it is
at least as likely that this disassociation is a chronological feature and that, as elsewhere in western Europe, Halstatt bronzes are not found with other types because the use of bronze for edge-tools and the practice of hoard deposition were both coming to an end (Champion 1975:138-141). The Hallstatt swords which are found in Britain are better regarded as regional variants than as imports (Cowen 1967:401-9): they form part of a continuous tradition whereby, from the Middle Bronze Age to the Late La Tène period, Britain adopted and copied the current western European fashions in weapon types. Similarly, the razors and horse gear form part of a longer tradition whereby prestige objects are widespread in western Europe. It is thus difficult to find any evidence which conclusively supports the arrival of a new population at the beginning of the Iron Age (Megaw J.V.S. and Simpson 1979:412-3).

It has been suggested that there was an invasion into the Marches in about the 5th. or early 4th. century B.C., at the time when some hillforts were enlarged and others were built, and when their defences were strengthened and provided with inturned entrances and rectangular stone and timber guard-chambers (Stanford 1972A:316-7, 1981:163-4). At this time, a new pottery industry seems to have been established, and the salt trade reorganised, while the close-packed planned arrangement of buildings within the hillforts may also have been introduced now (Stanford 1974A:235, 1981:163-4). The invasion which brought with it these innovations is interpreted as the invasion of a ruling class which brought with it an alien military architecture (Stanford 1972B:25-36). However, Stanford himself admits (Stanford 1974A:235) that there are few parallels in western Europe for the tightly packed pattern of huts allegedly seen in the Marcher hillforts, apart from Castel Coz, where the Iron Age pottery seems to date to the La Tène III period rather than earlier (Wheeler and
Richardson 1957:109-110). Four-post structures such as are seen in the Marcher forts need not have been introduced from the continent: there seems no reason why they should not have been inspired by the four-post porches found in some round houses (Guilbert 1975B:211-3). In general, there seems no particular evidence for invasion rather than for trade links and other contacts with the continent at this date.

If, then, any migration took place into the region in the period discussed in this chapter, it is most likely to have occurred at the beginning of the Penard phase (Burgess 1980A:24, 157-9), when the first hillforts were established, some burials with gravegoods were made and many continental metal types were introduced (Burgess 1976:94-9, Megaw J.V.S. and Simpson 1979:299); the evidence is, however, by no means conclusive. Thereafter, although there is evidence of continued contact with the continent, as evidenced for instance by the Parc-y-meirch hoard with its affinities with the later Urnfield culture of central France (Savory 1971B:22-4) and by the presence of various prestige items such as Hallstatt swords and razors, the evidence does not seem sufficient to suggest immigration rather than long-distance trade or exchange, the movement of smiths or at most of a few warrior adventurers. Such prestige items often continue themes of display already established in the Bronze Age, concentrating upon weapons (of which swords may have been especially prestigious), armour, horses and horse-drawn vehicles, and feasting, as witnessed by the cauldrons (Coombs 1975:70-74).

3.9: Some Social Implications of the Settlement Evidence

It seems unlikely, then, that various immigrant populations created hillforts of different types in order to protect themselves against the hostile native subject populations. However, the presence of
hillfort defences and, in some areas, their repeated repair, together with the construction of features such as guard-chambers, implies the presence of a threat of some sort and perhaps also the existence of a society which set a high prestige value on display of this kind. These circumstances may have varied from area to area, for there seems to have been a greater emphasis on defence in the Marches, where the defences of, for instance, Croft Ambrey and Midsummer Hill underwent repeated repair and improvement (Stanford 1974A:29-74, 1981:18-55), than in other areas where the hillfort defences seem to have been repaired only relatively infrequently. The presence of hillfort defences, and indeed of planned settlements, with all that they may imply, suggests the existence of some coercive power under which a community invested part of its surplus in the provision and maintenance of such defences (Cunliffe 1976B:136-8); the nature of this power is not known, but may have been regal, aristocratic or perhaps even democratic.

Settlement sites may contain some evidence concerning the nature of society. For instance, the similarity of the buildings in the hillforts of the Marches, and in the stone-built hillforts of the north-west, may indicate the presence at those sites of unstratified, egalitarian, societies. No evidence has yet been found in the Marcher hillforts of any special structures or precincts such as may have been set aside for the use of a prestigious minority, though clearly further excavation might reveal such complexes; however, if found, they might represent the administrative centres of egalitarian societies rather than palaces (Guilbert 1975B:210-1). In north-west Wales, a closer examination of the evidence may suggest the presence of a superior group in society despite the similarity of the circular huts found at all sites. The smaller enclosure located within the defences at Conway Mountain (fig. 5) may have formed the residence
of such a superior group, even though the huts which it contains are
the same as those of the main fort; its defences are more monumental
than those of the main fort, against which it could be defended
(Griffiths and Hogg 1957:72). At Garn Boduan, a small fort again
lies within the main fort; this small fort has been dated to the late
Roman period (Hogg 1962:8-10) but, as the excavated hut within it
contained VCP (ibid. 10), which seems indicative of Iron Age date
(see appendix 1), there seems no reason why the two fortifications
should not be contemporary with each other. Here too the rampart of
the small fort is better built than than of the main fort (ibid.
28). The site of Carreg-y-llam has also been dated to the late Roman
period on the grounds that the few fragments of pottery found there
resembled the finer wares from Pant-y-saer, Dinas Cadnant and Castell
Odo (Hogg 1957:55); however, the absence of either Roman pottery or
imported sub-Roman wares, and the Iron Age date attributed to the
finer pottery from Castell Odo (Alcock 1961:122), suggests that this
too is an Iron Age site. Though strongly fortified, the site contains
only one house, which is unremarkable, being about 6 metres in
diameter (Hogg 1957:51-2), a size comparable with the larger houses
in the hillforts of Conway Mountain and Garn Boduan (Griffiths and
Hogg 1957:52-61, Hogg 1962:8). The element of display in the defences
is important, however: the outer ramparts are so arranged that, from
the terraced approach road to the site, they hide the base of the
inner rampart, thus adding at least 3 metres to its apparent height
(Hogg 1957:54), and seeming to suggest that this site too may have
housed a dominant element in the population.

The artefact evidence also seems to support such indications of
possible social stratification in Wales, and in particular perhaps in
the north-west, for a large number of the pieces of fine metalwork
known from the region were found in this particular area: items such
as the Cerrigydrudion bowl, the Capel Garmon firedog, the Tal-y-llyn shields and plaques and the Trawsfynydd tankard may suggest the existence in the area of an aristocratic military elite. Such a warrior element may not have been confined to the north-west, for at least three rich warrior inhumations were discovered in the 19th century at Castell y Lligiad, Ogmore Down, Glamorgan (Francis 1871:553-6, Wheeler 1925:205-6), while the Lesser Garth and Seven Sisters hoards contained decorative harness fittings (Savory 1966B:28-33, Davies J.L. and Spratling 1976:129-31, 139). Luxury products of this type are rare before the 2nd century B.C., raising the possibility either that a class society which required expensive forms of display had not emerged before that date, or that the surplus wealth necessary for the production of such luxury goods had not yet been attained (Cunliffe 1978A:302). Though the presence of such prestige goods suggests a stratified society, their apparent absence need not be taken to argue against such stratification: wealth may have been expressed less in these terms than in terms which leave little archaeological trace, such as cattle, salt, produce and women (Burgess 1980A:32). However, the artefact record indicates a change of emphasis in the Late Iron Age from items of personal adornment such as pins, brooches and bracelets, to military equipment: weapons, armour and horse and chariot trappings. The warrior burial from Gelliniog Wen, Anglesey, an inhumation with a long iron sword in a stone cist (Hughes H.H. 1909:256-7), seems to date to the Late Iron Age, forming the only example yet recognised from the region of such a La Tène weapon burial (Collis 1973:123-30). It is not certain whether the Ogmore Down burials fall within this category, since the helmets found with the skeletons, now lost, seem consistent in style with Italo-Celtic work of the 4th to 3rd century B.C., yet the apparent presence of blue as well as red enamel points rather to the
1st. century A.D. ( R.C.A.H.M. 1976:II:p.6 ). If they are as late as the 1st. century A.D., these burials may reinforce the evidence of the polychrome harness fittings of the Seven Sisters hoard ( Davies J.L. and Spratling 1976:135-8 ) for the existence of a warrior element in south-east Wales at that date.

3.10: Burial and religion

The general absence of burials in the Iron Age west of the Severn and Dee is paralleled elsewhere: burials are generally absent from most parts of Britain from the Middle Bronze Age on and, with the exception of a few localised groups such as the La Tène burials of East Yorkshire and the Aylesford-Swarling cremations of south-east England, are generally too few to allow any speculation concerning the 'normal' rite for the period, which would seem to have been a rite which left no trace in the archaeological record, perhaps the cremation of the dead and their subsequent burial without a container or other gravegoods, or the scattering of their ashes. The few inhumations known from Wales and the Marches include the warrior burials mentioned above and the burial, perhaps of the Beaker period rather than the Iron Age, in a rock-cut grave on Coygan Hill ( Wainwright 1967:5-6 ); as the Cerrigydrudion bowl was found in a cist, it may have been associated with a burial ( Smith R.A. 1926: 276 ). The proportion of the total population which was given formal, or accompanied, burial may have been very small. Those buried with their swords seem to represent a particularly exclusive class, since such sword burials are found scattered throughout Britain, each being isolated in an area which is otherwise characterised by a different funerary form or by the complete absence of burials; it has therefore been suggested that those thus buried may represent refugees fleeing the Caesarian conquest of northern Gaul ( Whimster 1981:1:144-6 ).
Alternatively, there may have existed a very small warrior caste whose allegiances transcended tribal and regional differences in burial type.

Iron Age religion similarly remains a subject of which little is known: no buildings interpreted as religious in function are yet known from Wales and the Marches, though some structures which have been found in England have been interpreted as temples, for instance at Heathrow and South Cadbury (Grimes 1961:25, Alcock 1970:19-20). Such buildings may, however, have been relatively unimportant in the context of Iron Age religion, in which natural features such as rivers, lakes and woods may have been more important: this suggestion, based upon literary evidence pertaining to the continental Celts (Strabo 4.1.13, Lucan Pharsalia 1.450-54), is supported by the numerous finds of valuable objects such as swords, daggers and shields from British rivers, in particular the Thames (Megaw J.V.S. and Simpson 1979:405-6). The famous hoard from Llyn Cerrig Bach, Anglesey, seems important in this context, for there a wide array of objects, including numerous swords, spears and chariot fittings, had been deposited in a peat bog, and seems to represent a series of offerings, perhaps of spoils taken in war, made over a period of time (Fox C. 1945:52-3); again, the majority of the offerings reflect the masculine and military preoccupations seen elsewhere in the metalwork of this date. If this was indeed a religious deposit, it may have been associated with the Druids who, according to Tacitus, had a sanctuary on Anglesey (T.A. 14.29). It has indeed been suggested that the entire island, with its valuable agricultural lands and copper mines, may have formed a temple estate which then supplied the economic basis of the priesthood (Richmond 1965:155-6), but this unfortunately remains purely conjectural.
3.11: The Political Divisions of the Iron Age

Whilst the region has so far been considered as a unit, it is almost certain that, in the later Iron Age, it was divided into a number of tribes: unfortunately, the evidence for these tribes and their locations comes from sources of the Roman period, in particular from the works of Tacitus and Ptolemy. However, this evidence is likely to hold good at least for the immediate pre-Roman period, for Tacitus' information relates to the conquest period, and thus to the tribes of the Late Iron Age rather than to the administrative divisions of the Roman period, and the same is probably true of Ptolemy, whose work, though compiled in the mid 2nd century A.D., is derived largely from 1st century sources ( Rivet and Smith 1979:114-5; see Appendix 4 ). From the information provided by these authors, supplemented by the distributions of coins of the Iron Age and the evidence of inscriptions of the Roman period, it seems possible to distinguish, and to a certain extent to locate, a number of tribes ( see map 9 ).

The Deceangli, whose name is recorded on a number of lead pigs of the Roman period ( Webster G. 1953:22-3 ), are generally assumed to be the same as Tacitus' Decangi ( T.A. 12.32.1 ). The presence of lead mines in their territory suggests that it included part or all of modern Flintshire, where the tribal name survived into the Middle Ages as Tegeingl ( Rhŷs 1892A:165-6 ), one of the cantrefs of Flint, whose boundaries lay on the rivers Dee and Clwyd ( Jarrett and Mann 1969: 165 ).

In the south, Ptolemy states that Moridunum and Louentinum lay in the territory of the Demetae ( 2.3.12 ): Moridunum has been identified as Carmarthen ( Rivet and Smith 1979:422 ), but the location of Louentinum remains uncertain, though Dolaucothi is a possibility ( ibid. 400 ). The Demetae may then have occupied all or part of modern Carmarthenshire, with Pembrokeshire and perhaps southern
Cardiganshire, while the Octapitae of St. David's Head may form a sub-group of this tribe (Ptolemy 2.3.3, Jarrett and Mann 1969:166-7).

Only Boullaion is recorded by Ptolemy in the territory of the Silures (2.3.12); this site should probably be identified with Usk, the Burrium of the Antonine Itinerary (Ant. It. 484,5, Rivet and Smith 1979:285). Caerwent also fell within the territory of the Silures (R.I.B. 311), and their eastern boundary may have been formed by the lower reaches of the Wye (Jarrett and Mann 1969:170), while on the west they may have extended to meet the Demetae, and on the north were probably bounded by the sparsely settled hills of Blaenau Morgannwg and the Black Mountain.

Between these tribes in the south and the Deceangli in the northeast is a vast expanse of territory, some of it upland which seems to have been very sparsely settled: some or all of this territory may have belonged to the Ordovices. According to Ptolemy, the Ordovices contained within their territory Mediolanum and Brannogennium (2.3.11), sites which, from his coordinates, both seem to lie in north Wales. A Mediolanum mentioned in the Antonine Itinerary and the Ravenna Cosmography lies between Chester and Wroxeter, probably at Whitchurch (Ant. It. 469,4, Rav. 106,41, Rivet and Smith 1979:415-6), but, as Ptolemy sets both Chester and Wroxeter in the territory of the Cornovii (2.3.11), this Mediolanum is perhaps unlikely to lie in Ordovician territory, and the Mediolanum which Ptolemy attributes to the Ordovices may rather be the Mediomanum which, according to the Ravenna Cosmography, lies west of Wroxeter, perhaps at Caersês (Richmond and Crawford 1949:40). On the other hand, Ptolemy may have had in mind that Mediolanum which lies between Chester and Wroxeter, which may yet not lie in the territory of the Ordovices, for he probably located a tribe merely with reference to its administrative centre, in either the military or the civil phase.
of government, and the tribal name, when written on the original map, may then have attracted to itself all the places which lay near it when the coordinates were read off (Rivet and Smith:1979:121). The identity of Brannogennium is uncertain: it has been suggested that it was Leintwardine, and that its attribution to the Ordovices is perhaps an error (ibid. 275). However, the Ordovices probably had extensive territories in mid Wales (Jarrett and Mann 1969:170), perhaps extending into the north-west. The only other tribe known in the north-west is the Gangani of the Llyn peninsula (Ptolemy 2.3.2.), who may have been a sub-tribe of the Ordovices: however, it is not certain that they should be located here, for they may have been transferred to Wales in error from Ireland, where a tribe of the same name occupies a similar position on the west coast (Rivet and Smith 1979:365).

As has been mentioned, the territory of the Cornovii included Chester and Wroxeter, and may perhaps have included all modern Shropshire and the Midland Gap (Richmond 1963:252-4). Further south, it is less certain who occupied the land between the Wye and the lower Severn. It is generally assumed, on the strength of one reading of a milestone from Kenchester (R.I.B. 2250), that the territory of the Dobunni, whose capital in the Roman period lay at Cirencester, extended at least as far north as Kenchester (Todd 1976:100). However, the coin distribution suggests that, in the pre-Roman period, the western boundary of the Dobunni lay along the Severn rather than the Wye, in which case the Kenchester milestone may indicate the later expansion of Dobunnic territory as a result of reorganisation in the Roman period (Webster G. 1981:17). Alternatively, it has been supposed that the D of the inscription stood not for Dobunni but for Decangi, the tribe apparently mentioned by Tacitus (see below, chapter 4), while Collingwood read the letter as a B, again
suggesting the presence of a civitas other than the Dobunni in this area in the Roman, and presumably also the pre-Roman, period (Stevens 1937:201). It thus seems unlikely that the Dobunni occupied this territory in the pre-Roman period, and is perhaps uncertain that they did so in the Roman period.

This, then, may have been the approximate disposition of the tribes of the region on the eve of the Roman conquest. It is not clear for how long these groups had taken this form. Savory suggested that the four main culture provinces of Wales, associated at the time of the conquest with the tribal territories of the Silures, Demetacae, Ordovices and Cornovii-Deceangli, had already emerged by the very late Bronze Age, when they were represented by different metalwork assemblages: thus, the Silures were represented by the South Welsh axe complex, the Demetacae by axeheads with multiple mouldings at the socket mouth, the Ordovices by their strong Irish connections and the Cornovii-Deceangli by their links with northern Britain (Savory 1958:49-50). More recently, this suggestion has been revived by Burgess, who has divided the region into five areas (see map 10): the Silures are again represented by the concentration of South Welsh socketed axes in south-east Wales, and the Deceangli by the mixture of socketed axe types found in north-east Wales, while north-west Wales is remarkable for the number of ‘late’ palstaves found there, the territory of the Cornovii is marked out in the Ewart Park phase by the presence of spear-warriors of the Broadward complex, and the territory of the Demetacae in the south-west is remarkable for being virtually devoid of metalwork of any kind in the Ewart Park phase (Burgess 1980B:249-51). These culture provinces, however, may only reflect the geography of the region, as a result of which the different areas lying round the central moorland core enjoyed varying contacts with the outside world, those areas on the east being in closer contact.
with England and those on the west with Ireland (Savory 1976A: 241-2).

These culture provinces are to a certain extent visible in the Iron Age, when for instance the south-west, later the territory of the Demetae, was characterised by a multitude of small earthworks, in marked contrast with the large heavily-defended hillforts of the Marches and north-east Wales, later the territories of the Cornovii and Deceangli and the inhabitants of the area between the Severn and the Wye. Pottery, on the other hand, was relatively common in the central Marches and extended to some degree into south-east Wales, leaving the rest of the region virtually aceramic. There may perhaps be a certain degree of coincidence between the regions demarcated by such distinctions in the settlement and artefact evidence and the later tribal territories, but it cannot be assumed that the connection is causal: there is an natural tendency for cultural boundaries to coincide with ecological boundaries, as the occupations upon which subsistence are based are related to the different aspects of the ecological system (Myhre and Myhre 1972:48), and features such as the size and configuration of settlements must be especially responsive to such ecological factors, while artefacts are also likely to have been affected, though perhaps to a lesser degree. For this reason, it is difficult to be certain that features which might suggest the presence of the later tribes are present in the archaeology of the earlier Iron Age, and it is perhaps best to admit that the date at which the tribes emerged in the forms in which they are later known is uncertain. However, the same geographical elements as helped to form the earlier culture provinces by influencing the distribution of Late Bronze Age metalwork are also likely to have influenced the later patterns of trade and settlement, and of social and political cohesion.
THE ROMAN CONQUEST OF WALES

4.1: Introduction

At the onset of the Claudian invasion of Britain in A.D. 43, the Roman intention may have been to limit the conquest to the more productive areas to the south and east of the Fosse Way (Webster G. 1960:49-50, Frere 1974:91-2): however, trouble in Wales and Brigantia compelled them to turn their attention to the less readily controlled areas to its west and north. In this chapter, the course of the campaigns which led to the final subjugation of Wales and the Marches is traced: it is important as the varying degrees of resistance displayed by the different tribes seems to bear some relation to their later development under Roman rule.

4.2: The Governorship of Ostorius Scapula (A.D. 47-52)

By A.D. 47, Britain south and east of the Fosse Way had been conquered. However, various tribes apparently located outside the province in its current form took advantage of the interval between the departure of the first governor of Britain, Aulus Plautius, and the arrival of his successor, Ostorius Scapula, to raid allied territory (T.A. 12.31.1). Though the invaders were promptly driven out of allied lands, and some elements, probably dissidents resident actually within the province, were disarmed (T.A. 12.31.2), this alone was not enough. By the end of 47, the immediate menace had been dispelled, but the inadequacies of current troop dispositions had been revealed: the Roman forces lay too far east to come to grips with an enemy operating from Wales, while too much of the central Midlands remained in hostile, or potentially hostile, hands. The Roman response, apparently a decision to advance up to the Upper Trent and Severn, suggests that the principal troublemakers had been the tribes
of north-east Wales and perhaps also of the south-west Pennines; the territory which they raided may have been that of the Cornovii. It has, however, been suggested that Tacitus' immediate reference to the Iceni (T.A. 12.31.3-4: 'cunctaque cis Trisantonom et Sabrinam fluvios cohibere parat. quod primi Iceni abnuere') may indicate that Scapula's main concern was with the lower Trent and with the establishment of a military post at Lincoln to separate the Iceni from the Brigantes (Jarrett 1965:24), and there may indeed be at Lincoln a military installation earlier than the known fortress, which seems no earlier than the mid 50s (Thompson F.H. and Whitwell 1973:135-7, 144-9). As the Iceni were only the first to revolt, and were followed by neighbouring tribes (T.A. 12.31.3), their shared grievance may rather have been the manner in which they had been disarmed (Webster G. 1981:21-2).

After dealing with the revolt of the Iceni and their neighbours, Scapula probably spent the winter of 47/8 pushing the frontier forward to the upper Severn before advancing, presumably in 48, in Decangos (T.A. 12.32.1). The precise identity of this people has been the subject of debate. Their name is most often emended to that of the known Deceangli of Flintshire (see chapter 3): an advance in this direction would have separated the tribes of Wales from those of the north, and Scapula would thus have limited his objectives sensibly by cutting off his immediate enemy from the possibility of reinforcement or retreat. However, other interpretations have been suggested. The emendation in Decantos has been put forward: the Annales Cambriæ mention, s.a. A.D. 822, the Arx Decantorum, the modern Deganwy, and, as the form 'Decanti' is unlikely to represent a scribal corruption or philological development from the form 'Deceangli', a separate tribe may be indicated (Jarrett and Mann 1969:165). A series of large marching camps, ranging from 14.5 to 16.5 hectares in area, and
leading from Wall to Penrhos via Burlington, Wroxeter and Whittington (see map 11), could relate to a campaign against these Decanti, though they might instead belong to the Anglesey campaign of A.D. 60 (St. Joseph 1973:242-4). Finally, the reading in Decangers has been retained and has been supposed to refer to the inhabitants of modern Herefordshire (Stanford 1971B:124), an area where the distinctive similarities displayed by the excavated hillforts has been held to indicate the presence of some form of tribal entity (Stanford 1974A:235-6), and where the possible Scapulan forts at Clyro and Jay Lane (Jarrett 1964A:209-210, Stanford 1969:318-20) contrast with the apparent scarcity of military sites of any period in the presumed territory of the Deceangli (see map 12). A campaign directed against the supposed Decangi would open the way to the conquest of the Silures and help to explain the subsequent move of Caratacus, leader of the native resistance, to Ordovician territory (Stanford 1971B:124); it would not explain the way in which, whilst apparently still in Decangan territory, Scapula reached a point 'haud procul mari quod Hiberniam insulam aspectat' (T.A. 12.32.3), for the nearest point of access to such a sea, Cardigan Bay, surely lies well beyond the supposed Decangan territory, an advance beyond which does not seem implied by Tacitus' narrative. On the other hand, such a position could easily be reached through Deceanglian territory via the Vale of Clwyd, or even through the postulated Decantan territory via the Conwy valley, while an advance into north-east Wales would have furnished the Brigantes with a more obvious cause for their subsequent revolt than an advance into the southern Marches.

Though Scapula's campaign was cut short by trouble in Brigantia (T.A. 12.32.3), the land between the Severn and Trent was held: Watling Street was probably now extended to the Severn at Wroxeter, where the pottery from the fort to the south of the town is consistent
with a Scapulan foundation date (Dudley and Webster 1965:142-3), and the forts along its line at Stretton Mill near Penkridge and at Red Hill were probably also established at this date (Frere 1974:95). The large fort at Leighton surely also predates the arrival of the legion at Wroxeter in the 60s (ibid. 95). There is as yet little evidence for forts along the banks of the Severn itself, important though they would surely have been, except at Wroxeter, Kingsholm and probably Worcester (St. Joseph 1953A:54, Hurst et al. 1975:269, Frere 1974:96, Barker 1970:16); the importance of Wroxeter is emphasised by the marching camps nearby at Attingham Park and Leighton as well as at Wroxeter itself (St. Joseph 1977A:145, 1973:234-5). The success of operations against the Deceangli, if they were indeed Tacitus’ Decangi, is less certain. They certainly formed a part of the Roman province by about A.D. 60 at the latest, for lead was being mined in their territory by the governorship of Frontinus, A.D. 74-78 (I.L.S. 8710), and the Anglesey campaign of A.D. 60 presupposes their prior pacification. However, there were other opportunities for their conquest between A.D. 48 and 60, and Caratacus’ escape from mid Wales to Brigantia in A.D. 51 (T.A. 12.36.1), presumably through their territory, may imply that they were still unsubdued at that date.

The Silures as well as the Brigantes prevented Scapula from exploiting his limited success of A.D. 48 (T.A. 12.32.4); their belligerence necessitated further action against them. The obvious base for operations against the Silures was the lower Severn valley, and a fortress was probably built there, at Kingsholm near Gloucester, in A.D. 49 or 50 (Hurst et al. 1975:269-72, 275-80); this was the lowest point at which the Severn could be bridged, and may have been the site of an earlier auxiliary fort (R.I.B. 121). Its garrison is attested as Legio XX (R.I.B. 122), probably hitherto stationed at Colchester. Other major sites may also belong to this phase, for
Tacitus states that 'Silurum gens...castris...legionum premenda foret' (T.A. 12.32.4), indicating that more than one fortress was involved: not all need have been full fortresses rather than vexillation fortresses. The 10.5 hectare site at Clyro or the 6.7 hectare fort at Clifford may belong to this phase: the latter is probably earlier in date than the former, and is thus perhaps more likely to date to this period (Manning 1976:29). It has been suggested that the pre-Flavian fortress at Usk should also date to the governorship of Scapula (Jarrett 1968A:78), but it seems rather to date to the mid 50s (Manning 1978:76). At about this date, Gloucester and Wroxeter were presumably linked by roads protected by forts.

At some time between A.D. 49 and 51, Caratacus moved to Ordovican territory (T.A. 12.33.2): presumably, seeing the steadily advancing encirclement of the Silures, he wished to keep open his communications with Brigantia, with the consequent alternatives of reinforcement or escape. His defeat is set by Tacitus in the ninth year of the war in Britain (T.A. 12.36.1), in 51 or possibly 52 (Syme 1958:I:391 n.3); the events of the intervening years are unknown, but they may have been spent by the Romans in the reorganisation consequent upon their previous advances, and perhaps in campaigns against the Silures and possibly also the Ordovices. After the defeat of Caratacus and his followers, apparently in Ordovican territory (T.A. 12.33-35), perhaps on the Severn opposite Abermule (Dudley and Webster 1965:153-5), Silurian resistance continued. Late in 51, or in 52, a legionary force which had been left behind to build forts in Silurian territory was nearly defeated (T.A. 12.38.3-4). The forts upon which the force was engaged may have included that at Clifford or its apparent successor at Clyro (Frere 1974:97-98), and perhaps Abergavenny, where Claudian pottery and coins suggest a possible foundation date circa A.D. 50 (Probert et al. 1968:174, Davies J.L. 1980A:258); they
do not seem to have been far from the nearest occupied forts, from which reinforcements were rapidly sent (T.A. 12.38.4). Soon after this incident, two auxiliary units were surrounded and taken prisoner or killed in Silurian territory (T.A. 12.39.5), and, by distributing prisoners and spoils amongst other tribes, the Silures encouraged them to revolt. Tacitus' use of the term 'defectio' suggests that the tribes involved were regarded as forming part of the Roman province, and the success of the Silures now no doubt encouraged anti-Roman elements both inside and outside the province.

4.3: Consolidation and Renewed Attack

In A.D. 52 or 53, Scapula died, and, in the interval before the arrival of the new governor, Didius Gallus, a legion was defeated and widespread Silurian raids ensued (T.A. 12.40.3). On arrival, Didius seems only to have contained these raids without continuing the advance against the Silures (T.A. 12.40.3, 14.29.1); as Nero apparently toyed, early in his reign, with the idea of abandoning Britain altogether (Suetonius Nero 18), Didius may have been instructed to avoid any unnecessary warfare. Nonetheless, Tacitus states elsewhere that he advanced the frontier slightly, and built new forts (T. Agr. 14.3): the area involved is not specified, but probably lay on or near the borders of Wales. Both the road from Church Stretton to Leintwardine and the first fort at Usk, one of whose functions seems to have been to act as supply depot at the base of this road, may have been his work rather than that of Scapula (Frere 1974:100), and the road from Usk through Abergavenny to meet the Leintwardine road at Kenchester should perhaps also be attributed to Didius: it would debar the Silures from the lower-lying parts of their eastern borderlands (Frere 1974:100). There may have been an early fort at Kenchester (Webster G. 1966:41), and others at
Chepstow and Weston-under-Penyard (Davies J.L. 1980A:260, Webster G. 1960:66-67), and the fort at Coed-y-caerau may also have formed part of the same system, for it seems too near to Caerleon to be contemporary with the fortress there, and at one hectare is rather large for a mere observation post (Manning 1976:29). The large fort at Clyro and the fortress at Wroxeter should perhaps also be attributed to Didius. At Wroxeter, although the earliest pottery seems no earlier than c. A.D. 55 to 60, the tombstones of two legionaries who lack cognomina (R.I.B. 292, 295) should probably be no later than the Claudian period, and certainly earlier than A.D. 60, as in both cases the legion lacks the titles Martia Victrix which it probably won in the Boudiccan revolt of that year. However, both the fortress and the fort at Clyro may have been begun in the governorship of Veranius (Frere 1974:100), though probably no later: the fortress at Wroxeter was surely completed by the time of Paullinus’ campaigns in north Wales.

Didius was replaced, probably in 57, by Quintus Veranius, a commander with a great military reputation won in Asia Minor against hill-tribes comparable to the Silures (Birley A.R. 1981:52-3); his appointment suggests that, after a phase of consolidation, the time was felt to be ripe for a further advance into Wales. Though Veranius, who died in his first year of office (T.Agr. 14.3), according to Tacitus only pursued minor raids against the Silures (T.A. 14.29.1), he seems in fact to have accomplished much in his brief governorship, for, by A.D. 60, his successor Paullinus was in a position to invade Anglesey, having spent only two years in successful campaigning in which he conquered tribes and established forts (T.Agr. 14.4). The invasion of Anglesey would be inconceivable with the Silures still unsubdued, and the campaign of 58 was probably directed against them, and that of 59 against the Deceangli (Frere 1974:103) or the
Ordovices. Archaeological evidence of these campaigns is scanty. In South Wales, seven marching camps are known which are capable of holding a legion or more: these indicate campaigns ranging as far west as Neath and Llandovery (see map 11), but some at least may date from Frontinus' later campaigns. In North Wales, the series of large marching camps running from Wall to Penrhos (see above) could date to this period, as could the large vexillation fortress at Rhyn Park (St. Joseph 1977B:58-60), and the forts at Chester, Whitchurch, Brompton, Caersws I and the probable fort at Colwyn Castle (McPeake 1978A:15-16, Hartley 1981:245, Jones G.D.B. and Webster 1969:197-8, 213, St. Joseph 1969:119, Nash-Williams and Jarrett 1969:66, Spurgeon and Davies 1975:67).

The invasion of Anglesey, apparently viewed as the centre of native resistance, probably took place in A.D. 60 (Syme 1958:II:765). Paullinus crossed to Anglesey with a fleet of flat-bottomed transports (T.A. 14.29.3): he had defeated his opponents and established a fort (T.A. 14.30.3), perhaps at Aberffraw (White R.B. 1973A:36-7), when the Boudiccan revolt broke out. By this time, resistance in South Wales would seem to have come to an end, and total conquest was apparently near at hand. Though the Boudiccan revolt and its aftermath postponed the final conquest of Wales for another fifteen years, Veranius may not have been much mistaken in his dying claim (T.A. 14.29.1) that another two years would have sufficed for the reduction of the entire province.

4.4: The Roman Conquest: the Final Phase

Manpower shortages after the Boudiccan revolt, due to a need to redeploy the army in disaffected areas, meant that the full force of Roman attention was not again directed against Wales until A.D. 74. It has even been suggested that there was a partial withdrawal from Wales
in this period, as there does not seem to have been a major unit at Usk after about 67, although the site was not wholly abandoned (Davies J.L. 1980A:260-1). At Cardiff, however, structural timbers from the first fort, apparently founded about A.D. 55, were reused in the second fort (Webster J. and Webster 1978A:50), suggesting continuity of occupation, and a general withdrawal seems unlikely, though an aggressive policy was temporarily abandoned. In the meantime, there were some troop movements. In A.D. 66, the fourteenth legion was withdrawn from Wroxeter to take part in Nero’s projected eastern campaign. The twentieth was probably moved up from Kingsholm to take its place, and II Augusta, hitherto at Exeter, should then have replaced the twentieth at Gloucester though, as the new fortress there enclosed only 18.25 hectares, part of the legion was probably immediately outposted to Usk (Frere 1974:109), while in 74 the entire legion moved forward to Caerleon. The construction in the late 60s of a new fortress at Gloucester, and of the very large (21.5 hectare) site replacing the earlier fort at Usk, suggests that active preparations were under way for a major campaign in Wales: though the base at Usk seems to have been intended as a supply base, as two large groups of granaries are known (Manning 1978:73-4), there was also room for a very large concentration of troops, and the site may have housed the fourteenth legion on its brief return to Britain in 69. However, the reduction in strength of the British army when, in 69, vexillations were sent from the three British legions to support Vitellius in the Civil War, and when the fourteenth legion, after its brief return to Britain in 69, was withdrawn to the Rhineland in 70 (Frere 1974:115), entailed the postponement of any projected Welsh campaign.

In 74, this campaign became inevitable, for the Silures seem to have compelled the Romans to abandon the final subjugation of the
Brigantes (Frere 1974:120). The details of the campaign are unknown, though at least some of the marching camps in South Wales should belong to this period, especially that at Blaencwmbach which, at 26.25 hectares, is large enough to hold at least three legions plus auxiliary troops: Frontinus' governorship is the only time when such forces are likely to have been available for use in South Wales. The different sizes of the marching camps makes it impossible to trace the course of any particular force, but general probability, supported by the pattern of permanent forts in the area, suggests that the troops approached the area by landings on the coastal plain rather than through the mountains from the north-east. Forts whose occupation seems to begin about 75 are found at harbours all along the South Wales coast at Cardiff, Neath, Loughor and probably Carmarthen (Webster J. and Webster 1974:73-4, Nash-Williams and Jarrett 1969:99-100, Ling and Ling 1974:116, Jones G.D.B. 1969:4-5): from all these sites, and from Caerleon at the mouth of the Usk, valleys lead into the interior, the Usk and Tywi valleys being particularly useful as they are both easy routes, which between them almost cut off the greater part of Silurian territory. Roads were now built along these valleys, linking forts set approximately one day's march apart and forming a network which cordoned off each block of hills and thus limited the possibility of unauthorised movement on any scale (see map 13). Though the earliest milestone known from Britain, that from Llanfairfechan, is Hadrianic in date, and may mark the date at which the roads were first metalled (R.I.B. 2265, Rivet 1956:43), the provision of cleared tracks following these routes is surely contemporary with the construction of the forts which they linked.

In the Agricola, Tacitus mentions only Frontinus' conquest of the Silures (T.Agr. 17.3); the relevant sections of the Histories are lost. It seems likely that Frontinus also overran the Ordovices.
Certainly, by 78, part at least of their territory seems to have been under Roman occupation, for Agricola, on his arrival in Britain, found that the Ordovices had attacked and almost destroyed a cavalry regiment which was operating in their territory ('in finibus suis agentem': T.Agr. 18.2): its presence there is likely to result from the work of Frontinus rather than his predecessors. At Chester, a site which first became really important with the development of the Flavian policy of conquest in northern Britain (Strickland 1980:7), work on the fortress probably began between 74 and 78 (McPeake 1978A:12, 16, Hartley 1981:245); the early glazed-ware vessels found at Pennal and Caer Gai (Boon and Brewer 1981:363-6) suggest that the forts there are probably Frontinian in origin, as also are probably the forts of Llanfor and Tomen-y-mur (Davies J.L. 1980A:261). Agricola's modesty at the end of the campaign of 78, in which he occupied Anglesey and finally overcame the Ordovices (T.Agr. 18.7), may suggest that he regarded this as the suppression of a rebellion, or at most as the completion of the work of another, rather than as the conquest of new territory. However, Frontinus' achievements against the Ordovices must have taken second place to his conquest of the Silures, for he was still alive and important when the Agricola was written: if the conquest of the Ordovices had been his greater claim to fame, it could hardly have been ignored, even in the interests of the glorification of Agricola. As there is little or no evidence for the military occupation of North Wales prior to his governorship, the major task of conquest in the area should perhaps be attributed to Frontinus; Agricola may then have been responsible for the completion of the network of roads and forts, with the construction of forts at Segontium, Pen Llystyn and perhaps Caerhun and Brithdir (Nash-Williams and Jarrett 1969:60, Hogg 1969:145, Davies J.L. 1980A:261, Goodburn 1976:196).
So the initial phase of Roman activity in Wales and the Marches came to an end. The literary sources record severe resistance to Rome only on the parts of the Silures and Ordovices: other tribes may have been less hostile to Rome. This may be reflected archaeologically by the way in which, by circa A.D. 80, north-west, central and south-east Wales and the Marches were covered with a network of roads and forts which seem almost entirely restricted to the territories of the Silures, Ordovices, Cornovii and the Dobunni or other occupants of the area between the lower Severn and the Wye (see map 14). There is no evidence that the Demetae ever fought the Romans, and the only certain forts within their territory seem those at Carmarthen, at Pumsaint, whose function was probably to guard the gold-mine at Dolaucothi, and at Loughor on or near their border with the Silures. The absence of Roman forts, together with the native settlement pattern in which small enclosed settlements predominated (see chapter 3), may suggest that the population of this area was not given to war, and may therefore have offered little resistance to Rome, or even entered into a treaty relationship with her. Similarly, there is no evidence of any resistance on the part of the inhabitants of Llŷn: the peninsula seems to have been left beyond the limits of the Roman fort system, by which its inhabitants were either contained or protected, but which it was not felt necessary to extend into their territory. Though the Deceangli would seem to have offered some resistance to Rome, the only fort within their territory seems the possible fort at Prestatyn (Frere 1977:358-9, Grew 1981:314): however, their territory was ringed by the fortress at Chester and the forts at Whitchurch and Rhyn Park, which may have been considered sufficient to contain the tribe. Once this pattern of military sites crystallised in about A.D. 80, few changes were made in the location of forts in the region, though there were probably changes in the composition of its garrison, with
possible signs of temporary abandonment at Segontium, Caersws, Joy Lane, Erglodd and perhaps Brithdir, possibly in response to Agricola's northern campaigns (Davies J.L. 1980A:261-4); later, garrisons were gradually withdrawn as the region was pacified (see maps 15-17).
5.1: Introduction

The Roman occupation of Wales and the Marches saw the imposition upon the native patterns of society and settlement of an alien people with a different language, economy, social structure and way of life. Such an occupation of a country by a materially and economically more advanced power inevitably occasions changes in the way of life of the occupied people. In this chapter, some of these changes are considered; particular emphasis is laid here upon the changes in the settlement pattern which were brought about by the demands of the Roman army and administration, of which the most obvious is the development of urbanisation. Other changes which occurred in this period, in particular agricultural and industrial innovations, and social and legal changes, will be more fully discussed in chapters 9, 10, 12 and 13.

5.2: Economic Effects of the Roman Occupation: The Maintenance of the Army

As has been seen, the Roman conquest of Wales and the Marches resulted in the imposition of various military installations on the conquered territory: some of these were abandoned as the region was pacified, but others seem to have remained in use until the end of the Roman period (see maps 16-19). Consequently, the Roman occupation caused a large, and sudden, increase in the population of the region. In about A.D. 100, the army of occupation would seem to have numbered at least 25,000 men, a figure which is likely to have been higher earlier; imposed upon a native population of perhaps 200 to 400,000 (see chapter 8), this represents an increase in population of 6.25 to 12.5%. Such an increase would clearly necessitate the
reorganisation of the resources of the region; this is seen at its most basic level when the provisioning of these troops is considered.

Grain formed an important part of the Roman military diet. Under the Republic, it was apparently issued on a scale which ranged from 0.95 bushels of wheat per month for an infantryman to 2.85 bushels of wheat and 9.98 bushels of barley for a legionary trooper and his horse or horses (Polybius 6.39.13-14). This is comparable to the quantity of grain consumed by soldiers in late 6th-century Egypt, who were each issued with three pounds of bread a day, as well as two pounds of meat, two pints of wine and one-eighth of a pint of oil; each horse received seven pounds of barley and one-sixth of a load of hay (P.Oxy. 2046, Grenfell et al. 1924:265-8). So too, in 2nd-century Egypt, an ala required 20,000 artabs or 1,400,000 pints of barley a year (P.Amh. 107, Grenfell and Hunt 1901:134-5): this barley was presumably intended entirely for the horses, as barley was normally only given to the men as a punishment (Frontinus Strategems 4.1.25, Polybius 6.38.3, Suetonius Augustus 24), and amounts to about seven pounds per horse per day. The three pound issue of bread to the men represents about two pounds of grain (Pliny N.H. 18.67). Analyses of bones found on military sites indicate that the meat issue may most frequently have taken the form of beef, although mutton, goat and pork were also common, and poultry and game played a subsidiary role (Davies R.W. 1971:126-8). Fish and shell-fish were also eaten (ibid. 128-30), and, since scurvy is only mentioned once in a military context (ibid. 137, Pliny N.H. 25.20), so presumably were fruit and vegetables.

If the army of the early Empire was issued with grain to the standard suggested by Polybius, the garrison of Wales and the Marches, estimated to have numbered about 28,960 infantrymen and 3,000 cavalry in about A.D. 80, would have required 401,460 bushels of wheat and
265,390 bushels of barley and also, if the Egyptian figures are applicable, 23,336,640 pounds of meat per annum: if the meat was on the bone, as the generous figures might suggest, it may represent the equivalent of 46 to 60,000 of the cattle of the day (Noddle 1975: 252). By about A.D. 100, when the garrison of the region had been reduced, these figures may have fallen to about 350,000 bushels of wheat, 250,000 bushels of barley and 20,000,000 pounds of meat, representing perhaps 40 to 50,000 head of cattle: the latter figure may perhaps be compared with the tribute imposed on the Welsh princes by Athelstan in A.D. 926, which included 25,000 oxen (William of Malmesbury G.R.A. II:134, Migne 1855A:1100).

The total grain requirement of the Roman army in Wales and the Marches may then have stood at about 666,850 bushels in A.D. 80, falling to perhaps about 600,000 bushels in A.D. 100. Though it is often assumed that all this grain was imported from Lowland Britain or from further afield, this may not always have been so. The region contains large areas of potential arable land which were used as such in the 18th. and 19th. centuries, though they are not generally so used today. In the late 18th. century, for instance, a quarter of Breconshire, a county of which nearly 94% lies above 152 metres (Stapledon 1936:80), was said to be good land, suited for cereal production (Clark J. 1794A:11): this represents some 51,800 hectares of potential arable land, much of which may have been used as such earlier still, for Giraldus states that, in the 12th. century, Breconshire produced great quantities of corn as well as providing ample pasture and woodland (It. 1.2). Similarly, in the late 18th. century, Radnorshire contained 34,800 hectares of tillage (Clark J. 1794B:17), while in 1866 over 37,000 hectares of land in Montgomeryshire were laid down to arable (Stamp 1942:354). If, as thus seems likely, grain could be grown on a substantial scale in
Wales and the Marches in the Roman period, the army would surely have drawn upon such sources rather than relying unnecessarily upon the long-distance transport of supplies from the Lowland Zone, for the cost of such transport would surely have been prohibitive: at the end of the 3rd. century A.D., a 300 mile wagon journey doubled the cost of 1,200 pounds of wheat (Ed. Diocl. 17.3-5, 1.1, Pliny N.H. 18.66). Overland transport would also be wasteful of manpower, for soldiers would presumably have been required to guard the passage of supplies through areas whose loyalty was still in doubt. Though many of the Roman forts and fortresses, such as Chester, Caerleon, Caerhun, Cardiff, Carmarthen, Neath, and Segontium, were well-placed to be supplied by sea, for others in mid Wales and the Marches, such as Castell Collen, Forden Gaer, Leintwardine and Walltown, such transport would not have been available. Probably, then, wherever possible, supplies were drawn from the areas around the forts themselves, and one might expect to see traces of expansion in the agriculture of those areas.

It is interesting to calculate the area of land represented by the grain requirements of the army. In the late 18th. century, Wales was regarded by agricultural writers as an exceptionally retarded area, yet the wheat yields from the more fertile parts of Montgomeryshire ranged from 62 to 74 bushels a hectare (Kay G. 1794:17, Manning 1975:112): a yield of 25 bushels a hectare, such as has been suggested as appropriate for Iron Age Britain (Piggott 1958:23), would have been regarded as abnormally low. At this low estimate, the army of A.D. 80 would have required the produce of some 26,670 hectares, an area which would fall to 16,670 hectares should the yields reach 40 bushels per hectare. In theory, therefore, all the army's grain needs could have been easily met from the 37,000 hectares of Montgomeryshire which were laid down to arable in the 19th. century. These figures, however,
relate only to the land directly producing grain for the army: no allowance has been made for seed-corn, fallow, land taken up by buildings, roads and hedges, losses in storage, which may have stood at about 10% or more of the grain (Buckland 1978:44-5), or for the grain consumed by its producers if the latter were civilians. Nonetheless, when allowance has been made for all those factors, it does not seem unreasonable to suppose that a substantial proportion of the grain consumed by the army of the region might have been produced within the region itself. Similarly, Athelstan's tribute suggests that the quantity of meat which, on the Egyptian standard, the army may have required, though great, might not be beyond the capacity of the region to supply: at the stocking rate of 4 to 5 per hectare which seems applicable to modern bullocks (see chapter 2), the animals required by the army of A.D. 80 would seem to have occupied at most 12,000 hectares of land.

Not all of the supplies required by the army can have been produced in Britain. Oil and wine must always have been imported from abroad, and some grain may also have been imported, especially in the earlier days of the occupation: thus, at Caerleon, a deposit of burnt grain, dated to the late 1st. or early 2nd. century, contained, as well as barley, oats, rye and wheat, some weeds which suggested that the cereals had been imported from the Mediterranean region (Helbaek 1964:158-163, Boon 1972:35). Such imports of grain are unlikely to have continued long after the initial conquest period, and a reference to regular shipments of grain to the Rhineland (Ammianus 18.2.3, Zosimus 3.5) suggests that, by the 4th. century at least, the direction of the grain shipments had been reversed.

There were various means whereby supplies might be obtained from the neighbourhoods of the forts themselves. They could be obtained from civilians by compulsory purchase or requisition (T.Agr. 19.4),
purchased by normal market processes, or produced on military land either by the military itself or by civilians to whom that land might have been leased. Requisition seems to have been the primary means by which the needs of the army were met, at least in times of war (Rostovtseff 1957:1:357-8), and Trajan could be congratulated for paying for, presumably rather than requisitioning, supplies (Pliny Panegyric 29.4: 'emit fiscus quidquid uidetur emere'). It has, however, been suggested that the territories belonging to forts and fortresses were intended to make their garrisons as self-sufficient as possible. At Vetera, for instance, the fortress territorium seems to have covered no fewer than 3,500 hectares, an area large enough to produce all the grain required by the legion; the large number of small farms located within this presumed territorium suggests that it was let out to civilian tenants rather than farmed directly by the army (Von Petrikovits 1960:63-7). In general, however, the evidence for legionary territories throughout the empire is slight, and the term applied to them is almost invariably 'prata', suggesting that the land was used to pasture stock rather than for arable purposes (Mocsy 1967:211, Fentress 1979:141).

Evidence concerning the military territories in Britain is scanty, though the Antonine Itinerary, which records the distances between sites on various major routes, seems to measure not from the centres of those sites but from some point beyond, perhaps suggesting that there was a zone around each fort which might represent its territory; however, such a zone seems to have been less than a quarter of a mile in radius from the centre of the fort, and is unlikely to have been significant in economic terms. There is no indication in the Itinerary of a similar territory around the fortresses of Caerleon and Chester (Rodwell 1975:76-8, 99). Evidence of cultivation has seldom been sought within the immediate vicinities of military sites, but at Usk
plough furrows containing early samian and following the line of the Roman boundary ditch outside the Neronian fortress indicate that at least part of the area outside the fortress was under the plough at a time when this was essentially a frontier station (Manning 1975:115). As a result of their function controlling roads and river crossings, most of the Roman forts in Britain, with the notable exception of those on Hadrian's Wall, lie on or near good agricultural land, and cereal production within their territories would thus often have been a practical proposition. At yields of 25 bushels a hectare, with allowance for seed-corn, a garrison of 480 infantry would consume the produce of some 295 hectares of land, so that their grain requirements could be met from an area of less than 3 square kilometres: this, however, is approximately six times the average fort territory suggested by the Antonine Itinerary.

It seems unlikely, then, that all a fort's grain requirements were met from its own territory, if indeed the shortfalls in distance seen in the Antonine Itinerary indicate the likely boundaries of those territories, and if the territories were used in this way rather than as grazing land for the regimental animals and for the unit's future meat rations. The produce of the surrounding area would have been drawn upon, and supplies were presumably imported from further afield only when this source proved inadequate. Some expansion and intensification of agriculture in the areas near the forts should therefore be expected, though this is unlikely to have been reflected in any significant increase in the wealth of the peasantry: the distribution of villas in Britain suggests that substantial profits were possible only when considerable civilian rather than military markets lay nearby (Rivet 1969:178). Beyond those zones which lay within easy reach of a fort, the cost of transport probably precluded any pressures for increased grain production, unless this were to feed
a growing native population (Manning 1975:115). The demand for livestock was probably more constant, as cattle could walk to market and be fattened again on army land: cattle, or their hides, seem to have been levied as tribute in those areas in which they were bred in great numbers (T.A. 4.72.2). As, from the Middle Ages to the advent of the railways, cattle were driven to market in London from all parts of Wales, including Pembrokeshire, Anglesey and Llyn (Jones J.I. 1975:115), they could presumably have been moved around with equal ease in Roman Britain.

The early Roman period should thus have seen considerable expansion in agriculture and stock-rearing as a result of the increased demand for foodstuffs created by the presence of the army. Later, local recruitment (Dobson and Mann 1973:204-5) may have reduced this effect. Unfortunately, the difficulty of dating many settlements with any precision hinders the recognition of such an expansion, if indeed it occurred. Since much of the region was aceramic in the Iron Age, it cannot be assumed that sites which have yielded only Roman pottery first came into occupation at that date, nor indeed that sites which, on the artefactual evidence, seem only to have come into use in the 3rd. or 4th. centuries were first occupied then: their previously aceramic occupants may have been slow to accept pottery when it first became available to them in the Roman period.

5.3: Rural Settlement: North-west Wales

In the Roman period, as before, the pattern of rural settlement seems to have varied significantly from area to area, though in some cases the evidence for this is slight and the boundaries between the areas far from firmly established (Hogg 1966:28). The extensive use of stone for building means that, as in the Iron Age, most is known of the area north and west of the rivers Dyfi and Conwy. Here, rural
settlement takes the form of homesteads and huts, often found in association with 'terraced fields'; in Meirionnydd, such homesteads are found further inland and at higher altitudes than in Caernarfonshire, and more often lack such fields, suggesting that their economy may have been based almost entirely on stock-rearing rather than on agriculture. The homesteads probably have their origin in the Iron Age (see chapter 3), though it has been claimed that they represent the introduction of new settlers into a relatively sparsely populated area which had perhaps been further depopulated by Roman punitive action against the Ordovices (Hogg 1966:33, 1979:295-6, T.Agr. 18). The polygonal type of enclosed homestead may indeed have evolved from the earlier native types of homestead in the Roman period under Roman influence, but, although there might seem some evidence for a chronological development from the thin-walled oval type of homestead, the least well-built variety, of which some examples seem to have been occupied in the Iron Age, (see chapter 3), to the thick-walled oval and polygonal types, this sequence cannot be applied rigidly: some examples of different type were certainly occupied simultaneously, and may even have been built at the same date. So, at Caerau, Clynnog, the pottery found in a thick-walled oval and a polygonal homestead situated in the same block of fields suggests that both were occupied simultaneously in the mid Roman period (O'Neill 1936:299); the polygonal homestead seems to have been built on the site of an earlier, probably oval, homestead which was presumably associated with the late 1st. or early 2nd. century sherds found in the courtyard of the polygonal homestead (White R.B. 1973B:10-13). Other polygonal homesteads which seem to have been established in the late 2nd. or 3rd. century were also built over earlier settlements of different plan which may not have been enclosed; at Cefngraeanog, the earlier settlement was of timber, and
was associated with fragments of a 2nd. century olla (R.C.A.H.M. 1960:852, 1964:p.115, cf. R.C.A.H.M. 1937:pp.113-5 and perhaps also R.C.A.H.M. 1960:1340i and ii ). A second polygonal site at Cefngraeanog (R.C.A.H.M. 1960:836) formed the third phase of occupation on that site: the undated first phase, which may date to the 1st. century A.D. as it was sealed by a layer containing undateable samian and coarse pottery (Goodburn 1978:406), was first succeeded, after a break in the occupation, by an oval homestead built perhaps in the mid 2nd. century (Hogg 1979:295-6). Finally, at Cae'r Mynydd, a typical thick-walled oval homestead occupied in the 3rd. and 4th. centuries was built over an earlier settlement of different but uncertain plan; it may also overlie a pre-existing terrace (Griffiths 1959:57-60).

Such examples of homesteads which overlie earlier settlements, whether of similar or different type, may hint at continuity of settlement and tenure from one phase to the next. They certainly oppose the suggestion that enclosed homesteads represent officially encouraged settlement imposed upon a relatively sparsely occupied area in the early 3rd. century A.D. (Hogg 1966:33-6), with settlers brought from northern Britain, northern Iberia or even the Mediterranean region (Hemp and Gresham 1944:190-1, Griffiths 1951B:181, Hogg 1966:36). No exotic artefacts are found in association with the enclosed homesteads, whose origin now seems to lie in the Iron Age of the region, and whose associated 'terraced fields', which were previously thought to indicate the colonisation of the district by a people intrusive to it (Gresham 1963:266-7), now seem to have formed accidentally rather than been constructed deliberately (see chapter 9). Apart, therefore, from the establishment of the polygonal sites of Din Llugwy, Cefngraeanog and probably Hafoty Wern-las on the sites of earlier and different
settlements probably in the 3rd. century (Hogg 1966:36), which may be susceptible of other explanations, the only substantial argument put forward for the plantation of new settlers, or the planned exploitation of hitherto undeveloped land, is that relating to the group of habitations set amongst terraced fields at Caeronwy-uchaf, near Nantlle. These habitations are strung out along an old leat in such a way as to suggest that it formed their common water supply, and it has therefore been suggested that all were built at the same time. However, none of these sites are true enclosed homesteads: the leat runs past two single enclosed huts (R.C.A.H.M. 1960:1222-3), a pair of unenclosed round huts (ibid. 1224) and a large circular enclosure (ibid. 1226) before seeming to head in the direction of an irregular hut group (ibid. 1217). Whether or not these sites form an example of planned settlement, they thus seem to have little bearing on the question of the origins, or conditions of establishment, of the enclosed homesteads.

The example of Caerau, Clynnog, where two homesteads of different plan seem to have been in simultaneous use, suggests that differences of plan may reflect differences of function and wealth rather than simply differences in date. Enclosures which contain large areas of open space but little roofed accommodation may have been intended to serve an economy dependent on livestock rather than on arable or mixed farming, since stock-rearing requires few buildings but, at certain seasons, needs large enclosed spaces. The most common form of covered compartment, the round building, was probably used primarily as a dwelling; rectangular or sub-rectangular structures could be used for stalling oxen, as suggested by the paved, drained floor of the sub-rectangular building at Cae’r Mynydd (Griffiths 1959:47-8) or for industrial purposes, as suggested by the evidence of ironworking in rectangular buildings at Din Llugwy and Hafoty Wern-las (Baynes
1908:197-8, Williams H. 1923A:98-101). Though the distinction is not clear-cut, for round 'houses' may also have been used as byres at Fengate in the Late Iron Age, while there is evidence of ironworking in a circular building at Caemeta (Bradley 1978:49, Livens 1973:37), it may perhaps be assumed that the majority of round structures represent nothing more than domestic accommodation: if so, then homesteads which contain fewer circular and more rectangular structures may represent greater wealth in the form of a higher investment in stock or industrial activity than those which contain few or no rectangular buildings (Smith C.A. 1978:39-40). In general, the level of material prosperity evidenced by remains other than the buildings themselves is low, and there seems little correlation between prosperity as measured in those terms and settlement morphology. However, traces of metalworking seem particularly plentiful in polygonal homesteads, and those homesteads which have proved most rich in material remains, Din Llugwy and Hafoty Wern-las, are both well-planned polygonal sites of Smith's class Id (Smith C.A. 1978:46-7).

Other forms of settlement probably utilised at this period include large round unenclosed huts, such as those at Llanystumdwy and Penarth (see chapter 3), and also groups of huts associated with fields defined by low walls. The latter differ from similar hut groups which have been tentatively assigned to the Bronze Age in that the huts are larger and the fields lack clearance cairns. Such sites are found in considerable numbers around the coastal belt from Arllechwedd to the western slopes of Cadair Idris, with the greatest concentration in Eifionydd, in Cwm Pennant and Cwm Ystradllyn. Here, an excavated group of two round huts linked by a rectangular structure at Braichygornel produced no datable finds (Gresham 1973:56-9), but settlements of similar form are known at Moel Gaedog and Corsygedol, Meirionnydd, and
the latter site has yielded 2nd. century Roman pottery (Griffiths 1960A:127). Such ‘small compact’ hut groups (R.C.A.H.M. 1964:ci) seem similar to the enclosed homesteads of Caernarfonshire and Anglesey save that their enclosing walls are very slight and irregular by comparison with those of the true enclosed homesteads, and the enclosure is formed almost entirely by the huts themselves. At Corsygedol, the enclosure wall and rectangular structure may be secondary to the two round huts (Griffiths 1960A:122-3), and in this case the Roman pottery found on the floors of the round huts presumably dates the later phase of the occupation, suggesting that hut groups of this type may have been occupied from the Iron Age into the Roman period. The presence of walled fields rather than cultivation terraces may indicate that these settlements relied upon stock-rearing rather than arable farming: the hut group at Corsygedol was associated with a field system 21.5 hectares in extent which also contained other huts and hut groups (ibid. 120-2).

Some hillforts were also still occupied in the early Roman period. Finds of Roman pottery of the 2nd. to 4th. centuries at Braichy dinas and Tre’r Ceiri indicate occupation which was probably continuous with that of the Iron Age (R.C.A.H.M. 1956:252, 1960:1056). Other hillforts in the area which have been reasonably extensively excavated, for instance Conway Mountain, Pen-y-gaer and Craigydinas, have not produced Roman material (Griffiths and Hogg 1957, Gardner 1906, R.C.A.H.M. 1960:1281); it is not clear what factors determined which hillforts remained in use and which did not.

It has been suggested that the most Romanised rural site in north-west Wales, Bryn Glas 2.5 kilometres north of Segontium, may have been a military outpost (Nash-Williams and Jarrett 1969:132); however, it bears more resemblance to sites such as Cwmbrwyn, Carmarthenshire, which are probably Romanised farmsteads, and is the only site of this
type which is known in north-west Wales. Small-scale excavations within the enclosure of less than 0.1 hectare found traces of two structures and a very few fragments of Roman pottery, suggesting either a brief or an impoverished occupation at the end of the 1st. century A.D. (Wheeler 1922:126-133).

5.4: Rural Settlement: South-east Wales

In south-east Wales, the rural settlement of the Roman period is characterised by the villas of the Vale of Glamorgan and the Gwent coastal plain: though some of these may have been new foundations, others developed from Iron Age farmsteads. Some pre-Roman defended sites seem also to have remained in use in the late 1st. and early 2nd. centuries, although the paucity of material found in some suggests that this occupation may have been brief or impoverished: so, one mortarium fragment, a piece of Roman glass and a spindlewhorl made from a Roman sherd were found in a fundamentally Iron Age context in the promontory fort of High Penard (Williams A. 1941:27), while one samian sherd was found in Bishopstone promontory fort (Williams A. 1940:17). On the other hand, the large quantities of Roman pottery found in the hillfort of Caer Dynnaf, Llanblethian, suggest an intense occupation extending from the Iron Age to the 4th. century A.D. (Davies J.L. 1967B:77-78), and the Roman sherds of the 2nd. to 4th. centuries found at Castle Ditches, Llancarfan (Alcock 1956:299, Hogg 1977:34-7) also seem to represent a relatively intense occupation. At Caer Dynnaf, however, the function of the hillfort may have altered in the Roman period: most of its western half is occupied by a system of small rectilinear enclosures delimited by low stony banks at least one of which was built in the Roman period, and these may represent one or more small farmsteads (Davies J.L. 1967B:77-78). The site may owe its prosperity to the proximity of the Roman road, and of the
settlement at Cowbridge, 1.5 kilometres away. Other hillforts may have been abandoned earlier: Llanmelin, where none of the Roman pottery need date later than the conquest period, may have been abandoned at that date (Nash-Williams 1933B:289-90), and, although building took place within the Bulwarks, Porthkerry, in the Flavian period or early 2nd. century, the site seems to have been abandoned by the mid 2nd. century at the latest (Davies J.L. 1974A:92-3). Building took place within the hillfort of Sudbrook in the early Roman period (Nash-Williams 1939A:50-52), but it has been suggested that this may be connected with the possible use of the site by the Romans as a ferry point or coastal supply base rather than with its continued existence as a native settlement (Davies J.L. 1980A:260). At Mynydd Bychan, the group of three or more stone huts which succeeded the defended settlement was built either shortly before or immediately after the Roman conquest of the area, and was occupied from the mid 1st. to the early 2nd. century (Savory 1954B:96-98). It may thus be that, although most of the strongly defended sites in this area were abandoned in the early Roman period, in most cases the break in occupation came in the 2nd. century rather than immediately in the wake of the Roman conquest.

Other sites, however, continued in occupation into the Roman period. Some of the caves which had been utilised in the Iron Age, the Culver Hole, Minchin Hole and Lesser Garth Cave, remained in use in the Roman period (R.C.A.H.M. 1976:I:9, 12, 19, Hussey 1963:8), while others such as Spritsail Tor Cave and Ogof yr Esgyrn may have come into use then for the first time or after a break of millennia (R.C.A.H.M. 1976:I:10, Mason E.J. 1968:32). Similarly, some farmstead sites continued in use. At Whitton, a defended Iron Age farmstead developed gradually into a Romanised site whose buildings, initially of timber, were replaced in stone in the 2nd. and 3rd.
centuries until the final farmstead seems to have taken the form of a range of buildings set around a central courtyard (Jarrett and Wrathmell 1981:84-98). At Cae Summerhouse, another subrectangular enclosure was occupied from the Iron Age to the 4th. century A.D., but never seems to have attained the same degree of prosperity as Whitton: its buildings seem to be of timber throughout, unless two parallel drystone walls should be interpreted as part of a large Late Roman building (Davies J.L. 1967A:75-7, 1973A:53-7). At Moulton, however, another small Iron Age settlement developed into what may by the 4th. century have been a corridor-type villa (R.C.A.H.M. 1976:11:759), and the most substantial villa in the area, that at Llantwit Major, seems also to have been built in a pre-Roman ditched enclosure. Here too, the development was gradual: after a probable initial timber phase, a simple stone building was erected perhaps in the mid 2nd. century, and, after a period of economic decline or perhaps even abandonment in the mid 3rd. century, this was extended by various additions until by its period of maximum prosperity c. 350 A.D. it had become a large courtyard villa (Hogg 1974A:236-9). In this area, then, it seems more normal for villas to develop from pre-existing farmsteads than to be imposed upon virgin sites: only one villa, that at Ely, seems to fall into the latter category, apparently being built in stone at very nearly its maximum size early in the 2nd. century A.D. (Wheeler 1921:70-76).

Some discoveries on the Monmouthshire coast may, however, indicate the exploitation of previously unoccupied land. Pottery of the 1st. to late 3rd. centuries A.D. has been found with animal bones at the base of the alluvium near the coast at Magor (Boon 1968:121-5), large quantities of 2nd. century samian and coarse pottery on the foreshore at Cold Harbour Pill, and Roman sherds of the 1st. and 2nd. centuries with animal bones at Uskmouth (Nash-Williams 1952A:254-5, Barnett
none of these finds were associated with structures of any kind, and they may represent rubbish deposited in drainage channels (Hawkins 1973:83-4). Nothing is thus known of the types of settlement occupied by the users of the pottery save that they presumably lay close by in the low-lying and hitherto apparently unoccupied Caldicot Level.

5.5: Rural Settlement: South-west Wales

For the most part, therefore, the general pattern in south-east Wales may have been the gradual Romanisation of pre-existing settlements, and, although the south-west does not seem to have attained the same degree of Romanisation, the development there may have been broadly similar. Villas of some pretension are indeed known in the area, though they may not have been common: the villa at Abercyfar apparently had a very fine tessellated pavement and yielded quantities of coins of the late Empire (Randall 1949:86) while that at Llys Brychan, whose precise size and date remain uncertain, was equipped with a hypocaust and painted wall-plaster (Jarrett 1963:3-5). Roofing slates and hypocaust tiles found at Ford, Pembrokeshire, may indicate the site of another villa or Romanised farmstead (R.C.A.H.M. 1925:305A, St. Joseph 1961A:131). However, the dominant type of settlement in this area is probably the more modest defended farmstead, as seen at Castle Flemish, Cwmbrwyn and Trelissey (Wheeler 1923B, Ward 1907, Thomas W.G. and Walker 1960). Unfortunately, at these sites the relative dates of the earthworks and the Romanised buildings which they enclose are not certain, though at Cwmbrwyn the bank has been cut back to accommodate the long narrow stone building in a manner which suggests that the defences may predate this building (Ward 1907:196-7); at Trelissey, the ringwork could date to the Iron Age, though no evidence of pre-Roman occupation
has been found there, or could be contemporary with the rectangular stone building which it surrounded ( Thomas W.G. and Walker 1960:297-303 ). Such sites may then represent the Romanisation of pre-existing settlements of the type which seemed characteristic of the area in the Iron Age ( see chapter 3 ) or the continued construction of settlements of similar type in the Roman period. Various other small rectangular or sub-rectangular enclosures in the area could represent small defended farmsteads constructed in the Roman period, though excavation of the site of this type at Eithin Môn found it to contain only flimsy structures which may have been windbreaks and which, from their termini ante quos of 110± 80 and 100± 70 a.d., may have been in use in the Late Iron Age or Early Roman period ( Avent 1975:34-5 ).

In Pembrokeshire, some sites which originated in the Iron Age seem to have continued in use into the Roman period. At Walesland Rath, a small defended site similar to those mentioned above, the pottery indicates occupation in the 2nd. and 3rd. centuries A.D., and three structures, huts B and K and the rectangular building ( see figure 4 ), were probably constructed in the Roman period ( Wainwright 1971:77-82 ). Some groups of huts and enclosures, apparently associated with walled fields, which are found in Pembrokeshire, may also have been occupied in the Roman period: though none has been excavated, a brooch of the 2nd. or 3rd. century was found in the settlement of this type on Stackpole Warren ( Hogg 1963:250-2 ). Finally, some hillforts may have remained in use in the Roman period: pottery of the 2nd. century has been found in the promontory fort of Buckpool, and pottery of the 3rd. and 4th. centuries in that at Crocksydam ( Grimes 1931A:394-5 ), and one 2nd. century sherd has been found in the hillfort of Gaer Fawr ( Hemp 1943:234-5 ), though the squarish stone structures there are perhaps Mediaeval rather than Roman in date ( Hogg 19748:74-5 ).
The most common type of settlement in south-west Wales would thus still seem to be the small defended farmstead, which may now contain buildings whose construction displays a modest degree of Romanisation of techniques and materials; in Cardiganshire, the extreme paucity of Roman material suggests a substantial degree of continuity with the Iron Age. Two very curious sites in the south-west which seem unparalleled elsewhere should perhaps be mentioned briefly here as they may date to the Roman period. Gateholm, a very exposed and inhospitable tidal islet off the Pembrokeshire coast, is virtually covered with the foundations of long rows of uniform huts measuring at most about 6 metres by 3; it has been estimated that there are about 110 such huts (Davies J.L., Hague and Hogg 1972:103). The site gives the impression of homogeneity, with no sign of rebuilding: all the buildings may have been set out at the same time, despite the claim (Lethbridge and David 1930:371-4) that a layer of ashes runs under the wall of one house, for its doorway may have lain at this point (Davies J.L., Hague and Hogg 1972:103-4). Pottery finds suggest that the site was occupied in the late Roman period, but, as only abraded sherds of samian found embedded in a patch of metalling in one building were actually stratified (Lethbridge and David 1930:371, Davies J.L., Hague and Hogg 1972:105), the site may perhaps date to the immediate post-Roman period. The purpose of the settlement is far from clear: it has been suggested that it may represent an Early Christian monastic community, and if so is the largest surviving settlement of its kind in Britain (ibid. 104). A similar settlement of close-set rectangular buildings which have yielded scraps of Roman pottery lies on Sheep Island and the adjacent promontory fort of Castles Bay; here, however, the buildings do not take the form of the long unbroken runs of compartments characteristic of Gateholm (ibid. 104).
5.6: Rural Settlement: North-east Wales and the Marches

In north-east Wales and the Marches, the settlement pattern of the Iron Age seems to have been dominated by hillforts, some of which seem to have been abandoned at the conquest while others remained in use: the reasons for this are not clear. Caynham Camp, Titterstone Clee, Croft Ambrey and the Roveries were all probably occupied down to the conquest period, yet seem to have been abandoned at the conquest, or at the latest very early in the Roman period (Gelling P.S. and Peacock 1970:96-100, O'Neil 1934:29-31, Stanford 1974B:49), while the Berth and the Breiddin seem to have been abandoned at the conquest and then reoccupied in the late Roman period (Gelling P.S. and Stanford 1967:83, O'Neil 1937:97, Musson 1976:302). Dinorben, on the other hand, seems to have remained in occupation throughout the Roman period (Guilbert 1979A:182, 186), and Sutton Walls to have been occupied down to the 3rd. century (Kenyon 1954:18-20, 22, 43-57): the massacre originally thought to have occurred there at the conquest (ibid. 7-10) is now considered to have taken place considerably later (Stanford 1974B:49-50). Roman sherds are also known from Dinedor and Aconbury (Kenyon 1954:25-6), Oldbury and Wall Hills, Ledbury (Brown 1965:85), Poston and Timberline Camp (Anthony 1958:6-10, 14-18), and, in very small quantities, from Credenhill and Midsummer Hill, though at Credenhill the pottery could all be very early, and at Midsummer the Roman sherds are very few, suggesting that both sites were abandoned early in the Roman period (Stanford 1971B:116, 1981:148-9). It has been suggested that this varied pattern is the result of the enforced evacuation, under Roman rule, of some of the larger and more strongly defended hillforts of the area (Stanford 1974B:50-1). Thus, while the Breiddin seems to have been abandoned at or before the conquest, the nearby weakly-defended homestead of New Pieces was occupied from the 2nd. to 4th. centuries
( O'Neil 1937:110, 123 ), and, since Roman pottery of the 1st. century seems rare on civil sites in this area, may even have been in continuous occupation from an aceramic Iron Age ( Stanford 1974B:51 ). Similarly, while the Wrekin was abandoned at or before the conquest ( Kenyon 1943:99-109 ), the nearby low-lying weakly-defended promontory fort of Oliver's Point was occupied in the Roman period; a single occupation layer there contained pottery dating to the late 2nd. to 4th. centuries ( Hume and Jones 1961:130-2 ).

Presumably, then, a substantial population moved away from the hillforts of this area in the Roman period; its subsequent habitations are uncertain. The only major towns of the area are Wroxeter and Kenchester: of these, Wroxeter was perhaps large enough to hold all those who may have been displaced from the Shropshire hillforts, but was probably not founded as a town until the 90s, while Kenchester, which has produced little material earlier than the Antonine period ( Jack 1923:9-23 ), seems too small to contain all the potential occupants of the Herefordshire hillforts if they were occupied on the scale envisaged by Stanford, though it is by no means certain that they were ( see chapter 3 ). At Kenchester, too, the town plan seems to have grown gradually rather than being deliberately laid out for the resettlement of the hillfort communities, and indeed the deliberate transfer of native populations by the Romans to the new towns seems improbable in view of the fact that, in Spain and Gaul, neither Numantia nor Alesia, both hillforts which had formed the scenes of bitter sieges by the Romans, suffered subsequent evacuation ( Hassall 1979:248 ). Many of the inhabitants of the hillforts may then have moved to the vici outside the Roman forts, of which relatively little is known, or into scattered rural habitations; when they moved to the new towns, the economic advantages of the latter, and especially their relation to the new road system and their
consequent accessibility as markets, were probably sufficient attraction without any element of compulsion (ibid. 249).

Despite the presence of good agricultural land, villas are remarkably scarce in this area, and much of the population may have occupied farmsteads of native type, of which few have yet been excavated. At least some of the rectangular and sub-rectangular enclosures with traces of associated field-systems which seem to concentrate in the Severn valley above Shrewsbury, around Leintwardine and Craven Arms (Stanford 1974B:56), and in the Wroxeter area (Webster G. 1975:89-92) are likely to represent farmsteads which were in use in the Roman period: the excavated examples at Weeping Cross and Sharpstones Hill were both occupied from the Iron Age into the Roman period (Jenks 1966:14, 1967:22, Anon. 1969:17-18), and there seems no reason to assume that these sites are atypical. As yet, no evidence has been found in this area of continuity between such a site and a villa, but many of the known villas were excavated early, and are thus imperfectly known. That at Lea Cross seems to have been first occupied in the mid 2nd. century (Houghton 1961:26-7) while all the pottery from the villa at Crickton dates to the 2nd. century (Anon. 1951:130): both these sites, and the possible villa at Whitley (Houghton 1961:27), lie near the Roman road from Wroxeter to Caersws. There seems to have been a small courtyard villa at Yarchester which was occupied in the 3rd. and 4th. centuries (Webster G. 1975:84), while the villa at Acton Scott is perhaps also late, though it yielded no pottery, for the curious collection of Greek coins apparently found there (Acton 1846:340-5) can have no bearing on the date of the building. Again, the villa at Stowe yielded no datable pottery (Morris J.A. 1926:v-vi). There may have been villas at Rushbury, near Stanton Lacy, where masonry fragments were found with a little pottery (Auden 1911:xiii-xiv), and perhaps at Upton
Cresset, where large quantities of 2nd. to 4th. century pottery have been ploughed up (Webster G. 1975:89). In Herefordshire, the evidence for villa settlement is yet more scarce: stone buildings are known at Putley and Bishopstone, the latter having an elaborate mosaic (V.C.H. 1908A:193, 191), while at Blackwardine the settlement which has yielded coins ranging in date from Augustus to Honorius may be a village or small town rather than a villa (ibid. 195). At Huntsham, an extensive site contained a courtyard villa occupied from the late 2nd. to the late 4th. century and an aisled barn which seems to have been in use from the late 3rd. to the mid 4th. century (Bridgewater 1965:189-191, 1969:26).

5.7: Rural Settlement: a Summary

The pattern of rural settlement seems to have continued in the Roman period much as it had been before, the major change being the apparent abandonment of some hillforts. Many native-style farmsteads continued in use, some developing a veneer of Romanisation with the adoption of rectangular buildings, as seen in the enclosed homesteads of the north-west and the defended farmsteads of the south-west, of new building materials such as roofing tiles and window glass, and of luxuries such as painted wall-plaster, hypocausts and bath suites. It is difficult, in the absence of many recently excavated sites, to pinpoint any quantitative rather than qualitative differences in the settlement patterns of the region in the Roman period. The lack of good chronological indicators, such as closely datable Iron Age artefacts, may hinder the recognition of an Iron Age phase on many Roman sites in many areas, while the general need for the thorough excavation of a large number of sites to see how many represent continuations of Iron Age occupation and how many were new settlements of the Roman period means that any comments on the developments of the
Roman period are tentative in the extreme. The evidence from north-west Wales would seem to forbid the application to that area of the theory formulated in relation to Westmorland that enclosed settlements which have a single continuous boundary wall represent pioneer settlements in a landscape which had not previously been settled by that cultural group (Webster R.A. 1971:68-9), whereas agglomerated sites, where no single wall contains the settlement which would seem to have grown up in a haphazard fashion over a protracted period of time, form a feature of secondary settlement in a known landscape (ibid. 69-70). Various of the enclosed homesteads of north-west Wales, which should on Webster's terms represent pioneer settlement, occupy the sites of earlier settlements (for instance, Din Llugwy, Cefngraeanog and perhaps Hafoty Wern-las i and ii: R.C.A.H.M. 1937:pp.113-5, 1960:852, 1340 i and ii); there is no evidence whatsoever to suggest that the occupants of the later settlements on these sites were of a different cultural group from the occupants of the earlier settlements.

It is, therefore, difficult to trace an expansion in settlement and agriculture from the settlement remains, though such an expansion may perhaps be visible in the pollen record. So, for instance, there was at Tregaron a great rise in the ratio of herb to shrub pollen, indicative of an increase in either arable or pasture, at a date which probably fell within the Roman occupation, possibly near its beginning (Hogg 1979:288-9). This may indicate that the expansion in land use which might be expected in the Roman period, but which is, because of the deficiencies of the archaeological record, so difficult to document, may indeed have taken place (see further chapter 12).

5.8: Urbanisation: the Coloniae and Municipia

The effects of the Roman occupation are more evident in the sphere
of urbanisation. The presence of the garrisons created markets for goods other than basic foodstuffs, and for various services, and canabae and vici therefore grew up outside the fortresses and forts to provide these services and presumably also to house the soldiers' families. Although the evidence is sometimes lacking, such settlements probably developed outside every fort: indications of a vicus outside the fort of Tomen-y-mur (Nash-Williams and Jarrett 1969:113) suggest that no fort is likely to have been too isolated or too remote to have attracted a settlement. Where a fort remained in use for any length of time, its attendant settlement often took root and continued in existence, as a village or small town, after the army had moved away.

In addition to these vici, and to those which developed at mining and other industrial sites (see chapter 10), other towns were established as a result of more direct Roman pressures: these were the self-governing towns, the coloniae, municipia and civitas capitals, through which the surrounding countryside was also administered. In the 1st century A.D., the coloniae were still deliberate settlements of legionary veterans who, on their discharge from the army, were rewarded for their services by the grant of a plot of land in the town which had been founded to house them, and of another plot of land in the adjacent countryside to farm. However, by the time of Nero, the character of the coloniae seems to have been changing: Tacitus laments that they were no longer composed of soldiers from the same legion still drawn up in ranks under their officers but came from different units and therefore lacked the same spirit of loyalty (T.A. 14.27.4). Nonetheless, these coloniae still served the useful function of settling a body of ex-military men wherever the authorities might wish: located in or on the borders of potentially hostile territory, they could if necessary protect Roman interests: so, Tacitus speaks of 'coloniam romanam et partem exercitus' (T.H.
1.65 ) and, in Britain, states that the role of the colony at Colchester was as 'subsidiun aduersus rebelles' ( T.A. 12.32.2 ). The colonies were also intended to foster the spread of Roman habits: Tacitus cites as the second function of the colony at Colchester 'inbuedis sociis ad officia legum' ( T.A. 12.32.2 ), and they may also have been important as settlements of farmers producing a surplus of grain to supply the army ( Fentress 1979:125 ). Although none of the British colonies lay west of the Severn and Dee, that at Gloucester, on the very edge of the region, must have exerted some influence on south-east Wales, and in particular must have been intended to watch over the Silures, who had put up a stubborn resistance to Rome ( see chapter 4 ); the precise choice of site was presumably determined by the presence of the former legionary fortress which, as it was already imperial property, could have been used without further expropriation of land. The colony seems to have been founded between A.D. 96 and 98 ( I.L.S 2365, Wacher 1975:137 ), and its initial population, probably composed mainly of retired soldiers of Legio II Augusta, may have numbered about 5,000 men ( Frere 1974:296 ); a substantial number of natives may also have been enfranchised in the process of creating this, as other, colonies ( Stevenson G.H. 1939:129 ).

The extent of the territory attributed to the colony at Gloucester is uncertain, for colonial and municipal territories could embrace all or only part of the lands of the tribes amongst which they were situated ( Frere 1974:231 ). Gloucester is generally assumed to lie in the civitas of the Dobunni, whose capital lay at Cirencester, and the colony therefore probably only took over part of the tribal territory. All suggestions as to the location and extent of its territory, whether based on claimed traces of centuriation ( Wacher 1975:152-4 ), on the distribution of tiles stamped R.P.G. ( Richmond 1966:179 ) or
on the extent of the 'town zone' suggested by the Antonine Itinerary (Rodwell 1975:88-9, 99), indicate that it lay south and east rather than west of the Severn; it may have extended to the Severn on the west, and for some 5.5 kilometres to the east (ibid. 88-9).

Although the colony at Gloucester only occupied the area of the legionary fortress, after its foundation occupation seems to have continued on the site of the former canabae, presumably at first by their former occupants; by the mid 2nd. century, there seems to have been a densely occupied area outside the defences at least twice as large as the area within them (Hurst 1976:73). Most of the city's commercial and industrial activity may have been located in this area after as well as before the foundation of the colony.

The Roman colonies represent groups of Roman citizens living together under Roman law, and governed by an ordo of about 100 decurions who were elected from the citizens (cf. R.I.B. 616); in the earlier Empire, colonies were generally new foundations, or at least communities to which a substantial number of Roman settlers had been added. Municipal status, on the other hand, was awarded to pre-existing towns, and did not involve the settlement of veteran soldiers; though constitutionally similar to the colonies, the municipia could retain some native laws (Stevenson 1939:166-7). Thus, although the coloniae were generally regarded as higher in status than the municipia, in theory at least the latter possessed a fuller measure of self-government (Aulus Gellius XVI.13). Municipia were relatively rare in Britain: a settlement dependent upon the fortress at Chester may have achieved this status, but it is not certain whether the settlement so promoted was the legionary canabae or a settlement further from the fortress, perhaps at Heronbridge (Birley E. 1953:66-68, Mason D.J.P. 1978:40).
5.9: The Civitas Capitals

*Colonia* and *municipia* were relatively rare in Britain, where the most common type of self-governing community was the so-called *civitas* capital, whose development seems to have been encouraged by the Roman authorities. In this, they had two motives: they wished the new towns to form centres of administration and taxation for the *civitates peregrinae*, self-governing communities of non-citizens, whilst at the same time, by their provision of amenities such as baths, education, entertainments and comfortable dwellings, they fostered the acquiescence of the native population in the Roman presence (T.Agr. 21). Thus, as well as administrative centres, the *civitas* capitals also became centres for trade and industry; some were, in time, promoted to the rank of *municipium*.

The Romans had not only to promote the growth of these towns but also to create or organise the *civitates peregrinae* of which they were to form the centres. In Britain, as in Gaul, the Roman response to a population grouped in tribes ruled by kings or oligarchies (see chapter 12) was to create *civitates peregrinae* for the most part based upon these tribes; each then formed a self-governing unit administered from the capital which housed the organ of government which, as in the *coloniae*, took the form of an *ordo* of about 100 decurions, attested in Caerwent in the early 3rd. century (R.I.B. 311). This constitution may have been adopted spontaneously by the *civitates* themselves in emulation of the *coloniae* and *municipia* whose status they may have coveted (Stevenson G.H. 1939:161). Naturally, such a regime could not be imposed immediately after the conquest, and, where possible, the interim period was bridged by the retention of loyal kings such as Cogidubnus and Praesutagus (T.Agr. 41.2, T.A. 14.31). Military government may have filled the vacuum for those tribes which were not suited to such treatment (Hassall 1979:243-4),
and Roman military officers may then have acted as profecti civitatis (Rivet 1977:167); some tribes which never seem to have developed civitas capitals, such as the Ordovices and Deceangli, may have remained under military government throughout the Roman period, or may have been attributed to other civitates for administrative purposes.

The location of civitas capitals seems to owe much to the Romans, for very few seem to occupy sites which had been important in the pre-Roman period; when the evidence is available, most seem to occupy former Roman fort sites. Though the towns may then have developed from the vici which grew up outside these sites when they were still under military occupation, this does not explain why one vicus rather than another eventually developed into a civitas capital: it may be that the sites which became civitas capitals were those from which the tribes had been administered before they were given self-government, namely the posts where the units were stationed whose commanders acted as the profecti of the tribes. In this way, there would be continuity in the location of the tribal administration from the military to the civilian phase (Rivet 1977:169-171).

The distinction between the civitas capitals and those towns which were not the centres of local government was made clear to all by the provision in the civitas capitals of regular street plans and substantial public buildings, of which the most important were the forum and basilica; smaller towns displayed instead a more natural unplanned development. Roman or Roman-trained architects, surveyors, masons and builders were clearly employed in the development of the self-governing towns and, as their work appeared relatively early in the history of the province, it has often been suggested that official aid, perhaps in the form of military architects and surveyors, and even military labour, must have been forthcoming. The evidence is
equivocal. On the one hand, at Verulamium, the plan and techniques employed in the first buildings in insula XIV strongly suggest military assistance (Frere 1975:302-3), yet, on the other, few of the inscriptions from various parts of the Empire, including Britain, which attest military participation in provincial building are earlier than the 2nd. century, and the majority date to the reign of Marcus Aurelius or later (Macmullen 1959:216-8); furthermore, they refer chiefly to fortifications, precisely the kind of building in which army involvement would seem most likely, rather than to civic buildings of any other sort (ibid. 220). The general absence of evidence of military participation in the building programmes of the civitas capitals is hardly surprising when it is remembered that the majority of the towns took shape in the Flavian and Hadrianic periods when the army was still involved in campaigning and building roads and forts in Wales and the North. A close study of the architectural ornament employed on the civil and military sites in Britain suggests that, in the greater part of the province, different architects and stonemasons were at work on the different types of site; though there seems a close relationship between the ornament employed in the fortress at Chester and the town at Wroxeter, it is not clear to what extent any of the masons working there were military, and they may rather have been civilians (Blagg 1980:31-40). The burden of town building must then have fallen on the civilians, though it may have been lightened by means such as the remission of taxation, attested in other parts of the Empire (as, for instance, T.A. 2.47), or grants from the imperial fiscus (cf. Philostratus Vitae Sophistorum 2.1, C.I.L. XII.3151).

5.10: The Civitas Capitals of Wales and the Marches

The town of Wroxeter, probably founded on the evacuation of the
fortress there c. A D 90 ( Frere 1974:139-40 ), may have been the earliest civitas capital west of the Severn and Dee. The plan of the early town may have been quite different from that seen later. So, in the centre of the later town, on the macellum site, timber structures were built directly into the military demolition level ( Webster G. 1980A:292 ); like the structures found earlier under the forum ( Atkinson D. 1942:fig.5 ), these seem to have been modest houses rather than public buildings. Possibly, then, the centre of the original town lay elsewhere, perhaps around a forum in insula 10, while the houses on the macellum site lay on the periphery of the town rather than in its centre ( Webster G. 1980A:292 ). If so, the changes brought about in the town in the Hadrianic period seem quite remarkable: if the new forum and baths were centrally placed relative to the actual or projected size of the Hadrianic town, then it was, or was intended to be, almost twice the size of the earlier town. Moreover, the insulae containing the new forum and baths are very large, suggesting one of the largest civic planning projects in Britain outside London, and the quality of craftsmanship of the inscription which dates the completion of the forum in 120/9 ( R.I.B. 288 ) is also remarkable, with by far the finest lettering of any inscription from Britain. Works of such scale in an obscure western town may indicate the intervention of Hadrian himself, on his visit to Britain in 122, in pursuit of his policy of promoting the Romanisation of the provinces, and in particular of their more remote parts ( Webster G. 1980A:292-6 ).

The measure of prosperity attained by Wroxeter as a town is not clear. The area enclosed by the late 2nd. century defences is surprisingly large, at least 63 hectares, suggesting that the town flourished, but much of the northern part of the defended area seems devoid of any major buildings, and in that area the walls may have
enclosed only large gardens and smallholdings. The size of the forum has often been put forward as evidence of the town’s prosperity (Wacher 1975:360) but, if it was influenced by Hadrian’s intervention, perhaps reinforced by imperial subsidies, it may have little bearing on the prosperity of the town. However, the location of the forum, in an insula which had previously contained an unfinished set of baths, may hint at the town’s prosperity: as it would seem more reasonable to use that insula for the baths and another for the forum, the only reasonable explanation seems that this was the only central insula which was vacant at the time, and, since the Romans had no mechanism for compulsory purchase, contained no private buildings. If so, the town may have been a flourishing and populous settlement in the early 2nd century A.D. Later, its prosperity may have been crowned by a change in status: Viroconium appears in the Antonine Itinerary without its tribal suffix, and may thus by the early 3rd century have been promoted to the rank of municipium (Wacher 1975:19): as such, it would have continued to act as the administrative centre of the civitas Cornoviorum.

Caerwent was probably a later foundation than Wroxeter, though, as excavations have revealed little of its early history, this is not certain. Flavian pottery has been found, but, despite claims that the town was founded in the mid 70s (Nash-Williams 1930:274), it may rather indicate the presence of an earlier fort or its vicus, for the Silures are unlikely to have been freed from military rule so early (Hartley 1966:56), and are more likely to have been awarded self-government in the reign of Hadrian (Wacher 1975:33-4). Whilst relatively small, about 18 hectares in area, Caerwent seems to have been more densely occupied than most towns in Roman Britain, and its street frontages were particularly fully utilised (ibid. 386), suggesting that, by the later part of the Roman period at least, the
town flourished. However, this prosperity may have come relatively late, for both forum and baths are small (Nash-Williams 1954:159-65, Wacher 1975:378-9). It may relate to the proximity of the legion at Caerleon, whose influence may be reflected in the unusually large number of courtyard houses found at Caerwent (Walthew 1975:192), which perhaps housed veterans from the legion.

Carmarthen, where Roman remains have been found over an area of about 6 hectares, may have been the civitas capital of the Demetae. There was probably a Flavian fort there, from which the civitas was at first administered, and on the site of whose vicus the later town probably developed. As the garrison of the fort was probably withdrawn under Hadrian at the latest, and as no military unit is known to have been stationed in Demetic territory after that date, the Demetae probably received self-government at that date. The claim that the establishment of the street grid, and thus the constitution of the civitas, did not take place until the late 2nd. century (Jones G.D.B. 1970:7) is not conclusive: there seems to be an earlier alignment of streets which may predate the street which had a worn coin of 'Aurelius Caesar' in its primary level, and, even if there were not, it is by no means certain that that street was not a peripheral street such as might have been laid out later than those in the centre of the town (Wacher 1975:390-1). The extra-mural amphitheatre, which could apparently accommodate some 4,000 to 5,000 spectators (Little 1971:60), and which thus probably served the population of the surrounding countryside as well as the town, probably forms the most cogent argument for Carmarthen's status as civitas capital: it probably served as the tribal assembly place. A small piece of samian from its seating bank probably dates to the first half of the 2nd. century (ibid. 60), and is thus not inconsistent with the construction of the amphitheatre at the time when, on historical grounds, the civitas
is most likely to have been constituted.

5.11: The Small Towns of the Region

In addition to the towns which were official Roman foundations, with their Romanised features such as regular street grids and imposing public buildings, other, smaller, towns grew up, containing only a few of the amenities offered by the colonies and civitas capitals; they may have lacked any administrative role, or may, in their capacity as vici, have had local magistrates of their own. Civitas capitals too ranked as or were divided into such vici, and thus housed their magistrates as well as those pertaining to the civitas: this is most clearly illustrated in Gaul, where a certain Paternus was both aedile of the civitas Senonum and aedile of the vikanorum Agiedincensium, Agiedincum being the capital of the civitas of the Senones (I.L.S. 7049, cf. 4818).

Kenchester is the most notable small town in the region. Its defences enclose an area of 9.2 hectares; over half the area of Caerwent; within the defences, streets branched off the main street at different angles with no regular plan, and buildings were packed close together (St. Joseph 1953B:92). The number of lanes leading from the main road to the east of the town suggests that there were many buildings outside the defences on the east (Todd 1976:102), and there may also have been a suburb to the west or south-west of the town, where coins and other traces of occupation have been noted periodically (Jack and Hayter 1916:176). The site, of whose early history little is known, seems to have been occupied from the 2nd to the 5th century (ibid. 188-9, 27-8). The reasons for its unusual prosperity are not clear: perhaps if in the 3rd century it lay in the civitas of the Dobunni, whose capital lay over 70 kilometres away at Cirencester, it was used as a secondary administrative centre, serving
that part of the tribe which occupied the Wye valley (Todd 1976:99-100).

Kenchester may owe its initial position to the presence of a Roman fort (Davies J.L. 1980A:272 n.5) and its later importance to its location at an important road junction. Other small towns in the region seem also to have developed on the sites of former forts. At Whitchurch, after the fort was demolished c. 100, a civil settlement developed on the site (Jones G.D.B. and Webster 1969:201-2). There is evidence first of timber buildings, some of which contained traces of small-scale industrial activity, which were in use by the mid 2nd century A.D. (ibid. 203-5), and were replaced later in the same century by substantial stone buildings which seem to have displaced this light industry from what was presumably the centre of the town probably to sites nearer the outskirts (ibid. 205-7). The settlement at Cowbridge may also have developed on the site of a former fort: objects ranging in date from the late 1st. to the 4th. century have been found in an area extending for about 250 metres along the modern High Street (Thomas H.J. and Brooksby 1973:59-60), and the earliest of these finds may relate to a fort or its vicus. Similarly, at Weston-under-Penyard, occupation of the possible iron-smelting town may have begun in the late 1st. or 2nd. century; it apparently flourished from the late 2nd. to the 4th. century (Jack 1923:9-27). The first century samian found there may indicate that the settlement occupied the site of an earlier fort (ibid. 26, Webster G. 1960:66-7).

5.12: Settlement: a Summary

The effects of the Roman occupation on the settlement pattern of the region are thus most obvious in terms of urban development. Whilst urbanisation had been developing to some extent before the Roman
conquest in south-east Britain (Cunliffe 1976b:149-153), there is no evidence for such development west of the Severn and Dee. In this region, most, and perhaps all, of the towns of the Roman period developed on the sites of Roman forts and in positions related to the Roman road network and apparently unrelated to the former settlement pattern, whilst the hillforts, some of which, in the Iron Age, seem to have housed nucleations of population, were for the most part abandoned at or soon after the conquest.

The development of towns is the most obvious of the changes brought about by the Roman occupation, for the absence in many areas of datable materials, and of many excavated rural sites, makes other changes more difficult to document, though they may also have been important. The abandonment of many hillforts was clearly a major and significant change which affected some areas such as North Wales and the Marches more than others, such for instance as south-west Wales, where large hillforts never seem to have been particularly important. In areas such as north-west Wales which were too remote for the former hillfort populations to have been attracted to the new towns, though some may have been drawn to the fort vici, the remainder presumably moved into rural habitations: for these, the main reason for abandoning the hillforts was probably that, with the new security consequent upon the Roman occupation, defence could now take second place to the convenience of living nearer to the fields. Thus, if many of the former hillfort occupants now moved into the countryside, there should have been a marked increase in the number of rural habitations which were occupied, as well probably as an increase in the land under cultivation to supply the garrisons of the region and the inhabitants of the new towns. The general pattern of rural settlement seems to have continued much as before; the evidence suggests that the major form of settlement was the farmstead which housed a single family,
perhaps with some dependants, rather than the agricultural village, and in this respect the Roman occupation may have caused the intensification of an existing pattern rather than brought any radical change.

Clearly, then, the effects of the Roman occupation on the settlement pattern were far-reaching. The hillforts, the former nucleated settlements, were for the most part abandoned in favour of the new towns, fort vici and scattered rural habitations of the types already present in the Iron Age, which may now have become substantially more numerous. The new roads may have attracted settlement to their lines, thus further distorting the former settlement pattern (see chapter 11).
6.1: Introduction

This chapter deals with the nature and causes of the instability witnessed in Britain in the later Roman period by the increased deposition of coin hoards and by the growing emphasis on military and urban defences, and discusses the date and possible reasons for the gradual abandonment of towns after the final Roman withdrawal in the early 5th century. It is suggested that, whilst in eastern Britain the major threat seems to have been posed by the Saxons, in the west the greatest cause of insecurity was increased Irish pressure. The evidence for the movements of population which affected western Britain at and immediately after the end of Roman rule in Britain is then summarised: the probable date of the Irish migration into west Wales is discussed, the historical validity of the story of the Cuneddan migration into north-west Wales evaluated and the date, scale and source of the migrations to Brittany assessed. It is suggested that these elements together may indicate the magnitude of the disruption which beset the region at the end of the Roman occupation.

6.2: The Growth of Insecurity

The 2nd century A.D. saw the growth of prosperity under Roman rule, and, with the consequent increase in stability, troops were gradually withdrawn from Wales and the Marches, leaving only a skeleton garrison in case of emergency (see maps 16-19). Later, however, this prosperity was shaken by unrest in western Britain: from the predominantly coastal distribution of coin hoards of the late 3rd century in Wales, the major threat seems that of Irish raiding (Boon 1968:300), an interpretation supported by the construction of new
forts at Cardiff and Caergybi. The late fort at Cardiff seems to date to the late 3rd. or early 4th. century (Nash-Williams and Jarrett 1969:70-3); that at Caergybi is undated, but its closest parallels, on the Rhine and Danube, cannot be dated earlier than the reign of Diocletian (Johnson S. 1976:135-6). Both forts could thus have been built under Carausius or Constantius, or later in the 4th. century (Frere 1974:380); that at Caergybi is perhaps best attributed to Count Theodosius' reorganisation of the British defences after the 'barbarian conspiracy' of 367 (Ammianus 28.3.2, Nash-Williams and Jarrett 1969:137, Tomlin 1974:303-6) when, according to Ammianus, 'Picti...itidemque Attacotti...et Scotti, per diversa vagantes, multa populabantur' (27.8.1).

There is evidence of other military work in the region at about this time, perhaps in response to the same events. At Segontium, barrack XX was rebuilt after 330, the north-west gateway and the principia after 340, the praetorium after 350 and the north-east gateway after 364 (Wheeler 1924:75-89); as there is no evidence that the fort was abandoned for any length of time between 290 and 350 (Simpson G. 1962:115), such widespread rebuilding may have been occasioned by an attack, perhaps connected in some way with the 'barbarian conspiracy' (Frere 1974:396). At Chester, the fortress walls were repaired in or after the late 3rd. century, using a very weathered inscription of the reign of Caracalla or Elagabalus (R.I.B. 488, Richmond and Wright 1949:114). It has recently been suggested that, as large areas within the fortress seem to have been unoccupied in the late Roman period, and as the style of refortification does not resemble Roman military work, this work may have been carried out in the post-Roman period, probably in the Middle Ages (McPeake 1978B:41); if, however, the repairs date to the Roman period, the damage repaired may have been the work of Irish raiders, and may perhaps be
connected with the destruction of Wroxeter forum c. A.D. 300
(Atkinson D. 1942:105-7, Frere 1974:385) or with the destruction of
the fort of Forden Gaer, which was rebuilt c. 369 (Simpson G.
1962:165). Chester may have been used as a fleet base at this date,
and there may also have been a naval base at Caernarfon (Johnson S.
1976:135). In South Wales, coins ranging in date from Carausius to
Constans (R.C.A.H.M. 1925:841) may indicate the existence of a
coastal station on the site of Pembroke Castle (Jones G.D.B. 1971:
11). It is less likely that there was a similar station at Loughor
(ibid. 11), for the discovery of coins of Gallienus and Constantine
II above a ruined corner turret implies that the site was effectively
abandoned by the first quarter of the 4th. century, if not before
(Lewis J.M. 1969:26). The naval yard whose existence somewhere in
the Bristol Channel is attested in the 3rd. century or perhaps earlier
by the mosaic inscription at Lydney (C.I.L. VII:137, Anon. 1981A:
149) may still have remained in use in the 4th. century. Finally, the
coin evidence suggests that the forts of Caerhun and Brecon Gaer were
held after A.D. 369 (Baillie Reynolds 1936:244, Wheeler 1926:100-1,
Frere 1974:396). The disposition of these forts with evidence of late
activity suggests that the threat which they were intended to counter
was envisaged as primarily seaborne and western in origin.

Town as well as fort defences were augmented in the 4th. century.
In the late 2nd. century, many British towns were equipped with
earthwork defences, to which masonry walls were added in the 3rd.
century (Frere 1974:285-6); the addition of bastions to these walls
seems to have occurred in the late 4th. century, probably under Count
Theodosius (ibid. 291). This sequence is seen clearly at Caerwent,
where the earthwork defences contain pottery dated to the end of the
2nd. century (Craster 1954:57-9, Frere 1974:299 n.10); the stone
defences were built in the late 3rd. century (Frere 1974:287) and
bastions added to these defences no earlier than 335, and not much later than 350 (Nash-Williams 1930:274-5, Wilson D.R. 1972:302). Such bastions would have supported ballistae which probably demanded the presence of small specialist forces to operate them (Frere 1974:397); the presence of such forces may perhaps be indicated by the 'military' belt-plates and buckles found at Caerwent and Lydney (Hawkes S.C. and Dunning 1962:41,51-2, Simpson C.J.1976:211-2). At Kenchester, a milestone of Numerianus found in the wall foundations (R.I.B. 2250, Bull 1888:397) strongly suggests that the wall was built or rebuilt in the 4th. century (Webster G. 1962:32); the external bastions are very similar in plan to those at Caerwent (Heys and Thomas 1961:102-3, 106-7). At Wroxeter, samian from the earthwork defences suggests that they were built towards the end of the 2nd. century (Webster G. 1962:29), while the wide ditch suggests that bastions were later added to the defences (Wacher 1975:369). In Britain as a whole, the distribution of towns whose defences were augmented by bastions or by wide ditches such as suggest their presence (Frere 1974:398) does not point to any one direction as the source of the threat surely implied by such concern with defence; though in the west the pattern of forts which were built or rebuilt at that date suggests that the major threat was seen as coming from the west, in England the location of the forts of the Saxon Shore suggests that the threat came from the east. Certainly, the impression conveyed by these defensive measures, by the sudden increase in coin hoards in Britain as a whole in the period 270 to 282 and the construction shortly thereafter of the Saxon Shore forts in England and the similar forts of Cardiff and Caergybi in Wales is of a significant increase in insecurity from the late 3rd. century onwards (Frere 1974:289): danger would seem to have threatened from several directions.

The increased insecurity seems also to have prompted the
reoccupation of a number of hillforts in the late Roman period. In some cases, the Roman material from such sites dates from earlier rather than later in the Roman period, and in most cases the paucity of material suggests that the sites were only temporarily occupied by native shepherds and herdsmen, or by brigands and outlaws (Gardner and Savory 1964:213). Others, however, seem to have been reoccupied on a more permanent basis in the late Roman period. Dinorben was apparently reoccupied between c. 300 and 360 by wealthy inhabitants who may have dwelt in one, or possibly two, very large round houses (ibid. 68-70, 95-8, Savory 1971B:18-19, 30-1). Large quantities of late Roman material have also been found in the hillforts of Parciau, Din Sylwy and Moel Fenlli (Baynes 1930A:409-10, Gardner and Savory 1964:216-7); though no structures of that date are known at these sites, Din Sylwy has never been excavated, but fragments of flue tiles found at Parciau (Baynes 1930A:409-410) suggest the presence of a Romanised building. In South Wales, Coygan Camp was reoccupied between c. 270 and 300: a rectangular hut and three subsidiary structures of that date have been found (Wainwright 1967:45-54, 60-1). The reoccupation of these strongpoints may have been prompted by the threat of Irish raiding in the late Roman period.

It has been claimed that, at some hillforts at least, such reoccupation may have occurred in the 5th. or 6th. century rather than earlier, for the sites have yielded the same range of late Roman material as is found on sites which also produced post-Roman import wares: they may therefore have been occupied at the same date as those sites which also yielded the post-Roman import wares, yet been for some reason unable to purchase the latter. The threat implied by the reoccupation of these defended sites might then be that posed by the Irish or Saxons or, if they are assumed to have housed only an elite, by the general population, and the breakdown of the Romano-British
social and political system (Fowler P.J. 1971:211-2). As yet, the evidence generally seems insufficient to determine whether this is so, though it is perhaps more satisfactory to accept the evidence at face value. At Coygan, however, the initial reoccupation must be set in the late Roman period, though the site was subsequently reoccupied during the currency of the post-Roman import wares (Wainwright 1967:45-54, 70-3), but the counterfeiting activity associated with the late Roman reoccupation (ibid. 116-124) may suggest that the reasons for which the site was reoccupied were not the normal ones. Elsewhere, the reoccupation of hillforts seems to accord well with other signs of insecurity in the late Roman period.

6.3: The Decline of Town Life

In the late Roman period, Roman troops were gradually withdrawn from Britain. Many forts were evacuated in 383, when Magnus Maximus apparently took to the continent troops from the west Pennines, North Wales and Chester: some of these positions were never reoccupied (Frere 1974:405). The Seguntienses recorded in Illyricum (Not. Dign. Occ. 7.49) seem to be the former garrison of Segontium; it was suggested that they were amongst the troops taken to the continent by Maximus (Stevens 1941:134-5) but, as the coin evidence now suggests that Segontium was still occupied after 383, they may rather have been taken to the continent by Stilicho in 401 (Casey 1979:76-7), when more troops were withdrawn from Britain (Claudian De Bello Gothico 416-7). The last remaining garrisons left for the continent in 407 (Zosimus 6.1-3, Frere 1974:407).

In A.D. 410, the last Roman officials were expelled from Britain (Zosimus 6.5.2-3), and the breakdown of urban life, perhaps already declining in the 4th. century (Reece 1980:78-84), began. At Caerwent, the coin evidence suggests that the town was occupied down
to A.D. 400, and perhaps a little later, but it seems to have been abandoned by the mid 5th. century, as no post-Roman import wares have been found there, though they reached nearby Goodrich and possibly also Monmouth. Caerwent may therefore have been no longer commercially active, as otherwise such import wares might be expected there also (Alcock 1965B:185, Thomas A.C. 1960:107, 110). The thirteen Byzantine coins of the 6th. to 9th. centuries found at Caerwent, and at first thought to indicate a prolonged period of post-Roman occupation with occasional contacts with the Mediterranean area (Fox A. 1949:108), now seem more likely to have reached the site in the Norman period or later (Boon 1958:316-9). The basilica and some shops and houses at Caerwent seem to have been destroyed by fire some time in the 5th. century, perhaps as a result of Irish raiding (Ashby et al. 1909:575, Frere 1974:422); the blocking of the north and south gates of the town with rough masonry at a time when the baths were probably still in use (Wacher 1975:389) may indicate attempts to ward off such a raid. At Wroxeter, though the forum, basilica and baths had been destroyed c. A.D. 300 (Atkinson D. 1942:105-7, Kenyon 1940:190-3), town life continued. The forum site remained in use although the forum itself was not rebuilt (Atkinson D. 1942:108-113), and an extensive range of timber buildings was erected on the ruins of the baths basilica: the date of their construction and the length of their occupation unfortunately remains uncertain (Anon. 1974:112-5). However, the burial of the Irishman Cunorix, apparently within the town walls, in the mid to late 5th. century (Wright R.P. and Jackson 1968:296-300), and the discovery of other, apparently unburied, bodies in the streets (Wacher 1975:374), indicates that the old order had broken down by the late 5th. century at the latest.

At Gloucester, the picture is less clear. Normal occupation seems to have continued into the 5th. century, as a coin of Valens (364-
378 was found beneath a mosaic in Southgate Street (Wacher 1975:154), and fragments of 4th. and 5th. century North African amphorae have also been found in the town (Heighway et al. 1979:171). Moreover, the fact that the Anglo-Saxon Chronicle records the king of Gloucester as one of the three kings defeated by Ceawlin in 577 suggests that Gloucester, as well as Bath and Cirencester, was at that date still a populated town and centre of local administration (Pearce 1978:46). The character of the occupation at Gloucester may have changed in the later Roman period when, in the late 4th. century, a large public building was converted into smaller domestic or industrial units (Heighway et al. 1979:161-3): however, this area probably still preserved its original function as a market area into the 5th. century (ibid. 165). Moreover, although some Roman buildings were destroyed in the late 4th. century, others may have survived very much longer, as late Saxon buildings have so far been found only in areas which were open space in the late Roman period. The demolition of Roman Gloucester may thus only have occurred in the early 10th. century when the town was replanned (ibid. 167). However, the intensity and type of occupation represented by the apparent survival of these Roman buildings is unknown: Giraldus’ description of the fortress at Caerleon, whose buildings were still impressive in the 12th. century (It. 1.5), should warn against the assumption that any surviving Roman buildings at Gloucester may have continued to fulfil their original functions.

In general, the Roman towns may have been abandoned relatively early in the post-Roman period. The reason for this is not clear: at Gloucester Saxon pressure, and elsewhere Irish raiding may have been involved. Disease may also have been important. Epidemics are essentially a feature of urban communities, and may have been introduced to British towns by trade with the Mediterranean (Wacher
1975:416). A pandemic of bubonic plague is known to have swept the Mediterranean zone in about 540 (Procopius II.xxii-xxiii), and there was also an epidemic of some sort in about 443 (Hydatius 126) which may have reached Britain: the latter may correspond to Gildas' pestifera lues which probably occurred in the first half of the 5th. century as it is set before Vortigern's invitation to the Saxons (De Exc. 22). Rattus rattus, the only rodent capable of the initiation and support of an epidemic of bubonic plague amongst humans, is now known to have been present at York before the mid 8th. century A.D., probably in the Roman period (Rackham 1979:112-4, 117), and it is thus by no means impossible that the towns of Roman Britain should have been afflicted in the earlier 5th. century by some serious epidemic which might have hastened the decline of town life. The direct evidence for this, in the form of the remains of the victims of disease, might, however, be more convincing. The bodies found in the streets of Wroxeter and Caerwent may represent unburied plague victims (Wacher 1975:420), and the skeletons found in the baths at Wroxeter (Wright T. 1872:68, 118-9, Frere 1974:94-5) may be interpreted as the victims of disease or perhaps violence (Todd 1977:324), for the fact that they were not cleared away indicates a breakdown of public order. However, the decapitated body apparently abandoned by the roadside at Wroxeter (Atkinson D. 1942:113), if it was formally buried (Todd 1977:324), should be well post-Roman, as the town must have been abandoned for some time before enough soil had accumulated for the burial to take place (Atkinson D. 1942:113). At Caerwent, the many skeletons found within the town (Hudd 1913:437-8) probably lay in a cemetery which dated well after 400, for the bodies lay in graves which cut through the presumably buried walls of the ruined town (ibid. 438 n.1): there is then no reason to date these burials as early as the 5th. or 6th. century, especially as they lay near the
Mediaeval church (Todd 1977:323). Only two skeletons, found by the roadside (Nash-Williams 1930:230), could reasonably represent the unburied victims of a plague (Wacher 1975:389). In the absence of more unburied, or informally interred, bodies, and perhaps of mass graves, plague seems unlikely to have formed a major factor in the decline of the towns of Roman Britain (Todd 1977:324).

Less dramatically, the collapse of internal trade, no doubt related to the reorganisation of the tax system with the introduction of taxation in kind (Reece 1980:88), will have spelt the inevitable decline of town life in the later Roman period, and the withdrawal from Britain of Roman troops and officials, and the subsequent deterioration of links with the continent, must also have done much to decrease the volume of trade in which the British towns were involved. Although the walled towns might still seem to represent valuable strongpoints which could provide their occupants with increased security so long as the surrounding areas could be cultivated in relative safety, a factor which would vary in date according to the location of the individual towns (Frere 1974:421-3), yet the defensive circuits may have proved too great for the reduced urban populations of the post-Roman period to man effectively, and their value may therefore have been much diminished.

6.4: Irish Immigration

In the late or post-Roman period, Irish settlers moved into west Wales. Though the precise date of this immigration has been disputed, it seems most likely that these Irish settlers moved into the vacuum left by the withdrawal of the Roman garrisons. The 9th. century Historia Brittonum (see Appendix 7) states that the sons of Liethan settled in south-west Wales, in Dyfed, Gower and Cydweli, where they remained until they were expelled by Cunedda and his sons (c. 14).
These filii Liethon probably represent the Irish tribe of the Ui Liathain, a unit of the Erainn of Munster who lived to the east of Cork in the neighbourhood of the Deisi; they may have come to Britain as part of the migration of the Deisi recorded in Irish sources (Jackson 1953:155-6). So, the Tairired na nDessi (The Expulsion of the Deisi) claims that some of the Deisi, led by Eochaid Allmuir, settled in Dyfed where, at the time of writing in the 8th century, their descendants still lived under the rule of Teudor mac Regin who was descended by fourteen generations from Eochaid (Meyer 1901:113). This Irish record is confirmed by the second pedigree in B.M. MS. Harley 3859 in which, for eleven generations, Teudor's ancestors tally with those recorded in the Irish version (Bartrum 1966:9-10).

Teudor's son Meredydd is said in the Annales Cambrie to have died in 796, and it has therefore been argued that Teudor's floruit was about 730 and that, on an average of thirty years to a generation, the migration of the Deisi may have taken place in about 270, in accordance with the date of 265 supplied for this event in the Annals of the Four Masters (Meyer 1897:57-8). However, the dates supplied by those Annals, a 17th. century compilation, are untrustworthy (Bury 1905:281), and calculations based on a thirty-year average generation seem inappropriate when applied to this pedigree for, working back from 796 on this average, the death of Eochaid should fall in about 346 and that of Vortipor, apparently the Vortiporius who was the contemporary of Gildas in the mid 6th. century, in about 496, some fifty years too early. If Vortipor was indeed the contemporary of Gildas, the generation average between Vortipor and Meredydd should perhaps be 25 years: this may indicate the operation of laws of inheritance such as favoured the transmission of the line through eldest sons rather than the preferred Irish practice of fraternal and cousinly inheritance which favoured the transmission of the line via...
younger sons and produced a generation of about 35 years with two or three reigns per generation (Miller M. 1978A:35). As Eochaid was only four generations senior to Vortipor, the use of such an average would place Eochaid's settlement of Dyfed in the approximate period A.D. 400 to 425 (ibid. 36-7).

The archaeological evidence seems to support this later date for the Irish immigration into south-west Wales. There is little material evidence to suggest that the Irish were raiding Britain in the 3rd century, for Roman objects of that date are rare in Ireland, though Roman material of the 4th. and 5th. centuries is more common there (Bateson 1973:28). This may confirm the view, probable on general historic grounds, that Irish immigration did not take place until after the final Roman withdrawal from Britain (Simpson G. 1964:159).

The presence of Irish immigrants in south-west Wales is confirmed by the concentration in that area of Ogam inscriptions and of other inscriptions which, whilst in Latin, contain Irish names: the Ogam alphabet was almost certainly introduced into Britain from south-west Ireland (Jackson 1953:156-7) where Ogam inscriptions are found in the probable former territories of the Deisi and Ui Liathain (MacNeill J. 1909:330). Moreover, the Ogam inscriptions of south-west Wales suggest that Irish was a living language there until at least the mid 6th. century and probably as late as the 7th. century (Jackson 1953:170-1). Further, place-names containing Irish elements such as cnwc, 'hillock', are concentrated in the ancient kingdom of Dyfed, and also indicate Irish influence there (Richards 1960:147-51), while the preservation in south Cardiganshire into modern times of an Irish system of numeration whose forms derive from a period prior to the Old Irish period also suggests early Irish settlement in that area (Sommerfelt 1962A:259-65, 1962B:266). This Irish settlement may also have spread further east: Irish settlement in the
Brecon uplands is suggested by the presence there of Ogam inscriptions and Irish place-name elements. It has also been suggested that several groups of very small fields in that area may have originated in the 5th. or 6th. century, and, since they seem paralleled in the Irish clachan-rundale system, may indicate the presence of Irish settlers. The dating evidence for these field systems, though consistent, is sparse: one group seems later than the hillfort of Twyn-y-gaer on Mynydd Illtyd, which is presumably of Iron Age date, but earlier than a ridge and furrow system of perhaps about A.D. 1100, whilst the group on Waun Gynllwch is probably also earlier than some early 'Mediaeval' ploughland. The fields on Mynydd Illtyd contain several clusters of two to five minute enclosures which could represent nucleated settlements associated with the field system. The suggestion that these fields should be attributed to Irish colonists of the 5th. or 6th. century remains tentative, since little is known of early Welsh farming systems, so that it is not certain that these fields are alien to the area (Crampton 1967:57-69). However, the Ogam inscriptions must indicate some Irish settlement there, and this may also have spread into the Glamorgan uplands where Irish influence is seen in many river names (Pierce 1968:xi-xii).

Irish settlement also seems to have taken place in north-west Wales. The Historia Brittonum claims that Cunedda and his sons expelled the Irish from Gwynedd (c.62); they may not have been entirely successful if the tradition that Cunedda's grandson, Cadwallon Lawhir, fought the Irish in Anglesey (Bromwich 1978:167) is well-founded. The historicity of these traditions may be suspect, but their basic assumption of Irish settlement in these areas seems credible. Ogam inscriptions are found in Gwynedd, though they are by no means as numerous there as in south-west Wales, and some place-names also indicate Irish settlement: Dinlloen and Llyn in
Caernarfonshire as well, perhaps, as Mallaen in Carmarthenshire, attest the presence of the Irish Laigin or Leinstermen (Rhys 1892B:72-3, Williams J.E.C. 1968:38-41), while the name 'Gwynedd' may perhaps be cognate with the Irish Feni, suggesting the presence of members of this tribe (Richards 1960:147), though it is more likely to be cognate with the Old Irish fine, 'kindred' (Charles-Edwards 1972A:117-8). There is also in Anglesey a well-marked group of place-names containing the Irish element cnwc (Richards 1960:149). In parts of north-west Wales, Irish may indeed have been spoken as late as the Norman conquest (Gruffydd 1928:342-3). It has been suggested that a group of decorated rotary querns indicates some close connection between north-west Wales and north-central Ireland in the period A.D. 200 to 600 (Griffiths 1952:52-5): this is far from certain, for those querns with the more distinctive curvilinear type of ornament seem predominantly Welsh in their distribution, with only one close parallel in Ireland (ibid. 52-3, no.25, pl. 7.9). Nonetheless, there seems sufficient evidence to confirm the presence of Irish settlers in north-west as well as south-west Wales in the immediate post-Roman period.

6.5: The Cunedda Story

As has been mentioned, the Historia Brittonum credits Cunedda and his sons with the expulsion of the Irish from Wales (cc. 14, 62): however, evidence such as that of the Ogam inscriptions suggests that the Irish presence was still strong after the date at which Cunedda was supposed to have been active. However, some Irish settlers may have been expelled from Wales at this date, for tradition states that the Eoganacht kingship of Cashel was founded by Conall Corc on his return from a prolonged exile in 'Pictland', perhaps Britain. The name Cashel seems an early borrowing from the Latin 'castellum', whilst
Conall Corc, if he existed, can hardly be set before the 5th. century. Possibly, then, this tradition embodies a memory of the return of an Irish leader from Wales (Mac Niocaill 1972:5).

Cunedda is represented in tradition as an immigrant: according to the *Historia Brittonum*, he and his eight sons came to Wales from Manau Gododdin 146 years before his descendant Maelgwn reigned in Gwynedd (c. 62). It is not clear how this statement should be interpreted. Certainly, by the 9th. century, the kings of Gwynedd traced their ancestry to Cunedda whose sons were the eponyms of various cantrefs and larger districts: their filiation to Cunedda may be a legal fiction intended to express political allegiance or to provide the kings of Gwynedd with a title to rule in those areas (Dumville 1977A:77), or may perhaps embody some measure of truth, though in the latter case it is difficult to determine which of the various elements of the story found in the *Historia Brittonum*, some of which seem contradictory, should be accepted.

The date of Cunedda’s supposed migration has been the subject of much debate. A migration set 146 years before Maelgwn’s reign, which probably extended from 534 to 549, should fall in the late 4th. century, and it has therefore been suggested that Magnus Maximus or Stilicho moved Cunedda south to defend Wales from Irish invasion before he withdrew troops from the area to the continent (Hogg 1948:203-5, Collingwood and Myres 1937:289-90). Similarly, as the descendants of the Deisi in Dyfed claim descent from Magnus Maximus (Bartrum 1966:9-10), he has been credited with their establishment there as part of the new system of frontier defence which he may have created before his departure for the continent (Tolstoy 1964:258-62, Alcock 1971:96-8, 124). However, in the context of Cunedda’s claimed expulsion of the Irish, this dating seems unlikely: the Irish presence in north-west Wales had surely not grown so strong while Roman troops
were still stationed in the area that Cunedda on his arrival there had to expel the Irish (Blair 1947:36). Furthermore, though the Historia Brittonum states that Cunedda was Maelgwn’s atavus or great-great-grandfather, the pedigrees make him only his great-grandfather, and 146 years, though not impossible (Hogg 1948:201-2), seems an improbably long time between their floruits; if the relationship recorded in the pedigrees is correct, the Cuneddan migration might rather be expected to lie about A.D. 450 (Chadwick H.M. 1949:148).

Such an approach to the problem may be misguided. The issue may have less to do with the events of the 4th. or 5th. century than with the 9th. century view of the past. The author of Historia Brittonum 62 may have intended to set the Cuneddan movement in 388, and may for this purpose have calculated his 146 years from the obit of Maelgwn’s father Cadwallon, found in the Cartulaire de Redon s.a. 534 (Miller M. 1976A:101-3). His intention in so doing may have been to indicate that Cunedda was the legitimate successor of Magnus Maximus, who died in 388, and who seems to have been regarded as the last legitimate Roman ruler of Britain, and thus the source of legitimacy for later native rulers; this belief may explain his position at the head of the royal pedigrees of Powys, Dyfed and the Isle of Man (De Exc. 13-14, Nash-Williams 182, Bartrum 1966:9-10, Dumville 1977A:81-2). In this context, it may be important that Magnus Maximus was known in later tradition as Macsen: this form seems to be not a popular formation but an artificial and learned creation (Jackson 1973:81), thus perhaps confirming the importance of historians and genealogists in securing his place in Welsh history.

In conclusion, then, although the second dynasty which ruled Gwynedd, that founded in 826 by Merfyn Frych, would, being of northern origin, have cause to stress the northern origins of the first dynasty to strengthen the precedent for their own rule, they seem elsewhere to
prefer omission to invention, and are therefore perhaps unlikely to have invented the entire episode for their own ends (Miller M. 1978:517). There was probably therefore an earlier tradition which claimed that Cunedda had come to North Wales from northern Britain some time after the end of Roman rule. The date at which this occurred is not certain: no reliance should be set on the figure of 146 years put forward in the *Historia Brittonum*. The tradition seems to indicate that the movement was only one of leaders, of Cunedda and his eight sons, kinsmen or lieutenants (Miller M. 1976:98, 1978:524, Charles-Edwards 1972:117 n.3, Lloyd 1911:119), rather than a popular migration: there is nothing in the archaeological record which would seem to contradict this view.

6.6: The Colonisation of Brittany

The *Historia Brittonum* also associates the colonisation of Brittany with Magnus Maximus, claiming that the troops which he took to the continent and which never returned to Britain were instead settled in that area (c. 27). This may again represent conjecture on the part of the author of the *Historia Brittonum*, based on Gildas’ statement that the troops taken to the continent by Maximus never returned to Britain (De Exc. 14) and the knowledge that Brittany was now occupied by persons of British origin. Though the migration to Brittany is not likely to have begun so early, it seems to have been under way by the later 5th. century, when Sidonius Apollinaris mentions the Britons settled on the Loire under their chief Riotamus (Epp. 1.7.5, 3.9); these seem the same as the 12,000 Britons who, under their king Riotimus, came to the aid of Anthemius in his struggle against the Visigoths in about 470 (Jordanes Getica 45). A considerable migration would seem to have taken place by the late 6th. century: Gregory of Tours, writing at that time, always refers to the
peninsula as Brittania and its inhabitants as Brittoni rather than using the terms Armorica and Aremorici (Fahy 1965:111). The movement was probably virtually complete by the first half of the 7th century (Jackson 1953:12-16).

The bulk of the immigrants involved in the colonisation of Brittany seems to have come from the Dumnonian peninsula, though tradition suggests that most of the leaders came from central Wales (Chadwick N.K. 1969:190-1, 205-6). The reason for the migration is therefore unlikely to be direct Saxon pressure, for, if so, eastern England might be expected to figure more largely, and Irish immigration into Wales and Dumnonia may have been more important (ibid. 172-181). General population growth may have been the over-riding reason for such migration, as it was presumably for the Irish migration into western Britain. So Procopius, writing in the 6th century when the colonisation of Brittany may have been at its peak, states that all three of the nations which inhabited Britain, the British, Angles and Frisians, were so populous that each year they undertook a large-scale migration to the land of the Franks, where they colonised the sparsely populated areas (De Bello Gothico 8.20 6-9); the British element in this account seems to refer to the colonisation of Brittany (Chadwick N.K. 1969:168-9).

6.7: Summary

The movements of population which occurred at and very soon after the end of the Roman period may have caused a thorough disruption of society in Wales and the Marches. The almost total loss of Roman place-names in the west (Hogg 1964:296-9) suggests either that they were used primarily by the Roman administration and not by the native population and that, on the Roman withdrawal, the pre-Roman place-names once again came into more common use, or else that the general
movements of population at this date may have been such that the Roman place-names were forgotten. This latter view seems the more likely as many place-names exhibit the 'late' order of elements with the noun first and qualifying adjective second, a change which apparently fell in the 6th. century A.D.; they suggest an extensive renaming of places after the end of the Roman occupation (Gelling M. 1978:99-100). With the departure for the continent of the Roman troops and of the colonists bound for Brittany, and with substantial immigration into the western part of the region from Ireland and perhaps into the eastern part of the region by refugees from the Saxon expansion further east (Hogg 1964:296-9), there may have been major changes in the population and the pattern of settlement of the region, changes which were to become even greater with the Saxon settlement of the Marches (see chapter 7). Further changes in the settlement pattern were brought about by the abandonment of the towns, and possibly of the fort vicī also, though in some cases there is evidence of post-Roman occupation at fort sites (see chapter 7), suggesting that the vicus populations may have moved within the defences when the garrisons moved away. The economy must have contracted significantly with the loss of the towns, military markets and foreign trade of the Roman period, and the effect was such that the monetary economy collapsed and the region remained coinless until coins were reintroduced by the Saxons from the 9th. century onwards.
7.1: Introduction

As a result of the widespread disruption which seems to have affected western Britain in the 5th. century (see chapter 6), the society which emerged at the end of that century is likely to have differed considerably from that of the late 4th. century. The Roman towns seem either to have been abandoned entirely or else to have been occupied on a scale which can hardly be considered 'urban', whilst the villas which, from the writings of St. Patrick, seem still to have been occupied in the earlier 5th. century, seem to have disappeared by the mid 6th. century when Gildas apparently knew nothing of them (Wacher 1978:147), though the estates of which they formed the centres may perhaps have survived as working units (Davies W. 1979A:158-60). Some of the Roman roads in the region may have passed out of use relatively early (Alcock 1965B:206), though others may have continued in use for some time. The distribution of Early Christian inscribed stones may suggest that the road system was in use until at least the early 7th. century (Fox A. 1939:40, 1949:109), though at Maen Madoc the road seems to have been overgrown and at least partly invisible when the memorial of Dervocus (Nash-Williams 73) was set up there in the 5th. or early 6th. century (Fox C. 1940:211-3, Fox A. 1949:109). Either the centre of the road remained clear and in use although its verges were overgrown (Fox A. 1949:109) or the relationship of the inscribed stone and the road is coincidental, a product of the constraints imposed by a mountainous terrain (Alcock 1965B:206). The evidence elsewhere is equivocal: in England, the 12th. century lawbooks suggest that Watling Street, Ermine Street and the Fosse Way at least remained serviceable despite centuries of neglect (Poole 1951:78-9), while Mediaeval sherds from
the surface of the Roman road at Hen Waliau suggest that it too continued in use into the Middle Ages (White R.B. 1977:29-30). Yet, in the central Marches, the modern roads more often run alongside than over the Roman roads, suggesting that, by the Anglo-Saxon period, the latter may have been derelict and choked by vegetation and may therefore not have been used, though they may have been followed as direction indicators and boundary markers (Rowley 1972:41-2). Probably then, the length of time for which the Roman roads remained in use varied in different instances, depending upon their general utility, and no overall date may be established for this (see further chapter 11).

The conditions which governed the location of settlement at this date are likely to be significantly different from those operating in the Roman period, for the Roman withdrawal and the consequent breakdown of trade networks was counterbalanced by the emergence of new factors such as Irish settlement in the west, Saxon settlement in the Marches, the emergence of the Church and, at the very end of the period, Viking raiding and settlement. With the reemergence of kings, attested in the De Excidio, the Historia Brittonum and the Liber Landavensis (see also chapter 12), the political focus altered. Wales apparently fragmented into a large number of small kingdoms (see map 20) whose rulers were no doubt often at war amongst themselves: so, for instance, Taliesin's poem to Cynan Garwyn of Powys (Williams I. 1975:1) mentions his battles against the men of Gwent, Anglesey and Dyfed, and, whilst this poem is panegyric rather than strict history, it indicates the sort of power struggles which might have occurred in the late 6th century (Foster 1965:228-9). Eventually, as a result of continued struggles of this kind, smaller kingdoms were combined into larger units, and particularly powerful rulers such as Rhodri Mawr (844-878) and Hywel Dda (909/10-949/50).
secured for themselves extensive realms (see maps 21-22), though these displayed a tendency to fragment into their constituent parts on the deaths of their rulers.

In this chapter, the settlement pattern of the post-Roman period is discussed and the effects upon it of the development of the Church, the Saxon settlement of the Marches, and the possible Viking settlements in Wales considered.

7.2: Secular Settlement

Little is known of the settlement pattern which emerged from the upheavals of the immediate post-Roman period. This may be due in part to the scarcity of datable artefacts (see Appendices 8 and 9), for the region reverted to a state resembling its pre-Roman condition, abandoning the use of coins and, for the most part, of pottery also. Furthermore, many of the settlements of the period may underlie modern settlements and therefore remain undiscovered: so, from the 8th century onwards, the grants of land recorded in the Llandaf charters seem to refer to estates which bear a much greater relation to the modern settlement pattern than do those dated earlier, and they almost invariably enclose one principal modern settlement (Davies W. 1979A:156-8) which may perhaps occupy the site of its pre-Norman predecessor. Though evidence of post-Roman occupation has been found on some hilltops, in Roman forts and in caves, these sites are perhaps unlikely to be fully representative of their age: they may rather reflect a tendency to excavate conspicuous, and for that reason perhaps atypical, sites.

The most fully excavated site of the period is the small weakly-defended site of the 5th. to early 7th. century at Dinas Powys. Here, the slight defences seem to have enclosed two rectangular stone buildings, of which the larger seems to have been a dwelling and the
smaller perhaps a store-house ( Alcock 1963A:26-34 ). Imported glass and pottery of classes Ai and ii, Bii and possibly iii, D and E ( see Appendix 8 ), with evidence of metalworking and jewellery manufacture on the site, suggest that it was a wealthy, perhaps princely, residence ( ibid. 44-55 ). The total number of vessels represented by the post-Roman sherds is small, apparently a minimum of nine vessels each of classes A, D and E, and ten of class B: this suggests that such vessels were luxury items, which may have been supplemented by vessels of wood, leather and metal ( ibid. 52 ). Whilst it has been suggested that, as almost all the bones found on the site belonged to immature animals and thus do not seem to represent a viable breeding stock ( ibid. 37-8 ), the site was the haunt of robbers who obtained the pottery and jewellery and succulent young animals by raiding ( Gresham 1965:127-8 ), the presence of spindlewhorls ( Alcock 1963A:44 ) renders this interpretation improbable.

The hilltop site of Dinas Emrys was also occupied at this date. On this rocky hilltop, a palisaded settlement of the late or immediately post-Roman period was defended in the sub-Roman period by a drystone rampart enclosing about 1 hectare ( Savory 1961:15-16, 21-3 ). The pottery evidence suggests that the site was occupied perhaps from the late 4th. century at least into the early 5th. century. This occupation may have been associated with a large circular hut some 12 metres in diameter, and fine glassware, imported pottery of classes Ai, Biv and perhaps E, and evidence of iron-working suggests that this may have been a residence of some standing ( ibid. 37-41, 61 ). Later, however, the function of the site may have changed from a permanent settlement to a temporary refuge to which cattle were brought in times of danger; alternatively, if it was still a permanent settlement, the dwellings must have moved to another, unexcavated, part of the site ( ibid. 42-4, 51-2 ).
Some earlier hillforts were reoccupied in the post-Roman period. These would seem to include Coygan Camp, where unstratified fragments of bowls of class A and class Bi amphorae have been found, though no structures of this date are yet known (Wainwright 1967:70-1, 157-8), the Berth which, from the 6th. century cauldron found there, seems to have been an important site at this date (Rowley 1972:43), Lydney, where an unstratified brooch, apparently of the late 5th. century, suggests that occupation may have continued well into the 5th. century (Wheeler and Wheeler 1932:79-81), and possibly Dinorben. The evidence from Dinorben is not conclusive, however: the flanged bowls found there could be late Roman (Gardner and Savory 1964:205-7) rather than post-Roman in date (Thomas A.C. 1960:110), and the only certain post-Roman artefacts found there, a bead and a fragmentary brooch or buckle-plate with Germanic ornament, may indicate casual visitation rather than occupation (Gardner and Savory 1964:98-9).

Though it has been claimed that the small fort at Garn Boduan and the sites of Pant-y-saer and Carreg-y-llam were also occupied in the post-Roman period (Alcock 1965b:194-198, Hogg 1957:54-5), they probably date to the Iron Age (see chapter 3). The class H penannular brooch of the 5th. or 6th. century from Pant-y-saer was found 18 centimetres above floor level (Phillips 1934:7), and was therefore probably lost after the site had been abandoned; the unstratified brooch of class F found at or near the settlement of Porth Dafarch, which seems to have been occupied in the later Roman period (Stanley 1876:131-2), may also have reached the site after the settlement had been abandoned.

While there is thus some evidence for the occupation or reoccupation of hilltop sites in the post-Roman period, few excavated hillforts have yielded evidence of either construction or reuse at that date. The evidence may perhaps be distorted by the tendency to excavate larger rather than smaller sites, for it seems that no large
site was either built or refortified at that date: if the Breiddin was indeed reoccupied in the 4th. or 5th. century, its slighted defences were not refurbished then (Musson 1976:302). However as, before excavation, Dinas Powys was thought to be an unremarkable Iron Age site, many other small unexcavated defended sites which are generally assumed to date to the Iron Age may in fact be later in date.

Certainly, the available evidence seems to suggest that the defended sites of the Iron Age and the post-Roman period differed in function, the Iron Age hillforts perhaps housing a large population at a relatively low level of wealth, whereas the later sites housed smaller populations at a greater level of wealth; the defences of the post-Roman fortified sites seem weak in comparison with those built in the Iron Age (Alcock 1965C:1-2).

As some fortified sites of the Iron Age may have been reoccupied in the post-Roman period, so too some Roman forts seem to have been reused. At Segontium, an H4 brooch probably of the 5th. to 6th. century (see Appendix 9) was found unstratified within the fort (Wheeler 1924:135/5) and a small guardroom was built in the southeast guardroom of the south-west gateway when the main structure was in ruins (ibid. 93-4); the wattle and daub huts which overlay the infilled fort ditches, and which were first dated to the 4th. century (ibid. 73), are also likely to be post-Roman in date. The fort at Aberffraw may also have been refortified in the post-Roman period (White R.B. 1973A:36-7), perhaps for the use of the rulers of Gwynedd, whose 'special seat' is set by the later lawbooks at Aberffraw (Owen A. 1841:1:346): though this evidence is late, the presence 3 kilometres away at Llangadwaladr of the memorial of Catomanus Rex (Nash-Williams 13) suggests that the area did indeed have links with the rulers of Gwynedd at an earlier date. At Chester, in addition to the discovery of late metalwork (Newstead 1928:...
pl.ix.8), a large building which has been found within the fortress is associated with post-Roman import wares (McPeake et al. 1980:21, 29, 31). The post-Roman addition to the rampart at Brecon Gaer may also date to this period: it seems to have been carried out well after the site was abandoned by the Romans, but probably before the Norman conquest (Wheeler 1926:11-16). In other forts, such structural evidence of post-Roman occupation is lacking. The class F and G brooches found at Caersws and Castell Collen (Wheeler 1924:138 fig. 60, Evelyn-White 1914:43.1) may date to the late 4th. century or the post-Roman period. The Roman altar at Loughor to which an Ogam inscription was added in the 5th. or early 6th. century, the early 5th. century inscription found near Tomen-y-mur, and the 6th. century Ogam inscription found less than half a kilometre from the fort of Pen Llystyn (Nash-Williams 228, 285, 84) may also indicate activity centred on the fort sites. At Pen Llystyn, a palisade was set up after the fort was abandoned, perhaps in the 4th. century: the settlement which it represents may possibly have continued in use into the 5th. or 6th. century (Hogg 1969:155-7).

Some caves may also have been occupied in the post-Roman period. Of these, the most interesting is the Lesser Garth Cave, which seems to have been used as a workshop, and perhaps also as a home, by a metalworker of perhaps the 8th. or 9th. century (Alcock 1960A:221-6, Hussey 1967:18-20, 23, 29, 34). Post-Roman import wares were found in Longbury Bank Cave, Penalun: some seem to have been deposited in a shallow depression which then collapsed into the cave (Alcock 1960B:77-9), and thus need not constitute evidence of occupation, but others were found near food debris at the mouth of an adjacent cave, suggesting its occupation (Alcock 1963B:298-9), perhaps as a hermit's retreat (Alcock 1965B:199-200). So, several occupied caves on the north coast of the Forth of Firth which have crosses as well as
Pictish symbols incised on their walls (Anderson J. 1881:183-7) may have been occupied by religious figures; their occupation seems to extend no later than the late 7th. century A.D. (Thomas A.C. 1963:23, 1964A:33). Occupation of slightly later date than that of Longbury Bank Cave may be indicated by the H2 penannular brooch, the annular brooch probably of the 7th. century or later, and the 9th. century coins found in the Minchin Hole (Savory 1956:41-2, 51-2), the penannular brooch and Saxon necklace from the Bacon Hole (ibid. 55 n.100), and the fragmentary penannular brooch which may date to the Viking period from the Culver Hole (Alcock 1960A:227).

Other sites which may have been occupied at this date include the curious settlement on Gateholm (see chapter 5), where a loose-ring pin apparently found in an occupation layer in one of the huts (Lethbridge and David 1930:371, 373 fig. 6.3), whose closest parallels come from contexts of the Viking period at York (Waterman 1959:78-9), could carry the occupation into the 6th. century or later. Coastal activity of this period is indicated by penannular brooches found on shellmounds and sand-dune sites: the brooch of class G found with Roman sherds on a shellmound at Twlc Point, Llangennydd (Penniman 1937:175-6) could date to the late Roman rather than the post-Roman period, but a brooch of class H1 from Kenfig Burrows (Lethbridge and David 1928:201-2) is certainly post-Roman in date, as probably is an H2 brooch from Linney Burrows, Pembrokeshire (Savory 1956:49 fig. 11.5).

Though this survey suggests that the secular settlement of the post-Roman period centred on hilltops, Roman forts and caves, the picture may be distorted, for the majority of sites which have produced evidence of post-Roman settlement attracted attention for reasons other than their post-Roman occupation. Few if any post-Roman secular sites have been recognised and excavated on their own merits.
For the most part, the settlement pattern of the post-Roman period may have resembled that of the Roman period, apart from the gradual abandonment of the towns. There is no evidence of any return to an Iron Age pattern of large fortified settlements, and the population may have continued to live in, and have returned to, scattered rural habitations. Two new phenomena were, however, present: of these, the first, which affected the entire region, was the growth of the Church, whilst the second, which directly affected only the Marches, was the Saxon settlement of that area.

7.3: The Spread of Christianity

Christianity was first introduced into Britain in the Roman period; however, it is not clear to what extent it survived the upheavals of the 5th century, and to what extent it died out and was reintroduced in the post-Roman period. In Wales and the west, the presence of post-Roman import wares (see Appendix 8) indicates continued contacts with Gaul and the Mediterranean region, and Gaulish references in the Early Christian monuments of Wales (see Appendix 10) suggest that Christianity may have been reintroduced to the western part of the region in the sub-Roman period by Gaulish missionaries and refugees (Nash-Williams 1950A:4, Thomas A.C. 1981:271-3), though further east, in south-east Wales and the Marches, where such monuments are generally absent, Christianity may have survived from the Roman period (ibid. 273-4).

The Church of the region seems initially to have been episcopal in its organisation. Gildas, writing in the mid 6th century, depicts a Church run by bishops and priests, and, though some monasteries had been founded, the monastic element in the Church was still small (Davies W.H. 1968:140-2, Thomas A.C. 1981:349). Similarly, the monuments of the period mention priests (Nash-Williams 77-78), and
perhaps bishops (Nash-Williams 33, 83), but not monks or abbots, unless they are implied by the 'multitudinem fratrum' amongst whom Senacus the priest was buried (Nash-Williams 78). The bishops of the region may have been many in number; in the early 7th. century, Augustine met seven British bishops (H.E. 2.2), while at a later date Dyfed alone is said to have had seven esgoptai or 'bishop-houses' (Latin A 141, B 240, D 391, E 492). These seven bishop-houses probably lay one in each cantref, of which there were seven in Dyfed: certainly, all those which can be identified with reasonable certainty lie in different cantrefs. Mynyw in Pebidiog, Llan Ismael in Rhos, Llan Degemon (Rhoscrowther) in Penfro, Llan Teulydawc (Old Carmarthen) in Cantref Gwarthaf, Llan Teilaw, probably Llandeilo Llwydarth, in Daugleddau (Charles-Edwards 1972B:251-2), and Llan Geneu probably in Emlyn (Emanuel 1967:543). These cantrefi seem to be the successors of the ancient tud or small kingdom such as in Ireland, before the rise of the great monastic federations in the later 6th. century, seems each to have had its own bishop (Binchy 1967:219). Since Dyfed had been settled by an Irish dynasty in the 5th. century (see chapter 6), the presence of a bishop in each cantref is not surprising (Charles-Edwards 1972B:251); elsewhere in Wales, the cantref may have varied in its relation to the tud or small kingdom (Lloyd 1911:302), and the equation may not always hold good.

The date of the tud bishoprics in Dyfed seems substantially earlier than the date of the first text in which they are mentioned, the late 12th. century Redaction A, for, in the section in which they appear, the unit of currency used to calculate the compensation due for insulting a bishop is the female slave: in Irish law tracts of the 7th. and 8th. centuries, the compensation for insulting a bishop is also reckoned in terms of the cumal or female slave (Charles-Edwards 1972B:253-4). The document from which this section is drawn thus
probably dates to the later 9th. century: it is unlikely to be much earlier as the use of money to express some of the units of currency is unlikely to predate the 8th. century (ibid. 261-2). However, the fundamental information concerning the bishop-houses of Dyfed may be earlier than the 8th. or 9th. century since it contains no indication of the type of hierarchy which seems to have existed amongst Welsh bishops at that date (ibid. 257), and since, by the late 9th. century, at least four of the bishop-houses were ruled by abbots rather than bishops (Asser c. 79, Hughes K. 1981:11-12). By the late 9th. century, Nobis of St. David’s was described as **archiepiscopus** (Asser c. 79), and, although the bounds of his authority are not stated, they are likely to have coincided with the boundaries of Dyfed (Charles-Edwards 1972B:257). A similar organisation may have existed in Gwynedd in the early 9th. century, for the **Annales Cambriae** record, s.a. 809, the death of Elbodug ‘archiepiscopus Guenedotae regione’: Elbodug would seem to have exercised a territorial authority coextensive with the kingdom of Gwynedd, and, as Gwynedd at this date was the overlord of a number of smaller kingdoms, the ecclesiastical authority of the **archiepiscopus** of Gwynedd would presumably extend in similar fashion over the areas subject to other bishops (ibid. 257).

The episcopal organisation of the Church thus seems to have remained relatively vigorous in Wales despite the increasing importance of the monastic element such as came to dominate the Irish Church, though the latter seems also to have begun as a church governed by bishops each of whom ruled a territorial diocese coterminous with a **tuath** or small kingdom (Hughes K. 1981:1-3). The Llandaf charters provide further confirmation of this episcopal organisation. Thus, if all the grants attributed to one bishop are plotted, many of those for whom there is enough evidence seem to be found only in restricted areas. Dubricius thus seems to have been the
bishop of a restricted territory in Ergyng, and Berthguin and his successors Trichan and Catguaret of a larger territorial diocese in Ergyng and Gwent (see maps 23-24). Most of the later bishops attested in the Llandaf charters fit this pattern of a see in Ergyng and Gwent, spreading later into Glamorgan (Hughes K. 1981:6-9). The evidence for Oudoceus and Teilo, on the other hand, is different and, while that pertaining to Oudoceus may be ignored, as the grants cover six generations of a royal family and must therefore contain a number of false charters or grants made to other people, the dedications to Teilo are perhaps more worthy of consideration, and indicate a distribution much wider than those mentioned above (see map 25). The evidence may then suggest that, while Teilo's paruchia began as a restricted territorial diocese in Seisyllwg, it later developed into a monastic paruchia on the Irish model, with scattered religious houses owing allegiance to Llandeilo Fawr (ibid. 9-11). Whilst Welsh monasteries seem often to have been family foundations, regarded as hereditary possessions (V.S.S. 29, 30, cf. 14, 16), the diocesan bishops seem to have retained a greater jurisdiction over the monasteries within their territories than do the Irish bishops (Hughes K. 1981:4-5).

The size of the monasteries of this date is difficult to establish. The Saints' Lives, which in their existing form date to the very end of the period under study (see Appendix 11), provide surprisingly high figures, doubtless for reasons of prestige. So, for instance, Lifris claims that Cadoc's household at Llancarfan included 36 canons, 100 clergy, 100 soldiers, 100 workmen, 100 poor persons, 100 widows and an unspecified number of servants, esquires, strangers and guests (V.S.C. cc. 48, 18). Such figures do not inspire confidence, not least from their schematic nature. However, they may not be wholly erroneous: Bede, who seems to have less motive for such exaggeration,
claims that there were at least 2,100 monks in the monastery of Bangor Is-Coed in the early 7th. century (H.E. 2.2). As little remains of the early monasteries of Wales, and, sadly, nothing is known of that at Bangor Is-Coed, these figures cannot be compared with any material evidence. However, although the remains of Illtud’s monastery are now lost, a late description of its foundation claims that Illtud first marked out the boundary of his cemetery, which had at its centre an oratory, and then founded a church within a quadrangular stone rampart and ditch (V.S.I. 7, Wade-Evans 1944:202-3): there were presumably at Llantwit in the late 11th. or early 12th. century features which corresponded to this description and which were believed to be ancient. References are found elsewhere to the ‘vallum monasterii’ which formed the physical boundary of the monastic enclosure: Adomnan’s late 7th. century Life of Columba mentions such valla at Clonmacnoise and Iona (Adomnan 14a, 76b, Anderson A.O. and M.O. 1961:214-5, 392-3), while the early 7th. century Rules and Penitential of Columba, by stating the penalties for going ‘extra vallum, id est extra sepem monasterii, sine interrogatione’, and for leaving the vallum open by day or night (Rules VIII, Penitential section 26, Walker G.S.M. 1957:154-5, 178-80), indicates its function of separating the sacred from the secular.

The Vita Iltuti seems to envisage a church set in a rectangular enclosure, though in Ireland the ideal monastery seems to have been circular in outline, like the schematic monastery in the 8th. century Book of Mulling (Lawlor 1897:167, 173-83), and as implied by the rather obscure passage in the Tripartite Life of St. Patrick which describes the setting out of the monastery of Armagh (Stokes 1887:I:237, Thomas A.C. 1971:39-40). The Canons of the Synodus Hibernensis seem to recognise at least two, and possibly three or even four, zones of increasing sanctity around the church (Hughes K.
traces of such zones may be recognised for instance at Armagh, where the monastic settlement occupied the central position relative to two or three concentric outer zones which contained the settlement dependent on the monastery (Butler 1979:458). Similar zones of sanctity seem to have been recognised in Wales also (Ior. 43, Latin B 217, Giraldus Descr. 1.18); in one case, it is implied that there should be a circular outer enclosure concentric with the churchyard ('messur corflan erw Keuureithiaul yn hit ay phen are uenwent ahenne ekelch euenwent e dele bot en cumpas', 'the measure of the corflan is a legal erw in length, with its end to the churchyard, and that, encircling the churchyard, is to be its compass': Owen A. 1841:1:140-1, cf. Ior. 71). However, the relative scarcity in Wales of examples of the so-called 'monastic city' with such concentric zones, seen perhaps at Llandeilo Fawr, Llanynys and Meifod, and with less certainty at Bangor and St. David's (Butler 1979:458-9, 562-3), may be due to the apparent Welsh preference for valley rather than hilltop locations for early ecclesiastic settlements: this would increase the topographic constraints upon the development of symmetrical settlements. Moreover, the more modest urban growth in Wales in general meant that the settlements which grew up outside the monasteries were much smaller in scale than those found in Ireland.

A number of Welsh churches lie within Roman forts: in some cases these are said to have been donated to the founder of the church by the secular ruler of the area. This phenomenon is better documented in England than in Wales. So, in the mid 7th. century, King Sigeberht is said to have given St. Fursey a site for a monastery 'in castro quodam quod lingua Anglorum Cnobheresburg...vocatur' (Bede H.E. 3.19): this site was apparently the Saxon Shore fort of Burgh Castle within which a Christian cemetery and timber buildings have been found (Taylor H.M. and Taylor 1965:1:117-8). Similarly, the Anglo-Saxon Chronicle
states that, in 699, King Egbert of Kent gave his priest Bassa land at Reculver on which to build a monastery; the late 7th. century church, built chiefly of reused Roman brick, which lies within the fort almost certainly represents Bassa's church (Peers 1928:241-50). In Wales, the site apparently donated to Cybi in the 6th. century by Maelgwn Gwynedd is generally assumed to be the Roman fort of Caer Gybi (Lloyd 1911:130), although the late 11th. to early 12th. century Vita Sancti Kebii states only that Maelgwn donated 'castellum suum' (V.S.K. 19, Wade-Evans 1944:248-9). The churches situated within the forts of Caerhun, Llandovery, Leintwardine and Loughor, and in the fortress at Caerleon, may have early origins; the church of Llanbeblig may also be an early foundation for, situated just outside the fort of Segontium, its cemetery occupied the site of the cemetery used by the Roman garrison (Nash-Williams and Jarrett 1969:63). Similarly at Chester the earliest known church, St. John's, apparently a 7th. century foundation, lies just outside the fortress walls (Bu'lock 1972:6-8, 33-4), whereas the 10th. century origin of St. Peter's church, which occupies the site of the fortress principia, seems well-documented (ibid. 6).

In Britain in general, Roman forts seem to have formed favoured sites for churches: there were churches in at least six and perhaps eight of the eleven forts of the Saxon Shore (Rigold 1977:71-3), and in almost all the forts on the western half of Hadrian's Wall though, curiously, none of the forts on the eastern half of the Wall contain churches (Biddle 1976A:67-8). It is not clear why some forts were selected in this way as church sites when others were not. Forts in general may have been favoured by the founders of monasteries as they provided walled enclosures of convenient size, and thus removed the need to build a new vallum; walled towns were probably generally too large for convenience in this respect, though some seem to have been
used in this way, as Caerwent, traditionally donated to St. Tatheus by King Caradoc, which housed a monastery in the 9th century ( Asser c.79, Stevenson W.H. 1959:313-4 ). There is evidence of early post-Roman occupation at Caerwent: an unstratified double-spiral-headed pin of the 5th. to 6th. century was found within the town ( Fox A. 1949:108 fig.12 ), whilst a cemetery outside the east gate of the Roman town contained over 118 oriented burials, the majority in simple graves but some in stone cists, which overlay Roman features and yielded radio-carbon dates in the 5th., 6th., 8th. and 9th. centuries ( Gregory 1973:51-2, Rahtz 1977:60 ). As well as the presence of convenient enclosures, the use of fort sites for religious foundations may also relate to the mechanisms of donation: fort sites may have come into the hands of the rulers of those areas either as a result of their claims to be the successors of the Roman emperors or else as waste land ( Thomas A.C. 1971:33; see chapter 13 ), and may then have represented convenient sites which were at their ready disposal. Parallels from Irish hagiographic literature, in which the local king gives his stronghold or 'arcem' to a saint ( V.S. Carthagis 39, V.S. Moechoemog 13, Plummer 1910:1:184, II:169-70 ), may favour the latter rather than the former interpretation.

Many religious sites of the Early Christian period seem to have occupied virgin locations. Gravemarkers suggest that, perhaps especially in the earlier part of the period, many burials were isolated and never formed part of a cemetery, and some small cemeteries, such as that of five burials at Carreglwyd, Llanfaethlu, or of four long-cist burials at Rhos-y-gad, Llanbedr-goch ( Stanley and Way 1868:255-6, Hughes H. 1904:82-4 ), were apparently in use for only a short time before they were abandoned, but other such early cemeteries seem to have remained in use and later acquired a chapel or oratory. Such a progression may be seen at Arfryn, where the cemetery
which contains an inscribed stone of the late 5th. or early 6th. century was probably in use by that date ( White R.B. 1972:33-35 ). Central features of uncertain form and function were later replaced by what seems to have been a small wooden chapel or oratory. Extensive burning throughout the central area of the cemetery may suggest that it suffered at the hands of the Vikings in the 9th. or 10th. century ( ibid. 40-41 ), perhaps the reason why this extensive site, possibly containing as many as a thousand burials ( White R.B. 1978A:352 ), was abandoned in favour of a less conspicuous site a kilometre away. Probably few such cemeteries were deserted, and the majority may have continued in use, with the result that they, and their associated structures, now underlie Mediaeval and modern churches and graveyards. So, for instance, the chapel which underlies Eglwys y Bedd at Clynnog Fawr may date back to the 6th. century: numerous oriented interments were associated with the structure, and a tradition going back to the 1530s claims that Beuno, thought in the early 12th. century to be contemporary with, or earlier than, Rhun, son of Maelgwn Gwynedd, was buried there ( Stallybrass 1914:275-9, Owen A. 1841:1:104-7 ). Elsewhere, early graves found near a later church or chapel suggest that the site was used for religious purposes from an early date: at Llantwit Major, the early 10th. century Samson Cross ( Nash-Williams 222 ) seems originally to have been associated with an oriented cist burial, while two other oriented skeletons lay immediately beside it ( Halliday 1903:58-62 ), and at St. Patrick's Chapel, St. David's, cross slabs from burials suggest that the Mediaeval chapel was built over an earlier cemetery which may also have contained an earlier chapel ( Hague 1973:29, Badger and Green 1925:117 ).

In some cases, the locations chosen for early religious sites indicate a positive desire to break with the existing settlement pattern. Such is certainly the implication of the use of some island
sites, for instance Ynys Seiriol, where the enclosure wall and earliest monastic buildings seem to predate the 12th. century and may be as early as the 7th. century (R.C.A.H.M. 1937:142), and Bardsey, where, though the first contemporary reference to the monastery is the record of the death of a monk there in 1011 (Jones T. 1941:13, 1952:11), a stone with an incised linear cross may date to the 7th. to 9th. century (R.C.A.H.M. 1964:1518ii). In other cases, the sites in use in the Early Christian period may perhaps indicate a shift in the focus of settlement, as seen at some sites where Early Christian monuments cluster together in such a way as to suggest that the sites formed important ecclesiastical centres. So, the concentration of monuments (Nash-Williams 101-104a) suggests that Penmachno was important in the 5th. and 6th. centuries, though its importance seems to have declined thereafter, while, on Anglesey, Llangaffo and Llangeinwen seem to have been prominent in the 7th. to 11th. centuries (Nash-Williams 14-24 and 28-31 respectively). In Dyfed west of the Taf, a tendency has been noted for churches which have groups of 5th. and 6th. century inscriptions to lack later monuments. This is seen at Clydai, Llanboidy and Llandeilo (Nash-Williams 306-8, 148-9, 313-4), while at Llanllawer, Llanwnda, LLanychaer, Llanychlwydog, and Pontfaen there are cross-inscribed monuments which probably date to the 7th. to 9th. centuries, but no earlier inscriptions (Nash-Williams 323-4, 328-34, 335-7, 338-41, 367-8). The cluster of sites with later monuments only in the Gwaun valley (see map 26) suggests that this area may have been isolated by local topography and thus settled or converted to Christianity later than the surrounding areas (Lewis J.M. 1976:185): however, the apparent abandonment of some sites with evidence of earlier activity is more difficult to explain. Nonetheless, in Dyfed at least, there was apparently a break between what seem the principal sites of the 5th. to 6th. centuries and those
of the 9th. century and later: the monuments suggest continuity of activity in only a few instances, as at Nevern and St. Dogmael's (Nash-Williams 356, 358-60, 384-8), while the later monuments tend to concentrate at those sites which emerged as important churches in the Middle Ages (Lewis J.M. 1976:186).

7.4: The English and the Marches

The English do not seem to have reached the borders of the region until the later 6th. century, and in 603 the Severn still formed the boundary between the Welsh and the English (Jackson 1953:204). The first English contacts with the Welsh were hostile: in about 615, the Northumbrian Aethelfrith was victorious over the Welsh near Chester (Bede H.E. 2.2), though the English apparently withdrew from the district after the victory (Lloyd 1911:180-1). Not long after, Edwin of Northumbria conquered Anglesey (Bede H.E. 2.5, 2.9), but his supremacy seems to have been shortlived: he was killed in battle in 633 by Cadwallon and Penda of Mercia, and they went on to ravage Northumbria until the death of Cadwallon in 634 (Lloyd 1911:183-8).

By the mid 7th. century, the English seem to have expanded up to the Wye in the south and to the approximate line of Offa's Dyke further north (Jackson 1953:204). Some of the earlier inhabitants of this area may have moved west in the face of the English advance, but many are likely to have remained and were gradually absorbed by the English population. The original English settlement of Shropshire and Herefordshire, probably effected by an agreement between the Mercian warlord Penda and his Welsh allies in the mid 7th. century, may have followed a conquest the memory of which is preserved in the 9th. century elegy on Cynddylan, who died circa 650 (Jackson 1953:210, see Appendix 7). For two generations, this principality, ruled by Penda's heirs, seems to have coexisted peacefully with its Welsh neighbours.
After that dynasty became extinct, it was administered by ealdormen appointed by the Mercian king (Finberg 1972A:396-7).

Later, relations between the two peoples again degenerated, and Welsh raiding of English territory seems to have made desirable to the Mercians the construction of the successive border fortifications of Wat's and Offa's Dykes. Wat's Dyke, probably built in the reign of Aethelbold (716-757) (Fox C. 1955:271-5, Stenton 1955:xxi), seems to have been built at least one generation earlier than Offa's Dyke for, after its ditch had silted, a weaving hut dated by a Saxon loom weight of the 7th. or 8th. century was set up in it: such building presumably postdated the shift of the frontier west to the line of Offa's Dyke (Varley 1976:131-6). The latter Dyke was built, according to Asser, to run from sea to sea between Wales and Mercia (Asser 14): in its northern sector, it followed the line of Wat's Dyke (Hill 1974:312). The scale on which Offa's Dyke was built, apparently representing at least four million man-hours of labour (Moore L.P. 1975:302) suggests that, despite earlier claims (Fox C. 1955:279), it was more than a formal boundary marker, being instead a military frontier intended to end Welsh raids into Mercia (Moore L.P. 1975:302-3); the same seems true of Wat's Dyke also (Hill 1977:32-3). After the construction of Offa's Dyke, future frontiers generally followed its line. Contact between the two peoples was now reduced, though raiding continued: the initiative may now have rested with the English, who could more readily cross their own frontier work to attack the Welsh, as they did in 822 when they attacked Deganwy and overran Powys (A.C. s.a. 822), than the Welsh could cross to attack them. The English now retained a place in Welsh politics as an external power to whom appeal could be made. So, when the sons of Rhodri Mawr, who between them controlled Gwynedd, Powys and Seisyllwg (see map 21), worked together for the overthrow of the remaining
kingdoms of Dyfed, Brycheiniog, Glywysing and Gwent, the rulers of the latter kingdoms were compelled to place themselves under the patronage of King Alfred (Asser 80).

Relatively little is known of the form and intensity of the earlier English occupation of the Marches, though by the late 11th. century the evidence of Domesday Book suggests that the area was quite heavily occupied. Though this settlement was largely rural, towns again appeared in the region in the Saxon period. Such towns seem to have developed in the 8th. to 9th. centuries for the local exchange of non-luxury goods, facilitated by the use of money for buying and selling (Sawyer 1977:153-4). Many of these towns, such as Gloucester and Worcester (Lobel and Tann 1969:2, Whitelock 1955 no. 99), were fortified or refortified by the Mercians in the late 9th. century as protection against Viking attack; Hereford had apparently been defended earlier, probably by Offa after the battle of Hereford in 760 (Lobel 1969:2), because of the threat of Welsh raiding. Some of these towns soon achieved considerable importance as religious and trading centres. From the 10th. century onwards, Gloucester had its own mint (Stenton 1971:336), and its own series of weights and measures (D.B. 1.162), and by the 11th. century it probably contained ten churches (Heighway 1974:11). Perhaps less compact than the Roman town, Anglo-Saxon Gloucester spread beyond the Roman defences on the north, north-west and west (Lobel and Tann 1969:3), and in the later 11th. century may have housed a population of about 3,000 (Clarke H.B. and Dyer 1969:31). Chester, which had received Saxon settlers probably from the mid 7th. century onwards, became an important trading centre under Norse-Irish influence, and had its own mint before the end of the 9th. century (Mason D.J.P. 1975:12): its defences seem to have been strengthened in 907 (Anglo-Saxon Chronicle s.a. 907, Thompson F.H. 1969:2-3). The mint at Shrewsbury,
established by Athelstan (925-40), remained in use until the late 13th. century (Rowley 1972:196), while the only mint west of the Severn was located at Hereford (Lobel 1969:2).

There thus seem, by the 9th. to 10th. century, to have been flourishing and prosperous towns at Chester, Shrewsbury, Worcester, Hereford and Gloucester: when the shires were created, these towns formed their centres. West Mercia seems to have been divided into shires some time between the reign of Alfred and 980, when there is a reference to Cheshire in the Anglo-Saxon Chronicle. As Shropshire forms an artificial union of lands once divided between the Magonsaetna and the Wrocensaetna, the creation of these shires seems the work of a king strong enough to ignore any ensuing resentments and indifferent to local traditions, probably Edward the Elder (Stenton 1971:337).

7.5: The Scandinavians

The Scandinavians are known to have come into contact with Wales not least because of their chronicled raids on religious houses; these fall into two main groups, from the mid 9th. century to 914 and again from about 950 to 1014. These raids affected all coasts, though St. David's seems to have suffered particularly severely (Loyn 1976:4-8). Other evidence suggests that the Scandinavians may not have confined their activities to raiding. Many place-names in Wales are of Scandinavian origin. The majority of these are the names of headlands and islets, and indicate principally that the Scandinavians were active enough around the north coast of Wales and especially in the Bristol Channel to endow most of the principal navigation points in the area with new names; unfortunately, this activity cannot be dated, and could belong equally to the 9th. or 12th. century. Some Scandinavian place-names, however, lie further inland and may indicate
settlement in Pembrokeshire, especially around Milford and Fishguard, in Glamorgan, and perhaps in a small area of Flintshire (Loyn 1976: 8-10). Again, the dating of these place-names is difficult: for instance, though in Cardiff many early place-names seem Scandinavian in origin (Paterson 1921:59-80), they may date from the 12th century, when Cardiff merchants seem to have had close links with Dublin, rather than earlier (ibid. 82-3). Moreover, some of the place-names which have been claimed as Scandinavian may in fact be Anglo-Norman in origin. Nonetheless, some Cardiff place-names do seem Scandinavian, and there seems also to have been Scandinavian settlement west of Cardiff in the Pyle-Laleston area (Charles 1934:151-4).

A study of blood-groups in south Pembrokeshire, around Narberth, Pembroke and Tenby, found a preponderance of the relatively rare group A in numbers which seem statistically significant. As this situation is paralleled in south Norway, the Welsh evidence may indicate the presence of Scandinavian settlers in this area; similar evidence seems also to support claims of Scandinavian settlement around Chester (Watkin 1952:85). The part of Pembrokeshire in question is apparently not that to which Henry I transferred numbers of Flemings, nor is this high A frequency the same as that found amongst the presumed modern descendants of the Flemings in Holland and Belgium (Watkin 1956:171-3). Thus, Norse-speaking men may have built up settlements which were intended to be permanent in Pembrokeshire and at several favoured sea-ports along the South Wales coast: these settlements were probably small-scale and purposeful, related to trade with England via the Bristol Channel, and generally did not spread into the hinterland (Loyn 1977:147). They may have been set up in the relative lull in piratic activity in the mid 10th century. There is little evidence of permanent agrarian settlement save in south
Pembrokeshire and possibly in and behind Cardiff and Swansea, and in north-east Wales, this last being overspill from the Scandinavian settlements in Cheshire and the Wirral (ibid. 150-1).

7.6: The Post-Roman Period: a Summary

Whilst the settlement pattern clearly changed at the end of the Roman period, it does not seem to have reverted simply to its Iron Age form, for no substantial hillforts or other equivalent settlements are known to have been constructed or occupied. Instead, the pattern is more dispersed, seeming, so far as may be judged from the scanty evidence, to resemble the settlement pattern of the Roman period apart from the desertion of the now largely abandoned towns. The growth of the Church may have encouraged the development of nucleations of population at important monastic centres, but it is very difficult to ascertain the size of the settlements involved. If Bede's figure of 2,100 monks at Bangor Is-Coed (H.E. 2.2) is reliable, some monasteries may have been very large, but there seems no other evidence for nucleations of this size: though some of the Irish Saints' Lives claim even higher figures, such as the three thousand 'saints' who surrounded Finnian at Clonard (Stokes 1890:79, 226), the 500 gravestones of the 8th. to 12th. centuries at Clonmacnoise (Norman and St. Joseph 1969:120) suggest that, while the Irish monasteries are unlikely to have been as large as is claimed by some of the Lives, they may have been significantly larger than their Welsh counterparts where the concentrations of funerary monuments seldom if ever run into double figures. True urban nucleations are absent from the region from the 5th. to the 8th. or 9th. century, and then develop only in the Saxon-occupied areas of the Marches; elsewhere, the pattern is probably one of villages, hamlets and scattered farmsteads, many of which may occupy the same sites as their Mediaeval
and modern successors. There may have been changes in the pattern of settlement in about the 7th to 8th centuries, as indicated by the evidence of the Early Christian monuments and the Llandaf charters, in which the estates donated from the mid 8th century onwards bear a greater relation to the modern pattern of settlement than do those donated earlier (Davies W. 1979A:156-8): however, the reasons for these changes are not known.
8.1: Introduction

In this chapter, the methods whereby the population of Wales and the Marches may be assessed in the period under study, in the absence of accurate figures, are evaluated. The population of England is estimated on the basis of information supplied by Domesday Book and the Poll Tax Returns of 1377, and the possible population of Wales extrapolated from these figures; the relevance of the Tribal Hidage to questions of population is then considered. Possible archaeological methods are then surveyed. Attempts to employ the evidence of burials to estimate the Early Bronze Age population of southern Britain are summarised, and the method applied to Glamorgan; estimates of the population of Roman Britain based upon known or projected numbers of settlement sites, and of the Iron Age from the evidence of the hillforts are then evaluated. The potential sizes of the Roman towns and of the Roman army in Britain, and their relevance for the possible total population, are then reviewed. Finally, in the absence of secure absolute figures, an attempt is made to assess the relative fluctuations in the population within the period under study.

8.2: Domesday book, the Poll Tax Returns and the Tribal Hidage

Knowledge of the likely magnitude of the population of Wales and the Marches is clearly important in any assessment of the history and economy of the region, yet the task of estimating the population at such an early date is by no means easy. No census as such of England and Wales was taken until 1801, and the only document from the period under consideration which in any way resembles a census, Domesday Book, raises several problems. First, it deals only with the very end of the period, and with a very small part of the region, namely
Shropshire, Herefordshire, Gloucestershire, some parts of Monmouthshire which were included in the survey under Gloucestershire, and some parts of Flintshire which were similarly surveyed under Cheshire: by far the greater part of Wales was not subject to Norman authority in 1086, and was therefore not recorded. It is not easy to calculate the Domesday population of modern England in order to extrapolate from it a likely population for Wales: there are no records for Cumberland, Westmorland, Northumberland and Durham, and the account of Lancashire is very unsatisfactory, while London is omitted, and the figures offered for other towns are probably incomplete (Darby 1977:60). Moreover, Domesday Book is not a census as such but a calculation of resources, and so does not record the entire populations of even those regions which are included. It records only tenants-in-chief and such tenants as held their land directly from those tenants-in-chief, and seems generally to omit censarii, who held land for a money rent, of whom only 159 are recorded, whilst recording villani, who held land for a work rent. Two early 12th. century surveys in the Burton Cartulary suggest that, on manors in Staffordshire and Derbyshire which belonged to Burton Abbey, at least two-thirds of the Domesday households were omitted in the lists of tenants, though in some cases the land which they held seems to have been included in the Domesday ploughland figures (Walmsley 1968:74-6, 79).

The population recorded in Domesday Book is thus the 240,154 heads of household who were tenants-in-chief, or who held their lands directly from such tenants-in-chief, together with 683 bondwomen, 28,098 serfs and 7,549 urban freemen, a total of 276,484. However, it is by no means certain that every household held land of one lord, and possible that about half as many again did not, and thus passed unrecorded (Postan 1972:28-9). Furthermore, the size of household
represented by each recorded tenant is unknown: if five persons is a reasonable guess (Darby 1977:87-8), the recorded households of the recorded rural areas of England, omitting Lancashire, and Wales would have totalled about 1,341,200 persons. If half as many again are added to allow for the unrecorded households, the total rural populations of the recorded areas, again omitting Lancashire, may have been slightly over two millions (Postan 1972:29), though, if the Burton figures have a wider application, the total rural population of these areas may in fact have stood nearer four millions.

The only early documents comparable with Domesday Book which claim to record persons rather than property are the Poll Tax Returns of 1377, which set out to tax, and so incidentally enumerate, the entire adult population of England. Cheshire is unfortunately not documented in the Poll Tax Returns, but otherwise 1,386,196 taxpayers are recorded, of whom 1,325,599 were resident in the areas documented in Domesday Book, again omitting Lancashire (Miller E. and Hatcher 1978:29, Oman 1969:164-6). Tax evasion may have run at well over 25%, and children under the age of fourteen, who were exempt from taxation, may have formed as much as 45% of the total population (Postan 1972:29-30); if so, the total population of England at this time may have exceeded 2.5 millions. This figure reflects the mid 14th. century population decline associated with the Black Death: in the early 14th. century, the population may have reached a peak of six to eight millions (ibid. 30).

Such figures may provide some indication of the population densities which could be attained by pre-industrial populations in Britain; however, the figures presented in both Domesday Book and the Poll Tax Returns are of such doubtful reliability that some historians would regard attempts to employ them as the basis of population estimates as worthless (ibid. 27-8). The first accurate figures...
regarding the size of the population are then those found in the census of 1801, in which the population of Wales, including Monmouthshire, is 587,128, 8.24% of the population of England and Wales less Lancashire and the four northern counties which are omitted or badly recorded in the Domesday survey. If the relative distribution of population was the same in the 11th. century as at the very beginning of the 19th. century, the 11th. century population of Wales may have stood at about 165,800, and that of Wales and the Marches at perhaps about 237,000. However, such calculations are speculative in the extreme.

The only other document which has been thought to bear upon the problem is the Tribal Hidage, a tribute list probably compiled between A.D. 670 and 690 (Davies W. and Vierck 1974:226-7). The Tribal Hidage apportioned fiscal responsibility by means of the hide, which was apparently originally viewed as the measure of land considered appropriate to one family, and later as a fixed unit of land measurement (ibid. 229). In the Tribal Hidage, however, the assessments of the different areas seem arbitrary figures, scarcely representing the number of families found in each area or the sum of all the hidage assessments of the individual estates in the kingdoms or principalities in question (Hart C. 1977:45-6). 7,000 hides thus seems to have been the standard assessment of a subject province the size of a lesser kingdom or principality and forming a dependent administrative unit: in the Tribal Hidage, the Wrocensaetna, Westerna, Hwicce, South Saxons and East Saxons, and the kingdom of Lindsey, are all assessed at this figure, whilst King Hygelac rewarded Beowulf with the gift of 7,000 hides, a hall and a princely throne (Davies W. and Vierck 1974:236-7, Hart C. 1977:46, Beowulf 2195-6). Consequently, the assessment at 7,000 hides of the Wrocensaetna, who seem to have occupied central and northern Shropshire (Davies W. and Vierck
1974:230, Finberg 1961:29-33) may tell more of their status relative to the kingdom of Mercia than of their population or the extent of their territories. In the late 7th. century, therefore, the hide seems to have been employed as a unit of taxation, for the Tribal Hidage imposed military obligations on the communities involved at so much service per hide (John 1960:30-1), rather than as a measure of area.

The first appearance of the hide as a standard unit of land rather than as an arbitrary means of taxation may occur in the late 7th. century Laws of Ine (Ine 64, 65, 70.1, Liebermann 1903:118-121, Charles-Edwards 1972C:4). Bede, writing in the early 8th. century, may also have thought of the hide as a specific unit of measurement, for he states that, in the early 7th. century, there were in Anglesey 960 'familiarum mensuram iuxta aestimationem Anglorum' (H.E. 2.9): by 'familiae mensura', he will have meant the hide, since this measure of land was regarded in early England as the property pertaining to the 'normal freeman' or ceorl, which supported him and his nuclear family, and which seems to have varied in size in different regions (Charles-Edwards 1972C:5-7, 9-10, Stenton 1971:279). Bede's reference to the Anglian reckoning ('aestimationem Anglorum') implies that he had a specific unit of land measurement in mind when writing this passage (Maitland 1897:358), though its size is unknown: later, in some parts of eastern England, the hide was reckoned as 120 acres (49 hectares) of arable land (ibid. 387-9, 476-82). His statement might then be taken to imply that, in 7th. century Anglesey, there may have been about 46,621 hectares of arable, or potential arable, land, 66% of the total area of the island. However, it seems very unlikely that Bede's statement should be interpreted in this way, with its consequent implications for the population of the island, and more probable that he laid this later interpretation of the hide as a unit of land measurement on a source
which treated the hide in the same way as it was treated in the Tribal Hidage. Anglesey was probably assessed at 960 hides after its subjugation by Edwin of Northumbria in the early 7th century: it is improbable that it was surveyed as a result of this, probably short-lived, conquest, and more likely that it had imposed upon it a tribute of the convenient sum of 960 pence, or four pounds, or some multiple thereof (Finberg 1972A:413). The high figure reached if Bede's hide is taken to refer to a measure of arable land of about 120 acres is therefore probably irrelevant to the 7th century situation. Certainly, such a figure of some 46,621 hectares of arable land contrasts strongly with the implications of the erw assessment found in the lawbooks (Ior. 90, see Appendix 13): this, though highly schematic, suggests that the six commotes of Anglesey should together contain 76,800 erwau, about 9,250 hectares, of assessed land (Jones G.R.J. 1973:431), about 13% of the total area of the island, while the 363 vills or townships which Giraldus mentions in Anglesey in 1188 (It. 2.7) might, on the scheme indicated by the lawbooks, represent about 11,193 hectares of assessed land, some 16% of the total area of the island. It therefore seems highly improbable that, in the 7th century, as much as 66% of the total area of the island was used as arable land.

8.3: The Evidence of Burials

In default of documentary evidence, alternative methods have been sought of assessing the possible magnitudes of early populations. Cemeteries form one source of information and, since Early Bronze Age barrows are conspicuous burial monuments, they have formed the basis of some population estimates. However, the information which they provide is by no means straightforward, as it is not known what proportion of the population received barrow burial. It has been
assumed that as many as all (Atkinson R.J.C. 1972:109) or as few as perhaps one in 44 (Green 1975:132-3) were so interred; however, the latter figure, which is derived from estimates of the likely density of Bronze Age population in the Ouse Valley, lacks external confirmation. The length of time for which barrow burial was practised is also uncertain: Atkinson suggests 900 years, or 27 generations of 33 years (1972:113-4), and Green 1,150 years, or 38 generations of 30 years (1975:131-2), whilst it has been suggested that the majority of barrows in Glamorgan should fall within a span of 500 years, or 15 generations of 33 years (R.C.A.H.M. 1976:1:43-4). An average of three burials per barrow seems probable (Atkinson R.J.C. 1972:113, Green 1975:132), although it has been argued that, in north-east Yorkshire at least, there may have been as many as four to ten (Fleming 1971:7-8). Assuming that the population was static throughout the period of barrow burial, Atkinson has calculated that, in the Beaker period and Early Bronze Age, the population of Wales and England south of the Tees-Mersey line may have been about 2,000 (Atkinson R.J.C. 1972:114-5); the application of Green's figures, if these are felt to retain any validity, suggests that it may have stood at about 62,500, or possibly more. For Glamorgan, one of the better documented counties of Wales, calculations based upon a 500 year, or 15 generation, currency for barrow burial suggest that, if the entire population was so interred, the population at any given time might have been 78, an average of one person per 27 square kilometres, though if only one person in 44 received barrow burial the population may have risen to 3,414, a density of 1.6 per square kilometre.

This approach, though interesting, is unfortunately not applicable to the period under consideration, because of ignorance of the Iron Age method or methods of disposing of the dead, and because of the use, in the Roman period, and generally also in the post-Roman period,
of flat cemeteries such as are normally discovered only by chance, and whose extent, and therefore the number of interments which they contain, can be determined only by total excavation. Similarly, ignorance of the methods of burial in use in the later Bronze Age renders impossible any attempt to calculate the population on the eve of the Iron Age.

8.4: The Applications of Settlement Evidence

It might be thought that, in the later periods, the habitations of the living might prove more fruitful sources of information than the habitations of the dead, yet here too the problems are manifold. So few post-Roman settlements of any kind have been discovered that no calculations may be made relative to that period. In the Roman period, too, the recovery of sites poses a problem: although it is possible to hazard an estimate of the populations of some of the more fully excavated towns, and it has thus been suggested, for instance, that the population of Caerwent may have stood at two to three thousand (Frere 1974:296), the rural population is more difficult to assess. Many scatters of pottery and other chance finds, indicative of activity of some sort, have been discovered, especially as a result of the increased fieldwork of recent years, but in many cases it is not known what kind of activity is represented by any particular scatter of artefacts, nor is it easy to estimate what proportion of sites has escaped notice. Recent motorway archaeology has suggested that, in England at least, a Roman site of some sort may normally be expected every 2.3 square kilometres, and that this figure may rise to four sites per square kilometre in favourable areas (Taylor C. 1974:6), while in the Nene Valley the density of settlement seems to have been one site per 2.5 square kilometres, rising to a much higher density in those parts of the area where fieldwork has been more intensive. The
general density may then have been one settlement per square kilometre, rising to 5 per square kilometre in certain favourable areas (Taylor C. 1975:116). In areas which have undergone large-scale fieldwork, almost as many Iron Age sites have been found, suggesting that, in the Nene Valley at least, the Roman occupation saw merely a slight intensification of an almost equally dense Iron Age occupation (ibid. 118). Similarly, the intensive survey of an area of 7 square kilometres at Chalton, Hampshire, found at least ten Late Iron Age settlements. The minimum population there is likely to have lain between 50 and 100 persons, as against a probable Domesday population of about 70: it may have been well over 100, since the total arable farmed in the Late Iron Age and Roman period seems substantially greater than that farmed in the Middle Ages. The Iron Age population may then have exceeded the early Mediaeval population of Chalton, possibly by a considerable factor, and, as in the west and north of Britain the late prehistoric settlement pattern evidently extended far beyond the limits of the mediaeval pattern into marginal areas, the Late Iron Age population may have been even higher than that of Britain immediately before the Black Death (Cunliffe 1978B:14-15).

Although these figures seem relatively general in their application, it is not certain to what extent they are directly applicable to Wales, which is a generally less fertile and therefore probably more thinly populated region than England. In Glamorgan, one of the more populous and better documented counties, some 170 Roman sites are known, an average of one every 12.3 square kilometres, while at the English average of one site per 2.3 square kilometres some 900 sites might be expected. This may indicate either that figures based on the English evidence are not valid for Wales, where the prehistoric and Mediaeval populations alike may have been significantly lower than
in England, or that, as a result of inadequate fieldwork and excavation, our knowledge of Roman sites in Wales is pitifully inadequate.

Attempts to calculate the number of settlement sites in use in the Iron Age are hampered in some parts of the region by the lack of datable material. However, to compensate for this to some degree, the hillforts seem to belong primarily to this period, and they, because of their inaccessibility and the strength of their defences, are the settlement sites which are most likely to survive and the least likely to escape notice. In this context, it is best to define as hillforts only those defended sites which exceed 1.2 hectares in area, as some smaller sites are known to have been occupied in the Roman period or later. However, attempts to estimate the Iron Age population of the region on the basis of hillforts alone are not entirely satisfactory, as they beg the question of the function and date of the smaller defended sites which in some areas greatly outnumber the larger hillforts, and ignore the possibility that an unknown number of undefended settlements may have escaped attention. Furthermore, they assume that all hillforts were permanently occupied settlements rather than temporary refuges, cattle enclosures or fortified food stores (Guilbert 1975B:211-3, Cunliffe 1976A:343-4, 346-7, Bradley 1978:121); they also raise the questions of the density of their occupation, whether their populations were directly related to their sizes, and how many were in use simultaneously. Only about 22.5% of the hillforts over 1.2 hectares in area in the region have been excavated, many only on a very small scale, and, as much of the region was aceramic in the Iron Age, not all have produced dating evidence; the dates and density of occupation of many therefore remain conjectural.

Stanford has nonetheless attempted to estimate the population of
Herefordshire and Shropshire on the assumption that hillforts formed virtually the only type of Iron Age settlement in Herefordshire and perhaps the main type in Shropshire. Only sites of 1.2 hectares or over were included in his calculations, since it was claimed that smaller sites might be later in date, and in any case would barely affect the calculations since they were relatively scarce in those counties, with only 13 in Shropshire and 2 in Herefordshire (Stanford 1972A:307-8). It was further assumed that all the remaining hillforts functioned as permanently occupied villages (ibid. 313), that most were occupied simultaneously in the later Iron Age (ibid. 308-10), and that each was occupied at the same density as has been claimed for Croft Ambrey, namely 180 to 240 persons per hectare (ibid. 313-6). Should all these conditions be fulfilled, the population of the two counties would together total nearly 58,000 (ibid. 316), 81.5% of an estimated Domesday population of 71,190, and a high percentage when compared with Thomas’ estimate that the minimum population of Cornwall in the Roman period may have been something over 10,000 (Thomas A.C. 1966:95-6), perhaps as little as 25% of the estimated Domesday population of 40,700.

It should however be emphasised that the population density suggested for Croft Ambrey is in fact quite arbitrary: the excavated buildings there are all four-post structures which range in size from 4.4 to 13.7 square metres (Stanford 1974A:123), and it has been assumed that the larger of these are dwellings, housing on average four persons, whilst the smaller are taken to be granaries (ibid. 124-5). As there is room in the Plateau Camp for 274 such structures, it has been assumed that half were dwellings and half granaries, and the population has been claimed to be 548, a density of 240 persons per hectare. If, by the time of the Roman conquest, such densities applied throughout the Main Camp also, the total population may have
reached nearly 900 (ibid. 129-30). However, only about 5% of Croft Ambrey has actually been excavated (see chapter 3): consequently, the unexcavated areas may contain structures of different type and function, or indeed no structures at all. The interior may have been zoned, as at Moel-y-gaer phase II (Guilbert 1975B:203-6) and at Danebury where, in the late 5th. to early 4th. century B.C., large four- and six-post structures of Croft Ambrey type were arranged in streets and seem to have been contemporary with circular houses (Cunliffe 1976C:209). It is thus possible that only the areas of Croft Ambrey which contained granaries have been sampled, and round houses may remain to be found: this could upset any estimates of population not least because, by virtue of their shape, round houses are less easily regimented than rectangular structures, and fewer can be packed into the same area. The same criticisms apply to the suggestion that, at Credenhill Camp, if the pattern of four-posters were extended from the four excavated examples, and if these structures housed on average four persons each, the population may have been 37 persons per hectare, a total of 7,400, or, on the Croft Ambrey figure of 180 to 240 persons per hectare, 3,600 to 4,800 (Stanford 1971B:108-9, 122). It has been suggested that, at Midsummer Hill, there were in the last phase between 626 and 1,732 buildings within the defences: again, if half of these were dwellings housing four persons each, the population may have lain between 1,252 and 3,464 (Stanford 1981:116), an average of between 144 and 398 persons per hectare. However, these figures are most speculative, as only 1% of the conjectured buildings has been excavated (Stanford 1971C:6). By contrast, at Moel-y-gaer, where 18% of the interior has been excavated (Guilbert 1975B:210), circular structures which were probably dwellings have been found as well as four-post structures which were probably not, the former being far less closely packed than
the latter. This underlines the fact that the results of small-scale excavations may be misleading, revealing only a zone of tightly-packed four-posters near the rampart on a site which in the centre may also have contained more loosely arranged circular structures and even open spaces (cf. Guilbert 1975B:204).

Clearly, then, the density of occupation postulated for the hillforts of Herefordshire and Shropshire is highly tentative, especially as the sizes of the hillforts in the area may not be directly related to those of their populations: at Croft Ambrey, when the hillfort expanded from the Plateau Camp to the Main Camp, the useful habitable area was not greatly increased despite drastic alterations, and the main purpose seems to have been to increase the defensive capacities of the site (Stanford 1974A:41). In other cases also, such considerations may have outweighed considerations of population alone in determining the sizes of hillforts which, though likely to bear some relation to the size of their populations, probably also reflect the operation of other factors. Furthermore, the high population densities postulated for the hillforts of the Marches, even if valid there, which seems highly unlikely, do not seem to apply equally to other regions. For instance, in the hillforts of north-west Wales, the internal buildings are generally of stone, and can therefore be counted even in default of excavation. Assuming an average of four occupants per building throughout, the maximum population of Garn Boduan would seem to have been 548, or 54 per hectare, in the first phase, and 572, or 50 per hectare in the second (Alcock 1965A:194), of Conway Mountain about 150 persons or 56 per hectare, and of Tre’r Ceiri phase I 95 persons, 48 per hectare (Hogg 1962:22).

These apparently discrepant figures may point to any one of several conclusions. First, they may suggest that the hillforts of north-west
Wales fulfilled a function somewhat different from those of Herefordshire. Secondly, both may have acted as permanently occupied villages, and the smaller populations of those in north-west Wales may reflect only the poorer agricultural potential of that area. Finally, as has been suggested, the Herefordshire figures may be erroneous, being based on too small an excavated sample. Certainly, it is apparent that no one set of figures may be extended with confidence to all the hillforts of the region in an attempt to estimate the population of the entire region in the Iron Age.

8.5: The Population of Wales and the Marches in the Roman Period

Clearly, attempts to estimate the population of the region from the settlement evidence are fraught with difficulty. Other methods essayed relative to the Roman period, generally with the aim of calculating the population of the entire province, are also hazardous. So, the theory of rank size suggests that, in the Mediaeval period at least, a capital city should bear a roughly fixed size relative to other cities in its provincial hinterland (see Appendix 14). In 1377, London accounted for about 1.7% of the population of England (Oman 1969:164-6), and for perhaps about 1.3% of the estimated population of England and Wales. If the population of London in the 1st. century A.D. stood at about 30,000, as suggested by Tacitus' claim that over 70,000 people died in the Boudiccan sack of Colchester, Verulamium and London (T.A. 14.33.4, Frere 1974:296-7), and if conditions similar to those of the Middle Ages applied in the Roman period, the total population of England and Wales in the 1st. century A.D. may then have stood at about 2,000,000 (Jones M.E. 1979:242). Conversely, if Caerwent ranked sixteenth in the hierarchy of British towns, as its size may suggest, its population would by this theory seem to have been about 2,600 (see Appendix 14), comparable with Frere's estimate, based on
the plan of the Late Roman town, of two to three thousands (Frere 1974:296). However, it is not certain that the capital city fulfilled the same functions relative to its dependant population in the Roman and Mediaeval periods, nor is it clear what should be viewed as the hinterland of Roman London.

It has been estimated that the urban population of Roman Britain, namely the inhabitants of the civitas capitals, larger civil settlements and fort vici, may have numbered about 200,000, the remaining non-agricultural population, the army and those engaged in trade and industry, about 320,000, and the rural population which fed them about 1,700,000; the total population of the province may then have been about 2,220,000 (Frere 1974:348-50). The estimate of the rural population here may be too low: it seems unlikely that the urban inhabitants of Roman Britain accounted for a substantially higher proportion of the population than in early modern Britain, where they apparently never greatly exceeded 5% of the total population (Stone 1966:20), yet on Frere's model they form 9% of the total. If the rural population is increased to balance the conjectured urban population, the total population may rise from 2.2 to 4 millions (Jones M.E. 1979:244).

Estimates of population have also been based upon the strength of the Roman army in Britain. Its paper strength in the 2nd century is usually reckoned at about 60,000; it is not clear to what extent its real strength differed from this. It has been suggested that there may have been ten times as many actively hostile natives as there were military personnel, and that, if each warrior had five dependants, the native population may have totalled some three millions (Hall A. 1895:148); however, this ratio is clearly a crude approximation, and the number of dependants per warrior may be a little high. It is difficult to find appropriate parallels to illuminate the problem of
the probable size of the Roman army relative to that of the native population. In more recent times, a small intrusive population has controlled a huge native population, as when some 19 million Nigerians were controlled by a combined police force and army of 7,600 men under about 140 British officers (Oliver 1979:21), but here the astonishing ratio of one military personage to 2,500 natives clearly reflects the great advantage conferred upon the military by their possession of modern weapons and means of communication, and has little relevance to the situation in Roman Britain. The army in Wales and the Marches in about A.D. 100 seems to have numbered at least 25,000. If the region may be treated as a self-contained unit, an approach which holds some dangers as it is not clear to what extent the units stationed there were considered a reserve against trouble in lowland Britain, the potential warriors in the region may have numbered from 50,000 at the very low estimate of two active enemies per Roman soldier to perhaps 250,000 on Hall's figures (Hall A. 1895:148). Even at the lower estimate, the total population of Wales and the Marches, at an estimated three to four dependants per warrior, should lie between 200 and 250,000, and may well have been higher. An alternative method of assessing the total population in terms of the size of the army has less application here: it depends upon the observation that, before the introduction of modern mass conscription, the army seems normally to have formed at most 5% of the total population of a country. If, in the later stages of the Roman occupation, the army in Britain may be regarded as a native, British, locally recruited army rather than as a foreign army of occupation, its size might suggest that the population of the entire province was about 1,200,000 (Jones M.E. 1979:242), but it is not certain that this approach is valid.

Different methods of assessing the population of Britain in the
Roman period, all to a greater or lesser degree conjectural, nonetheless combine to suggest that the population of the province may have lain between two and four millions, or possibly higher; the population of Wales and the Marches may have accounted for perhaps about one tenth of the total. These figures are substantial when compared with the 1801 figures of 587,245 for the population of Wales and Monmouthshire, and of approximately 855,000 for Wales and the Marches, and indicate that the population of the region in the Roman period may have stood at between 23 to 47%, or possibly more, of the 1801 figures.

8.6: Relative Trends in the Population

The difficulties inherent in any attempt to estimate the absolute population are apparent: most confidence may perhaps be placed in the figures proposed for the Roman period, and it is clear that these are far from secure. It might seem easier to assess relative trends in the population caused by such factors as natural population growth, immigration and emigration, but here too there are problems: though some events, such as the Roman conquest, are documented, in the prehistoric period the shortage of information is acute. Thus, in the current state of knowledge, it is difficult to tell whether there were invasions into the region from the continent in the course of the Iron Age, or from eastern Britain at its end, when there may have been some movement westwards in the face of the Belgic or Roman advance, and it is impossible to assess the magnitude of these movements, if indeed they ever occurred (see chapter 3). At the time of the Roman conquest, the population of the region, then perhaps about 250,000, or on average ten persons per square kilometre, was increased by the Roman army, which probably numbered at least 30,000 in A.D. 80, falling to about 25,000 by A.D. 100. Camp followers and traders who
came in the wake of the regiments may have swelled the population further. However, the native population may have decreased at this time, as a result of the fighting of the conquest period in general and perhaps of the massacre of the Ordovices mentioned by Tacitus (Agr. 18) in particular. The population then presumably increased gradually under the more peaceful conditions of the Roman rule. Such population growth at this period would not be surprising, for at the same time the population of Ireland seems also to have been increasing, without the stimulus of the Roman presence, and apparently without any major immigration into the island (Mac Niocaill 1972:2-3, Charles-Edwards 1972C:8-10). However, the rate of increase may have been slow. It has been suggested that, under preindustrial conditions, the natural rate of increase of an agricultural population was about 0.3% per annum (Clark C. 1967:83), and that the rate may have been slower earlier in the preindustrial period than later, perhaps standing at an increase of 0.04 to 0.09% per annum: at 0.04% per annum, it would take over 16 centuries for the population to double (ibid. 61-2, see Appendix 15). At this rate, any natural increase in the population in the course of the Roman period would have been counterbalanced by the gradual withdrawal of the Roman army. However, Clark's figures for such early population growth may be too low: a study of the Iron Age settlement at Glastonbury suggests that the population there may have increased at a rate of about 0.5% per annum (Clarke D.L. 1972:831-2), while, taking the higher estimate of about 62,500 for the Early Bronze Age population of Britain south of the Tees-Mersey line and an estimate of about four millions for the population of Roman Britain, the population may have increased in the intervening period at an average rate of about 0.2% per annum, probably increasing more slowly in the earlier part of the period, and more rapidly later.
At the end of the Roman period, there seem to have been several movements into the region, from Ireland into West Wales (see chapter 6) and perhaps also, under Saxon pressure, from south-east Britain into the eastern part of the region (Hogg 1964:296-9). The pressures caused by these movements may have been responsible for the Welsh participation in the colonisation of Brittany at about this time (Chadwick N.K. 1969:171-3, 190-1). Later, in the 7th. century, the Saxons themselves began to settle in the Marches (see chapter 7), and later still the Vikings may have settled in some coastal areas, though they seem to have done so only in small numbers, and perhaps not until the 12th. century (Richards 1975:57-8). Similarly, at the very end of the period, the Norman presence in the region can have entailed only a very small increase in population. Presumably, then, the population was growing steadily, if perhaps slowly, despite suggestions that the population of England and Wales as a whole must have fallen in the post-Roman period, perhaps more specifically in the 5th. and 6th. centuries (Fowler P.J. 1978:6). Changes in the meaning of the term 'tref', which first denoted a single farm, to a village in the lawbooks and a town in the late 11th. or early 12th. century Pedeir Keinc y Mabinogi again suggest that the population of Wales increased between the 5th. and 12th. centuries (Charles-Edwards 1971:196).

8.7: Conclusions

Recent research suggests that the population of prehistoric and early Britain may have been considerably higher than was previously thought. The population of the late Iron Age and early Roman period may have equalled or exceeded that of the late 11th. century, while the population of Wales and the Marches at that date may have risen as high as perhaps 50% of the 1801 figure. The population may then have
increased at a higher rate than is sometimes assumed: whilst it has been suggested that the rate of early population growth lay between 0.04 and 0.09% per annum (Clark C. 1967:61-2), the evidence from Glastonbury seems to suggest a rate of 0.5% per annum (Clarke D.L. 1972:831-2), and the figures put forward for Wales and the Marches suggest that, between about A.D. 200 and 1801, the population may have increased at an average rate of 0.7% or more per annum, though the rate may have been lower in the earlier part of the period and higher later. As has been seen, the evidence thus suggests a significant growth of population, with consequent pressure on the land, in the post-Roman period. In general, the population of the region would seem to have been relatively dense, and was expanding. This carries significant implications for the extent and efficiency of the agricultural exploitation of the region, and for the probable complexity of its social and political organisation, and of the rules governing the tenure of land (see chapters 9, 12, 13).
AGRICULTURE, ANIMAL HUSBANDRY AND LAND USE

9.1: Introduction

In this chapter, the evidence pertaining to the land use of the region is surveyed. The probable importance of cereal cultivation at different dates is assessed, and the types of crops and tools available summarised; the evidence for new introductions of both crops and tools, and in particular of the heavy plough, in the Roman period is then discussed. The evidence for animal husbandry is summarised, and the relative importance of different animals at different dates and in different areas is discussed, together with their various dietary uses. Other natural resources which may have been of dietary or agricultural value are then summarised. The likely importance of different elements in the diet of the period under study is then evaluated, and related to the areas of land involved in their production. Finally, an attempt is made to evaluate the relative quantities of land utilised for agriculture and pasture, and those left waste, at different times within the period under study.

9.2: Cereal Cultivation: The Bronze Age

As the population of the region seems to have been high throughout the period under study, so the agriculture which sustained that population must have been reasonably efficient. In the past, arable cultivation was considered virtually unknown in Wales until the Middle Ages, and earlier economies were thought to be primarily pastoral and semi-nomadic (Seebohm 1905:187-8, 204-5, Lloyd 1911:11:605-7, Jones-Pierce 1951:17); this view now seems erroneous. Cereal cultivation has apparently been practised in Wales since at least the Early Bronze Age. The evidence for this comes largely from the Vale of Glamorgan, where wheat and barley grains were found at Pond Cairn (Fox C.
1938:150), a cairn whose construction is interesting: the lower part of the structure is of turf, perhaps obtained from field stripping, whilst the cairn ring is formed of surface stones. This may indicate that, by the time this ring was added, the surrounding area was more intensively exploited (Bradley 1978:19-20). In the light of the cereal grains found here, this exploitation may have been for agriculture rather than pasture, despite the suggestion that arable farming did not become extensive in the vicinity of the cairn until the first millennium A.D. (Fox C. 1938:156). Similarly, Simondston Cairn, only a few miles from Pond Cairn, was built on land which had been stripped of turf, a process which would seem unnecessary unless it were intended to release the land for tillage (Bradley 1978:16-17, 19-20). The impression of a Celtic bean on a late Neolithic sherd from Ogmore may indicate that pulses were also cultivated in Glamorgan at an early date (Smith A.G. et al. 1981:188). However, food refuse found under Saint-y-Nyll Cairn, St. Bride’s-super-Ely, indicates that the economy there was based primarily upon stock, especially sheep (Savory 1960:24-5, 27-9, Williams M. 1975:33). Both cereal and stock-based economies may thus have been practised in this relatively small area at an early date.

There is also evidence of early cereal cultivation elsewhere in the region. Seven impressions of emmer and seven of naked barley were found in an Early Bronze Age context at Moel Hebog, Caernarfonshire (Jessen and Helbaek 1944:18), and charred emmer and six-rowed barley were found at Capel Eithin, Anglesey, in a Neolithic, or perhaps Early Bronze Age, and also in a later Bronze Age context (White S.I. 1981:17-18, 21). An impression of naked barley of the Middle Bronze Age came from Kilpaison Burrows, Pembrokeshire (Jessen and Helbaek 1944:19), and grain which has been radio-carbon dated 1050 ± 200 b.c. came from the main quarry ditch at Croft Ambrey (Fowler P.J. 1981:
Thus, early cereal cultivation seems to have been widespread throughout the region (see map 27 and Appendix 16).

9.3: Cereal Cultivation: The Iron Age

Despite the effects of the climatic deterioration which marked the end of the Sub-Boreal and the inception of the Sub-Atlantic climatic period (see chapter 2), agriculture was still practised in Wales and the Marches during the Iron Age, on perhaps a greater scale than is generally assumed (see map 28 and Appendix 17). The evidence for this is varied. The most conclusive evidence for agriculture at any date at any particular site is the presence of fields of that period: fields which apparently date to the Iron Age are indeed known in some areas, and their apparent absence elsewhere is not conclusive, for it is often difficult to date fields closely. Furthermore, ancient fields normally survive only in those areas which are marginal in terms of modern agriculture: this need not reflect their original distribution, as modern agricultural techniques tend to destroy any remains of earlier field systems located in those areas in which they have been employed. Moreover, the search for ancient fields itself involves some assumptions concerning the practice of early agriculture. Only fields with permanent boundaries are likely to be represented in the archaeological record, yet fixed boundaries may not have been universally used: so, for instance, the redistribution of land seen in the Welsh lawbooks in the systems of tir gwelyog and tir cyfrif (see chapter 13) would seem to militate against the use of more than temporary boundary markers in at least the later pre-Norman period. In the prehistoric as well as the early historic period, boundaries may have changed too frequently for large earthworks to have formed or for walls to be built. Furthermore, the formation of lynchets requires some degree of mismanagement, even in systems which favour permanent
field boundaries; the land may be thoroughly worked without leaving any trace of this activity (Bradley 1978:40).

Despite these factors, some field systems which survive seem to date to the Iron Age: these are particularly associated with the enclosed homesteads of north-west Wales. Though some of these homesteads were occupied, and may even have been built, in the Roman period, others, such as Pant-y-saer, seem earlier (see chapter 3), and the fields which pertain to them may also be pre-Roman. Moreover, the field system near Maen-y-bardd seems to predate the Roman road from Segontium to Caerhun, which should probably be dated to the early Roman period (R.C.A.H.M. 1956: p. 28); the field system may then be Iron Age in origin. There is certainly no reason why such ‘terraced fields’ should not have originated in the Iron Age: many of the supposed ‘terraces’ are not deliberately built features but lynchets such as reflect the use of a traction plough capable of turning a furrow, a feat which lay within the capacity of a bow ard (Smith C.A. 1978:39). If the so-called ‘terraces’ were formed in this way, there can be no doubt that the fields were used for agriculture, and the height of some of the lynchets further implies that those fields were intensively used over a protracted period (Johnson N.D. 1976:44-46). Almost all the ‘terraced’ fields avoid wet soils, again suggesting an agricultural function, and contrasting with the walled, un-lynchetted fields which occasionally also occur with enclosed homesteads, and which are found only on wet soil: these seem to have been used as enclosed pasture (Johnson N.D. 1978:130-2).

The ard seems to have been known in Lowland Britain since the Neolithic period, when plough marks such as would have been created by an ox-drawn ard were formed in the soil which later underlay South Street long barrow (Fowler P.J. and Evans 1967:289-90, Ashbee et al. 1979:282-3, 296). It was certainly in use in the Highland Zone in the
Iron Age: in Scotland, the ard from Milton Loch has yielded a radiocarbon date of $400 \pm 100$ b.c. (Guido 1974:54), and that from Lochmaben a date of $80 \pm 100$ b.c. (Lerche 1972:64). In Wales, the wooden ploughshares found at Walesland Rath seem to belong to the later Iron Age phase there, thus dating to the 1st. century B.C. or the 1st. century A.D. (Wainwright 1971:94-8, 101, Rees 1979:1:294); iron ploughshares were found in the Iron Age deposit from Llyn Cerrig Bach (Fox C. 1945:65, pl. XVI 61-2, Allen D.F. 1967:312-4).

Like ploughshares, ox goads form good evidence of agriculture, for the goad is an implement which is useless to the pastoralist but almost indispensable to the agriculturalist. Its presence is thus a clear indication of the use of the traction ard or plough, though its absence from a site or an area does not prove that such an implement was not in use there: in the early historic period, at least, it was customary in Wales to lead oxen from the front rather than to goad them from the rear (Payne 1948:99-100, Giraldus Descr. 1.17).

Moreover, even when goads were used, a sharpened stick could prove as effective as a metal goad. Nonetheless, metal goads were used, and have been found at Mynydd Bychan (Savory 1955:43 fig. 4.8), Croft Ambrey (Stanford 1974A:105-6, fig. 76.3, Rees 1979:1:295) and Braichydinas (Rees 1979:1:294).

Other, less conclusive, evidence of the practice of agriculture is provided by the presence of sickles. In the Iron Age, these are found in the Marches in the same area as is characterised by the presence of the four- and six-post structures which may well have been used as granaries (Bradley 1978:43-4, Rees 1979:11:543), but they may have been used to cut fodder rather than, or as well as, to reap grain. Finally, a number of sites have evidence for the consumption of grain, indicated by the presence of querns and of the grain itself. So, querns have been found at the Breiddin, Moel-y-gaer, Croft Ambrey and
Conway Mountain (Guilbert 1977:48, Stanford 1974A:185-6, Griffiths and Hogg 1957:78). Wheat has been found at Croft Ambrey, Caynham Camp and, with some barley, at Midsummer Hill (Stanford 1981:160-2); emmer and barley have been found in pre-rampart contexts at Dinorben, and emmer, hulled barley and a little rye at the Breiddin (ibid. 162). Grain was also found at Moel Hiraddug and the Wrekin (Guilbert 1977:48), the latter being radio-carbon dated to 520±180 and 510±90 b.c. (Fowler P.J. 1981:267-8). The presence of querns and grain at these sites does not prove that the grain was grown by their inhabitants but only that they consumed it; however, it seems unlikely that, at this early date, supplies of grain were transported far, and agriculture is therefore likely to have been practised relatively near at hand. Recent techniques for examining plant remains can in fact distinguish between samples characteristic of 'producer' and 'consumer' sites. Such examination has indicated that the Iron Age to Romano-British farmstead of Cefn Graeanog II was a 'producer' settlement, with spelt as one of its main crops, even though by modern standards its location seems unsuitable for growing any form of wheat. The presence there, and at the nearby Mediaeval farmstead, of seeds of Heath grass in association with the cereal remains indicates that, at both sites, the ard rather than the mouldboard plough was in use (Hillman 1981:142-3).

9.4: Cereal Agriculture: the Roman Period

There is more evidence for the practice of agriculture in the Roman period than in the Iron Age (see map 29 and Appendix 18). Many of the fields associated with enclosed homesteads are probably of this date, and more agricultural implements have been found in Roman than in Iron Age contexts. The type of plough used in the Roman period seems initially to have differed little from that used in the Iron
Age: a wooden ploughshare belonging to an ard of this type has been found in a 2nd. century context at the military site at Usk (Rees 1979:1:45), and two such iron shares of the 3rd. century were found at Coygan Camp (Wainwright 1967:95-7, 103-5, fig. 29.5, 30.1). The asymmetric heavy plough seems to have been introduced in the later Roman period: an asymmetric winged share of that date has been found at Dinorben (Gardner and Savory 1964:156 fig. 24.11, 158-9), and another occurred in the hoard in the fortress at Chester (Rees 1979:1:273). Ox goads have also been found in Roman contexts, at Brecon Gaer, Dinorben, Lydney and Wroxeter (Wheeler 1926:119 fig. 60.11, Rees 1979:1:294, Savory 1971B:53-4, fig. 14.27, Wheeler and Wheeler 1932:92-3, fig. 23.189, Atkinson D. 1942:225 pl. 58 B48, B86).

The importance of cereal cultivation at this date is further emphasised by the popularity of the so-called 'corn-driers': though these structures, which are inefficient for drying grain, now seem more likely to be malting floors (Reynolds and Langley 1980:32-9, 41-2), they nonetheless suggest the processing of large quantities of grain. Structures of this type are known at the Iron Age farmstead of Biglis, Glamorgan (Parkhouse 1979:28), but seem to become common only in the Roman period, when examples are known at Caerwent, Cae Summerhouse, Cwmbrwyn, Huntsham, Llantwit Major and Whitton (Ashby 1905:308, Davies J.L. 1973A:54-5, Ward 1907:198-9, Wainwright 1967:64, Bridgewater 1965:182, Nash-Williams 1953:122-3, Jarrett 1966:61, 1967:80, Morris P. 1979:95). The presence of such purpose-built malting ovens may indicate large-scale domestic consumption of ale, perhaps as the normal beverage, or may suggest commercial production for a wider market.

9.5: Cereal Cultivation: the Post-Roman Period

Archaeological evidence for cereal cultivation at this period is
scanty (see map 30 and Appendix 19). Most is known of the economy of Dinas Powys, where the large quantities of animal bones suggest that stock rearing was more important than arable farming, though fragments of three rotary querns, and objects which may be bakestones (Alcock 1963A:161-3), indicate that cereal products were used. In the absence of agricultural implements (ibid. 41), it is impossible to be certain that grain was grown by the occupants of the site, and it may have been brought from elsewhere, but it was probably not transported far, and some cereal farming therefore probably occurred within fairly easy reach of the site. The same seems true of Dinas Emrys, where a rotary quern came probably from the late Roman or sub-Roman phase (Savory 1961:41). In Hereford, two 'corndriers' which underlay the rampart were built of reused Roman material; they contained much carbonised grain, and one contained charcoal dated to A.D. 761 (Rahtz 1968:242, Shotton et al. 1970:394), again suggesting cereal cultivation in the vicinity. At Hen Domen, ridge and furrow associated with cereal pollen predated, though probably not by long, the late 11th century castle (Barker P. and Lawson 1972:60-6).

The literary evidence also suggests that cereal cultivation was important at least in the later part of the post-Roman period. Oats, wheat and ale figure prominently alongside animal produce in the food renders listed in the lawbooks (lor. 96, Bleg. 68-9), whilst, in the late 12th century, Giraldus states that the normal Welsh diet was heavily reliant on oats (Descr. 1.8, 1.10). Thus, despite the shortage of archaeological evidence, which parallels the general shortage of evidence for this period (see chapter 7), cereal agriculture is likely to have remained important in the post-Roman period.
In the Iron Age, as earlier, both barley and wheat seem to have been grown as staple crops in those areas best suited to their cultivation (Dennell 1976:14-19); the cultivation of cereals such as rye, oats and bread wheat is generally thought to have begun in the Iron Age. At this time, too, spelt seems to have replaced emmer as the most common type of wheat, while hulled barley became increasingly prevalent at the expense of the naked variety. This may represent a response to the cooler wetter climate, to which spelt and hulled barley were better suited than emmer and naked barley (Mercer 1981A:xix), or may reflect the differential preservation of spelt, which had to be parched before threshing (Fowler P.J. 1981:223-4), and was therefore more likely than emmer to be accidentally charred and thus preserved. If, however, spelt was increasingly used at the expense of emmer, this may be important, for spelt can be sown in the autumn; the workload could then be spread and arable production increased if other crops were sown in the spring (Bradley 1978:123). Diodorus' reference to the two harvests a year enjoyed in Britain circa 500 B.C. (D.S. 2.47) may indicate that both spring and autumn sowing were practised in at least some areas at that date. This innovation, which represents a greater investment of labour than does a single harvest, is perhaps likely to have been undertaken only in response to population pressures (Bradley 1978:123) though, as there is evidence to suggest that autumn sowing dates back at least to the Bronze Age (Jones M. 1981:109), these pressures may predate the Iron Age. In some cases, emmer and spelt may have been grown together to safeguard against crop failures: evidence from Pembrey Mountain, Carmarthenshire, where grains of spelt and emmer, radio-carbon dated to 335±45 b.c., were always found together, suggests that they may have been grown mixed (Hillman in Williams G. 1981:26). However, as
barley and in particular oats are best suited to spring sowing, whereas wheat is generally better suited to winter sowing (Jones G.R. J. 1972:355), the discovery of wheat, oats and probably barley in what seems an early Iron Age context at Marlborough Grange, Glamorgan (Savory 1970:54) may indicate that both spring and winter sowing were practised there. This may also be implied by the spelt and oats found in a deposit sealed by the inner rampart at Dinorben and radiocarbon dated to the mid 6th. to mid 5th. century b.c. (Jones M. 1981:104).

A variety of cereals was thus available in the Iron Age, and legumes were also grown. It was for long thought that the cultivation of legumes in Britain began only in the Iron Age, but recent evidence suggests that some were in fact grown earlier, though, perhaps because of their size, they are poorly represented in the pottery impressions which form perhaps the main source of information pertaining to early crops (Dennell 1976:18). In addition to the Neolithic bean from Ogmore, mentioned above, and Celtic beans from Iron Age levels at Meare and Whortlebury in Somerset (Percival 1948:18), peas of the late 2nd. millennium b.c. are now known from eastern England (Legge 1981:92), and such crops may have been more widely grown.

New crops seem to have been introduced into Britain in the Roman period. Increasing evidence for the use of oats in the Iron Age tends to discredit the earlier belief that they were not established as a cultivated crop until the Roman period; however, they may then have been grown more widely since, as prime horse fodder, they would have been in demand by the army, and their spread may have been linked with the presence of cavalry units in garrison (Applebaum 1972:109). As oats thrive better in a moist climate than either wheat or barley, and as oatstraw is more absorbent and thus forms better cattle bedding and manure than wheatstraw (ibid. 119), their spread would clearly have
been beneficial to the general economy. Rye may only have been present as a weed in Iron Age contexts, and may not have been grown as a crop until the Roman period ( Helbaek 1964:163, Wild 1970:128 ), though this is not certain. Other plants which were probably introduced into Britain by the Romans are the mulberry, fig, plum, walnut, vine, lentil, radish, celery, fennel, cabbage, cucumber, and possibly the turnip and millet, as well perhaps as improved varieties of broad bean, pear and cherry ( Godwin 1975:480, Wild 1970:128, Applebaum 1972:120, Willcox 1977:279-80 ). Individually, these introductions may have been relatively unimportant; collectively, they formed a substantial contribution to the available stock of foodstuffs, to such an extent, indeed, that it has been claimed that the practice of horticulture itself was a Roman introduction, and that the earlier populations of Britain may have used only wild herbs, vegetables and fruit ( Wacher 1978:141-3 ).

The increased diversity of crops available after the introductions of the Roman period should have reduced the risk of famine consequent upon crop failure. Particularly valuable in the context of the climate of the Highland Zone was the increased importance of oats, due perhaps to the Roman presence: by the 12th. century, spring-sown oats seem the chief cereal grown in Wales, where, with dairy produce, they seem to have formed the basis of the diet ( Giral dus Desc r. 1.8 ). Whilst winter-sown cereals compete better with weeds, and can produce higher yields than spring-sown crops ( Coles 1976:64, Hillman 1981:147 ), this reliance on spring-sown oats would have the alternative advantage of freeing the arable land for use as fallow pasture in winter, whilst in spring and summer the upland wastes could be used for grazing ( Jones G.R.J. 1960:68 ). By such means, the productive potential of the land was clearly increased.
The tools of cultivation as well as the crops grown changed during the period under study: some innovations seem to date to the Iron Age, others to the Roman period, and many may represent attempts to deal with worsening climatic conditions. So, the billhook, which seems to have been an Iron Age introduction, may have been developed in response to an increased need for winter feed for stock: this need seems to have been felt at the same time in continental Europe as in Britain, and presumably reflects the cooler wetter climate of the Sub-Atlantic period, which may have reduced the winter grass growth and made it necessary to house cattle in winter. Haymaking may then have developed in an attempt to conserve the summer grass for winter use (Ryder 1981:332), and foliage may have been used in similar fashion. The need for fodder seems to have increased further in the Roman period when new tools were introduced to deal with the hay harvest: these were the two-handed scythe, which made it possible to mow low and thus increase supplies of hay and straw, the mower’s anvil which was used with this scythe, and improved rakes and pitchforks (Rees 1979:II:741, Applebaum 1972:76-7). These new tools are relatively common on the military sites of the 1st century A.D., and may therefore have been used to gather fodder and bedding for military animals (Rees 1979:II:741).

The plough seems to have developed in the Roman period. The iron coulter was probably a Roman introduction, for the supposed Belgic coulter from Bigbury is now interpreted as a tanged billhook (Manning 1964:62-3) and no other pre-Roman coulter has yet been found. Before the climatic deterioration at the end of the Sub-Boreal period, it was probably not necessary to use a coulter, which is of use only in a wet climate where it is desirable to turn a furrow in order to allow the soil to dry out, not in a hot dry climate where the aim is rather to
break the soil up to prevent it from drying out. Consequently, the introduction of the coulter suggests that the soil had become wetter than hitherto, and that a new type of agriculture had been developed which enabled man to tackle the heaviest wettest soils which could not be worked with the prehistoric coulterless ard (Payne 1954:16, 26-8). The asymmetric heavy plough, apparently developed in the later Roman period (Manning 1964:65), enabled the exploitation of the rich heavy lowland soils which, if properly handled, would yield far better crops than the light upland soils. The asymmetric coulter, designed to turn the soil to the same side each time, could be used to raise ridges between the furrows, as was necessary only where the climate was wet and cold (Payne 1954:32-3); such ridge and furrow is attested in Wales at Hen Domen, Montgomeryshire, in the 10th. or 11th. century (Barker P. and Lawson 1972:60-8). The size of team originally used with this plough is not known; by the later pre-Norman period at the latest, however, it was drawn by a team of eight oxen yoked abreast. This method of yoking is recorded in Llyfr Iorwerth (Ior. 148), but was apparently obsolete by the mid 12th. century, when Giraldus' description of Welsh ploughing practices (Descr. 1. 17) mentions only yoking in pairs or in fours, suggesting that he had never heard of the custom of yoking eight abreast (Charles-Edwards 1971:355).

It thus seems that the coulter and the asymmetric plough, presumably equipped with a mouldboard (Manning 1964:65), were first used in Britain in the Roman period, when they were developed as a response to the wetter climate of the Sub-Atlantic period. Such a plough would enable the wetter soils to be cultivated, which had probably been impossible previously. It would also be important in reducing labour on lighter soils, for the prehistoric coulterless ard was probably unable to plough up pasture or downland unless that had
been previously treated with spades or mattocks (Evans J.G. 1975:165-7), whereas the heavy plough was capable of this feat.

The iron or iron-shod spade is perhaps also a Roman introduction, although a spade of this sort from Croft Ambrey may come from a late Iron Age context (Stanford 1974A:62). The use of such a spade would halve the labour involved in activities such as digging ditches, and should therefore have had a marked effect upon the efficiency of drainage (Applebaum 1972:79-80, 82), again more important in the Sub-Atlantic climate than hitherto. Other tools which may have been introduced by the Romans are the balanced sickle, which brought greater economy of labour in harvesting, the turf-cutter, mattock, iron fork, and ascia-rastrum, an implement probably intended primarily for weeding (Manning 1970:20). The bidens-type hoe, pruning hook, threshing sled and improved types of billhook and axe were probably all innovations of the Roman period, the last leading to greater facility in deforestation (Rees 1979:1:311, Applebaum 1972:81-2). It is not clear, however, to what extent the native population as a whole benefitted from these innovations, for in the Roman period the majority of iron tools seem to have remained in Roman, or heavily Romanised, hands. The iron-shod spade, for instance, is found on few purely native agricultural settlements in Britain, and this may reflect the poverty of these sites. In Wales, such spades have been found at the military site at Usk (Rees 1979:1:426), and also at Caerwent, Chesters villa and the Minchin Hole (Ashby et al. 1904:106, Scott-Garrett 1938:121, Rees 1979:1:424); all but the last are Roman or strongly Romanised sites. Agricultural implements found on military sites perhaps belonged to a farming element in the vicus: equally, they may have belonged to the soldiers themselves, for the sickle at least seems to have been a normal part of the infantryman’s equipment, used when foraging for grain and fodder on campaign (Josephus B.J.
3.95, 2.528, Caesar B.G. 4.32, Cichorius 1900 taf. LXXXI), and other agricultural implements may have had similar uses. So, though the range of implements available to the farmer may have widened in the Roman period, and some of the existing implements may have been improved, the cost of such tools may have kept them out of the hands of the greater part of the population; or, if present at the poorer sites, greater care may have been taken to reforge worn and broken implements which may thus have been lost to the archaeological record.

9.8: Animal Husbandry

Animal husbandry was probably important throughout the period under consideration, although the evidence for it is tenuous: bones indicate the sites on which meat was eaten, but these need not be the sites on which the animals were reared. However, the physical plan of a farm in part reflects the nature of the farming pursued there, and a study of farm morphology may provide some indication of their major interests. Some of the enclosed homesteads of north-west Wales contain relatively few roofed buildings yet enclose large areas of unroofed space: these may have been intended to meet the requirements of an activity such as large-scale stock rearing in which, though whole herds or flocks had to be accommodated at an annual round-up, few other buildings were required apart from accommodation for farm personnel. Mixed farming, which seems to be represented by the remainder of the enclosed homesteads, would require a greater range of buildings, including not only accommodation for the work force but also stalling for the plough-teams and storage and processing facilities for the produce of the fields as well as some enclosed, unroofed, space for stock (Smith C.A. 1978:39-40). It has similarly been suggested that the multiple-enclosure hill-slope forts of south-west England and South Wales were occupied by stock-rearing communities: the outer enclosures could have
been used to separate the animals for purposes such as milking as well as for their protection in times of danger, while the inner enclosures housed the populations. The forts themselves all lie within easy range of sources of water and of extensive grazings on upland or coastal tracts (Fox A. 1953:18-19).

Throughout the pre-Norman period, cattle seem to have been the most economically important animals in the region. Sheep may have been kept primarily for their wool, and only secondarily for their meat: so, in Denmark, between the Bronze Age and the Roman Iron Age, sheep were improved in terms of the quality of their wool but not in terms of their build (Clark G. 1947:135). In Britain, the sheep of the Iron Age seem to have been brown-fleeced sheep of the Soay type; such sheep were still the main wool suppliers in Roman Britain, although the Romans also introduced an improved white-fleeced sheep which again was distinguishable from earlier sheep only in terms of its wool and not of its build (Wild 1979:124). The sheep population seems to have increased greatly in the Iron Age and Roman period at the expense of cattle and swine presumably as, with the growth of agriculture and the increasing need for timber for building and smelting, open grassland expanded at the expense of forest (Godwin 1975:474): these two trends seem continuous and parallel from the Neolithic period onwards (Clark G. 1947:122-3, 129-33). The increase in sheep seems to have taken place primarily at the expense of swine rather than cattle: although both the latter were originally woodland animals, cattle may have been less dependent on their environment and have adapted to pasture better than swine, especially after the development of haymaking in the Iron Age freed them from dependence on leaves and branches for winter fodder (ibid. 129-30). Cattle also played an important part as traction animals, particularly in ploughing, and could supply milk, whereas pigs were useless until dead.
The quantities of swine kept at different sites varied widely, no doubt in response to the availability of woodland, or kitchen waste, on which they might feed. In the Iron Age, the extremes are perhaps seen at Glastonbury, where the ratio of sheep to swine stands at 54 to 1 (Bradley 1978:37), and Croft Ambrey, where their numbers seem to have been almost equal (Stanford 1974A:216). Pigs were killed at very varied ages, and this, together with their erratic representation in the faunal remains from different sites, may suggest that they formed an occasional resource, a reserve against the failure of other staples: they are suited to this role as they need little management, and can be kept in an environment with few other resources (Bradley 1978:37). Though beef and mutton may generally have been eaten in preference to pork as they are easier to keep, pork is favoured for preserving as its fatty meat requires less salt to ensure preservation and yet remains succulent when cooked; lean meat becomes hard and unpalatable when salted (Ryder 1981:396).

There is little evidence that the Romans introduced to Britain either new breeds of animals other than the white-fleeced sheep, or new methods of livestock husbandry (ibid. 336): the domestic fowl was probably introduced by the Belgae, though it may only have become of general economic value in the Roman period. As its bones are more fragile than those of the larger animals, there is less evidence of its relative importance at different dates and in different areas (ibid. 333, 340).

There seems no good evidence for the autumn killing of stock in prehistoric and early Britain, and in some cases there is evidence against it. Because of the problems associated with the precise ageing of ancient animals, it is difficult to prove that autumn killing was practised: comparison can only be made with modern animals, and differences in breeds and possibly also in the levels of nutrition may
make these comparisons misleading (Silver 1969:283). Nonetheless, the evidence suggests that the sheep at the Iron Age site of Aldwick, Hertfordshire, were slaughtered at a steady rate throughout the year (Ewbank et al. 1964:425), and, though results pertaining to sheep need have no bearing upon the autumn killing of cattle, since sheep are more easily left out in winter to fend for themselves (ibid. 426), yet there is no evidence of autumn killing amongst the Neolithic cattle of Skara Brae in the Orkneys (Higgs and White 1963:284-8). Few surplus animals may have been available for autumn killing, as most of the stock probably had to be kept to maintain a breeding population (Ryder 1981:342). If practised at all, autumn killing should probably then be expected only in marginal areas where, the poorer the area, the greater might be the temptation to carry a large stock at winter starvation levels in order to utilise the summer surplus (Higgs and White 1963:288-9). At Croft Ambrey, the low proportion of immature animals killed may suggest that meat was not over-abundant, for few animals were killed at the age when they would, to modern tastes at least, be most appetising to eat. Clearly, however, the overwintering of stock there posed no problem, as almost all the animals were overwintered once, and most at least twice, despite the huge quantities of hay which would have been required if the cattle were to be fed entirely, or even primarily, on harvested food for the duration of the winter (Stanford 1974A:216-9). Near the coast, seaweed may have been important as animal food, perhaps especially in winter: in more recent times, the sheep on Orkney were fed on seaweed for ten months of the year, and were only pastured during the lambing season (Round 1973:221). Elsewhere, transhumance, probably practised in much if not all of the region at least when demanded by population pressures (see chapters 2 and 3), may have facilitated the maintenance of the stock over the winter by permitting
the lowland pastures, or their hay, to be reserved for this purpose.

9.9: The Dietary Uses of Livestock

Within the region, at most sites for which adequate information is available, cattle formed the majority of the animals kept (see map 31 and Appendix 20); at the remainder, they are likely to have been predominant in dietary terms. It seems, from bone measurements, that the weight ratio of late prehistoric livestock may have differed slightly from the modern ratio, a cow then weighing about ten times as much as a sheep and nearly seven times as much as a pig (Ryder 1981:333-4). Their dietary predominance is maintained, however, even if the 7th-century Laws of Ine are taken to indicate that, at that date, a cow provided only as much meat as five sheep (Ine 70.1, Liebermann 1903:119-121).

Bones, however, form only a partial index of an animal's dietary usefulness to the community. When sheep and cattle are raised purely for their meat, it is most economical in terms of resources to slaughter them at 1.5 to 2 years, leaving only a female breeding stock; milk production makes it advantageous to keep at least half the female animals beyond five years (Sherratt 1981:283-5), and older animals which are found therefore represent such milk animals, or draught beasts. Dairy produce is likely to have been important at this date, perhaps more important than meat itself: so, in early Ireland, the farmer seems normally to have eaten flesh only in winter when milk was scarce (Thurneysen 1936:23), while in Wales the dairy component of the bond food-gift is higher in summer than in winter (Ior. 96).

Full use of dairy produce is sensible, for milk represents the most efficient way of converting plant to animal protein, with a 27% efficiency as against 18% in pig meat and only 6% in beef and mutton (Ryder 1981:313).
Ewes as well as cows are likely to have been important sources of milk, provided that they did not range so far in search of grazing that they could not easily be rounded up for milking. Ewes' milk was valued in the Mediaeval period, when a gallon was said to be worth as much as, and to produce as much butter and cheese as, 1.5 gallons of cows' milk - though, elsewhere in the same work, it is stated that 16 gallons of ewes' milk were needed to make a stone of cheese and two pounds of butter, which could be made from 14 gallons of cows' milk (Anon. Husb. 28, 32, Oschinsky 1971:428-9, 430-1). Ten ewes together seem to have yielded as much milk as one cow (Walter of Henley 88, Oschinsky 1971:334-5), though the season over which the ewe could be milked was shorter, ending on the first of August (Anon. Husb. 29, Oschinsky 1971:428-9). The yields of cows varied with the quality of the grazing: according to Walter of Henley, two cows on salt marsh pasture or three on stubble or woody pasture should between them yield a stone of cheese and half a gallon, or 3.5 pounds, of butter a week from Easter to Michaelmas, a yield which represents at least 14 gallons of milk between them per week. Thus, each cow might yield about 160 gallons of milk a year on salt marsh pasture or 105 gallons on poorer pasture (Walter of Henley 87, Anon. Husb. 27, 32, Oschinsky 1971:332-3, 428-31). The higher figure seems optimistic, and presumably reflects the use of good land under efficient management (Oschinsky 1971:180), since even a cow on the poorer grade of pasture is expected to produce a total yield of 8 stones of cheese and two stones of butter per annum, whereas the Anonymous Husbandry claims that each cow should yield only 7 stones of cheese and one of butter a year (Anon. Husb. 33, Oschinsky 1971:430-1). Neither figure seems to allow for the consumption of the calf which, if allowed to do so, would presumably consume by far the greater part of the cow's milk yield (Ryder 1981:387-9). The figures, moreover, apply to England,
and the yields from Wales and the Marches at this date are not known: they presumably varied greatly within the region in response to local conditions, but may perhaps be taken to approximate to the lower figures indicated for England.

As well as milk, blood may be taken from living animals for use as food. There is no specific evidence for this practice in prehistoric and early Britain, though it may have been employed, for it is documented elsewhere. In the 13th century, the Tartars could make a ten day journey living only on the blood of their horses (Polo trans. Latham 1978:100), while in Ireland, in the 17th century, blood taken from living cows was boiled with their milk and butter and herbs to form a delicious blood pudding (Misson 1719:155). In parts of Ireland, blood was also preserved with salt and set aside for use at times of year when food was scarce (Otway 1841:334-5).

9.10: Other Natural Resources

Various other natural resources may also have contributed to the diet. Wales seems a promising region for hunting and fishing: despite clearances for agriculture, extensive forests still existed in the 12th century (Giral dus Descr. 1.1), while much of the region lies within easy reach of the coast or of sizeable rivers. Little evidence of fishing or fowling survives but, as fish and bird bones are very fragile, little weight should probably be attached to this negative evidence. Shells survive in greater numbers, and indicate that the coastal resources were utilised; however, the nutritional value of shellfish is low, and a large quantity is therefore required to provide a satisfactory meal, so that very large numbers of shells may actually reflect only a very limited use of this resource. Whilst shellfish are available all year round, they supply more meat in the summer months, and may have been used then rather than in winter for
that reason; conversely, they may have been more valued in winter when fewer other food resources were available (Bradley 1978:93). Seaweed may also have been used for human consumption: the earliest record of this practice is found in an Icelandic saga of A.D. 961, and it could have been found in Wales at a similarly early date (Bell 1981:118).

There seems surprisingly little evidence for hunting. Red deer remains are relatively scarce, and in many cases take the form of antler, which may have been gathered after they had been shed by the deer and thus need not constitute evidence of hunting. Deer remains come mostly from coastal sites, though some have been found inland (see map 32 and Appendix 21): as red deer would winter on the coasts and pass the summers on the open heaths and moorlands, this distribution of remains may indicate that they generally formed a seasonally exploited resource (Bradley 1978:95). On those sites where deer remains were found, they formed only a small proportion of the faunal remains, suggesting that hunting may not have attracted the native population: so, Giraldus claims that in his day deer, and to a lesser extent other wild animals also, were very numerous in Britain because they were seldom hunted (Descr. 1.8). Their existence in Wales at that date is certainly confirmed by the evidence from Loughor Castle where deer formed 19% of the faunal remains of the period from c. A.D. 1150 to 1300 (Noddle 1975:251), suggesting that hunting may have been more attractive to the Normans than it was to the native population. Alternatively, deer may previously have been hunted and butchered where they were caught, so that only the meat and not the bones were carried back home: thus, no trace of the consumption of these animals would be preserved in the archaeological record. In Ireland, sites are known in County Cork which comprise hearths and troughs perhaps intended for boiling water: these are dated to the Early to Late Bronze Age, and are assumed from later literary
references to have formed the bivouacs of summer hunting parties (O'Kelly 1954:138-143). A similar site at Radur, Glamorgan, dates to the late Iron Age (Hyde 1937:184, R.C.A.H.M. 1976:1:594), and, at Merthyr Mawr Warren, some small clay-lined pits dating to the Iron Age and associated with heaps of burnt stones (Fox C. 1927:53, 58) may have served a similar purpose. Hunting may then have been more important in economic terms than might at first appear.

9.11: Diet and Land Use

It is not easy to determine the form taken by the diet of the early populations of Wales and the Marches, or to ascertain whether it was adequate and balanced. Few deficiency diseases leave their mark upon the skeleton, and for much of the period under study few skeletons are available; of the known inhumations, detailed information regarding the skeletons themselves is all too often absent from the published record. The deficiency most readily displayed by the skeleton is that of Vitamin D. There seems no convincing evidence for deficiency of this vitamin in prehistoric Britain as a whole (Brothwell 1969:532-3), but this may not reflect the diet of the period, for people who spend much of their time out of doors may form sufficient of this vitamin from sunlight without recourse to its dietary sources, fatty fish and eggs (Bingham 1978:359). However, dental evidence from the Anglo-Saxon cemetery at Holborough in Kent suggests that the population there underwent seasonal dietary disturbances, probably taking the form of a winter shortage of Vitamin D (Noble in Evison 1957:114-5). Teeth may convey further information relating to the diet of their owners: since the pH of plaque varies according to the relative quantities of protein and carbohydrate in the diet, being alkaline when protein is metabolised and acid with carbohydrate, the occurrence of caries seems to indicate a diet in which carbohydrate is
more important than protein (Hillson 1979:150). Possibly, then, the
current dental health of the Bronze Age reflects a greater reliance
upon pastoral foodstuffs, while the increased dental caries of the
Iron Age may be associated with an increase in cereal consumption.
Caries increased further in the Roman period, though it then decreased
markedly in England in the Saxon period, again probably in response to
changes in the diet of the period (Brothwell 1959:61-3, 1960:316,
Hardwick 1960:11, Emery G.T. 1963:277-80). Broadly speaking, then,
animal produce may have played a more important part in the diets of
the Bronze Age and Saxon populations of Britain than in the Iron Age
and Roman periods. Unfortunately, this information relates to Britain
as a whole rather than to Wales and the Marches in particular: in
terms of proximity to the region under study, the most pertinent
information here seems that from the hillfort of Bredon, not far east
of the Severn, where the teeth of the victims of the Iron Age massacre
had suffered marked attrition, suggesting that their diet was largely
based on coarse cereals (Hencken T.C. 1939:22-3).

The literary evidence relating to the diet of the region in the
later part of the period is also more scanty than might be wished. The
food renders listed in the Welsh lawbooks (Ior. 96, Bleg. 68-9) give
some impression of the range of foodstuffs available at this date:
wheaten and oaten bread, butter, cheese, beef, mutton, pork, bacon,
honey, mead, ale and bragot (a drink made of ale and honey) were all
available, but it is not clear to what extent, and in what
proportions, they were consumed by the common people rather than by
their lords. However, the food renders suggest that both bond and free
populations regularly disposed of cereal as well as pastoral products,
and bread may have formed the staple of their diets: so, Giraldus
states that, in his day, the people ate mainly oats, with milk, butter
and cheese, baking thin bread cakes daily (Descr. 1.8, 1.10). The
labour involved in the production of cereals may be reflected in the way in which, when the free food render or *gwestfa* was commuted into money, it was regarded as being apportioned half for bread and a quarter for the cereal-based liquor, and only a quarter for the *companagium*, all the animal produce which was to be eaten with the bread (Ior. 96, Latin B 239). Before commutation, the *gwestfa* comprised a horse-load of flour, seven thraves of oats, a vat of mead or the equivalent values of ale or bragot, the carcase of a cow or an ox, a three-year-old pig, a salted flitch of bacon, and a vessel of butter (Ior. 96). Further, the 'standard' cow of that date was worth 60 pence, the equivalent of only 90 to 240 sheaves of oats (Ior. 127, 140, Owen A. 1841:1:298-9, Lewis T. 1936:83), whereas now a similar cow would seem worth some three to four thousand sheaves of oats (Jenkins 1967:221). These values probably reflect the fact that, before the mechanisation of agriculture, crop husbandry involved more labour than did animal husbandry, a relationship which is now reversed; they may also suggest that crops were grown even in areas which were not ideally suited to such agriculture.

A diet based mainly upon cereals, supplemented by dairy produce and some meat, is likely to have been adequate, and the use of peas, beans and, after their introduction in the Roman period, lentils, would enable the role of animal protein in the diet to be reduced. Indeed, animal protein is not a requisite of a healthy diet: a community which lives predominantly on cereals is likely to receive enough protein if it also receives enough calories (Clark C. and Haswell 1966:7), and this is even more likely to have been true in the past, for the earlier wheats, spelt and emmer, have protein levels more than twice as high as those of modern bread wheat (Reynolds 1977:37). A population living in a climate with an average temperature of 10 degrees Centigrade has a calorie requirement of about 2,000 calories.
per person per day, averaged over the whole population of men, women and children. If, then, their diet were based primarily on cereals, of which about 10% by weight may have been lost by milling, each person would require on average about 235 kilograms of unmilled grain per year (Clark C. and Haswell 1966:48-9). This consumption is not unparalleled: Roman military rations, as envisaged by Polybius (6.39.12, see chapter 5), suggest that an infantryman received some 330 kilograms of corn a year. This figure might seem high, and it has therefore been suggested that it included provision for the soldier's family (Wilkes 1965:130-1), but, as the population for which it was intended was composed entirely of working men, it does not seem unreasonable. For comparison, in 13th. century Hangchow, where rice, pork and fish formed the main diet of the lower classes, contemporary estimates indicate that the daily consumption of rice was just over two pounds per person, about 330 kilograms or more per annum (Gernet 1962:136). Though in this case all the alcoholic drinks which were consumed were made from rice, accounting for some of the intake (ibid. 138-9), while the Roman soldier drank wine, the native population of Britain is also likely to have been very largely reliant upon grain-based alcohol. The dominant position of grain in the diet of the Roman soldier and the inhabitant of Hangchow is emphasised by figures from the reign of Elizabeth I, when about 33,110 kilograms each of wheat and malted barley were required to victual a thousand men in garrison for a year (MacNeill E. n.d. 45): both bread and beer together then seem to have accounted for only about 66 kilograms of grain per man per year.

When meat forms the main source of calories, on average about one kilogram per person per day is required, though the precise quantity varies slightly according to the type of meat used. In view of the probable differences between modern and ancient animals, it is
difficult to determine precisely what this requirement may represent. However, it has been calculated that, in Neolithic Greece, a diet based primarily on meat would demand the slaughter of an average 20 sheep per person per year, and for this a live flock of about 60 sheep per person would be required. If the meat in the diet were supplemented by milk, a live flock of about 25 sheep per person might have been adequate (Halstead 1981:314). If similar figures are applicable in Iron Age Britain, a diet based primarily on mutton, or mutton and milk, might demand the use of 50 to 120 hectares of hill pasture per person. Similarly, it has been suggested, on the basis of a slightly higher average calorie requirement than is assumed here, that a nuclear family would have required well over 120 hectares of land to live by beef alone (Mercer 1981b:235), while a diet based largely on beef with some milk may suggest the use, per person, of 3 hectares or perhaps more of good quality lowland for summer grazing, and perhaps 3.5 hectares of good meadow land to provide hay for the winter (ibid. 234).

So, following a primarily meat-based strategy, a family of five would need to draw on the resources of some 32 to 600 hectares of land. Far less land would seem to have been needed to produce grain to the level of 235 kilograms per person per annum. In the Middle Ages, a threefold return on grain sown was perhaps all that could be expected in a good year (Drummond and Wilbraham 1958:19), though one treatise which probably dates to the early 13th. century suggests that one could expect an eightfold increase for barley, sevenfold for rye, fivefold for wheat and fourfold for oats. The same treatise indicates that the sowing rate should be 2.4 bushels per acre for wheat and rye, and four for barley and oats (Anon. Husb. 3, 58, Oschinsky 1971:418-9, 442-3, Whitlock 1965:65). At about 27 kilograms to the bushel, and at a threefold return, allowing a third for seed-corn, 235 kilograms
of wheat should then have been obtained from 0.65 hectares of land, or, if allowance is made for alternate fallow, from 1.3 hectares, or perhaps 1.5 hectares if generous allowance is made for losses in storage. In this case, a family of five may have needed to draw on 7.5 hectares of arable land in order to supply its grain needs. However, the yields assumed in this calculation may be unnaturally low. Recent experiments have show that, on a sloping south-facing field, on unmanured soil no more than 10 centimetres deep and at a sowing rate of 63 kilograms per hectare, the average yield of emmer over eight consecutive years, two of which were very difficult seasons, was 1.85 tonnes per hectare, an increase of nearly thirtyfold, and that of spelt 1.76 tonnes per hectare, a twenty-eight-fold increase (Reynolds 1981:108-9). Despite the high yields, the sowing rate used here is substantially lower than the recommended Mediaeval figure for wheat of 2.4 bushels per acre (Anon. Husb. 58, Oschinsky 1971:442-3, Whitlock 1965:65), or 172 kilograms per hectare. With yields such as these, the land required to supply the grain requirements of a family of five would, with alternate fallow, fall to 1.5 hectares, and, if pulses played an important part in the diet and were grown in rotation with the cereals, the need for fallow, and consequently the area of land required, would be further reduced.

In addition to arable land, land would be needed for stock, for the area of cultivable land is linked to the availability of manure: if it were not manured to maintain its fertility, and if little use were made of pulses, the arable would probably have to be left fallow more often than every other year. Evidence from Llyfr Cyfnerth, in which a distinction is drawn between the erwau and the furrows of the ploughed land (Owen A. 1841:1:772-3), may suggest that, in post-Roman Wales, the erwau were under permanent cultivation, whilst other land was cultivated only intermittently and at long intervals (Jones G.R.J.
in this case, the occasionally cultivated outfield would have been left to long fallows, but the infield which was cultivated every year would be heavily dependent upon manuring. The quantity of dung available for this purpose is directly related to the quantity of hay and straw fed to the stock, creating a direct relationship between the quantities of fodder available and the quantities of grain produced. Even when the pasture takes the form of good quality grassland rather than the infertile wastelands which were often used as pasture, 1.25 to 1.5 times as much pasture as arable land is needed to maintain the fertility of the arable (Slicher van Bath 1963:22).

When cultivating hill slopes in particular, where the nutrients are more readily leached from the soil, stock management practices must have been governed by this need for dung. Though the use of arable fields as winter folds would help to maintain the organic matter and nutrient content of the soil, it also created a risk of greater soil erosion and damage to the soil structure, which would cause a fall in crop yields despite adequate manuring. Probably, then, the stock grazed the stubble in late summer and autumn, and was moved from it in early winter as the soil grew wetter and the risk of erosion increased. Though enclosed fields may have been used in rotation, serving as pastures and haymeadows as well as arable fields, these too would have needed manuring, and, to compensate for leaching losses, manure would have to be brought from outside the enclosed area, either by grazing the animals on summer pastures outside the enclosures into which they were then brought at night for milking and protection, or by bringing in winter fodder. By thus maintaining the quality of the enclosed fields, the degeneration of the soils elsewhere would be hastened (ibid. 23). However, this cycle could be eased or broken by the freer use of either legumes or coastal resources, using seaweed rather than animal manure to produce a rich soil. Such a use of
seaweed is first recorded in the 4th. century A.D. by Palladius, apparently quoting Columella (Palladius *Opus Agric.* 3.24.6): it is then found in 12th. century France, 16th. century Devon and later in Scotland and Ireland (Bell 1981:18-9, Fenton 1976:8, 11). The numbers of tiny shells and beach pebbles found in the fields of the 9th. to 11th. century A.D. at Gwithian, Cornwall, suggest that seaweed was used as manure there (Bell 1981:121), and the practice may also have been common in the coastal areas of Wales.

It would be interesting to compare these speculative figures of 1.5 to 7.5 hectares of arable land and perhaps between 2 and 12 hectares of pasture which may have been needed to support a family of five with the areas of land available to the different settlement sites. Unfortunately, however, there are few sites where the amount of arable, let alone pasture, associated with any one settlement may be reliably estimated, and the probable populations of the different sites are also far from certain. Most evidence survives in north-west Wales, where the stone-built farmsteads and their lynchetted fields have survived better than similar features elsewhere. The polygonal homestead of Tyddyn Mawr seems to stand within 5.6 hectares of fields (R.C.A.H.M. 1960:1063), and the thick-walled oval homestead of Cwmceiliog is associated with 2.4 hectares of fields (ibid. 1064): both belong to Smith's class IIa, which he suggests may have housed extended families of ten or more persons (Smith 1978:47). The polygonal homestead of Cae Metta is associated with a field system of about 4 hectares which seems to predate the homestead and to continue in use after its construction (Livens 1973:37, 1974A:22): this site, of Smith's class Id, may have housed five to nine persons (Smith 1978:46). The small compact homestead of Coed-y-brain and the polygonal homestead of Hafoty Ty-newydd seem to have shared a field system of 12.8 hectares (R.C.A.H.M. 1964:ciii), and three homesteads
near Nantlle (R.C.A.H.M. 1960:1216-8) shared some 10 hectares of fields (R.C.A.H.M. 1964:ciii), while the four hut-groups near Caeronwy Uchaf (R.C.A.H.M. 1960:1222-4, 1226) may have divided between them a field system 20 hectares in extent, and the small oval site near Gellifrydiau is associated with 4.9 hectares of fields. The fields attached to the small compact site of Moel Faban and Braichygornel are smaller in extent, covering 1.8 and 1.6 hectares respectively (R.C.A.H.M. 1964:ciii). The quantities of arable land available to these sites may then have been adequate to supply inhabitants for whom grain formed an important element of diet, and all had access to an almost unlimited range of mountain pasture. The figures, moreover, compare for the most part favourably with the average endowment of a typical member of a free clan at the end of the 13th century, who had less than four hectares of arable land, though he also had grazing rights over extensive common pasture (Jones G.R.J. 1960:63). The economy at some at least of these sites may then have been heavily dependent upon cereal production, though it was more probably mixed, as it seems to have been in the Irish rath, a settlement of similar size (Proudfoot 1962:111-3): it has been suggested that if, as seems likely, the rath was a small mixed farm housing a nuclear family, it may have needed to farm about 16 to 32 hectares of land to meet that family's dietary needs (ibid, 119).

If, then, the population of the region in the later Iron Age fell within the range of 200,000 to 400,000 (see chapter 8), the average area of land available per person, regardless of altitude and quality, would seem to have been from 6.3 to 12.6 hectares. Such figures again suggest a diet in which cereals played a relatively important role, simply because there would not seem sufficient land available to permit a primarily meat-based diet: a diet based largely on mutton, or even on mutton and milk, with its requirement of at least 25 hectares.
of hill pasture per person, is clearly impossible unless the population fell as low as half or less of the estimated population, while it is unlikely that there was sufficient good lowland pasture available for beef to have formed the basis of the diet. It seems most likely, then, that the economy was mixed, with cereals, and perhaps also pulses, playing an important role.

9.12: The Expansion of Settlement and Agriculture

The growth of population over the period under study (see chapter 8) must have necessitated the clearance of increasing quantities of land for arable and pastoral farming: this activity has left its trace in the pollen record. The Late Bronze Age and Iron Age seem to have seen the inception of large-scale forest clearances, no doubt related to the rise of hillfort building, expensive in terms of timber, and to the need for timber for bronze, and later iron, smelting, as well as to the clearance of land for agricultural purposes. As a result of such human activity, and of climatic change, the uplands which had been frequented in the Bronze Age were probably by the Iron Age open, windswept and peaty, and the hillslopes, though thickly wooded, would be more attractive for settlement; many were presumably now cleared, probably for the first time (Taylor J.A. 1975:18). Major deforestation seems to have occurred in the areas which are known to have been occupied in the Iron Age. At Tregaron, at a site 2.5 kilometres south-west of the hillfort of Penybannau, extensive deforestation circa 400 B.C. was apparently undertaken for pastoral purposes, and seems to mark the transition from a series of temporary clearances to a more permanent system of open grassland (Turner 1964:75-8, 83-4). At Ystwyth Forest, a site at 137 metres was cleared for settlement and agriculture or burned for charcoal in about 133±110 B.C. (Taylor J.A. 1975:18), while at Borth Bog there is
evidence of large-scale forest destruction in the Iron Age and Roman period, though this was probably due chiefly to an expansion of pastoral farming in the Roman period (Moore P.D. 1968:1007-9). A similar pattern is seen at Plynlimon, where evidence for shifting agriculture in the Bronze Age is followed by a far more intensive phase of forest clearance in the Iron Age and Roman period (Moore P.D. and Chater 1969:363-6, 371). Further north, there is evidence of forest clearance and human activity, apparently pastoral in nature, in the Capel Curig area from around the Neolithic to Early Bronze Age transition (Johnson N.D. 1976:69, Taylor J.A. 1980:105), and agricultural activity is first witnessed there only in the Late Bronze Age or Early Iron Age (Johnson N.D. 1976:69, Godwin and Willis 1960:66). Despite the fact that it is remote from the areas in northwest Wales which have produced most evidence of early settlement, the main change from woodland to moorland in the Capel Curig area seems nonetheless to fall within the Bronze Age (Johnson N.D. 1976:70-1), and agriculture seems to have been introduced or intensified in that particular area in the Late Bronze or Early Iron Age.

In South Wales, the high oak forest of the Middle Bronze Age was slowly replaced in the early Sub-Atlantic period, the Late Bronze to Early Iron Age, by oak-Polypodium forest, in which the abundance of the Polypodium fern suggests increased rainfall and a deteriorating climate (Crampton and Webley 1964A:446). Before the hillfort of Harding's Down West was built, the area was dominated by oak forest with significant quantities of Polypodium (ibid. 446), while the Roman marching camp of Ystradfellte was built in a landscape still dominated by oak and Polypodium forest: a decline in tree pollen and extension of grass after the construction of the latter may result from tree-felling associated with its construction, and the forest seems thereafter to have reasserted itself (ibid. 445-6). The Iron
Age is likely to have seen the extension of forest clearance in this area. In the Vale of Glamorgan, settlement seems to have expanded in the Iron Age, principally over the poorer sandier soils which were previously unused: this expansion may form a response to population pressures, or may reflect the fact that, in the cool wet Sub-Atlantic summers, these soils would yield better pastures than they had hitherto done (Crampton and Webley 1960:392). Marling, a technique known in Britain and Gaul in the 1st. century A.D. (Pliny N.H. 17.6-8), would also have made an important difference to the use of these sandy soils, making them much more productive for acid-susceptible crops such as barley and wheat (ibid. 394).

In the Roman period, though there is as yet relatively little palynological evidence for any major new forest clearances (Turner 1970:103-5), the settlement evidence suggests that, in Glamorgan at least, there may have been some expansion onto the heavy soils of impeded drainage, which were largely avoided in the Iron Age (see chapter 11): the heavier plough needed to utilise them effectively seems to have become available in the Roman period. In some areas, however, the Roman withdrawal seems to have been followed by some woodland regeneration: this is seen at Borth Bog and Plynlimon. This, perhaps a very localised phenomenon, was apparently succeeded by a gradual increase in the importance of cultivation, perhaps culminating in extensive arable activity associated with the foundation of the Abbey of Strata Florida in 1164 (Moore P.D. 1968:1009, Moore P.D. and Chater 1969:336-7, 374). The gradual increase in arable farming in the pre-Norman period may also have been stimulated by the growth of the Church, as in Ireland the development of the monastic regime seems to have encouraged the spread of arable farming, while the location of some monasteries in remote areas may have brought about the exploitation of land which would otherwise have remained virgin soil.
So, in Tipperary, Bronze Age clearances seem to have been followed by forest regeneration and then by renewed clearances which apparently began in about A.D. 300; thereafter, cereal pollen was continuously present in the area. The later extension of the clearances in this area may reflect the size of the monastic settlements which, with their abstinence from meat, may have laid a greater emphasis than hitherto on the production of cereals and other vegetable foodstuffs (Mitchell 1965:128-9). Some of the Welsh monastic communities, in particular those such as the followers of St. David who seem to have pursued a particularly ascetic meatless diet (Rhigyfarch 24), may have had a similar effect upon land use in their immediate vicinities.

While on lower ground in Wales the forest seems to have been cleared to provide arable and pasture land, on higher ground it may have been replaced by heathland: in the acid uplands of South Wales, the Iron Age landscape dominated by oak-Polypodium forest seems to have been succeeded in the post-Roman period by a more open landscape of grass and heathland, with perhaps some forest regeneration (Crampton and Webley 1964A:448-9). When the Glamorgan cross-ridge dykes were built, perhaps in the 8th. or 9th. century, they were built in a landscape of heather and coarse grasses; by this date, heathland probably covered all plateaux above 300 metres, forming the culmination of a process of human interference with the landscape (Emery F.V. 1969:24). At a similar date, peat growth seems to have been rampant, for the Roman road at Maen Madoc is buried in peat; earlier, this phenomenon may have been confined to pockets of peat in depressions (Crampton and Webley 1964A:448-9).

The landscape thus would seem to have been changing still in the post-Roman period. In some parts of the region at least, the area of land under cultivation may have expanded at this date: so, the
landscape described in the Llandaf charters seems largely cleared of forest and fully settled, while the pressure for land seems to have been such as to compel the settlement of wet soils from at least the 7th century A.D. onwards, and the evidence from Glamorgan suggests a steady expansion in the range of soils which were utilised (see chapter 11). This phenomenon, though apparently paralleled in Ireland, may contrast with the situation in England, where it has been claimed that there was in general no evidence of a significant increase in arable cultivation at the expense of either woodland or pasture between the 5th and the 11th century A.D. (Sawyer 1978:148), and where at Chalton the area of arable under cultivation, and perhaps with it the total population of the area, fell sharply in the post-Roman to Mediaeval period from its Iron Age and Early Roman peak (Cunliffe 1978B:14-15).

9.13: Conclusions

There seem to have been two major causes of change in the agriculture and land use of the region in the period under study, climatic deterioration and population growth. So, from the Iron Age onwards, changes in the agricultural tools and techniques employed in the region seem to have been intended to meet the problems posed by the climatic deterioration of the Sub-Atlantic period. Of these changes, the most important would seem to have been the introduction, by the late Roman period, of the asymmetric heavy plough: this would have facilitated the exploitation of a far wider range of soils than had hitherto been possible, including some which were potentially very fertile, and thus seems to have enabled the documented expansion of settlement onto the soils of impeded drainage in the Roman and post-Roman periods. Nonetheless, the heavy plough was not universally adopted: in some places, such as Cefn Graeanog (see above), the ard
may have continued in use into the Middle Ages, perhaps because the nature of the soil there did not demand the use of a heavy plough or because the inhabitants of that settlement were unable to afford the new implement.

Various pieces of evidence suggest that population growth is an important element in understanding the period under study. Agriculture seems to have been more widespread in the region than was once thought, for there is evidence of cereal cultivation in most areas and throughout this period: the only area with as yet no evidence for the practice is the sparsely occupied upland core of Wales, and cereals were certainly grown in the past in areas not now considered particularly well suited to their cultivation. This may in itself point to population pressure, as the same area of land could sustain a higher population if more use were made of cereals than of animal products, though the former would probably involve more labour. The dental evidence further suggests that, in Britain as whole, the cereal element in the diet may have gained in importance in the Iron Age at the expense of the animal produce which may have been more prominent in the Bronze Age, and that the cereal element in the diet may have increased further in importance in the Roman period. This again may suggest that the population increased from the Bronze Age onwards and, though in England the apparent trend towards the greater use of animal products in the Saxon period may indicate a fall in population, it seems more likely that, in Wales, the population continued to expand (see chapter 8). Cereal products are therefore likely to have been very important throughout the period, though they were probably supplemented in the diet by dairy produce, meat (especially beef), and probably pulses and fish. So, the dental evidence together with the apparently steady increase in the quantity of land cleared, presumably for arable and pastoral use, throughout the period in
question, suggests that the population increased at a pace comparable with that of the forest clearance.
10.1: Introduction

As indicated in the previous chapter, the development of agriculture was influenced by the development of metalworking and the consequently greater availability of metal, and in particular iron, tools. The increased efficiency of agriculture was a prerequisite for the later emergence of towns which in turn, by providing increased markets, will have caused the further expansion of agriculture and a greater demand for metal goods. In this respect, the presence of the Roman army was also important, for it formed a ready market for metals, woollen and leather goods, and for services, as well as for foodstuffs. The expansion of the metal, woollen and pottery industries, the development of trade, the related growth of towns, the effects upon them of the Roman occupation, and their subsequent decline in the post-Roman period are all discussed in this chapter.

10.2: The Metal Industry

At the beginning of the Iron Age, bronze was still the metal in most common use, a position which it seems to have retained for most or perhaps all of that period. Copper was locally available in Wales and the Marches, but no sources of tin are now known there and, unless small deposits which have since been worked out were once available, this metal was probably imported from Cornwall. Little is known of the scale upon which copper was worked before the Roman conquest, but in the Roman period the bun-shaped ingots found in Anglesey and Caernarfonshire attest its large scale extraction. Some of these ingots, which range in weight between 13.5 and 23 kilograms, bear the stamps of the societies or individuals responsible for their production (R.C.A.H.M. 1937:1xxxvii). Few have been found outside
Anglesey and Caernarfonshire, and they may thus have been produced primarily to meet local needs. 19 have been found in Anglesey and only 7 in Caernarfonshire (Livens 1970:251-3), suggesting that the former county was the more important source of the metal, and that copper was extracted from Parys Mountain at this date (Lynch F. 1966:110-1); however, copper was probably also mined on the Great Orme, where Roman pottery and a coin of Aurelian have been found in the vicinity of the Gogarth mines (Davies O. 1949:61-6). The existence of copper ingots may indicate that, in the later Roman period at least, copper was smelted near the mines by a person other than the bronze smith, who probably received his copper and tin ready smelted (Kelly 1976:142). This suggestion seems to be confirmed by the absence of known smelting furnaces of Iron Age or Roman date, suggesting that smelting did not take place at settlement sites (Manning 1979:115). The ingots, on the other hand, are often found near native hut-groups (Lynch F. 1966:110-1), and much copper slag has been found in the hut-group of Ty Mawr, which seems to have housed a smith’s workshop (R.C.A.H.M. 1937:27-8). No such ingots have been found on a Roman fort site, perhaps suggesting that the army played no part in their production or distribution (Kelly 1976:141-2).

Iron working in Wales commenced in the 7th. century B.C. Its inception is marked by the sickle from the Llyn Fawr hoard, which seems to have been manufactured by a local craftsman for, although in the new metal, it imitates native bronze prototypes (Crawford O.G.S. and Wheeler 1921:135-6, Cunliffe 1978A:144-6, 290). At first, iron seems to have been rare: there is no evidence for its use on any scale in any part of Britain until the 4th. and 3rd. centuries B.C., when both smelting and forging seem to have been carried out on homestead sites (Cunliffe 1978A:290-1). The volume of iron in use increased gradually throughout the Iron Age, culminating in a great increase in
the later part of the period, from about the 1st. century B.C. onwards (Manning 1972:239-41). As the use of iron became more widespread, the evidence of home smelting in Britain as a whole diminished drastically: this, together with the appearance of iron ingots or 'currency bars', may indicate that at this date smelting was generally the work of specialists (Cunliffe 1978A:290-1). West of the Severn and Dee, however, the state of affairs may have remained much as before: currency bars are known from only two sites, Malvern and Llyn Cerrig Bach (Allen D.F. 1967:332-3), whilst smelting was undertaken on the homestead site of Mynydd Bychan in the later Iron Age (Savory 1954B:99-100).

Iron is plentiful in Britain, and occurs in outcrops which are easily exploited by opencast mining as well as in deeper deposits, whereas copper had probably to be mined from quite an early period (Hodges 1964:65): it is thus surprising that the new metal was not more readily adopted. The reason for this seem to be that iron was more difficult to smelt in primitive furnaces than either copper or tin (Tylecote 1962:183-4). Moreover, until the introduction of the blast furnace in the Middle Ages, it was impossible to produce molten iron for casting (Derry and Williams 1960:120-1): as bronze had largely been cast, a new range of techniques had now to be developed to accompany the new metal. Early wrought iron, though tougher than other available materials, would not take a satisfactory sharp edge, an achievement which was possible only with steel, the proper understanding of whose manufacture may have been a Roman introduction (ibid. 121, Manning 1979:118), and so the advantages of the new material may not have been readily apparent in comparison with the well-established bronze.

By the Roman period, metal implements in general had become far more abundant on native sites than in the Iron Age, and iron seems to
have been in commoner use than bronze (Kelly 1976:140-1): this may suggest that the manufacture of iron implements was now better understood, so that they competed more successfully with their bronze equivalents than hitherto, despite the fact that, in the 1st. century A.D., the Romans evidently still had much to learn about how to handle the metal (Pliny N.H. 34.14.143). The demand for iron, which had been growing throughout the Iron Age, will have increased greatly and suddenly with the Roman conquest, as the army needed vast quantities of iron for weapons, tools and building. Whilst iron does not seem to have been important in the buildings of the Iron Age, Roman techniques demanded large quantities for nails and hinges: the quantities involved are indicated by nearly 12 tons of nails which were buried when the fortress at Inchtuthil was dismantled (Anon 1961:160). As building was vigorous in the early Roman period, both in the forts and fortresses of the military zone and in the public and private buildings of the civil zone, the implications in terms of metal are apparent. Moreover, the quantities of scrap iron found on sites of the Roman period indicate that the increased demand was satisfied, and that the value of iron was so low that it was seldom worth the trouble of reforging small pieces (Manning 1979:116).

Since little is known of the organisation of the copper and iron industries in the Iron Age, it is difficult to assess how they were altered by the increased demand of the Roman period. By the late Iron Age, both copper and iron are likely to have been mined rather than obtained from superficial deposits, which were probably unable to meet contemporary demands. Though no certain Iron Age mines are known, this is hardly surprising, as any evidence is likely to have been destroyed by later mining activity. Similarly, only one deep iron mine, that at Lydney (Wheeler and Wheeler 1932:18-22), is known from the Roman period. It is thus impossible to determine whether the Romans
introduced new mining techniques. Though they may have done so, the increased demand for metals may have been met by greatly increasing the number of simple mines such as already existed in the Iron Age (Manning 1979:116-7). Smelting techniques, on the other hand, seem to have improved in the Roman period with the introduction by the 2nd century A.D. of the shaft furnace, used for smelting both copper and iron: this had a capacity greater than that of any effective bowl hearth, and its use is implied by the size of the copper ingots from Anglesey and Caernarfonshire, which seem to exceed the capacity of any bowl furnace of the Iron Age or Early Roman period. Nonetheless, the capacity of the new shaft furnace was still relatively low, between 7 and 23 kilograms of iron at a time, and probably generally nearer the former than the latter figure. Any substantial increase in metal production must therefore have resulted largely from a significant increase in the number of furnaces in use rather than from their increased capacities (ibid. 115, 117). The general increase is vividly attested by the slag heaps of the Roman period which weigh hundreds of tons, in contrast with those of the Iron Age whose average weight is about 10 kilograms (Tylecote 1962:201).

In the Roman period, iron, like copper, seems to have been smelted near the ore sources on sites which had a ready supply of timber for charcoal. This is seen at Coed Newydd, Anglesey, where the smelting activity is assumed to date to the Roman period (Baynes 1920:91-8), and more particularly in the Forest of Dean, an area which, from the pattern of roads serving it, seems to have been important in the Roman period; Iron Age activity, perhaps associated with trade as a coin of the Coriosolites of about 50 B.C. was found at Bream Scowles, had probably preceded the mining and smelting of the Roman period (Hart C.E. 1967:23, Scott-Garrett 1958:200-2). At Weston-under-Penyard, where a town may have developed in association with the mines of the
Forest of Dean, Roman objects have been found over an area of perhaps 100 hectares (Bridgewater 1967:132-5), and there seem to have been extensive smelting furnaces and forges (V.C.H. 1908A:187-9): the scale of this activity, which may have reached its peak between A.D. 250 and 350 (Dudley 1954:127), indicates the involvement of specialist smelters. Evidence of smelting has also been found at some Roman forts, at Pen Llystyn, Forden Gaer and perhaps also Brynygefeiliau (Kelly 1976:134-5), but seems generally absent from native settlement sites, where smithing seems to have taken place, as attested at Din Llugwy and Hafoty Wern-las (Baynes 1908:201, 207, Williams H. 1922:340-1, 1923A:94-101), and where the smith, probably a person other than the smelter, may have served the needs of the local communities; at Cefn Graeanog, however, there is evidence of both smelting and forging (R.C.A.H.M. 1964: p.115, Kelly 1976:136-7).

While the iron industry seems to have increased substantially in scale in the Roman period, the lead industry apparently increased yet more dramatically. In the Iron Age, lead was required primarily as a component of some types of bronze: the quantities involved were relatively small, and could probably be obtained from superficial deposits alone. In contrast, the Roman demand for lead was so great that each new deposit seems to have been exploited rapidly as soon as it fell into Roman hands. The magnitude of this demand was probably due to the military building programme, followed by the programme of public and private building which was encouraged in the civilian areas: both required lead for items such as water pipes and tanks which had hitherto been unknown in Britain. The possibility of obtaining silver from lead ores will also have encouraged the exploitation of any new lead deposits. On occasion, the army seems to have been involved in the extraction of lead. For instance, it...
participated in the exploitation of the Mendip field which was in production by A.D. 49 at the latest: here, its involvement may reflect the fact that lead was needed for the construction of the fortress at Exeter before it had become available by normal commercial processes (Manning 1979:112-4).

In Wales and the Marches, the evidence for army participation in lead production is less clear. The Flintshire lead field was in production by the Flavian period: two lead pigs bear the stamp DECEANGL and a Vespasianic stamp of A.D. 74 (Webster G. 1953:22-3). Another pig, from Holywell, bears the cast inscription C. NIPI. ASCANI (ibid. 5), indicating that private lessees were at work in the area, probably by the Flavian period (ibid. 7-9). A smelting site is known at Pentre Ffwrndon, where one residential and several industrial buildings have been found. The site was occupied from the late 1st. to mid 2nd. century, though, as all the lead pigs yet known to have come from North Wales date to the 1st. century A.D., lead-smelting may not have been carried out throughout the site's occupation (Petch J.A. 1936:82-3). The baths at Ffrith, which occupy a position quite unsuitable for a fort, and the hypocausted building at Hope which incorporated tiles of Legio XX, and which was apparently in use from the late 1st. to the 3rd. century, may represent baths provided by the army for some mining and smelting establishments (Nash-Williams and Jarrett 1969:172, Taylor M.V. 1922:70-1).

Further south, the Shropshire lead field was apparently worked in the Hadrianic period, for five lead pigs bearing the cast inscription IMP HADRIANI AUG were found near the mines in the Minsterley area (Webster G. 1953:26-7, V.C.H. 1908B:264-5). The enigmatic site in the grounds of Linley Hall may be in some way associated with the mines, perhaps representing the residence and offices of the procurator together with some facilities for processing the ore.
In South Wales, the lead mines at Draethen were worked in the 1st. and 2nd. centuries (Wilson D.R. 1966:198, Strange 1779:75). At Lower Machen, a settlement occupied in the 1st. and 2nd. centuries, and extending for some 400 metres, produced traces of lead working, and seems to have contained at least one building of substance, perhaps the residence of an army officer or government official who supervised the mining at Draethen (Nash-Williams 1939B:108-110). The structure floored with legionary tiles at Risca probably represents part of a bath-house (Wakeman 1855:209-210), and could also be associated with the mining activity in this area.

Gold was also extracted in the Roman period, and indeed the goldmine at Dolaucothi (Manning 1968:301, Boon and Williams 1966:123-5) is the only mine of any sort in the region which bears any evidence of Roman engineering (Manning 1979:115). Gold may have been obtained here in the pre-Roman period also: circular huts which are probably pre-Roman in date appear to be associated with small-scale mining near Melinymilwyr (Lewis P.R. and Jones 1969:253), and the gold which Strabo mentions as one of Britain's chief exports in the late Iron Age (Strabo 4.5.2) probably came from Wales. However, the Roman workings were on a far greater scale than those thought to belong to the Iron Age, and this, together with their well-ordered nature, may suggest that they operated under imperial licence, perhaps overseen from the neighbouring fort at Pumsaint (Wacher 1978:92).

The bath-house south of Pumsaint village may have been intended to serve the miners (Nash-Williams 1952B:80), again indicating that the mining settlement may have lain under some measure of military control. However, as manufacturing goldsmiths seem to have been present in the mining settlement, some of the gold which was extracted was presumably sold on the open market (Wacher 1978:92). The extraction of precious metals seems to have continued in Wales in the...
post-Roman period, when the annual tribute imposed upon the Welsh princes by Athelstan in 927 included 20 pounds of gold and 300 pounds of silver (William of Malmesbury G.R.A. II.134, Migne 1855A:1100).

The volume of metals in circulation thus seems to have increased greatly in the Roman period: the iron and lead industries were certainly affected, and so probably were the gold and copper industries also. While the expansion of the iron industry was to some extent the continuation of an existing trend, the vast expansion of the lead industry seems to have been on a scale quite different from earlier lead extraction. The increase in the scale of metal extraction, though no doubt intended chiefly to benefit the Roman army and administration, seems also to have benefitted the native population by rendering metal goods, and in particular iron tools, more readily available. Moreover, the new roads of the Roman period, together with the probable increase in coastal and riverine transport, will have enabled metal smelted at the mining sites to be more easily moved to the production centres, while the new towns will have provided greatly increased facilities for marketing goods (Manning 1979:119-20), perhaps also helping to bring such metal goods within the grasp of a wider sector of the population than before. Little is known of the means whereby the expansion in metal extraction was effected, not least as so few ancient mines are known: it is thus virtually impossible to evaluate any changes in mining techniques over the period in question, or to estimate how many mines were in use at different dates. The number of mines worked surely increased, and the techniques employed may have improved, in the Roman period. In some cases, the Roman army may have been involved to some degree in mining operations, though its role was probably confined to the provision of bathing facilities and technical assistance, perhaps with some measure of supervision: the mining itself was probably performed by slaves,
convicts and prisoners of war rather than by free or military labour (Davies O. 1935:14-15). Smelting techniques were improved in the Roman period with the introduction to Britain of the shaft furnace which, having a greater capacity than the earlier bowl hearth, will have helped to increase productivity: the copper ingots found in north-west Wales indicate that such shaft furnaces were in use there in the Roman period.

Whilst there is little evidence which relates specifically to Britain, evidence from other provinces suggests that mining rights were often an imperial monopoly which was sometimes leased out to private contractors who paid the fiscus either a fixed rent or a quota, at Aljustrel in Spain a half, of the ore extracted (Davies O. 1935:8-13, Pliny N.H. 33.7.118, C.I.L. III.4809). Pliny implies that some system of imperial control governed the working of lead in 1st century Britain when he says that, in Britain, the metal was found 'summo terrae corio adeo large ut lege interdicatur ne plus certo modo fiat' (N.H. 34.17.164, with Brunn's emendation). It is not certain how long such a system remained in operation: the latest dated lead pig from Britain, that from Bruton in Somerset, is dated to the joint reign of Antoninus and Verus, A.D. 163-9, and thereafter the ownership of the mines may have passed from imperial into private hands (Tylecote 1962:82-5). In the earlier Empire at least, then, the gold, lead and silver industries seem to have fallen under imperial control, while the extraction of iron and copper was probably not thus regulated. In the Roman period, both copper and iron seem generally to have been smelted near the mines by specialist smelters: it is not clear whether this division of activities between smelter and smith was inherited from the Iron Age or introduced in the Roman period, nor whether it continued into the post-Roman period, when there is little evidence of the way in which the metal industry was organised.
10.3: The Textile Industry

The presence of the Roman army increased the demand for goods other than metals, not least textiles: the army never produced its own fabrics but always relied upon supplies from the provinces, and, in the Early Empire at least, bought goods above the level laid down for taxation in kind (Wild 1979:128). The demands of the army thus provided a great impetus to the growth of the British weaving industry, and weavers were probably amongst the first settlers in the fort vici (ibid. 126-7). For most of the Roman period, the textile industry seems to have remained small in scale and domestic in organisation, though later, when the conventional clothing levies and taxation in kind became inadequate to supply the army (Wild 1976:54-5), the system was reorganised, with the introduction, probably by Diocletian (Wild 1967:651-2), of the gynaceae whose existence is attested by the reign of his successor Galerius (Lactantius De Morte Persecutorum 21.4). Since no gynaceum has yet been recognised, it is impossible to suggest how large such establishments might have been, or whether they merited the name of factories: only one gynaceum is attested in Britain, at Venta, probably Winchester (Not. Dign. Occ. XI.37, Wild 1967:668-76, 1976:54). The success of such gynaceae may be reflected by the way in which the quota of clothing which, in the late Empire, every provincial had to render to the army, and which in 4th-century Egypt stood at five cloaks, six shirts and half a pallium for every 30 iugga, about 4.5 hectares, of land, was by the end of the century commuted to cash (C. Theod. 7.6.3, 5, Wild 1976:55).

So, the British textile industry was stimulated by the presence of the Roman army, and production must have increased until, in the later Roman period, British woollen goods, including the famous byrri and tapeti recorded in the 4th century, were produced for export (Ed. Diocl. 19.28, 48, Wild 1979:129). The changes brought about in the
British woollen industry by the Roman presence seem to have related primarily to the volume of production: there is no evidence to suggest that the Romans introduced any significant advances in the techniques of spinning and weaving, though they probably brought improvements in dyeing and fulling (Wild 1979:124-6). The Roman presence, and the production of woven goods for the army and for other Roman markets, does not seem to have caused any change in the fashions of the north-western provinces of the Empire as a whole, and it seems instead that, by the late 2nd. and early 3rd. centuries, the Italians were adopting Celtic fashions, presumably as being more practical than the traditional Roman dress, rather than vice versa (Wild 1968:233-4).

10.4: The Pottery Industry

The Roman period may have seen more profound changes in the pottery industry. Most of the region was aceramic in the Iron Age (see chapter 3), with pottery in general use only in south-east Wales and parts of the Marches: in both areas, pottery seems to have been manufactured by professional specialist potters, at least from the appearance of decorated pottery in the Middle Iron Age onwards (Peacock 1969:52, 1968A:424). Supplies do not seem to have been abundant in either area, as broken pots were often mended with rivets (Stanford 1974A:192), and vessels and containers of materials such as metal, wood and leather were presumably also used: in other parts of the region, where pottery was not available, such objects, like the wooden bowls from Corsygedol and the Breiddin (Griffiths 1960A:126, Musson 1977:149), would have entirely replaced pottery.

This situation was incompatible with the demands of the Roman army, which required large quantities of pottery. Although fine wares such as Gaulish samian were imported, local pottery was used as kitchen ware whenever possible, and in some parts of Britain, for instance at
Exeter, local sources could supply the army from a very early date (Green 1979:100-1). In other areas, such as Wales and the Marches, where local supplies were inadequate, special arrangements had to be made: the army even manufactured its own pottery when no reasonable alternative was available (ibid. 99-100). About 80% of the pottery at Wroxeter, and an even greater proportion of the pottery which may be attributed to the Neronian fortress at Usk, was in each case of a single fabric, and all the types were of continental derivation, with wide-ranging parallels and no sign of native influence: as it seems too early in the Roman occupation for native potters to have absorbed these foreign influences, this pottery may have been produced by potters attached to the legions, perhaps themselves soldiers (Darling 1977:59-64). Wroxeter and Usk are unique in having so much pottery which seems to have been produced by military potters: this seems due to the aceramic nature of both areas in the Iron Age, which rendered impossible the supply of the army from local sources with pottery which was acceptable in both quality and quantity, while civilian potters from other parts of the province do not seem to have been eager to follow the army into these hostile regions.

At Gloucester, where the occupation of the fortress overlapped that of the fortress at Wroxeter, military involvement is not apparent in the pottery, indicating that the solutions which the army applied to its problems varied according to local factors (Darling 1977:66-7). The army seems to have preferred to obtain its pottery from outside sources whenever possible, though it seems always to have produced its own bricks and tiles, and in some cases also produced small quantities of pottery in the tile kilns. So, the works depot at Holt, apparently operated by the legion at Chester (Grimes 1930:132, 137-43), was in use from the late 1st. to mid 3rd. century; its period of maximum activity, under Trajan and Hadrian, seems to correspond with the
rebuilding of the fortress in stone (ibid. 48-53). Pottery was manufactured at Holt, apparently chiefly in the late 1st. and early 2nd. century (ibid. 23, 28, 42-3, 143-182), presumably the period at which it was most difficult to obtain pottery from other sources. This pottery seems to have been intended primarily for the fortress at Chester: examples are rare elsewhere, though they have been found at a few other sites in North Wales (ibid. 43-6). Military involvement in the production of pottery may also be seen at Caerleon, where the kilns which produced large quantities of brick and tile probably also produced the 'legionary ware' found there (Boon 1966:45-52, 59-61): these kilns, apparently in use from the Flavian to the Severan period (ibid. 61-5), were probably located very close to the fortress (Boon 1972:17). There is less evidence to suggest that auxiliary units also produced their own pottery: the tileries at Caer Gai and Pen-y-stryd, the latter of which supplied the fort of Tomen-y-mur (Anon 1924:202), are not known to have produced pottery as well as tiles, though the kilns situated just outside the stone fort at Gelligaer produced both tiles and mortaria (Nash-Williams and Jarrett 1969:91).

Although in the early Roman period the military pottery supply seems in some cases to have been organised quite separately from the supplies to the civilian markets, this may only reflect the inadequate volume of pottery available at that date: when the supply was adequate, the same potters may have supplied military and civil markets alike. So, even in the early Roman period, Severn Valley Ware, manufactured in the Severn Valley area from the 60s and 70s of the 1st. century, was sold to both soldiers and civilians: it is found in the primary levels of the fortress at Gloucester and in the legionary base at Usk as well as at Sudbrook and Mynydd Bychan (Webster P. 1976:235). Later, Oxford ware which, though virtually absent from the
north of England, is fairly prominent in the west on both military and civilian sites, presumably reached the latter by normal commercial routes, whatever the means by which it reached the army (Young 1977:291-3).

Native potters responded in different ways to the Roman presence. Some seem to have moved their businesses closer to the military markets, whilst others remained in their original locations. So, Severn Valley Ware is characterised by a distinctive type of tankard. In the Iron Age, these pottery tankards were confined to Durotrigian territory but, as has been mentioned, very early in the Roman period they appear in the Severn Valley. The vessels themselves are very similar in both the Iron Age and the Roman period, but their distribution in the Roman period is quite different from that found in the Iron Age, suggesting that the potters themselves had moved from Durotrigian territory to the Severn Valley in pursuit of the larger markets provided by the army (Webster P. 1976:231-6). On the other hand, the Malvernian pottery of the Marches displayed continuity of location as well as of style from the Iron Age to the Roman period: handmade pots, identical in fabric to the pre-Roman group A pots, continued to be made in the Roman period, and there was probably no break in their manufacture (Peacock 1968B:16-18). This pottery is found on both military and civil sites chiefly in Worcestershire and Herefordshire, and its distribution is much the same in the Roman period as it had been in the Iron Age, though it seems to have lost its markets in the western Cotswolds presumably to other more readily accessible centres of production (ibid. 15-16, 26). Though the manufacture of this pottery may have ceased at the end of the 2nd century, there may be some continuity with the very similar but wheel-made Late Roman pots from Malvern Link; the adoption of the wheel is perhaps due to Roman influence (ibid. 26). In addition to the
expansion of existing industries, new potteries opened in the Roman period, for instance at Ismore near Wroxeter (Houghton 1966:101-5), and at Caldicot and Llanedeyrn near Caerwent (Barnett 1968:62-3, Anon 1979A:32, Vyner and Evans 1978:120-3): such expansion in the pottery industry may reflect, as well as the demands of the Roman army, the spread amongst the native population, under Roman influence, of the custom of using pottery.

10.5: The Development of a Market Economy

The demand created by the army for commodities such as foodstuffs, metals, clothing and pottery, together with the development of towns in the Roman period (see chapter 5), must have caused changes in the patterns and mechanisms of exchange. Though little is known of the economic structure of Iron Age Britain, it has been suggested that exchange may then have been 'embedded' in social relations, with goods changing hands primarily between kinsmen and peer groups, at marriages, festivals and similar occasions, rather than between strangers; it seems unlikely that a true market economy, in which goods were bought and sold outside a social context in pursuit of profit, had yet developed, despite the evidence for the specialist manufacture of, for instance, pottery in the later Iron Age (Hodder 1979:189-90). The distribution of VCP (see map 33) indicates that, if this is so, goods could clearly travel substantial distances by means such as reciprocal exchange. Coinage does not appear in Iron Age Britain until relatively late, and is then virtually confined to the south-east: Wales and the Marches are almost totally devoid of early coins and iron 'currency bars' alike. Moreover, the early coins of south-east Britain do not appear to bear witness to a market economy: they were of high value, and probably fulfilled two functions, the payment and discharge of obligations of a political, religious and
social nature, with the ensuing increase in the prestige of the individual who made such payments, and the storage of wealth with the primary aim of using it later to make such payments. Both these roles could be, and presumably previously had been, filled by other prestige items such as ornaments and weapons, or by subsistence goods such as cattle and 'currency bars', with which the earliest coinages doubtless functioned in parallel (Collis 1972:76-7, Haselgrove 1979:202). The appearance, later, of small bronze coins which were probably intended as a standard of value and medium of exchange may then herald the beginnings of a market economy (Collis 1972:77), though this is still unlikely to have been a fully developed commercial economy offering a wide range of goods and services in the market place (Haselgrove 1979:205-6): a low-value coinage could have been used as a local standard to aid exchange at fixed rates in a controlled and socially embedded process rather than in free and competitive market exchange (Hodder 1979:191).

It is not clear what immediate impact the Roman invasion had upon the native economy, not least because it is not clear how advanced the Roman economy itself was in this respect at this date. In the northern provinces of the Empire, where denominations smaller than the as were scarce, coinage seems to have been little used as a medium of exchange in the first two centuries A.D., and in the earlier Roman period the civilian population may have viewed coins mainly as a means of storing wealth, and as the compulsory means of paying taxes; their use as a medium of exchange may at this date have been limited largely to the cities of the Empire (Crawford M. 1970:44-5). In this respect, the Roman presence may not have brought with it any sudden or far-reaching changes in the attitudes of the provincials to the coinage. However, the presence of the army encouraged the growth of vici whose chief role may have been the provision of facilities for trade and exchange,
and this exchange was surely free from any social constraints such as may have existed in the Iron Age, for the military undoubtedly represented 'outsiders' in relation to the pre-existing social system. Furthermore, the growth of towns will have encouraged competitive trade as, perhaps for the first time, there may have been more than one trader or group of traders of any one kind in close proximity to each other. Specialists in the same wares may also have tended to cluster together, as in Mediaeval towns, thus heightening the competition: so, at Cirencester, a market hall seems to have been used only, or primarily, by sellers of meat, while at Wroxeter several pottery sellers had set up their stalls beside each other ( Wacher 1975:299, 363-4).

It has been suggested that, whilst the towns of the Roman period were open to competitive marketing, trade in the pre-Roman oppida may have been under monopolistic control ( Collis 1979:231 ). The normal shop or workshop of the Roman town, a long narrow building set end on to the street, seems to contain shop and work space, storage facilities and domestic accommodation, whereas, in the Continental oppida, the equivalent structures were small rectangular buildings, and in the British hillforts and oppida small circular buildings apparently served the same purposes ( ibid. 235 ). The relative sizes of these buildings, however, suggest that storage facilities were less important in the Iron Age than they became in the Roman period, and, if the 'warehouses' at Manching have been correctly interpreted, this may be because production fell under the control of an elite or ruling body. The absence of such warehouses in Roman towns, with the presence of greater storage facilities in individual buildings, may indicate that trade was now individually organised, each craftsman storing his own raw materials and finished goods, and engaging directly in trade upon his own behalf ( ibid. 235-8 ). However, the evidence is
susceptible of an alternative interpretation: instead of working raw materials which were allocated to him from a central store to produce goods which were in turn kept in a central warehouse until they were needed, the Iron Age craftsman may have worked only to commission, perhaps using raw materials which were brought to him by his client. This interpretation is most readily tested in relation to the smith, by virtue of the relative durability of his products: it is supported by the scrap metal found in hoards, which suggests that customers brought the smith broken or worn-out implements, and perhaps also new metal, in whole or part exchange for new tools (Rowlands 1972:211-2): parallel instances where steel is taken to a smith to be made into new weapons are found in Irish heroic literature (Robins 1953:60-1). So, the Seven Sisters hoard, which contained old and new objects as well as casting jets and ingots (Davies J.L. and Spratling 1976:125-35), and which was deposited on a site which may have been that of a farmstead, may represent the activity of a part-time smith who was supplied with scrap metal by his customers (ibid. 139). In such instances, the smith may never have had any quantity of either raw materials or finished articles to store, yet his production need not have been regulated by any strong centralised power. It may indeed be significant that most workshop hoards belong to the conquest period: the troubles of that period may have hindered the normal reuse of the scrap items and the delivery of the new goods to those customers who had ordered them.

Whilst the Roman occupation may have brought changes to the economy with the appearance of the new towns and vici, outside these settlements the economy may have been slower to change. So, the similarity of the Iron Age and early Roman distributions of Malvernian pottery (see above) may indicate that the methods by which it was distributed were the same, or very similar, in both periods (Hodder
1979:193). However, by the 2nd. century A.D., the distribution of this pottery may suggest that it was dispersed from the town of Kenchester and the presumed town at Worcester, either by sale in the town markets only, or also by traders and peddlars in surrounding periodic markets (Hodder 1974:346-7, 349): this suggests a significant change from earlier methods of distribution. Such changes may have been followed by further changes in the economy. In the later Roman period, in the 3rd. and especially the 4th. century, large quantities of low value coins appeared for the first time: prior to the 4th. century, the coins which were available had been too high in value to be of general use, whereas by the 4th. century the purchasing power of the smaller coins had fallen to a third of their earlier value, enabling them to be used for a much greater range of commercial transactions than hitherto (Reece 1973:230-1, 239-41). At this time, when the pottery distributions cut across those of the earlier periods, suggesting changes in the patterns of distribution, it is perhaps first possible to talk of a fully developed market economy (Hodder 1979:194).

If it indeed took so long to establish a true market economy, the Roman conquest would not seem to have engendered any very swift changes in the British economy. However, the Roman period may have seen the development of a free market economy such as had probably not previously been seen in Britain, and its development, which perhaps might otherwise have been more rapid, may have been retarded by a wish on the part of the old aristocracy to hinder the social changes which the transition to a free market economy would inevitably entail (ibid. 195). Such a development was clearly important though, because of the relative paucity of towns in Wales and the Marches, its effects may have been less fully felt there than in other parts of the Roman province. The extent to which the growth of towns in the Roman
period stimulated the occurrence of other changes is more difficult to assess. Defended sites which seem to have housed nucleated populations were known in the Iron Age (see chapter 3), and some of these sites may also have fulfilled administrative and redistributive functions, as suggested perhaps by the evidence of minting at some of the oppida of south-east Britain such as Bagendon and Prae Wood (Allen D.F. 1961:97-8). Some, for instance Danebury and South Cadbury, may also have housed religious structures (Cunliffe 1976C:205-7, Alcock 1970:19-20), and, though the evidence is lacking, such facilities as existed for education and entertainment may also have centred on such sites. Though all lacked the more obvious tangible aspects of Romanisation, amenities such as running water and drainage, their roles may in many ways have been comparable with those of the Roman towns.

10.6: The Post-Roman Economy

After the Roman withdrawal from Britain, the economy may have reverted to something resembling its Iron Age state. The use of coined money of any kind, whether official Roman issues or native counterfeits, seems to have ceased by the middle of the 5th century (Boon 1974:136), and thereafter the region remained coinless until, from the 9th century onwards, the first Anglo-Saxon and Viking coins appeared. The Llandaf charters suggest that, in the 8th century at least, the cow was the most frequently used standard of value, though ounces of silver were occasionally mentioned (L.L. 201, 202, 203a, 203b, 204b). The coastal distribution of the coins of the later post-Roman period suggests that they mirror Viking and Anglo-Norman rather than Welsh activity, and, as they have mostly been found upon ecclesiastical sites, they could have been intended primarily as church offerings: they certainly offer no indication of the existence
of a coin-using market economy in Wales at this date (Dolley and Knight 1971:81-2), and coins had not come into anything resembling general use in Wales by the time of the Norman conquest. Coins are likely to have been more common in the Marches, now largely settled by the English, and the situation there may more closely resemble that in the rest of England where, although in the 7th. and 8th. centuries coins seem to have had a social rather than a commercial significance (Sawyer 1977:140), by the mid 11th. century market transactions in cash seem to have played a major part in rural life: sources such as Domesday Book indicate that peasants were expected to pay most, if not all, their taxes and rents in silver pennies which they could obtain only by selling their surplus produce or labour (ibid. 154). This development may have been made possible by the demands of the Danegeld which, rather than the demands of contemporary native society, may have led to a significant increase in the quantity of coinage in circulation in the later 10th. century (Grierson 1967:159-60).

At the same time as coinage passed out of use, the use of pottery was also virtually abandoned in Wales and the Marches. Apart from pottery such as Chester ware which was introduced into the Marches by the English in the later part of the period, only the rare Mediterranean and continental import wares are found in the region, appearing on a few ecclesiastical, princely and other sites around the Irish sea from the 5th. to early 7th. centuries (see chapter 7 and Appendix 8). Not all these import wares are likely to have been imported for their own sakes: the amphorae which are prominent amongst such imported pottery would have been imported for their contents, probably wine and perhaps oil, while the E ware vessels may have been imported only alongside wine in casks (Thomas A.C. 1976:252-3). In general, it would seem that, as in the Iron Age, pottery was again a commodity of which the greater part of the populace felt no real need,
presumably reverting to the use of metal, wood and leather artefacts. Though the evidence is scanty, the absence of metal ingots which may be attributed to the post-Roman period may suggest that, at the end of the Roman period, the metal industry also reverted to something more closely resembling, in terms of its scale and organisation, its Iron Age than its Roman form.

With the collapse of the social and economic system which had made their existence possible, towns were gradually abandoned after the Roman withdrawal (see chapter 7). In their absence, some of their functions may have been fulfilled by periodic fairs such as had supplemented urban markets even in Italy itself under the Roman Empire (Jones A.H.M. 1964:II:855-6): they are likely to have become more important after the decline of the urban markets. Whilst there is no evidence from post-Roman Britain, that from contemporary Ireland points to their possible importance: it seems that, there, the king of every tribe was obliged to convene an oenach or fair at regular intervals, and at these fairs games and races were held, goods exchanged and the public business of the tribe transacted (Binchy 1958:124-5). The greatest of these fairs, that at Tailtiu, is attested from the 6th century A.D. onwards (ibid. 115, MacNeill M. 1962:329-31).

When towns began to develop again in the later post-Roman period, they did so in response to a set of stimuli other than those which had caused the development of the towns of the Roman period: these new factors included the presence of the English and Vikings, and, to perhaps a lesser extent, the growth of the Church (see chapter 7). Though some of the town sites of the Roman period, such as Gloucester and Caerwent, were reoccupied, this was largely because the Roman defences, though decayed, were still useful: true continuity of occupation seems to be lacking. The street plans of these towns may
bear some resemblance to those of the underlying Roman towns and fortresses, but this resemblance is probably due only to the survival of the defences which, even in decay, formed a massive physical barrier which it was easier to observe than to transgress. This factor alone must account at least in part for the continuity of location of the main gates of many Mediaeval towns of Roman origin, and such continued use of these gates would in turn influence the internal planning of the towns, for the shortest route between two opposed gates was likely to follow the approximate line of one of the main Roman streets. Thus, though a town might seem to preserve some elements of the Roman street plan, true continuity need not be present: indeed any deviation, however slight, from the line of the Roman street must indicate that the Roman property boundaries had been lost and that urban order had broken down ( Biddle 1976B:20-2 ). So, at Gloucester, though the early Mediaeval town roughly preserves the main lines of the Roman street plan ( see figures 6 and 7 ), this is probably only because the presence of the Roman walls and gates directed the lines of the Mediaeval streets: the Mediaeval south gate and its approach road did not occupy the exact positions of their Roman forerunners, suggesting that this quarter had been abandoned for a considerable period after the end of the Roman occupation ( Lobel and Tann 1969:3 ).

10.7: Conclusions

The Roman occupation clearly had a marked impact upon the Iron Age economy: its short-term effects were probably dramatic, creating for instance a great increase in the volume of metal in use, major expansion in the pottery industry and probably a noticeable increase in the efficiency with which raw materials, manufactured goods and foodstuffs were transported and traded both within the province and
beyond. The Roman period may also have witnessed some technical innovations, including the introduction of the shaft furnace and perhaps also the manufacture of steel, as well as some minor improvements in other industries such as the textile industry; however, the evidence for major innovations is relatively slight, and the most important effect of the Roman occupation is likely to have been the increase in the scale of production and the ease of transport. The long-term effect of the Roman occupation on the native economy is more difficult to assess, not least because of the scarcity of evidence relating to the post-Roman period. It is not known, for example, whether the production of metals reverted to pre-Roman levels or whether it continued on a greater scale in the post-Roman period. However, the pottery industry certainly reverted to its pre-Roman condition after the Roman withdrawal. Though, in the Roman period, the use of pottery had been introduced into areas in which it had not previously been customary, the habit evidently did not take deep root, and lapsed at the end of the Roman period: the Mediterranean and continental import wares which represent the only pottery found in the region in the earlier post-Roman period are rare, and, as some would seem to have been imported as containers for other goods rather than for their own sakes, very few are likely to have been imported primarily for use as pottery, and the region thus again became to all intents and purposes aceramic. Similarly, the use of coinage is a phenomenon which is confined to the Roman period: coins were absent from the region before the Roman occupation, and their use died out soon after the Roman withdrawal. Thereafter, the Llandaf charters indicate a return to barter (L.L. 185, 191, 201, 202). At the same time, towns declined, though their functions may have been to some extent fulfilled by fairs such as may also have been found in the region in the Roman period, and perhaps even earlier. Thus, the
evidence suggests that, at the end of the Roman period, the economy reverted to something more closely resembling its pre-Roman than its Roman state: though there were probably changes, the evidence is not sufficiently detailed to enable them to be observed.
11.1: Introduction

This chapter examines the factors governing the location of settlement. The location of settlement is never random: potential sites vary in desirability according to their access to different resources such as good soil, water, fuel and building materials, and, in times of stress, their defensibility. Such factors have to be balanced against others created by the development of more complex economic systems, such as ease of access to useful raw materials and to markets. Within the timespan covered by this thesis, some of these factors are virtually constant, whilst others change: an attempt is made here to ascertain to what extent the settlement pattern was affected by such changes. Clearly, a detailed study of the entire region is a task too large to undertake here, and therefore, after a general introduction, a number of contrasting areas are examined, and their relative development in the period in question compared: some general conclusions are then drawn which may be relevant to the entire region. The counties of Glamorgan, Caernarfonshire and Herefordshire have been selected for detailed study not least because they are probably the best documented counties in the region: Glamorgan and Caernarfonshire are served by the most recent volumes of the Royal Commission for Wales, and Glamorgan is also represented by the Llandaf charters, while Herefordshire figures prominently in the admittedly one-sided work of Stanley Stanford, and is also documented in Domesday Book.

11.2: The Location of Settlement: Some General Comments

One of the most striking changes to influence the settlement pattern seems to have occurred largely before the period under study.
This is the climatic deterioration which occurred at the end of the Sub-Boreal period, becoming severe perhaps at the Early to Middle Bronze Age transition, and even more marked in the early first millennium B.C.: this would have increased the altitudinal constraints on settlement and agriculture as, by the Iron Age, the uplands were probably deforested, bleak and peaty (see chapter 2). In view of this, Iron Age settlement is likely to have been lower in altitude than that of the earlier Bronze Age, yet, because of the increased marshiness and risk of flooding, will probably have favoured hilltop or hillslope locations rather than level or concave sites. Whilst the climate seems to have improved slightly in the Roman period (Lamb 1981:56), this change was probably not marked enough to affect the pattern of settlement, and conditions thus seem generally to have been much the same throughout the period under study. Thus, whilst a distinction in terms of altitude might be expected between Early Bronze Age and later sites, there seems no climatic reason to expect any such distinctions within the period under study.

Whilst the climate probably remained reasonably constant throughout the period, the population is unlikely to have done so. Though the evidence is tenuous, and any figures purely conjectural, yet indications such as the expansion of many hillforts in Herefordshire and Shropshire may perhaps suggest that the population increased naturally during the course of the Iron Age (Stanford 1972A:316-7, though see chapter 8), whilst in the Roman period it was swollen initially by the presence of the Roman army, some of whose veterans probably settled in retirement in those areas in which they had served. The gradual withdrawal of the army is likely to have had relatively little effect upon the population figures, especially as it was balanced by immigration into Wales from Ireland and perhaps also from England (see chapter 8). The evidence thus seems to suggest
that the population may have increased throughout the period; there should therefore be a corresponding increase in the number of settlements in use or in their size. Whilst the general paucity of excavated sites and datable artefacts makes such expansion difficult to pinpoint, the development of large hillforts in the Iron Age and of towns in the Roman period may indicate some such growth in population, and this may also be marked by an expansion onto soils which were either poorer or more difficult to handle than those which had previously been favoured. So, in England, an expansion is seen in the later Iron Age into hitherto unsettled areas such as the Essex clays and Northamptonshire boulder clays, and this probably occurred in response to population pressures (Cunliffe 1978:22); a similar expansion may be seen in some parts of Wales (see below).

The Roman occupation did not simply create an increase in population within the existing framework: by introducing alien ideas, it distorted that framework, creating new focal points. So, if it is assumed that the pre-existing settlement pattern was related primarily to the location of agricultural resources, the Roman fort network, the details of whose dispositions were governed at least in part by strategic considerations, was clearly an alien phenomenon which, as the forts attracted civil settlements which probably acted as foci for native as well as immigrant populations, will have distorted the original settlement pattern. The creation, with Roman encouragement, of new towns is a continuation of this process, since most of the towns of the Roman period appear to occupy sites which were unoccupied in the Iron Age but which had generally formed Roman fort sites (see chapter 5). The attraction of settlement towards the lines of the Roman roads is similarly likely to have distorted the earlier pattern of settlement.

The Roman influence upon the settlement pattern may have continued
even after the Roman withdrawal from Britain: though most town sites seem to have been abandoned relatively soon after this event, some small-scale activity may have continued there, while there seems also to have been continued activity of an uncertain nature at some fort sites, and some Roman roads may have continued in use (see chapter 7). It has even been suggested that, in south-east Wales, some of the estates whose existence is recorded in charters of the 6th. and 7th. centuries (see Appendix 23) may represent estates which had existed in the Roman period (Davies W. 1979A:158-160). However, as the place-name evidence suggests that the earlier settlement pattern may have suffered considerable disruption at the end of the Roman period (see chapter 6), this disruption may also have affected the pattern of land tenure, and it cannot be assumed that the early estates which were donated to the Church are the same units as the estates associated with the villas of the later Roman period. Nonetheless, within the post-Roman period, estates of this kind appear to display considerable longevity: so, for instance, it has been suggested that the maenor of Med diminih in Carmarthenshire, described as an estate in the late 8th. century (Chad 6, Evans J.G. 1893:xlvii, Jackson 1953:47), may be coextensive with the parish of Llandybie (Fisher 1927:15), though the earlier estate may perhaps have excluded the township of Derwydd and perhaps also the south-western corner of the parish (Jones G.R.J. 1972:308-311). Nonetheless, the estate would have been huge, over 3,000 hectares in area, containing seven townships (Richards 1969:109) reminiscent of the seven townships which according to some lawbooks made up a maenor (Latin A 135, D 383, E 498, cf. Appendix 13). In terms of its size, the closest parallel to this estate amongst those recorded in the Llandaf charters is that of nearly 2,500 hectares at Llandeilo Fawr (L.L. 77); the majority of estates donated to the Church fall within the range of 50
to 400 hectares, 50 hectares being the most common size (Davies W. 1978:32-3). The bond township of Treb guidauc, donated to the Church in the mid 9th. century (Chad 3, Evans J.G. 1893:xlv, Bradshaw 1889:460), may, probably with the addition of a supplementary piece of land (Chad 4, Evans J.G. 1893:xlv), form Llanycrwys parish (Jones G.R.J. 1972:311-5). The wording of these two charters may imply that the lands formed part of a larger estate which may coincide with the commote of Caeo which, in terms of relief and drainage, almost forms a natural unit (ibid. 316). Llanycrwys parish alone would represent a large estate of about 1,300 hectares, and, as the entire commote covers about 180 square kilometres, if it ever formed a single estate it would have been quite exceptionally large, and could surely have belonged to no less a figure than the local ruler.

These instances all suggest some measure of continuity in estates within the post-Roman period, from the 8th. and 9th. centuries onwards: it is not certain whether the estates involved are of earlier origin. In England, parishes, usually coterminous with a single village or manor, represent the administrative formalisation of the catchment areas of those settlements, and are generally documented at least as early as the 9th. or 10th. century (Addleshaw 1954:11, Ellison and Harriss 1972:917); it has further been suggested that their boundaries may date back to the 5th. century, or perhaps even earlier (Bonney 1966:27-8, 1972:173-85). The factors involved are complex. England was first divided into dioceses in the 7th. century: each of these dioceses contained a number of minsters, many of which were first founded to serve royal estates, and the parish which belonged to each minster could represent the estate which belonged to its founder or the area occupied by the particular tribe which it served. Thus, the parishes attached to some minsters covered enormous areas bounded only by forests or wastes (Addleshaw 1953:11-12).
Lesser churches were only built in any numbers within the minster parishes in the 9th. century and later (ibid. 14). The subsequent correspondence between the parishes belonging to these lesser churches and early estates may relate to the foundation of these churches, from about the 10th. century onwards, by ecclesiastical and secular lords, since the existence of a church serving one's estate was considered a mark of rank (Addleshaw 1954:13). However, though in some parts of England the parish system may have its origins in the 9th. century, in Cornwall, the county which seems most likely to parallel Wales in this respect, the parochial system seems no earlier than the 12th. century, though the subdivision of the hundreds into tithings predates the Norman conquest, and the hundreds themselves may perhaps date to the Roman period (Thomas A.C. 1964B:71, 73-4). Similarly, in Wales, the division into commotes may be earlier and more significant in this context than the division into parishes, which again is likely to be relatively late in origin: the charter evidence for the fragmentation of estates from the 8th. century onwards (Davies W. 1978A:56-8) suggests that the later parishes are unlikely to represent units earlier than that date, while in the Vale of Glamorgan the parochial system relates to the Anglo-Norman lordships, with small parishes centred on manorial centres and almost coterminous with the knight's fee or manor (Pierce 1968:xiv-xv), and thus may not reflect earlier patterns of settlement and land tenure.

11.3: The Location of Settlement: Some Problems

Various problems arise in comparing the settlement patterns of different areas. First, the types of evidence which are available vary from one area to another, so that direct comparisons are difficult and often impossible. Further, any discussion of the location of settlement tends, albeit involuntarily, to imply that all sites of the
type or period under consideration are known, though it is clearly very improbable that this should be so, and it is difficult to see how this balance may be redressed. It is highly unlikely that all sites in a given area are known, and it cannot be assumed that sites of different types and different dates have been discovered in similar proportions. Comparisons between the locations of such sites can thus only be regarded as tentative, for different factors may govern the chances of survival and discovery of the different sites: so, as mentioned earlier (see chapter 3), defended sites are more likely to be recognised than undefended settlements, and stone buildings than wooden ones. Knowledge of the earlier patterns of settlement may also be distorted by their relation to the modern patterns of settlement and communication: many discoveries are made in the process of building and road-making, thus weighting the balance of discovery, for some kinds of sites at least, in favour of the modern urban areas where an apparent relative density of ancient occupation may reflect the operation of factors which have no relevance for earlier periods. The modern communications network would also seem to favour the discovery of sites which, whilst outside the urban areas, are located on or near modern roads: though they may seem to suggest that these same routes were in use in antiquity, this pattern may in fact have been created by the presence of the modern roads. Similarly, the number of ancient sites which are discovered and recorded may in some areas be due to their proximity to the home of an archaeologist or antiquary; this is illustrated, for instance, by the work of Lord Stanley in the Holyhead area (so, for instance, see Stanley 1867, 1870, 1876). In less frequented areas, conspicuous monuments such as hillforts and Early Christian monuments are considerably more likely to be observed and recorded than undefended settlements and small finds, so that some kinds of activity may be heavily over-represented
at the expense of others. This is clearly seen in Cardiganshire, a county which is today relatively sparsely inhabited as, from its division into a few very large parishes, it would seem to have been in the past. Here, few sites other than hillforts and Early Christian monuments are known, and, with the exception of a few military sites, the Roman period is extremely poorly represented. Elsewhere, coastal sites may be under-represented as a result of sand-dune encroachment: this is a particular hazard in Anglesey and the Bristol Channel area. The picture of early settlement is therefore biased and, though the use of aerial photography, a technique unrelated to modern population densities and communication networks, has gone some way to redress the balance, not all soils and vegetations are well suited to its application. Thus, though the three counties which have been chosen for fuller discussion, as well as differing from each other in various ways, are also as well documented as possible, the evidence available is of necessity inadequate in many ways, the balance varying in the different cases.

11.4: Glamorgan: A Geographical Outline

Of the factors which govern the selection of locations for settlement, the most fundamental, since they change only very slowly, are relief and soil types. Glamorgan is an area of very varied relief, ranging from the elevated moorland of Blaenau Morgannwg, which, though dissected by steep-sided valleys, rises in places to over 500 metres, to the fertile coastal plain of the Vale, or Bro Morgannwg; the division between the two is marked by the Pennant limestone scarp behind the 120 metre platform. A barrier of soils of impeded drainage separates upland from lowland Glamorgan: there are only two relatively dry routes to higher land which are likely to have been used by early man, that to the west via Margam mountain, and that to the east, up
the west side of the Taff valley to the Garth mountain (Crampton and Webley 1960:390). Whilst the uplands were utilised by the builders of the Bronze Age cairns, who presumably found there large areas of open moorland grazing (Fox A. 1936:103, see map 34), thereafter they were generally neglected in favour of the better soils of the Vale and the Gower peninsula. The soils and settlement patterns of these different areas are first discussed individually, and the changing patterns of settlement within the county as a whole is then summarised.

11.5: The Vale of Glamorgan

The most important geological features in the Vale are the limestones and the sandy glacial drift, both of which can bear soils of free and impeded drainage. The soils of impeded drainage, whose distribution is not consistently related to topography, bearing no simple relation to hill or valley location, have generally been avoided as difficult to work. Of the soils of free drainage, those on limestone (the Ston Easton, Lulsgate, Wenvoe and Nordrach series) are, as a result of their high base status, more fertile than those on the sandy glacial drift, of which the most important belong to the Radyr series: these have a lower base status and can also be very stony. The limestones occur chiefly in a wide belt adjacent to the coast, but also outcrop intermittently in the northern part of the Vale; the sandy glacial drift occupies the east-west band of land north of the coastal limestone belt (Crampton and Webley 1960:388-9, see map 35).

No inroads were made into the impeded soils of the Vale in the Bronze Age, when only the Late Bronze Age hoards of the Taff alluvium indicate activity on these soils: these were probably deliberately concealed in unoccupied areas, though they also suggest that routes through these marshy areas were used at that date (ibid. 391-2).
Otherwise, Neolithic and Bronze Age activity seems to have been limited to the loams and clay loams over limestone (ibid. 391, 393). The Iron Age, with its extensive exploitation of the freely-drained soils of the Radyr series, may have seen the first expansion onto the glacial sands. There are two possible reasons for such expansion: increases in population may have necessitated the exploitation of poorer soils than had hitherto been used, whilst changes in climate with the inception of the wetter Sub-Atlantic period may have improved these soils, which in the Sub-Boreal period had probably suffered from seasonal drought, so that they now for the first time became attractive to settlement (ibid. 392). Marling may also have played a part in the colonisation of these Radyr soils whose natural fertility was lower than that of the soils in the area of the limestone outcrops: it would raise their pH and base status so that they became much more productive in terms of acid-susceptible crops such as barley and wheat (ibid. 394, see chapter 9). Nonetheless, the freely-drained soils on limestone were still preferred: four times as many Iron Age sites are found on these soils as on those of the glacial drift (see map 36). This does not simply reflect the relative areas of the different types of soils which are found in the Vale, for 75% of the known Iron Age sites lie on the freely-drained limestone soils, though these account for only 38.4% of the surveyable land in the Vale; 17.5% of Iron Age sites lie on the sandy soils which represent 30%, and only 7.5% on the soils of impeded drainage which account for 31.5% of the surveyable land in the Vale (Crampton 1972:19).

Little ingress seems to have been made into the heavy soils of impeded drainage until the Roman period. The only hillforts located on such soils, at Llanvithyn and Castell Moel, lie near better soils: the latter is probably Mediaeval, though it may overlie a small Iron Age hillfort (R.C.A.H.M. 1976:II:638). The hillfort at Caerau, Ely,
which, from the map, appears to lie on such wet soil, in fact occupies a platform of freely-drained soils over marl (Crampton and Webley 1960:392 n.1). The heavy soils of impeded drainage may thus not have been effectively occupied until the Roman period, when the sites at Ely, Hamston Fawr, Little Greave, Llanfrynach, Pop Hill and Rhumney Great Wharf, and the possible villa at Llandow (Spurgeon and Thomas 1974A:33-4), as well as the villas at Llantwit Major and Llandough, were located on such soils (see map 37 and Appendix 25). The settlement at Cowbridge, and the site at Cadoxton which, like the villa at Llantwit Major, may have been occupied from the Late Iron Age, seem also to be located on soils of impeded drainage (Crampton and Webley 1960: map facing p.396), though they fall within the areas termed urban on the more detailed soil map (Crampton 1972).

Nonetheless, the heavy soils, whilst considerably more prominent at this date than before, still took very much second place to the freely-drained soils on limestone; the glacial sands seem to have been eschewed at this date.

It is difficult to assess the nature of the Dark Age settlement pattern in the Vale since the evidence is limited, relating chiefly to the location of early churches and of the estates which were donated to them. If, however, these may be assumed to be representative of the general pattern of settlement, the area would now seem to be more evenly occupied than before. Approximately equal numbers of sites are known from the freely-drained soils on limestone, those on the sandy glacial drift, and the soils of impeded drainage (see map 38), though in fact, when related to the areas of soils of each category in the area, this seems to indicate that the sandy loams were particularly favoured at this date, and that both they and the soils of impeded drainage were favoured above the better freely-drained soils on limestone. Thus, the important monastery of Llantwit Major,
founded in or before the 7th. century, lay on soils of impeded drainage, as did the estates donated to the church in the 7th. century in the Thaw valley near Llansanwyr and at Gabalfa, and in the 11th. century in Dyffryn Golwch (L.L. 147, 151a, 259). The 10th. to 11th. century pillar-cross at Llandough (Nash Williams 106), where there was, or was claimed to be, a monastery from the mid 7th. century (L.L. 152, Davies W. 1979B:101), also stood on such soil, as did the late 6th. to early 7th. century stone at Llanilltern (R.C.A.H.M. 1976:III:850) and the monuments of the 10th. to late 11th. or early 12th. century at Penyrallt Farm, Newcastle, Coychurch and Llangan (ibid. 936, 983-4, 934-5, 913 and 982). It is not clear why the soils of impeded drainage were particularly favoured at this date; the introduction of the improved plough in the Roman period may have been important, as may also have been a growing population, combined perhaps with a tendency to found churches on virgin sites and thus, in a fairly fully utilised landscape, on the less desirable soils.

11.6: The Gower Peninsula

The soils of the Gower are mostly permeable and fertile: the best soils are the freely-drained sols bruns acides and the worst the poorly-drained gleyed soils, whilst podzols, which are rare in Gower where they occur only on the highest hills, occupy a position intermediate between the two. As the wide band of gleyed soils which traverses the peninsula obliquely from Llanrhidian Marsh in the north to Swansea Bay in the south-east (see map 39) was generally regarded as unsuitable for settlement, sites of all periods cluster on the better soils in the south and west of the peninsula. Almost all settlements, Iron Age, Roman and post-Roman, thus lie on, or near the margins of, the sols bruns acides: the only exceptions are the hillforts on Harding's Down and Llanmadoc Hill, which, though on
podzols, lie only some 0.25 kilometres from the sols bruns acides, the Roman fort at Loughor, whose location was clearly determined by factors other than soil potential, and the post-Roman estate of Penncreic, identified as Llanrhidian (L.L. 144, Davies W. 1979B:97), whose exact location is uncertain, but which presumably lay on the gleyed soils which surround Llanrhidian in all directions. A decorated stone, probably of the 9th. or 10th. century (R.C.A.H.M. 1976:III:951), in Llanrhidian churchyard, and a lost pillar-stone, perhaps of the 6th. century, which apparently once stood to the west of the church (R.C.A.H.M. 1976:III:p.39,ii) confirm this suggestion of post-Roman activity in the Llanrhidian area, despite the poorly-drained nature of the soils there.

It is interesting to observe that, whilst most of the settlement sites in Gower are located on the better soils, they generally lie on or near the margins of, rather than in the middle of the patches of, the sols bruns acides: this may perhaps be to allow easy access to other resources, whether provided by the gleyed soils or marine in nature, as suggested by the good use made in the Iron Age of coastal locations. The distribution of sites of the Iron Age and later (see maps 40-42) contrasts markedly with that of the Bronze Age, when most round barrows cluster on the freely or imperfectly-drained podzols (see map 43). This distribution of Bronze Age monuments is surely significant, for these soils account for only a small proportion of the soils of Gower (Crampton and Webley 1964B:333), and may reflect an emphasis on grazing and a pastoral economy in the Bronze Age as against a concern for arable farming in the Iron Age (R.C.A.H.M. 1976:I:p.7) or else the choice for burial of those soils which were least desirable in agricultural terms, whilst other soils were preferred for settlement (Crampton and Webley 1964B:336). Owing to ignorance of the location of the settlement sites of the Bronze Age,
it is uncertain whether the pattern of settlement changed radically
between the Bronze and the Iron Age.

11.7: Blaenau Morgannwg

Impermeable soils occupy both the high central core of Blaenau
Morgannwg and the valley bottoms; podzols, which generally provide
good grazing, are found on the lower ridges while, lower again on the
ridges, permeable soils occur in increasing proportions with
decreasing altitude (R.C.A.H.M. 1976:1:p.6, see map 44). Whereas
most Bronze Age round barrows are associated with areas of podzols
with gleying, frequently lying near their boundaries with the gleyed
soils (Crampton and Webley 1964B:333-4), Iron Age hillforts are
found chiefly in the vicinities of the podzols or sols bruns acides,
and avoid the gleyed soils as much as possible (see maps 45-6): this
is perhaps to some extent fortuitous, as the distribution of hillforts
must have been governed by the availability of suitable defensive
sites as much as by soil types (ibid. 334). Evidence of activity
other than military in nature in the uplands of Blaenau Morgannwg in
the Roman period is largely lacking but, of the few civil settlements
which are known, two, those at Hen Dre'r Gelli and Merthyr Tydfil
(see map 47). The apparent lack of activity in this area in the
Roman period may reflect the actual state of affairs rather than
resulting from modern neglect of the area, as this includes the now
populous valleys of the Rhondda, Cynon, Taff and Rhumney.

Blaenau Morgannwg seems to have achieved greater prominence in the
post-Roman period than it had hitherto enjoyed. Though few estates in
this area are recorded in the Llandaf charters, the only known
examples being that at Llansanwyr, donated in the 7th. century, at Cwm
Nofydd and Garth Maelwg, donated in the 11th. century, and, if the
identification is correct, at Llanwynno, donated in the late 8th.
century (L.L. 147, 255, 271, 209a, Davies W. 1979B:118), numerous
Early Christian monuments dating from the early 6th. to the 11th.
century have been found in the area, whilst dykes were built, perhaps
in the 8th. and 9th. centuries, either to block access to the area
from the north or to mark the boundary between the cantrefs of
Morgannwg and Brycheiniog (Fox A. 1949:117-8, see map 48). Thus the
area, apparently neglected in the Roman period, seems to have become
much more frequented in the post-Roman period: the reasons for this
are not clear.

11.8: The Iron Age and Roman Periods: A Summary

It has been suggested that the Iron Age preference for the more
fertile loams, which contrasts with the apparent Bronze Age preference
for the semi-permeable podzols, reflects a greater concern for
agriculture in the Iron Age and for pastoral farming in the Bronze Age
(R.C.A.H.M. 1976:I:p.7); alternatively, it may reflect a distinction
between the sites preferred for settlement and those chosen for burial
(Crampton and Webley 1964B:335-6). The movement, in the Roman
period, and perhaps also the late Iron Age, onto the soils of impeded
drainage, indicated by the location of settlement sites and also by
the abundant occurrence in 1st. century A.D. deposits from South Wales
of *Anthemis cotula*, a weed of cultivated ground which occurs most
commonly on heavy clay and clay loam soils (Jones M. 1981:111), may
then suggest the use in this area of a more efficient plough such as
would be needed to utilise these soils effectively. The most
significant factor here may be the introduction of the coulter,
probably in the Roman period (see chapter 9): this, as it enabled
the sod to be turned, would be valuable in dealing with the wetter
soils (Payne 1954:31-3). Even so, the heavy soils would be slower to
warm up in spring, and thus later in producing young grass than the freely-drained soils, and this would be disadvantageous to pastoralists and mixed farmers alike (Crampton and Webley 1960:393). Movement onto such soils may therefore have come only in response to population pressures such as may also have been responsible for the movement onto the clays in the later Iron Age in Lowland Britain (Cunliffe 1978B:22). It may be relevant that, in the Iron Age, two-thirds of the settlement sites which were located on soils of impeded drainage lay on soils of the Siginstone series which represent only 19.3% of the area occupied by soils of this class: the Siginstone series, transitional in character between the well-drained soils of the Ston Easton series and the poorly-drained Dyffryn soils, is particularly productive in dry years (Crampton 1972:41), and was presumably the easiest of the soils of impeded drainage to work with the ard rather than the heavy plough. While, in the Roman period, only one settlement site of the eight which are known to lie on soils of impeded drainage occupies such soil, in the post-Roman period again one third of all sites which occupy soils of impeded drainage lie on soils of the Siginstone series.

Factors other than changes in climate, agricultural techniques and population pressures may have been responsible for changes in the settlement pattern: as has been suggested, the imposition of the Roman road and fort network onto the Iron Age settlement pattern may have formed an incentive to change. However, whilst Roman forts generally attracted extra-mural settlements, there is little evidence for this in Glamorgan. The fort at Cardiff presumably had its vicus, of which little is known, and there seems also to have been a substantial degree of activity in the Roman period in the Cardiff-Barry region (see map 37 and Appendix 25): it is not clear to what extent this may represent extra-mural activity related to the fort at Cardiff or
to the possible naval base at Cold Knap (Dowdell 1981:116). The vicl which are likely to have developed outside the forts of Caerffili, Coelbren, Gelligaer, Loughor and Neath have yet to be found, but a civil settlement is known at Merthyr Tydfil, very near the fort of Penydarren (Robinson 1980:19).

The extent to which the Roman roads influenced the pattern of settlement is again far from clear. If the course of the Roman road across the Vale from Cardiff to Neath has been correctly conjectured, little settlement seems to have been attracted to its line (see map 49), though the villa at Ely and the farmstead at Llanfrynach lie very near it, and the settlement at Cowbridge, probably a small town which acted as the market centre for the Vale, appears to owe its development to its position on the road at an important river crossing, possibly the site of an earlier Roman fort (Robinson 1980:23-4). Proximity to the road may also have been a factor in the continued use of the defended sites of Mynydd Bychan and Caer Dynnaf. Whilst, however, very few settlements lie actually on the line of the road, there seems to have been some change in the pattern of settlement from the Iron Age, and this may be due to the influence exerted by the road. Thus, in the Iron Age, settlements, in particular hillforts, favoured coastal locations from which they could utilise the freely-drained soils of the coastal limestone belt, whereas, in the Roman period, the coast itself seems to have been avoided, apart from the Cardiff-Barry area at the eastern end of the Vale, and most settlements lie a few kilometres inland, often still on the freely-drained limestone soils. Villa sites thus generally lie at some distance from the Roman road across the Vale, between it and the coast: although the villa at Ely and Llanfrynach farmstead lie only some 0.5 kilometres from the road, the villas of Hamston Fawr and Whitton Lodge and the possible villa at Llandow lie about 3 kilometres
from the road, the villas of Llandough and Llanbethery about 4 kilometres, Moulton about 4.5, Llantwit Major 6 and East Aberthaw some 7.5 kilometres from its line. It has been suggested that these locations reflect a 4th century compromise for, at that date, when relatively few forts in the area were still occupied, as few towns lay nearby, villa produce may have been intended for distant rather than local markets, making water transport more important than road transport in its distribution (Davies W. 1979A:154). There is, however, no evidence that any of these villas was founded in the 4th century, and all seem to have some evidence of occupation in the 1st or 2nd century: 4th century conditions will therefore have no relevance to the original choice of location, though they may have affected the later prosperity of the different sites. Although there seems to have been less activity in the Roman period at the western than at the eastern end of the Vale, this may reflect modern conditions: the western end of the Vale is today less populous than the eastern end, and much of the evidence for activity in the eastern part of the Vale has resulted from chance discovery rather than planned excavation.

11.9: The Post-Roman Period: A Summary

The Roman road system may have continued to influence the pattern of settlement for some time after the end of the Roman period. The date at which these roads passed out of use is not certain (see chapter 7). If, as seems probable, the major modern road across the Vale of Glamorgan, the A48, follows the course of the Roman road for most of its length, then that road may have remained in more or less continuous use ever since the Roman period. However, the distribution of Early Christian monuments may suggest that a route running nearer the coast, through Llantwit Major and Merthyr Mawr, was more important
in the post-Roman period (see map 50), and may perhaps have developed earlier to serve the villas located in that area (R.C.A.H.M. 1976:III:pp.2-3). There seems no particular evidence that post-Roman activity in the Vale was particularly influenced by the line of the major Roman road, though there seems greater evidence of activity of this date along its presumed route further west, from Mawdlam to Neath; however, this may be due simply to the constraints of the terrain as, in this sector, the mountains come so close to the sea that little variation in route is possible.

The Roman route along Cefn Gelligaer may have continued in use after the end of the Roman period: two Early Christian monuments lie near it (R.C.A.H.M. 1976:III:842 and 892, of the late 6th. or early 7th., and the 8th. or 9th. century respectively), and two dykes which may have been built in the 8th. or 9th. century, Tyla Glas and Clawdd Trawscaer, lie across or very near its route (R.C.A.H.M. 1976:III:804-5). One early monument, the Banwen Pyrddin stone of the early 6th. century (ibid. 841), lies on the assumed route of the Roman road over Hirfynydd, and, just outside the county boundary in Breconshire, Maen Madoc, a monument of the 5th. to early 6th. century (Nash-Williams 73), stands beside the same road, suggesting that it too may have remained in use in the post-Roman period, though its use may relate to its status as a natural ridgeway rather than to the existence of the Roman road which seems to have been overgrown and at least in part invisible when Maen Madoc was erected (Fox C. 1940:211-3, Fox A. 1949:109, see chapter 7). The distribution of Early Christian monuments, and of the cross-ridge dykes which were probably built to block access to the area from the north, certainly suggest that the ridgeways, whether or not they had previously borne Roman roads, formed favoured routes in the post-Roman period (see map 50).

Though elsewhere Roman forts may have formed foci for post-Roman
activity (see chapter 7), there is relatively little evidence to suggest that this was so in Glamorgan. At Cardiff, by the later 10th. or early 11th. century at the latest, the emphasis seems to have shifted away from the vicinity of the fort to the easier river crossing at Llandaf, while there is no evidence of post-Roman activity at Caerffili, Coelbren or Gelligaer: though at Caerffili and Coelbren this may be explained by their apparent abandonment in the 2nd. century, Gelligaer had apparently been reoccupied in the late 3rd. or 4th. century, while the fort at Cardiff was rebuilt and occupied in the Late Roman period (Nash-Williams and Jarrett 1969:91, 70-3). The only evidence of post-Roman activity near Penydarren is the pillar-cross of the 8th. to 9th. century at Merthyr Tydfil (R.C.A.H.M.1976:III:862); an inscribed stone of the 5th. to early 6th. century at Loughor may indicate some activity in the vicinity of the fort there, as may the two pillar-stones of the 7th. to 9th. century at Neath (ibid. 862, 845, 871).

Although it has been argued that the correlation between the best lands, the earliest recorded post-Roman estates and the known Roman pattern of villa exploitation may suggest that the villa estates of south-east Wales survived relatively unchanged into the post-Roman period, when their transfer is recorded in the Llandaf charters (Davies W. 1979A:158-60), there is as yet no good evidence for the continued occupation of villa sites in the post-Roman period. Continuity of the estates as working units, not itself dependent upon the continued occupation of the villas, is extremely difficult to prove though, as mentioned above, the volume of evidence which suggests a surprising measure of continuity in such instances in Britain as a whole is increasing. Whilst it is very difficult to assess the contribution made in this respect by the Roman occupation to the post-Roman landscape, another probable Roman contribution,
whose results are known to have persisted long after the Roman period, was the draining of the Wentloog Level, a large area of estuarine alluvium which seems to have been unoccupied until the Roman period; it seems then to have been drained and protected by sea defences, to form good arable and pasture land which was still cultivated at the Norman conquest of the area (Crampton 1972:53-4). The only settlement known from the Wentloog Level, that at Rhumney Great Wharf (Boon 1975:48-9), is reminiscent of those indicated by traces of occupation further east in Monmouthshire, in the Magor and Uskmouth areas in the Caldicot Level which seems to have been unoccupied between the Neolithic and Roman periods (Nash-Williams 1952A:254-5, Boon 1968A:121-7, Barnett 1964:12-13, Locke 1971:9-13); the Caldicot Level too may have been drained and provided with sea defences by the Romans (see below, section 19).

The charters of the Liber Landavensis (see Appendix 23) record the transfer not of waste lands but of estates in working order (Davies W. 1979A:156); they suggest that, although the archaeological evidence for settlement in the post-Roman period is sparse and the exact relation which it bore to the settlement of the Roman period uncertain, yet the landscape was largely cleared and the area fully settled at that date. So, for instance, in a charter which may date to c. 745, and which should perhaps be located at Breigon near Llansanwyr, the bounds of the estate are formed on all four sides by the boundaries of other estates or townships (L.L. 202); moreover, if its location is correctly conjectured (Davies W. 1979B:116), this estate lies towards the north of the Vale on sandy loams or soils of impeded drainage, probably not the most favoured area for settlement. Whilst the better soils seem generally to have been selected, and there seems to have been a tendency, especially in the Vale and Gower, to avoid areas of impeded drainage, yet some
estates which seem to have been donated in the mid to late 7th.
century lay on soils of impeded drainage, as at Gabalfa, Llanrhidian
and Llansanwyr (L.L. 151a, 144, 147), and one of the estates in the
Llansanwyr area is actually described as extending 'a palude Elleti
usque nadauan' (L.L. 147). These indications of a heavily utilised
landscape occur, moreover, in short expressions of the limits of
estates such as may have been integral to the charters from an early
date. Lengthy perambulations may not have been integral until the mid
9th. century or later; when found attached to charters of earlier
date, they may have been added in the 10th. or 11th. century, and
thus probably relate to the landscape of that date rather than earlier
(Davies W. 1978A:28-9, 1979B:143-4). These later perambulations
suggest that the landscape was still heavily utilised at this later
date. Though settlements are barely mentioned, and may have been set
well away from the estate boundaries (Davies W. 1978A:32), there are
frequent references to ditches (foss or claud) used as boundary
markers (eg. L.L. 157, 212, 260): this may not have been their
primary function, for a reference to 'fossam paludis' (L.L. 188b)
hints that their main purpose may have been drainage, but the lawbooks
suggest that their boundary function was well established (cf. Latin
A 131: 'si quis fregerit metam terre que fuerit inter duas villas...;
Qui viam publicam vel fossam termini araverit...'). Roads are also
mentioned in boundary descriptions, except in Gower; in some cases,
the road is specified as being large or wide (Uiam magnam/ ford maur:
L.L. 159b, 260; uiam latam/ ford litan: L.L. 216b, 249a, 257).
Unfortunately, nowhere in Glamorgan is it certain that such a major
road is a Roman road, though outside the county the 'uiam latam' at
Chepstow (L.L. 165) may well be; however, in Glamorgan, as two of
the estates in whose perambulations such a road is mentioned lie near
Llandaf (L.L. 159b, 249a), they may refer to the Roman road across
the Vale of Glamorgan, which appears to head for the river crossing at Llandaf (North 1957:4-11). Stones and tumuli were also used as boundary markers, and it is often impossible to tell from the texts whether these represent conspicuous natural or pre-existing features or whether they were erected at the time when the boundaries were established. It has been suggested that some Irish ogam stones may have acted as boundary markers (see Appendix 10), and some inscribed stones in Wales may have been similarly used: Lech lybiou (Lybiou's stone: L.L. 141), lech oudoceus (Oudoceus' stone: L.L. 156), 'petram in quattuor confinibus' (L.L. 121), and 'carnou fin tref peren' (Tref Peren boundary cairn: L.L. 253b) may all represent deliberately erected boundary markers, as may in particular the 'hirmain guidauc' (Guidauc's tall stone) of Chad 4 which lies on the boundary of land donated by Ris who in Chad 3 donated treb guidauc (Evans J.G. 1893:xlv). The only example of this type in Glamorgan, petram onnbrit at Fairwater (L.L. 188b), may also represent a purpose-made boundary marker.

Though the evidence of the charters suggests that settlement of this period was substantial in volume, the archaeological evidence is surprisingly meagre. In this, Glamorgan is representative of the region as a whole, though one of the few known post-Roman secular settlement sites lies in Glamorgan, at Dinas Powys, as do several important religious centres whose general, if not specific, locations are known from reasonably early literary sources. Other evidence of activity in this period is provided by the Early Christian monuments whose distributions, interestingly, vary from class to class. The earliest monuments, those of class A, of which there are 10 to 12 in Glamorgan, are distributed fairly evenly throughout the county, though they perhaps tend to favour the uplands rather than the Vale (see map 51), but thereafter different groupings emerge. The 11 monuments of
class B seem to avoid the Vale, favouring the uplands, Gower and the Port Talbot area, whereas the 13 monuments of class C are found in the Vale and Margam area, in Llangyfelach and the eastern uplands. Class D monuments, 29 in all, occupy the western Vale and Margam area, with a few outliers in the uplands north and east of Margam and one in Gower, whilst the 10 examples of class E lie in the Vale and at Llangyfelach. The late monuments of class F and G are found only in the Vale, the coastal strip near Margam, and the Gower peninsula. The significance of these varying distributions is not altogether clear: they may relate to the ranges of influence of different workshops based perhaps in different monasteries, to the dates of the monuments or to a combination of these factors. So, the earlier monuments of classes A, B and to a lesser extent C favour the uplands which are avoided by the later monuments and are also largely ignored by the charters which are for the most part contemporary with the later monuments. This shift in emphasis from the uplands to the coastal region is paralleled elsewhere: in Dyfed and Merioneth, monuments of class A are found in the hills as well as near the coast, and those of classes B and C, Nash-Williams' group 2, are still occasionally found in the hills, but tend to favour the coast, while later monuments avoid the hills entirely (Nash-Williams 1950A:11, 19, 30). Later in the period, when the standing crosses of classes D and E seem similar in both function and date, the differences in their distributions may relate primarily to the spheres of influence of the workshops in which they were produced. Some monuments, especially the later ones, seem to be located chiefly at important religious centres such as Llantwit Major and Merthyr Mawr, thus suggesting the presence of nucleations of population there. However, the relation which the earlier, and apparently isolated, monuments bore to the settlement pattern of the day remains unknown.
The apparent paucity of physical remains of settlement in the post-Roman period should not then be taken to indicate a lack of activity at that date. Rather, it seems that many sites which were occupied at that date subsequently remained in occupation, so that any remains of early settlement, perhaps slight in nature, may have been sealed beneath, or destroyed by, later and probably continuous occupation. So, both the later of the Early Christian monuments and the later estates whose transfer is recorded in the Llandaf charters, those donated from the mid 8th. century onwards, bear a closer relation to the modern settlement pattern than do the earlier examples; the later estates almost invariably enclose one principal modern settlement, often with its own church and outlying farms (Davies W. 1979A:156-8). The settlement pattern of the later post-Roman period may thus have borne a substantial resemblance to the pattern of Mediaeval and later settlement, and may have been governed by many of the same factors.

11.10: Caernarfonshire: the Nature of the Evidence

In Caernarfonshire, the problems relating to the settlement evidence differ from those found in Glamorgan, and in some ways the material may be more deceptive. So, the tendency to build in stone means that far more buildings are known than in Glamorgan, but also promotes the assumption that the pattern is complete, whereas in fact timber buildings were also constructed, as for instance at Castell Odo, Llandegai and Cefn Graenanog (Alcock 1961:84, Houlder 1968:220, R.C.A.H.M. 1964:p.115), and are more likely to have escaped notice than stone structures. As settlements in the uplands, where stone was more abundant, were less likely to have been built of timber than those in the lowlands, the pattern of known sites may thus be biased in favour of upland rather than lowland settlement. More massively
constructed structures are also more likely to have survived than those which were less solidly built: so, enclosed homesteads are probably better represented than settlement types such as the lowland hut groups which seem to have preceded the enclosed homesteads at Hafoty Wern-las and Cae'r Mynydd (R.C.A.H.M. 1960:1340ii, 1173, Griffiths 1959:45-6, 59-60) or isolated lowland huts such as that at Llanystumdwy Rectory (R.C.A.H.M. 1960:1375). It has further been claimed that, because the 'terraces' found with the enclosed homesteads were so substantial, they were likely to survive when the homesteads themselves had been destroyed, and thus might represent the original distribution of such settlements which, on this evidence, would seem to have been limited to a belt of higher marginal land (Gresham 1963:267). However, as these 'terraces' are now thought to have formed as a result of ploughing on sloping ground rather than to have been deliberately constructed by the inhabitants of the enclosed homesteads (see chapter 9), they are more likely to have developed on sloping than on level ground, thus again distorting the pattern of survival in favour of the sites on the higher, generally less desirable, land. This pattern is likely to have been further reinforced by later building and agricultural activity in the area, which again is likely to have destroyed lowland rather than upland settlements. Consequently, few early settlements are known from the more fertile coastal belt which would seem the most attractive area for settlement: this is surely not so much because the area was avoided at an early date as because later activity has concentrated there and destroyed most traces of early settlements, especially when these were of timber. It seems unlikely that traces of early activity are absent from the coastal lowlands because these were too heavily wooded for settlement: certainly, in Breuddwyd Macsen, the brief description of Arfon with its parallel bands of sea and plain,
woodland and mountain (Jones G. and Jones 1949:80) suggests that, by the late 12th. or early 13th. century at least, the coastal lowlands were not wooded, though the lower slopes of the mountains apparently were. The pattern of early settlements which survives to the present day, a pattern of settlement on the higher marginal land, is therefore unlikely to represent the original pattern of settlement, but rather represents the pattern of survival, and the archaeological record seems biased in favour of the larger and more remote sites.

The problems of differential survival are paralleled by problems of dating, which are particularly acute in this area which was generally aceramic in the Iron Age, and in the post-Roman period used only the rare Mediterranean import wares: one of the most important dating tools is thus lacking for much of the period under study. Moreover, although more settlements are known than in Glamorgan, relatively few have been excavated and, as many of these have produced no datable material, reasonably precise dating is possible only in the Roman period. Even then, the absence of artefacts datable to that period need not indicate that a site was not occupied in the Roman period: particularly remote or impoverished settlements may never have received romanised artefacts, and may therefore be attributed incorrectly to the Iron Age or post-Roman period. The arbitrary nature which dating may assume as a result of this paucity of material is illustrated by the case of the enclosed homesteads and associated hut groups, some of which are known to have been occupied in the Roman period, yet whose origin as a group lies in the Iron Age (see chapter 3). Consequently, although some excavated sites of this type may be said with certainty to have been in use in the Roman period, the dating of the unexcavated examples, which in Caernarfonshire form over 90% of the total of such sites, can only be conjectural, and if, as has been plausibly suggested (Smith C.A. 1978:39-40), their ground-
plans reflect the functions and levels of wealth of these different settlements, they are unlikely also to provide clear evidence pertaining to the dates at which they were occupied: though none of the rectangular buildings found in enclosed homesteads are yet known to be pre-Roman in origin, and therefore sites which include such structures are often assumed to date from the Roman period, such arguments from negative evidence cannot be regarded as conclusive. It is therefore difficult, if not impossible, to compare the distributions of sites of these types in the Iron Age and Roman periods.

Moreover, while few settlements of any kind have been excavated, some entire classes of settlement have never been excavated. Thus, none of the upland hut-groups has received such attention, nor have any finds come from them, so that arguments relating to their date remain purely conjectural. It has been assumed that small huts found at high altitudes belong to the Early Bronze Age, partly because of their similarity to hut-groups of that date found in Devon and Cornwall, and especially on Dartmoor (Griffiths 1951A:60-66), and partly because it would seem that such areas could only have been habitable before the climatic deterioration which is believed to have begun at the Early to Middle Bronze Age transition (see chapter 2). However, these hut-groups may perhaps have housed Iron Age herdsmen, and have owed their small size to poverty rather than to early date. The only indication of their date, by no means as precise as might be desired, comes from Moel Faban and Conway Mountain, where settlements of this type have been partially destroyed by settlements which appear to belong to the Iron Age or Roman period (Griffiths 1951A:68-9); this suggests that such hut-groups may date at latest to the earlier Iron Age.

Despite these problems concerning the nature of the evidence, it
seems worthwhile to attempt to discuss the distribution of settlement in Caernarfonshire against its geographical background. Here too Caernarfonshire is at a disadvantage relative to Glamorgan, for not all of the county is covered by published soil maps, and thus settlement can be correlated with soil types in some areas only; nonetheless, some general comments may be made.

11.11: Caernarfonshire: the Iron Age

Whilst it contains the highest land in Wales, Caernarfonshire also has a coastline which extends for nearly 190 kilometres, second in length only to that of Pembrokeshire, and its relief is very varied, ranging from sea-level to 1085 metres. Thus, although 29% of the county lies over 300 metres, the bleak uplands are to some extent counterbalanced by the presence of the lengthy coastal strip and of rich valleys such as Nant Ffrancon and Dyffryn Nantlle which penetrate the central uplands. Moreover, these uplands may be useful to the pastoralist: in the 12th. century, Giraldus considered the mountains of Snowdonia capable of pasturing all the herds in Wales (Descr. 1. 6). Nonetheless, from the Iron Age onwards the central uplands seem to have been avoided for settlement, which concentrated in the Llŷn peninsula and the coastal belt: even the major defended sites of the Iron Age, those with areas of 1.2 hectares or more, lie on average only 265 metres above sea-level (see map 52), while the smaller defended sites lie on average 176 metres above sea-level. These altitudes are significantly low, for a third of the Bronze Age cairns in the county lie between 380 and 460 metres (R.C.A.H.M. 1964:lix): a comparison of the distribution of Bronze Age monuments on the one hand and of Iron Age or later hillforts and hut-groups on the other (see maps 53-4) indicates that, after some measure of use in the Bronze Age, the central uplands and, more surprisingly, the inland
valleys also, seem to have been avoided entirely in the later period, a phenomenon which may be related to climatic deterioration and soil degradation (see chapter 2), and perhaps to a greater Iron Age interest in agriculture as opposed to a Bronze Age emphasis on pasture. However, apart from a few important Roman military sites, the rich coastal lowlands have yielded little save small finds, whereas the lower slopes of the mountains, between about 150 and 300 metres, were occupied by a belt of settlements: as has been remarked, this pattern seems explicable only in terms of the destruction by later activity of traces of settlement on lower ground.

Within the belt of settlement which has been preserved, individual settlements seem to have been located on the best lands available. Thus, in the Bangor area, settlements of the Iron Age and Roman period seem whenever possible to avoid the rock-dominant soils and the soils of impeded drainage, preferring the sols bruns acides and in particular the well-drained acid loams of the Arfon series which form the greater proportion of such soils in the area (Roberts 1958:45; see map 55). In Llyn, though hillforts are more frequently located on the rock-dominant soils, the same tendency to avoid the soils of impeded drainage is seen at all periods, and the extensive marshy area in the centre of the peninsula seems largely to have been avoided: in this area, which is broken up by mounds of glacial drift, the marshy hollows are now used for rough grazing for cattle and the drier mounds provide a little arable and winter sheep-grazing (Bowen 1957:307, 320). The soils of the Arfon series are again popular in this area (see map 56).

More detailed study of the location of enclosed homesteads in Caernarfonshire has shown that, although most such sites lie between about 180 and 240 metres O.D., yet 95% lie on good well-drained soils; the remainder occupy sites which are not badly gleyed, and which may
have been better at the time when the homesteads were in use (Johnson N.D. 1978:130). A comparison of the average altitudes of the different classes of enclosed homesteads suggests that, in terms of the traditional classification (R.C.A.H.M. 1964:xcvii-cciii), the polygonal homesteads enjoy the lowest locations, with an average altitude of 180 metres, while the thick-walled oval homesteads, at 190 metres, are on average lower than the less well-built thin-walled ovals at 230 metres, and these are lower again than the small compact groups whose average altitude is 240 metres. This apparent altitudinal progression from the best to the least well-built sites may suggest that their plans and methods of construction were determined by wealth, which in turn may have been influenced by location and consequent access to resources. Relative to Smith's classification (Smith C.A. 1978:42-8), the class of homestead thought to represent the highest level of investment, class Id, is interestingly the class with the lowest average altitude, 160 metres. Surprisingly, however, the class with the highest average altitude is not that class which is thought to represent temporarily occupied stock-stations, class Ib, which, with an average altitude of 230 metres, occupies the second highest position, nor yet those homesteads of class Ilc which, while they had some arable interests, are thought to have specialised in stock-rearing, but one of the classes thought to represent mixed farms, class IIb, which has an average altitude of 290 metres. However, some examples of this class, and also of class Ic, thought to represent mixed farms operating at subsistence level and located at an average altitude of 200 metres, may date to the Bronze Age rather than to the Iron Age or Roman period (ibid. 46-8); the altitudes of these settlements may then be explained by the more favourable climate which may have existed when they were occupied (see chapter 2).
11.12: Caernarfonshire: the Roman Period

The problems associated with dating sites in this area make it peculiarly difficult to determine whether, and if so in what ways, the pattern of settlement changed as a result of the Roman occupation. The artefact evidence indicates that some enclosed homesteads and other hut sites were occupied at this date, and some may have first been constructed in the Roman period. Similar evidence suggests that many hillforts went out of use at this time, though a few, including Tre'r Ceiri, Penydinas and Braichydinas, remained in occupation, and at Tre'r Ceiri the density of occupation seems to have increased significantly in the Roman period (R.C.A.H.M. 1964:lxvii-1xxix, Hogg 1975:93-5, R.C.A.H.M. 1956:367, 252, Savory 1976C:69-70). In general, however, many of the former hillfort occupants may have moved to other settlements such as the enclosed homesteads and other hut sites, and some of the unexcavated hut-groups may thus date to this period.

It is difficult to assess the extent to which the Roman presence influenced the pattern of settlement in Caernarfonshire. Extramural settlements are known at the forts of Segontium and Caerhun (Nash-Williams and Jarrett 1969:63, St. Joseph 1975:42), but, as at Segontium the fort replaced a multi-period native settlement (Grew 1980:346), the location was apparently a focus for settlement before the advent of the Romans, and therefore the growth of a fort vicus need not represent a total disruption of the earlier settlement pattern. There is no evidence for vicī at Pen Llystyn or Brynygefilliau, though they may well have existed. Some settlement may have been attracted to the road which linked Segontium and Caerhun: the short-lived site of Bryn Glas, possibly military in function (R.C.A.H.M. 1960:1129), lay very near its line, as did the polygonal homestead of Cae Metta which was occupied, and perhaps also founded, in the Roman period (R.C.A.H.M. 1960:1179, Livens 1971:16, 1973:37,
Other homesteads whose precise dates are uncertain lie relatively near the road in Aber parish (see map 57): however, they may predate the road, as the cluster of enclosed homesteads and other settlements around the road near Maen-y-bardd seem to do.

There seems little evidence that settlement was attracted to any of the other Roman roads in the county unless, as seems likely, a road ran south from Segontium to the fort at Pen Llystyn and thence to Traeth Mawr, which may have been crossed in the region of Tremadog. If this road followed the approximate line of the modern road from Caernarfon to Porthmadog, the A 487, it will have passed a cluster of settlements at Caerau, Clynnog, some of which were certainly occupied, and perhaps first built, in the Roman period (R.C.A.H.M. 1960:827-8, O'Neil 1936:299). The polygonal homesteads at Caerau and Llystyn Ganol, and at Cwm Mawr, and the possible polygonal site at Tyddyn Bach (R.C.A.H.M. 1960:830, 931, 1439, 1284) lie near the road and, though unexcavated, may perhaps be regarded as Roman in date, as may the site about 1 kilometre from the road at Ty'n y Caeau (ibid. 930). The homesteads at Cefn Graeanog (ibid. 836, 852), within about 1 kilometre of the road, were both occupied in the Roman period, though the former at least may have its origins in the Iron Age: however, there seems a break between its Iron Age occupation and that of the Roman period (Hogg 1979:295), and its refoundation and subsequent prosperity may be due to its proximity to the road. Finally, the Roman-style bath-building at Tremadog, which lies on the projected course of this road, is unlikely to have belonged to a fort, and may either have formed part of an otherwise unknown villa (Daniels 1970:189-90) or be connected with some industrial activity such as mining (Richmond 1965:160): the latter would seem the more likely suggestion. The Roman demand for metals may also have influenced the pattern of settlement by stimulating the working of copper on the
Great Orme, where signs of Roman-period activity have been found associated with the mining site (R.C.A.H.M. 1956:366). It has been suggested that the miners may have been housed in the hillfort of Penydinas where the huts, in which Roman material has been found, are claimed to display signs of Roman influence in their disposition (Gardner 1958:69): the strength of this assertion is not certain.

The absence of well-excavated sites and of closely datable artefacts thus makes it difficult to ascertain to what extent the location of settlement in Caernarfonshire was affected by the Roman occupation. However, some roads, and in particular the probable road south from Segontium, seem to have attracted settlement to their lines (see map 57); in the case of the road south from Segontium, this pattern seems unrelated to the availability of good land in the area (see map 56), and is therefore unlikely to be merely coincidental.

11.13: Caernarfonshire: the Post-Roman Period

In the post-Roman period, Caernarfonshire is again disadvantaged relative to Glamorgan by the absence of any documentary evidence comparable with the Llandaf charters which might provide information concerning the density and distribution of settlement at that date. However, the archaeological evidence for the period seems comparable with that from Glamorgan. Early Christian monuments indicate some activity in this period, and in some cases cluster together in such a way as to suggest the existence of important religious centres, as for instance at Bangor, Bardsey Island and Penmachno (Nash-Williams 79-81, 82 and R.C.A.H.M. 1964:1518ii, and Nash-Williams 101-104a respectively). One of the two inscribed stones found at Capel Anelog, Aberdaron, marks the burial of Senacus the priest CVM MVLTITVDINEM FRATRVM (Nash-Williams 78), and thus suggests the existence of a religious community of some kind there in the late 5th. to early 6th.
century. Religious sites have been excavated at Llandegai, Clynnog Fawr and St. Tudwal's Island East (Houlder 1968:221, Hague 1973:21, Stallybrass 1914:271-96, R.C.A.H.M. 1964:1591), and secular settlements have been discovered at Dinas Emrys and Deganwy (Savory 1961:37-9, 51-2, Alcock 1968:198), while there seems also to have been some activity of this date at Segontium (Laing 1977:57-8).

Insofar as may be ascertained, the pattern of post-Roman settlement seems broadly similar to that of the Iron Age and Roman period (see maps 58 and 59). The religious site at Llandegai lies near a homestead site of the Iron Age (Houlder 1968:220-1), while there seems to have been Roman occupation at Deganwy, and Roman and possibly Iron Age occupation at Dinas Emrys (Alcock 1968:198-200, Savory 1961:29-37, 49-50); there was also Roman activity of some sort on St. Tudwal's Island East (Hague 1961:11). However, some sites now achieved a prominence which they hitherto seem to have lacked: the concentration of monuments at Penmachno (Nash-Williams 101-104a) suggests that this was an important site by the late 5th. to early 6th. century, though there is no evidence of earlier settlement in the area, and the same is true of Llangwnadl, with its inscribed stone, possibly of the 7th. century, and its 9th. or 10th. century handbell, and Llannor with its 6th. century inscription (Radford and Hemp 1961:146-7, Fox A. 1949:121, Nash-Williams 95), as well as Bardsey Island, though, as much of the island is good agricultural land, some of the huts there, which are undated (R.C.A.H.M. 1964:1520) but which are generally assumed to belong the religious community, could be earlier, perhaps Iron Age, in date.

It is not clear whether the Roman occupation had any lasting effect upon the settlement pattern in Caernarfonshire. Although there is some evidence of activity on the fort site of Segontium at this date (see chapter 7), the scale of this activity is uncertain, and there is no
specific evidence that Llanbeblig church is an early foundation: however, its dedication is of a type which may be early, and it is located very close to the cemetery which served the fort garrison (Nash-Williams and Jarrett 1969:63), so that some continuity of use seems possible. The road from Segontium to Caerhun may have remained in use at this period: an Early Christian stone of the type conventionally dated to the 7th. to 9th. centuries was found, probably in its original position, standing against the earth bank which formed the northern side of this road near Maen-y-barodd (Lynch F. 1978:70-2). However, as this pass seems to have been used from the Neolithic period onwards (ibid. 72), this evidence of its use in the post-Roman period may reflect only the constraints imposed by the lie of the land rather than the continued influence of the Roman road. The postulated Roman road running south from Segontium may have remained in use: the 6th. century inscribed stones at Llystyn Gwyn and Gesail Gyfarch (Nash-Williams 84, 105) lie very near to its projected course, and the Ty'r Dewin bucket, which may date to this period (Hawkes C.F.C. 1951:190, 198), was also found near it (Anon. 1905:255-6).

Thus, the Roman forts and roads seem to have attracted some settlement to their vicinities in the Roman period, and this attraction may have continued to some extent in the post-Roman period when the roads were no doubt still of use and the protection afforded by the defences of the fort of Segontium at least may have been appreciated. Whilst the evidence for settlement in the post-Roman period is generally slight, such evidence as exists may point to an expansion of settlement into some hitherto unpopulated areas and, whilst some of this may be due to the desire of the Early Christian communities to establish monasteries and hermitages in remote locations, in other cases it may result from population pressures such
as seem to have operated at this at date.

11.14: Herefordshire: an Introduction

In Herefordshire, the material available, and hence the problems arising in a study of the settlement pattern, again differs from that found in either Glamorgan or Caernarfonshire. A detailed soil map is available for only part of the county (Hodgson 1972), though, as the entire county has been covered by a smaller-scale map (Burnham 1965: facing p.28; see map 60), the distribution of settlement can be related to soil types in a very general fashion. Furthermore, as in Herefordshire the natural building material is wood rather than stone, undefended sites are not readily observed, and the record may be unduly biased in favour of defended sites at the expense of other forms of settlement; without excavation, the number of buildings which such defended sites contain remains unknown. However, the use of pottery in this area in the Iron Age renders the dating of such sites more accurate, whilst some information concerning the later part of the period, the post-Roman centuries, is supplied by charters in the Liber Landavensis and by the Domesday survey.

Geographically, Herefordshire is a basin-shaped lowland almost completely ringed by hills. The central plain lies generally between 45 and 130 metres, rising to over 210 metres in the Wormsley and Dinmore hills: the soils in this area are mainly heavy loams, and the original vegetation may have been mostly damp oakwood (Atkin 1971:107-8), though the area now provides fertile farmland, excellent for corn, fruit and grazing (Sylvester 1969:349). In the south-west, the Golden Valley is also especially favourable for settlement (ibid. 348), but the most prosperous part of the county is the eastern extension of the central plain up the Lower Frome valley into the Upper Leadon basin (Atkin 1971:110). The northern part of the county
is less desirable for settlement: the north-western upland rises to over 300 metres in places, and the soils there are mostly stony loams with some intractable clays (ibid. 109). In the south, Archenfield and the Ross region together form the Ryelands, a distinctive region of light sandy soils extending from the Monnow in the west to the Forest of Dean in the south and east (ibid. 110; see map 61). The climate of the county as a whole is generally mild, with a long growing season (Sylvester 1969:350), but the river valleys are liable to flooding.

11.15: Herefordshire: the Iron Age

The Iron Age occupation of Herefordshire is currently represented chiefly by hillforts. However, undefended settlements were probably also in use at this date, though few are yet known: double-ditched enclosures of single farmstead size have been discovered, chiefly by aerial photography, in the Severn Valley and, although few have been excavated, that at Sharpstones Hill, Shropshire, has produced Iron Age pottery (Anon 1969:17-18). Five similar enclosures are known in Herefordshire, near Leintwardine (Stanford 1980:146-7), but, as none has yet been excavated, it is not known whether they were occupied in the Iron Age or the Roman period: however, their occupation may have overlapped that of the hillforts. More sites of this kind, presumably related to the increased clearance of valley land, are likely to await discovery.

The distribution of the hillforts suggests that their occupants particularly favoured the leached brown soils of the Bromyard, Middleton and Eardiston series (see map 62), as 42% of the hillforts in the county lie on these soils which, though of moderate to imperfect drainage, are excellent for corn crops (Burnham 1965:32). They are followed in popularity by the leached brown soils of the
Wootton, Castleton and Frog Moor series, of which the well-drained but water-retentive soils of the Wootton series are amongst the best soils in the district, though the Castleton and Frog Moor soils can be poorly drained (Hodgson 1972:87, Burnham 1965:31): these together account for 21% of the hillforts in the area, whilst the freely-drained sols bruns acides of the Munslow series account for 15.75%.

The peaty soils of the Scethrog and Beacon series, found only in the extreme south-west of the county, were altogether avoided, and the alluvial soils also seem to have been unpopular at this date, perhaps largely because of their poor drainage as well as the risk of flooding. The most fertile part of the county, the Eastern Plain, was relatively neglected at this date, though there is a cluster of hillforts in its south-eastern part; the hillforts of Poston, Timberline and Vowchurch Camps overlook the good lands of the Golden Valley in the south-west of the county. Large areas of the favoured Bromyard, Middleton and Eardiston soils, and of the relatively popular leached brown soils, seem to have been ignored by the hillfort populations, and the relative paucity of hillforts in these areas may suggest that some supplementary forms of settlement remain to be found, and were perhaps more important in those areas in which hillforts were scarce. However, the soils of the Munslow series, which were not so widespread in their occurrence, seem to have been particularly favoured by the hillfort populations.

There are at most 38, and more probably 34, hillforts in a county 2,235 square kilometres in area: on paper, each might then be attributed a territory averaging some 60 to 65 kilometres in extent. However, some areas, especially parts of the north and east of the county, seem particularly devoid of hillforts (see map 62): these areas may perhaps have been avoided because they were heavily wooded at the time when the hillforts were built, or because other forms of
settlement predominated there. Yet, as there is no area where the
hillforts appear to cluster together, this suggests that each may have
drawn upon the resources of a relatively large hinterland. Moreover,
the overall density of hillforts is certainly low when compared with
figures of 54 in 1,458 square kilometres in Caernarfonshire, an
average of one per 27 square kilometres, and 94 in 2,089 square
kilometres in Glamorgan, an average of one per 22 square kilometres.
However, the Herefordshire hillforts compensate in size for what they
lack in quantity: at most four, and more probably only two, are
smaller than 1.2 hectares in internal area, and most are substantially
larger: the average internal area is 5.23 hectares, and the largest
hillfort, Credenhill Camp, is 20 hectares in internal area.
Consequently, in Herefordshire, for every hectare enclosed by the
hillfort defences there are only 12.89 square kilometres of land
outside the hillforts, in contrast with figures of 24.07 square
kilometres per hectare in Caernarfonshire and 26.23 square kilometres
per hectare in Glamorgan, both counties in which the majority of
hillforts are small in internal area.

If each hillfort in Herefordshire had a territory proportional to
its internal area, and if the entire county were regarded simply as
potential hillfort territory, regardless of the probable existence of
other forms of settlement, then the territory attributed to the
average hillfort would seem to have been some 4.5 kilometres in
radius, rising to 9 kilometres for Credenhill Camp. On a similar
calculation, the territories which may be attributed to the average
hillforts in Glamorgan and Caernarfonshire stand at 2.7 and 3
kilometres respectively. These latter figures compare well with the
distance from a farmstead to its cultivated land which, in a variety
of regions and at a variety of dates, averages about 1 kilometre,
commonly rising to 3 to 4 kilometres, but seldom much more (Chisholm
1962:48): the distances may vary according to the type of farming carried out in the areas in question, for the costs incurred in dairy farming increase more rapidly with distance from the farms than those incurred in arable farming (Everson and Fitz-Gerald 1969:27-8).

Whilst the radii of the territories tentatively ascribed to the average hillforts in the three counties are not necessarily too large for the hillforts to have formed the homes of the communities which farmed those territories, yet in the case of the largest hillfort in each county the distances involved seem excessive, standing in Caernarfonshire and Glamorgan at 9.3 and 9 kilometres respectively for the hillforts of Garn Boduan and Dunraven, assuming that the latter originally enclosed some 10 hectares, and 9 kilometres for Credenhill.

Either, then, these hillforts fulfilled functions other than that of housing simple farming communities, or the theoretical territories attributed to these hillforts are irrelevant to the Iron Age situation. There seems considerable truth in at least the latter of these propositions, for Garn Boduan, whose theoretical territory on such calculations seems some 270 square kilometres, in fact dominates an obvious natural unit of territory of only 21 to 26 square kilometres: this is bounded by marshy valleys and contains no other substantial hillfort (Hogg 1962:24). Thus, although the hillforts, if they were permanently occupied settlements, must have drawn their food supplies from territories which bore some relation to their own sizes, it is clearly unrealistic to assume that the counties in which they stood simply represented potential hillfort territories, without regard for waste land and areas perhaps occupied by settlements of different types, as well as for the contributions which coastal and riverine resources may have made to the diet of the hillfort populations. Too little is also known about the sizes of the populations represented by the hillforts, and their relationship to
other possible elements in the population who may have occupied settlements of different types.

If they were permanently occupied by populations proportionate to the areas enclosed by their defences, the Herefordshire hillforts may represent substantial nucleations of population (see chapter 3). They may, moreover, witness an increase in population during the period of their occupation, when some were enlarged in such a way as approximately to double their original size: this enlargement, seen at Herefordshire Beacon, Ivington, Wall Hills Ledbury, Little Doward Camp and Croft Ambrey, is conjectured to have occurred in the early 5th century, and may represent the combination of smaller units to form larger nucleations (Stanford 1980:104), or may reflect the results of natural population growth (see chapter 8). The hillfort population at the time of the conquest has been estimated to be about 25,000 (Stanford 1980:107): while this figure is likely to be too high for the populations of the hillforts alone (see chapter 8), no allowance is made for the inhabitants of such scattered rural settlements as were likely to have existed, and the overall figure for the area may thus be roughly correct. If so, most of the lowlands had probably been cleared and were being farmed by the end of the Iron Age (ibid. 107-8).

As the Herefordshire basin forms a geographical unit, it has been suggested that, in the Iron Age, it was occupied by a single tribe whose boundaries coincided with the later county boundaries, and whose unity is indicated by apparent uniformity of material culture within that area: it has been suggested that these were the Decangi apparently mentioned by Tacitus (T.A. 21.32.1, Stanford 1971B:124, see chapter 4). Their capital is then supposed to have been Credenhill, by far the largest hillfort in the county, situated near the later centres of Kenchester and Hereford (Stanford 1980:94-5).
Though the area is more generally assumed to have formed part of the tribal territory of the Dobunni, whose capital in the Roman period lay at Cirencester, and in whose territory Kenchester is thought to have been a small town (Todd 1976:99-101) rather than forming the capital of the Decangi (Stanford 1980:158-9), the evidence for this is very slight (see chapter 3), and does not disprove the theory that the area was occupied by another tribe. However, the argument from the geographical unity of the area need bear little weight for, in the Saxon period at least, its apparent unity was ignored, and the area formed part of a larger tribal unit: the present shire took shape only as an administrative convenience in the 10th century (see below, section 17).

11.16: Herefordshire: the Roman Period

The Roman occupation brought changes in the settlement pattern. Some hillforts such as Croft Ambrey and Midsummer Hill were apparently abandoned at the conquest, though others were not: there seems to have been a lengthy occupation in the Roman period at Sutton Walls and Poston, and some activity at Aconbury, Dinedor, Uphampton Camp and Wall Hills Ledbury as well perhaps as an occupation of one or two decades at Credenhill (Stanford 1980:147). Whilst the evacuation of the hillforts was probably voluntary rather than enforced (see chapter 5), the nature of the subsequent habitations of their former occupants remains largely uncertain, and this is a problem, especially if the hillforts were as densely occupied as has been claimed. About half the hillforts in the county may have been abandoned soon after the conquest, and it has been suggested that the displaced population may thus possibly have stood as high as about 13,000 (Stanford 1980:147), and, even if lower, may still have been substantial, yet there is little evidence of new settlements at this date. The town at
Kenchester and the settlements at Blackwardine, Leintwardine, Peterstow, Stretton Grandison and Weston-under-Penyard seem inadequate to house the hillfort populations if they were indeed of this magnitude, while very few rural settlements of the Roman period are yet known in the county. However, it must be stressed that the figures are highly conjectural, and that the populations displaced from the hillforts may have been considerably smaller than has been suggested.

The changes in the settlement pattern represented by the evacuation of some at least of the hillforts clearly form a response to the stimulus of the Roman presence: the former hillfort inhabitants presumably realised the advantages of living nearer to the new roads and in or near the new towns. The vici which developed at Leintwardine and Stretton Grandison (Canon Frome) (Nash-Williams and Jarrett 1969:94-5, Stanford 1980:159) will have been attracted by the spending power of the army, whilst the industrial settlements at Peterstow and Weston-under-Penyard may have sought to take advantage of the increased demand for iron created by its presence. The new roads also attracted settlement. Coins and scoriae have been found at St. Weonards, on the road north from Monmouth (V.C.H. 1908A:195), and the possible settlement at Lower Monkton (Leach 1969B:175) and the vicus at Leintwardine also lie on this road; some Roman material has also been found at Hereford (Norwood 1965:107, Rahtz 1968:242-3) and at Aconbury hillfort (Kenyon 1954:26). The town of Kenchester lies at a road junction, as does the industrial settlement of Weston-under-Penyard: both may occupy the sites of earlier Roman forts (Webster G. 1960:66-7, 1966:41). Scatters of Roman material have also been found near those roads at Credenhill (V.C.H. 1908A:191-2).

The villa at Bishopstone (Thompson Watkin 1877:361-3) lies near the road which runs west from Kenchester, whilst the settlements of the Roman period at Old Sufton, Lugwardine and Blackwardine (Leach 1969C:...
480, Pye 1973:40, V.C.H. 1908A:195) lie near the road which runs north from Weston-under-Penyard; the road south-west from Weston-under-Penyard passes near the villas at Huntsham and Whitchurch (Bridgewater 1965:179-91, 1969:26, Anon 1888:258), and the settlement at Frogmore (Davies W. 1979A:166) lies very near a branch road which runs south-west from the road from Gloucester to Weston-under-Penyard (see map 62). It thus seems that, in the Roman period, the roads served to attract settlement to their routes.

Whilst the evidence is not as good as might be desired, owing to ignorance of the pattern of rural settlement in both the Iron Age and the Roman period, it has been suggested that the Roman period saw no expansion into previously undeveloped areas, and that there may even have been some retreat from marginal areas as a result of depopulation consequent upon the Roman conquest (Stanford 1980:160). Thus, no site of the Roman period is yet known from a large sector of the north-western borderlands south-west of Leintwardine, whilst only military sites are known from a large area roughly east of Leominster (see map 63). However, these areas may not have been abandoned at this date; instead, the available evidence may reflect the abandonment of the hillforts in favour of scattered rural settlements such as may have left little permanent trace, and need not indicate that large areas of land now passed out of use.

The evidence of the surviving settlements suggests that, in the Roman period, some soils which had been favoured in the Iron Age became less popular, whilst others not previously particularly favoured now increased in popularity. The most striking feature of this date is perhaps the rise in importance of the alluvial soils which account for 21.6% of all sites of this period, though at most only about 5% of the sites of the Iron Age lay on such soils. Though this is in part due to the location of some Roman military sites and
their attendant *vici* on such soils, nonetheless, when such sites are discounted, the relative frequency with which the alluvial soils were utilised seems to have at least doubled from the Iron Age. However, this may again reflect the absence of evidence of rural settlement in the Iron Age, for hillforts are by their very nature relatively unlikely to occupy alluvial soils, although these may have been exploited either by their occupants or by the occupants of the as yet little known rural settlements. The clay loams over clay seem first to have come into use in the Roman period, and the leached brown soils of the Wilderhope, Yeld and Stanway series seem also to have doubled in importance from the Iron Age, the latter together now accounting for about 10% of all known sites. There seems also to have been a slight increase in the importance of the freely-drained *sols bruns acides* of the Ross series. On the other hand, there seems to have been a very marked decline in the importance of the soils of the Munslow series, now representing only 2% instead of nearly 16% of all known sites, and a lesser decline in the popularity of the soils of the Bromyard, Middleton and Eardiston series, together accounting for 26.5% instead of 42% of all sites. The soils of the Scethrog and Beacon series were still completely avoided. So the pattern, though perhaps distorted by lack of evidence, seems, as in Glamorgan, to be a pattern of movement onto the heavier, wetter soils in the Roman period; the lines taken by the Roman roads may have played some part in attracting settlement to the alluvial soils, and to a lesser extent to the soils of the Ross series also.

11.17: Herefordshire: the Post-Roman Period

As a result of the Saxon settlement of the area, the post-Roman period is more complex in Herefordshire than in either Glamorgan or Caernarfonshire. In 603, when Augustine held his conference with the
British bishops, the Severn was still regarded as the boundary between the British and the English (Jackson 1953:204), but, by the mid 7th. century, the English had expanded up to the Wye in the south and the approximate line followed by the late 8th. century Offa's Dyke in the north; the former remained the frontier between England and Wales until the Norman conquest (ibid. 211). Thus, although the greater part of Herefordshire was now occupied by the English, Ewias and Archenfield in the south-west remained in Welsh hands. This situation is reflected in Domesday Book, in which Ewias and Archenfield appear as to all intents and purposes Welsh, with tenants paying renders in honey and sheep. Archenfield remained in the diocese of Llandaf until about 1130 (Charles 1963:88), and, in Liber Landavensis, when Herewald, bishop of Llandaf from 1059 to 1104, is recorded building and consecrating churches in Archenfield (Evans J.G. 1893:275-7), nearly all the persons involved bear Welsh names (Charles 1963:91). However, whilst the Welsh element remained dominant in these parts of the county, the English element predominated elsewhere: the Domesday survey records the presence of Welshmen only in the manors which lay to the west of Offa's Dyke, and to its east they had presumably either been displaced or absorbed by the immigrant English.

For the greater part of the county, therefore, place-names may afford some evidence of the state of the countryside when it was first settled by the English. In the West Midlands, there seems a distinct antithesis between the distribution of place-names in tun and those in leah: names in tun, meaning a 'farmstead' or 'estate', regularly avoid forest land, whilst names in leah are equally regularly associated with woodland (Gelling M. 1974:66-7). Names which include either of these elements seem relatively early in the English settlement of the area: little use seems to have been made of either element when naming new settlements in the late Old English or post-conquest periods.
The occurrence of a group of place-names in leah in the West Herefordshire lowlands (see map 64), in an area where there is no evidence of Iron Age activity, may then suggest that this area, apparently forested and uninhabited on the arrival of the English, was never cleared. However, the area is crossed by the Roman road which runs west from Kenchester, along which lie places whose names include the element tun, such as Winforton, Staunton, Letton and Monnington: these names probably represent the exploitation in the Saxon period of land cleared in the Roman period or earlier. Names such as Willersley may suggest that not all land along such roads had been cleared of forest (Stanford 1980:180) or, perhaps more probably, that there had been a resurgence of woodland in the post-Roman period: another such name, Putley, denotes a settlement on a site which had previously been that of a Roman villa. The rapidity with which woodland could reassert itself on abandoned land is illustrated in the later part of the period when, by 1086, woods had grown up on the eleven manors held by Osbern Fitz Richard in north-west Herefordshire and the adjacent parts of Radnorshire (D.B. 186b). These had been waste in 1066, and had therefore probably been devastated by the Welsh in 1055: by 1086 they were good for nothing save hunting (Atkin 1971:84-5). Consequently, not all woods commemorated in place-names in leah need greatly predate the Saxon settlement of those areas. Thus, along the Roman road from Gloucester to Stretton Grandison, clearances are indicated by the names Preston, Aylton, Ashperton and Stretton Grandison itself, but the presence of wooded areas is suggested by names such as Pixley, Munsley, Much and Little Marcle, and Putley (Stanford 1980:180): some at least of the latter may reflect the resurgence of woodland in the post-Roman period rather than the continued existence of pre-Roman forests. Names in tun predominate around Leintwardine, an area which seems to have seen some activity in the Iron Age as well as the Roman
period: a number of places with such names are grouped closely around the confluence of the Teme and Clun (ibid. 181).

So, whilst many early English settlements were located in areas which were already cleared and formed before their arrival, in the Saxon period settlement also expanded into some areas of woodland which had either never been cleared or else which, like that apparently found at Putley, had grown up in the post-Roman period. The reason for this apparent reduction in the area of settled land, and presumably also in the population of the area, suggested by this evidence for forest regeneration in the post-Roman period, which may also be seen in some parts of Wales (see chapter 9), is not clear. However, though the maps seem to suggest that there was much more activity in the north and west of Herefordshire in the Saxon period than there had been earlier, much of this activity is represented by place-names in tun, suggesting that this succeeded earlier activity which is otherwise unknown: the general prevalence of names in tun in areas where there is no evidence of activity in the Roman period, and the relative scarcity of names in leah, some of which in any case seem to reflect post-Roman forest regeneration, suggests that the area was very extensively settled in the Roman period and perhaps earlier, despite the lack of information concerning the forms taken by such settlements. In the Saxon period, the most popular soils again seem to have been the alluvial soils, which were utilised to an extent disparate with the extent of their occurrence; the leached brown soils of the Wootton, Castleton, Frog Moor, Bromyard, Middleton and Eardiston series were also popular.

In the south-west of the county, some information concerning the settlement pattern at this date may be gleaned from the Llandof charters, together with the presence at Llanvynoe of three Early Christian monuments dating to the 9th. and 10th., and perhaps also to
the 6th. century (Nosh-Williams 409-411; see map 65). The location of some of the estates mentioned in the Llandaf charters suggests that the Roman roads may still have been important at this time: the estates at Dorstone and Llanllowdy (L.L. 72b, 165, 192; 163b, 192) lie on such roads, and others at Madley, Much Dewchurch, Llanwarne and Llangynfyl (ibid. 76a, 165, 200, 264a) lie relatively near to them. Roads are mentioned in the descriptions of the bounds of only two of these estates, that at Llanwarne (L.L. 200), where the road in question may have been the Roman road to Monmouth, and that of ecclesia Cum Mouric which, if correctly identified with Little Dewchurch (L.L. 170, Davies W. 1979B:107), lies some 4 kilometres from the same Roman road. In this part of the county, the most popular soils at this date seem those of the Bromyard, Middleton and Eardiston series, on which lay over 50% of the estates donated to the church; these were followed in popularity by the freely-drained soils of the Ross series and the leached brown soils of the Wootton, Castleton and Frog Moor series.

The frequency with which the various Roman roads coincide with, and were therefore presumably used to mark, parish boundaries, may also indicate the extent to which they remained in use in the post-Roman period. Some parishes in Herefordshire may have assumed, at a relatively early date, a shape closely resembling their later form. So, in a charter of 958 (Sawyer 677, C.S. III.1040), the Saxon manor of Staunton-on-Arrow appears to have boundaries approximately the same as those of the later parish (Rennell 1961:282-7), and such boundaries may date to a yet earlier period. Thus, in Herefordshire, Offa's Dyke is used as a parish boundary for only about 2 kilometres of its length, and, as this only represents some 8% of a potential length of about 25 kilometres, the Dyke does not seem to have formed a significant political frontier at the time when the parish boundaries
were established (Fox C. 1955:303). This may then suggest that the parish boundaries predate the Dyke as, were they to postdate it, they might be expected to respect such an obvious boundary marker. By comparison, the Roman roads in the county were followed by parish boundaries to a significantly greater extent: of some 235 kilometres of Roman road which have been traced within the county, about 29 kilometres, or 12.3%, are followed by parish boundaries. However, the proportion varies from road to road: 28.6% of the road which runs through Kenchester from east to west is so utilised, whereas the road which runs west from Weston-under-Penyard is completely ignored by the parish boundaries. The extent to which the different roads were utilised as boundaries may thus indicate the extent to which they were used in the post-Roman period, and it is interesting to observe, for instance, that the use of the road west of Kenchester as the boundary between the parishes of Staunton and Monnington coincides with the presence of these two place-names of a type which suggests that English immigrants found in this area cleared land on which to settle. Two early place-names in tun which also contain the element street, which indicates the presence of a paved, probably Roman, road in the area (Smith A.H. 1956:161-2), Stretton Sugwas and Stretton Grandison, provide further indication that such roads were in use at the time of the English settlement of the area, for both lie on Roman roads which are, for parts of their courses, utilised as parish boundaries; Stretton Sugwas lies on the road which runs from east to west through Kenchester, and which seems to have been particularly important in the post-Roman period.

So, the Roman occupation seems to have had some effect on the later pattern of settlement. Land cleared in the Roman period seems to have been favoured for settlement, though other land which had either never been cleared or else had suffered from woodland regeneration in the
early post-Roman period was also utilised, and some of the Roman roads seem to have continued in use in the post-Roman period, though the extent to which they were used may have varied in different instances. It is not clear whether the Roman fort sites continued to exert any attraction, though names in tun cluster around Leintwardine, apparently indicating continued occupation in an area which had apparently been popular for settlement from the Iron Age onwards. However, Kenchester, presumably the market centre, if not also the political centre, of the area in the Roman period, seems to have been abandoned in the post-Roman period in favour of Hereford, some 8 kilometres to the east, a site which seems also to have seen activity in the Roman period (Rahtz 1968:242-3): settlers may have been attracted here from Kenchester by the existence at Hereford of a ford across the Wye. The industrial settlement at Weston-under-Penyard seems to have declined in the post-Roman period, perhaps as a result of a decrease in the demand for iron after the Roman withdrawal.

As has been mentioned, in the Saxon period Herefordshire was not an autonomous unit, but formed part of a larger tribal grouping. Whilst Ewias and Archenfield remained in Welsh hands, the remainder of the modern county formed part of the territory of the group known in the 7th century as the Westerna or Western Hecani, assessed at 7,000 hides in the Tribal Hidage (Davies W. and Vierck 1974:231); by the 9th century they had come to be known as the Magonsaeta, or settlers in the district of Magona, now Maund, 11 kilometres south-east of Leominster (Finberg 1972B:217). Their territory seems to have been coextensive with the diocese of Hereford, extending from the Severn in the north to the Wye in the south, with Wyre forest, the Malverns and the Leadon south of Dormington forming their eastern boundary (Hillaby 1976:37). The Western Hecani seem to have formed a dependent administrative unit of the kingdom of Mercia: their first
recorded ruler, Merewohl, was the third son of Penda of Mercia (Finberg 1972B:217-9), and, after the death of his second son Mildfrith, by about 704-9 (Hillaby 1976:41), the kingdom seems to have fallen under direct Mercian rule (Finberg 1972B:223-4). Though later tradition associates the kings of the Western Hecani with the Shropshire area, and in particular with Much Wenlock, which lay within the territory of the Wrocensætana, as well as with Herefordshire (Davies W. and Vierck 1974:238), suggesting that both Shropshire and Herefordshire may at first have formed part of the same Mercian dependency whose precise extent is unknown, the implications of this later tradition do not correspond with the distinction drawn in the Tribal Hidage between the two separate units of the Westerners and the Wrekin-dwellers (Davies W. and Vierck 1974:238), though it may suggest that the territory of the Western Hecani at one time extended beyond the boundaries of the later county.

Herefordshire does not seem to have taken on its current form until the early 10th century at the earliest: it is nowhere mentioned as a shire until 1048 (Taylor C.S. 1957:24), though West Mercia was probably divided into shires by Edward the Elder in the later part of his reign (Stenton 1971:337). By this artificial division, which was carried out for administrative convenience and did not respect ancient tribal or diocesan boundaries, the ancient kingdom of the Magonsæta may have lost the land between the Severn and the Teme, including Much Wenlock, to Shropshire, and the area between the Wye and the Severn on the south to Gloucestershire (Taylor C.S. 1957:26), and will then have assumed the approximate form of the modern county, although its boundaries on the west were still fluid.

The establishment of the diocese of Hereford probably resulted from the policy of archbishop Theodore, first expressed at the synod of Hertford in 673, that more bishops should be consecrated to deal with
the increasing numbers of believers (Bede H.E. 4.5). At that date, England was still organised into only three large dioceses, and his intention seems to have been to divide it into a series of smaller dioceses organised on a territorial basis with due regard for existing political and tribal divisions (Hillaby 1976:43). By tradition, the diocese of Hereford was founded in 676 with Putta as its first bishop: this is in fact improbable (ibid. 17-22, 24-8), and the earliest bishop for whom there is firm evidence is Tyrhthel, circa 693 (C.S. I.85). The original ecclesiastical centre of the kingdom was probably Leominster, where the church was founded by Merewahl. The manor of Leominster which, at 80 hides, was one of the largest estates in Domesday England, may represent the remains of the personal domain of the princes of the Magonsaeta, with which they endowed their ecclesiastical foundations (Rennell 1963:306-7, 313-4); it probably originated in the lands of Merewahl, who seems to have made over many of his estates in the district to the abbey of Leominster on its foundation. As none of these estates lie in the district of Magana, in the centre of the kingdom, he may have retained any estates there for his personal use (ibid. 323). The reasons why the ecclesiastical centre of the kingdom moved to Hereford, where the church, apparently founded by Merewahl's son Mildfrith after the death of his brother Merchelm in the late 7th. century, was a cathedral at the latest by the episcopate of Wahlstod, 727-36 (Finberg 1972B:217, 219-223, Hillaby 1976:43), are not clear.

II.18: Domesday Herefordshire

While the evidence relating to the earlier Saxon period in Herefordshire is relatively scarce, consisting largely as it does of place-name evidence, Domesday Book provides some information pertaining to the later pre-Norman settlement pattern. Unfortunately,
this information is not as full for Ewias and Archenfield as for the rest of the county, for Archenfield remained a more or less autonomous Welsh district under the overlordship of the English king, whilst Ewias had only recently been conquered and must still have remained largely in Welsh hands (Atkin 1971:57, 111). Although the first objective of the Domesday survey was to record the situation in 1086, information relating to the situation in 1066 is also included, and it is in any case unlikely that there were any significant changes in the pattern of settlement in the first twenty years of Norman rule. So, although most of the old English townships became manors each under a lord, and although many of these lords were Norman, the settlements themselves had probably not grown much in twenty years, and few new settlements are likely to have been established; thus, the general pattern of settlement recorded in the Domesday survey is probably very similar to the settlement pattern of the late Saxon period (Sylvester 1969:119-20).

In 1086, there were within the area of the modern county 2,462 and a quarter plough-teams, and a recorded rural population of 4,450 men and 112 bondwomen; this recorded population is clearly incomplete, as in several instances unspecified numbers of men are mentioned (Atkin 1971:71-3), and the real population may have been of the order of 33,500 (for the potential difference between the real and the recorded population, see chapter 8). It seems that, at this date, the central plain was well settled, with villages set close together along the valleys, though becoming more widely spaced towards the hills; the general prosperity of this area is indicated by the density of the plough-teams and of the recorded population, which is in sharp contrast with the poorer areas to the west (Atkin 1971:107). On these criteria, the eastern plain and the Woolhope area seems slightly more prosperous again than the central plain (ibid 100). The low
populations of the western border and the north-western uplands in 1086 does not reflect geographical factors alone, but also the effects of border raiding (ibid. 108-9), although in the north of the county, an area not laid waste by the Welsh, the lower densities of population and plough-teams must reflect the broken topography and poorer soils of the Silurian uplands (ibid. 79-80). The greatest density of plough-teams, in the east of the county, averages 2 per square kilometre, decreasing to about one per 2.5 square kilometres in the west and one per 5 square kilometres in the badly ravaged north-west of the county (ibid. 77-8).

Despite the earlier clearances, and the substantial settlement recorded in Domesday Book, woodland seems to have been widely distributed in the county: the precise locations and sizes of these woods are uncertain, but they seem generally to be more frequent in the west, and there may have been a continuous belt of forest on the borders of Archenfield. However, there is far less woodland in Herefordshire than in the other border counties at the same time (ibid. 86-7), confirming the place-name evidence which, as seen above, suggests that clearance and settlement were widespread. Although in 1086 the area was depopulated relative to its earlier condition, as may be seen by comparing the distribution of named settlements on the one hand with that of the recorded population and plough-teams on the other (ibid. 64 fig. 23, 78-80 figs 25-7), this depopulation, especially apparent in the south and west, presumably results from recent border raiding. By 1086, much waste land in the western part of the county was already being reclaimed (ibid. 96-9 figs 32-4), but this reclamation did not yet correspond with the distribution of named settlements which extended into the foothills in the west, indicating the presence of a belt of temporarily deserted townships (Sylvester 1969:358).
So, late post-Roman Herefordshire saw changes in the earlier pattern of settlement. These changes were due in part to raiding and consequent depopulation in the west, and in part to the growth of the town of Hereford into a settlement which, despite the fragmentary nature of the evidence, seems to have been a flourishing defended town with a thriving commercial life, as indicated by the presence there in 1086 of seven moneyers (Atkin 1971:102-4). However, Hereford still seems to have been the only urban settlement in the county, as the only other boroughs recorded in Domesday Book were the Norman castles of Clifford, Ewias Harold and Wigmore: of these, Clifford was a small agricultural borough, and Ewias Harold seems to have been primarily a military stronghold (ibid. 102, 104-5). In general, the pattern of settlement in the later pre-Norman period and after the Norman conquest was probably very similar to that found earlier in the post-Roman period, a pattern of prolific rural settlement with frequent villages, where, though woodland was widespread in its occurrence, the individual woods were probably small and the greater part of the county would seem to have been settled and cleared for agricultural use.

11.19: Conclusions

The study of the patterns of settlement in Glamorgan, Caernarfonshire and Herefordshire suggests that, within these counties, different areas varied in their desirability. As might be expected, some unattractive areas were never settled: so, for instance, the alluvium by some Glamorgan rivers such as the Ewenni, Cadoxton, Ely and Rhumney seems to have been avoided at all periods, presumably for fear of flooding as well as because of the generally poor drainage of these soils, whilst in Herefordshire the poor soils of the Scethrog and Beacon series were also avoided at all periods. By
contrast, other areas were always attractive: in broad terms, the Vale of Glamorgan is such an area, presumably because of its generally desirable soils and climate, and within that general area the vicinities of Merthyr Mawr, Llantwit Major and Llancarfan seem to have been particularly popular. Surprisingly, however, some areas of good soils in the Vale appear to have been neglected at all periods, as for instance the areas around Rhoose airport and St. Athans, and the area south and east of Cowbridge: here, the absence of evidence of settlement seems surprising, and such evidence may yet remain to be found.

Other areas again were favoured at some dates rather than others: the factors governing their occupation in the different periods are various. Climatic factors were important: so, as has been seen, the Caernarfonshire uplands were, in the earlier Bronze Age, utilised in a way which, as a result of subsequent climatic deterioration, has never again been possible. Similarly, in the south, the uplands of Blaenau Morgannwg were only sparsely settled after the Bronze Age and, to their north, the higher ranges of the Black Mountain, which straddles the Carmarthenshire-Breconshire border, and of Fforest Fawr in Breconshire, seem to have been completely abandoned after the earlier Bronze Age. Differing population pressures must also have affected the pattern of settlement. However, it is not easy to tell from the settlement evidence how the sizes of populations of any particular periods differed from one another: the most obvious method might seem a comparison of the numbers of settlements dating to the periods in question, but this poses problems. So, for instance, in comparing the populations of the Iron Age and the Roman period, the defended sites which are assumed to belong to the Iron Age, being more conspicuous than the undefended sites of the Roman period, and indeed of the Iron Age itself, distort the picture: only excavation can determine whether
such sites were still occupied in the Roman period, or even whether their initial construction dates to the Roman period, as seems to have happened at Kilvey Hill, Llwynheiniarn (Morris B. 1968:24) or the post-Roman period, as at Dinas Powys (Alcock 1980:231-2). A comparison of the assumed Iron Age settlement sites in Glamorgan with those of the Roman period (other than military sites) might suggest that there were almost twice as many settlements of the Iron Age as of the Roman period, but this is unlikely to be a realistic reflection of the situation. Indeed, the expansion onto the soils of impeded drainage observed in Glamorgan and Herefordshire in the Roman period may have been prompted by an increasing population, and facilitated by the introduction of a more efficient plough (see chapters 8 and 9); it may alternatively reflect a process of denucleation, as their former occupants left the hillforts to occupy more scattered rural settlements, and in this latter case the amount of land in use may have remained approximately constant. However, expansion of the area of land in use at this period may be evidenced in other parts of Wales in the pollen diagrams which indicate the clearance of more land in the Roman period than hitherto, for instance at Llanllwch, Carmarthenshire, and Llyn Mire in the Wye valley (Thomas K.W. 1965:116, Moore P.D. 1978:296-7, 300), suggesting that population pressures were indeed active at this date. The part played by a more advanced technology in the exploitation of new areas in the Roman period is suggested also by the occupation, at that date, of the Wentloog and Caldicot Levels, apparently previously unoccupied, whose occupation was presumably made possible by drainage operations, probably in combination with the construction of effective sea-walls. The Goldcliff stone, which records the activity of a detachment of the legion from Caerleon in the Caldicot Level probably in the late 2nd. or 3rd. century, may relate to the construction of such sea defences,
but is later than the initial occupation of the settlements which it would protect, whose occupation seems to extend from the late 1st. to the late 3rd. century ( Nosh-Williams 1952A:254-5, Barnett 1964:12-13, Boon 1968A:121-6 ), and may equally well refer to the construction of a small fort or signal station ( Knight J.K. 1964:35-6 ), a boundary work intended to distinguish the *prota legionis* from the territory of the *civitas Silurum*, or perhaps a drainage work ( Boon 1968A:126 ).

The occupation of some other areas which were settled only in some periods may have been due to external stimuli independent of climatic change and population growth. So, the location of Roman forts was governed primarily by strategic and tactical considerations, constraints quite different from those which influenced the location of farming settlements: some, such as the fort at Loughor, occupied positions which seem very poor if viewed in terms of their agricultural potential. Nonetheless, these forts attracted civilian populations which settled at their gates because the garrisons formed markets for the goods and services which they could provide. The growth of such *vici*, and of other settlements whose location was influenced by factors such as proximity to the road network or to mineral sources, or by their roles as administrative centres, introduced or developed the concept of settlements reliant on trade or industry rather than directly dependent on the land, and the availability of good land thus lost its over-riding importance in determining the location of settlement. With the withdrawal of the Roman army, and the collapse of trade networks, such sites were probably abandoned, or were occupied by much smaller populations such as could be supported by the agricultural resources of the immediate environs alone. The pattern of settlement may thus have resumed something more closely resembling its pre-Roman form, though the role of the Iron Age hillfort does not seem to have been assumed by any
other form of settlement at this date, and the soils of impeded drainage may have continued to be more fully utilised than in the pre-Roman period as a result of the introduction of a better plough. The resulting pattern of settlement may have continued little altered, save by the occupation of some isolated and generally undesirable locations by religious men in search of solitude on mountains and islands or in small clearings in forests (see chapter 7), until it was again distorted by the foundation in the Marches in the early 10th century of the burhs which were intended to act as fortified markets and centres of royal administration (Sawyer 1978:194-5).
12.1: Introduction

This chapter surveys the evidence which relates to the society of the region throughout the period under study, drawing upon literary and archaeological evidence to provide the fullest possible picture of this society. As evidence relating to Wales and the Marches in the Iron Age is scanty, the literary evidence pertaining to the society of Gaul, and of Britain as a whole, at that date is first summarised, and that relating to early Ireland then reviewed: though the latter strictly relates to the Early Christian period, the archaic nature of Irish society, and its many parallels with that of Iron Age Gaul, together with the island's freedom from Roman occupation, seems to justify the inclusion of this evidence in this context. The archaeological evidence for the nature of Iron Age society in Wales and the Marches is then considered, and related to the literary evidence. Such changes as are likely to have been brought about in the existing social order by the Roman occupation are then assessed, and the forms subsequently assumed by society in the post-Roman period examined.

12.2: Society in Iron Age Gaul: the Literary Evidence

The earliest literary evidence which deals with Celtic society describes the continental, and to a lesser extent British, Celts as seen by the Greeks and Romans; it is thus potentially distorted by the classical interpretation. Nonetheless, the eye-witness account of Caesar at least should not be too readily dismissed (Nash 1976:120-6). Caesar indicates that there were in his day two main classes in Gaulish society, the aristocracy, composed of the Druids and equites, on the one hand, and the commoners on the other (B.G. 6.13); the
Druids and equites seem to have differed from each other only in function, and not in social status. Social, political and religious life was controlled by this aristocracy alone (ibid. 6.13-15). If it may be assumed that, in time of war, the equites provided the cavalry for the army, as their name would suggest, while the commoners formed the infantry, and if the figures supplied by Caesar for the cavalry and infantry in the Gaulish army at Alesia are accurate and reflect the normal situation, then the equites, excluding the druids, may have stood to the population of fighting men at large in a ratio of no more than one to ten (B.G. 7.64.1, 76.3, 77.8; Jullian 1914:190, Wightman 1975:589).

Originally, political power probably resided primarily with kings, though by the conquest period they seem to have been largely supplanted in central Gaul, which, as the area most open to Roman influence via the province of Gallia Narbonensis, seems to have been moving away from monarchy towards a more widely based form of government. Strabo indicates that most tribes there were governed by aristocrats and chose a chief magistrate annually (4.4.3), and Caesar more specifically states that the Aedui had a chief magistrate called a Vergobret 'qui creatus annus et vitae necisque in suos habet potestatem' (B.G. 1.16.5). It is clear that there should be only one Vergobret at any one time, for the existence of two claimants to the position caused such consternation and strife that the principes Aeduorum came to Caesar for his assistance because 'cum singuli magistratus creari atque regiam potestatem annum obtinuere consuussent, duo magistratum gerant et se uterque eorum legibus creatum esse dicat' (ibid. 7.32.2-3). However, the Lexovii may have had two magistrates who bore this title simultaneously, for they issued coins with the legend 'Vercobreto Cisiambos Cattos', Cisiambos and Cattos apparently being personal names in the nominative, and
Vercobretas perhaps a dual form (Allen D.F. 1963:30). Amongst the Carnutes, the ancestors of Tasgetius had been kings, a position which Tasgetius himself did not enjoy until restored to it by Caesar (B.G. 5.25.1-2). As no reference is made to the deposition of any other ruler to make way for Tasgetius, kingship had probably been abolished amongst the Carnutes, and the assassination of Tasgetius, apparently with the approval of many members of the tribe, within a few years of his elevation (ibid. 5.25.3) may be compared with the death of Vercingetorix' father, one of the Arverni of Central Gaul, who 'principatum Galliae totius obtinuerat et ab eam causam, quod regnum appetebat, ob civitate erat interfectus' (ibid. 7.4.1).

Thus, in Central Gaul, magistrates may generally have come to replace kings by the eve of the Roman conquest, and, though kings were still found in Caesar's day in the peripheral areas of Aquitania and Gallia Belgica (Grenier 1945:183), in some cases at least their power may also have been weakening. So, in the conquest period, the Eburones of Gallia Belgica were ruled by Ambiorix and Catuvolcus (B.G. 5.24.2): if they were kings, they would seem to have shared a dual kingship. Ambiorix' statement that 'suaque esse eiusmodi imperia, ut non minus haberet iuris in se multitudo quam ipse in multitudinem' (ibid. 5.27.3) may suggest that the power of kings, if such he was, was weakening in this area, but it should not perhaps be taken at face value, forming as it does his excuse for having attacked a Roman camp. Only one ruler mentioned as such by Caesar, Adiutunnus of the Sotiates in Gallia Aquitania (B.G. 3.22.1), if he is the same as the Adiituanus of the coins, is known to have styled himself REX on his coinage: other rulers whom Caesar termed kings issued coinages which did not bear titles, and in general the persons named on Gaulish coins seem to have been leading citizens rather than kings. This contrasts with the situation in Britain, where a higher proportion of the
persons named on the coins are termed 'rex', or the Celtic equivalent (Allen D.F. 1976:206). At the same time as the power of the kings in Gaul seems to have been declining, the archaeological evidence suggests the emergence of a middle class of artisans, merchants and possibly bureaucrats (Crumley 1974:72): their appearance may have been hastened by the stimulus of increased trade with the Mediterranean world consequent upon the Roman annexation of Gallia Narbonensis in 121 B.C.

Clientage formed the basis of Celtic social and political organisation. The earliest reference to the institution is that of Polybius, writing in the 2nd. century B.C. of the 4th. century Celtic invasion of Italy: he states that, amongst the Celts, the man who had the greatest number of attendants and followers was considered the most powerful (2.17.12). Similarly, Caesar says of the equites of Gaul 'eorum ut quisque est genere copiisque amplissimus, ita plurimos circum se ambactos clientesque habet. Hanc unam gratiam potentiamque noverunt' (B.G. 6.15.2). Some of the devices by which such popular favour might be won are indicated in the story of the Arvernian Louernios who, in the 2nd. century B.C., rode his chariot across the plains distributing gold and silver broadcast, and who built an enclosure reputed to be 12 stades, or about 2.5 kilometres, square which he filled with food and drink so that all who wished might enter and feast (Athenaeus 4.152, cf. Strabo 4.2.3). Similarly, Ariamnes set up booths, each capable of holding 400 men or more, at intervals along the major highways, and set in them cauldrons of meat and casks of wine, offering a year's free feasting for all (Athenaeus 4.150). Members of the nobility were thus free to challenge the position of any other noble by providing superior hospitality and by warfare, both being intended to attract and maintain a large retinue; the possession of wealth for use in warfare and feasting must then have been a
central preoccupation of the Celtic nobility (Nash 1978:468). The ability to maintain such dependents was critical: so, Caesar says of Dumnorix 'magnum numerum equitatus suo sumptu semper alere et circum se habere' (B.G. 1.18.5), and this armed retinue would surely have dwindled rapidly had Dumnorix' ability to sustain it been reduced.

Dumnorix' influence was not limited to his own tribe, the Aedui: by means of careful marriage alliances, it had been extended to neighbouring tribes also (ibid. 1.18.6-7). Inter-tribal relations seem generally to have formed a natural extension of internal patron-client relationships. Some tribes are actually described as the clients of others (for instance, 'Aeduis atque eorum clientibus, Segusiavis, Ambluaretis, Aulercis Brannovicibus, Blannoviis...', B.G. 7.75.2), others as being habitually under the authority of a more prominent tribe ('...Eleutetis, Cadurcis, Gabalis, Vellaviis, qui sub imperio Arvernorum esse consuerunt', ibid. 7.75.2, cf. 5.39.1) or in their trust (so, the Senones 'adeunt per Aeduos, quorum antiquitus erat in fide civitos', ibid. 6.4.2). At the tribal level, such client relationships may have been achieved by marriage alliances, as in the case of Dumnorix, or by promises of protection, or by other means: so, for instance, the use by the Arverni of bribery to bring the Aedui over to their cause (ibid. 7.37.1-6) may indicate that the more powerful tribes commonly bargained in this way with lesser groups in order to gain their allegiance or to win some economic advantage (Crumley 1974:24).

12.3: Society in Iron Age Britain: the Literary Evidence

Many of the features seen in Gaulish society in Caesar's day and earlier may have survived in Britain until the Claudian conquest. At the time of both Caesar and Claudius, Britain was under the rule of kings: Caesar found Kent ruled by four kings ('Cantium...quibus
regionibus quattuor reges praeerant': B.G. 5.22.1 ), while, later, a Claudian inscription records the reges Brit[anniae] XI who were conquered by Rome in the 1st. century A.D. ( I.L.S. 216 ). Diodorus Siculus, writing in the 1st. century B.C., and Cassius Dio, writing of the Claudian conquest of Britain, also refer to the number of kings to be found in Britain ( D.S. 5.21.6, C.D. 60.20.1 ). Their testimony is supported by internal evidence: in the early 1st. century A.D., Epillus and Verica styled themselves REX on their coinages, perhaps using the title to indicate that they had become client kings of the type 'reges a populo Romano appellati', while Tasciovanus' use on his coins of the Celtic equivalent of the title, RICOMUS, may have been intended to stress his own British allegiances ( Stevens 1951:340-1 ). In addition to the kings known from the pre-Roman coinage, others survived the conquest to become client kings of the Romans: of these, the best known are Prasutagus of the Iceni, whose death precipitated the Boudican revolt of A.D. 60 ( T.A. 14.31 ), and Cogidubnus, the rex magnus to whom the Romans entrusted 'quaedam civitates' ( T.Agr. 14.2, R.I.B. 91, Bogaers 1979:245 ). Some of the British kingdoms, such as the four kingdoms of Cantium implied by Caesar’s reference to the four kings of that region ( B.G. 5.22.1 ), must have been very small: the four kingdoms of Kent may together have formed a loose federation. Similarly, in the 1st. century A.D., the very large kingdom of the Brigantes may have comprised a federation of at least twelve subdivisions. The names of one, or perhaps two, of these subdivisions, the Setantii and the Gabrantovices, are recorded by Ptolemy ( Geog. 2.3.2, 4, Richmond 1954:44-6 ), though it has been argued that the Gabrantovices formed a sept of the Parisi rather than of the Brigantes ( Ramm 1978:21-2 ). The Lopocares, who seem to lie around Corbridge ( Rav. Cosm. 107.18, Rivet and Smith 1979:322-3 ), and the Carvetii of the Upper Eden
Valley (Wright R.P. 1965:224, R.I.B. 933), may also have formed subdivisions of the Brigantes. These smaller units seem themselves to have been kingdoms, united under an over-king who was himself the king of one of these smaller kingdoms (Charles-Edwards 1974:35, 39).

As on the continent, the power of the kings may have been beginning to weaken at least in some parts of Britain by the Roman conquest for, according to Tacitus, the British 'olim regibus parebant, nunc per principes factionibus et studiis trahuntur' (T.Agr. 12.1): this, however, may reflect the appearance of Celtic kingship to one who was perhaps more accustomed to oriental concepts of monarchy. Other evidence on this point is not clear. The coins of the Coritani have been interpreted as indicating a system of dual magistrates (Cunliffe 1974:308), but such magistrates may have been moneyers rather than tribal rulers (Allen D.F. 1963:29-32); alternatively, the coins may indicate the practice of dual kingship, or the issuing of coins by a lesser king with the approval of his over-king. It has also been suggested that the rapid succession of names seen on the coinages of the Dobunni and Iceni may indicate the presence of rulers elected for a fixed term of office (Cunliffe 1974:308), though they may equally indicate political instability within the tribes in question without any deliberate change of constitution: so, in the later Iron Age, the Dobunni seem to be divided into two parts, each with its own ruler who issued his own coinage to serve that part of the tribe which he ruled (Webster G. 1980B:60). The coinage of Tasciovanus of the Catuvellauni also bears names other than his own, and some at least of these display some localisation within the tribal area (ibid. 50-1), suggesting that the Catuvellauni may also have formed a confederacy of smaller groups which were not firmly welded into one tribe until the late 1st. century B.C. when they were united under the strong leadership of Tasciovanus (Todd 1981:48-9), yet retained their local
rulers. So, though the power of the kings may have been weakening in some parts of Britain by the mid 1st. century A.D., this is not certain: moreover, if the more advanced states of the south-east, such as those of Kent, were ruled by kings in Caesar's day, a similar type of organisation is likely to have continued in the more remote and backward areas such as Wales and the north for at least another century.

Though there is less evidence concerning the lower grades of society in Britain than in Gaul, the same division into nobles and commoners is likely to have applied. Druids existed in Britain as in Gaul: indeed, in Caesar's day it was believed that the druidic doctrine had been introduced to Gaul from Britain, and those Gaulish druids who wished to pursue their studies further normally returned to Britain to do so ( B.G. 6.13.11 ). In the mid 1st. century A.D., there seems to have been a druidic centre on Anglesey ( T.A. 14.29 ).

Polygamy seems to have been practised at least in south-east Britain for, according to Caesar, the Britons 'uxores habent deni duodenique inter se communis, et maxime fratres cum fratribus parentesque cum liberis; sed qui sunt ex eis nati eorum habentur liberi quo primum virgo quaeque deducta est' ( B.G. 5.14.4 ). It is not clear whether this was similar to the polygyny which seems to have been practised in Gaul ( 'cum paterfamilias...decessit...de uxoribus...quaestionem habent': B.G. 6.19.3 ), and is seen later in early Ireland, where a distinction could be drawn between a man's chief wife and the rest: the chief wife had a higher standing and greater privileges than the other wives, although they were also recognised by law, as indeed were the various grades of concubine whose position was open and established ( Power 1936:84, 94-9 ).
12.4: Early Irish Society: the Literary Evidence

Although the literary evidence relating to society in early Ireland dates to the Early Christian period, the society which it depicts appears to contain features paralleled in Iron Age Gaul and Britain. Irish society seems to have been archaic, and the law tracts, which first assumed a definitive form in the early 7th century, appear to preserve a record of a much earlier period (Binchy 1970:2). Such Irish evidence may thus cast some light upon early society in Britain.

In Ireland, the primary political unit was the tuath. This term, literally meaning 'a people', is also by definition a kingdom, as indicated by the legal maxim 'that is no tuath that has no king', and thus refers primarily to the people of a small kingdom (Byrne 1973:31, Charles-Edwards 1972A:115). Each tuath was a purely territorial unit, formed of a group of kindreds who inhabited a particular area and were bound together by subjection to the same tuath king or ri, but not by descent from a common ancestor, nor by common land-ownership (Binchy 1970:7-8). The small kingdoms or tuatha were very numerous: the 12th century Book of Rights, which preserves earlier territorial divisions, indicates that there were 97 tuatha in 10th century Ireland (MacNeill E. 1924:272, Dillon 1975:105), and the number of kings, each ruling such a tuath, found in Ireland between the 5th and 12th centuries may have risen as high as 150 (Byrne 1973:7-8). Clearly, the tuatha were very small in area, ranging on average from perhaps about 550 to about 850 square kilometres in extent. Because of this, each king, with the aid of only a few officers, could exercise the very limited functions of government in person, without resort to intermediate bodies (Binchy 1954:59). The tuath kings formed a hierarchy: each king was in essence only the ruler of his own tuath, and exercised no direct authority outside it (Byrne 1973:41), but he might also be the
overking of a group of tuath, and a number of such groups might then be united under a 'king of overkings'. The unity of these groupings was created by the personal submission of the subject king to the overking, who did not displace the king of the tuath (Charles-Edwards 1974:35-6).

It has been suggested that this pattern of small, loosely-connected tribal kingdoms is late rather than early in date. So, the Ireland described by Ptolemy, drawing presumably on sources dating to the 1st century A.D., seems to have been divided into only sixteen tribes (Geog. 2.2.2, 4, 6, 8) rather than into the hundred or so tuath seen later, whilst tradition stresses the great extent of the provincial kings' power in the past: this, together with the substantial size of some of the Iron Age hillforts, may imply the existence of a more highly organised and centralised authority at that date than in the Early Christian period (Byrne 1971:135). As the majority of the hillforts were probably deserted by the middle of the first millennium A.D., though a few remained in use later (Raftery 1976:353), it has been suggested that, at the date when most were abandoned, prehistoric society collapsed and fragmented into a vast number of smaller kingdoms (Byrne 1971:135). However, in view of the probable primary position in western Indo-European society of the *teuta ruled by the *reg-s (Binchy 1970:6-7), it seems more likely that the larger hillforts and traditions of great power may reflect the pre-eminent positions which could be attained by some 'kings of overkings' within a system similar to that attested in the Early Christian period.

Substantially the same legal rules seem to have been common to all tuatha (Binchy 1970:5), though they were valid only between members of the same tuath. Thus, a man was only a freeman enjoying full legal rights within the tuath in which his kindred held its land: outside
it, he lost his political and legal status, and became a stranger, exile or outlaw (Byrne 1971:132-3, Charles-Edwards 1972A:115-6). Problems thus arose when marriage took place across ūth boundaries, especially when a man moved to his wife’s ūth rather than vice versa: he was regarded with contempt and depended for his status upon the status of his wife (Charles-Edwards 1972A:116). The same situation seems to have been found in Wales, where the technical legal term used of an exile or foreigner, alltud, contains the word tud, cognate with the Irish ūth, and means literally ‘a man from another tud’. In Wales, too, the alltud’s wife remained a member of her own kindred, and not that of her husband, and her children inherited land and status as members of her, and not their father’s, kindred (Ior. 86, Charles-Edwards 1972A:116).

The free members of each Irish ūth were divided into three grades, reminiscent of the divisions seen in Gaulish society in Caesar’s day: the grades were those of nobleman, seer and aithech or ‘rent-payer’, the commoner who cultivated the land (Dillon 1975:96). Clientship was important, in Ireland as in Gaul. The freeman was usually bound in clientship to the noble who, in return for renders of food and some unpaid labour, would supply his client with a grant of land or livestock, and offer him protection against powerful neighbours; by an alternative aristocratic form of clientship, the client seems to have owed his patron homage and personal services without supplying him with food renders (Dillon and Chadwick 1973:128, Charles-Edwards 1971:32, 35). As the free clients seem only to have undertaken harvest work for their lord, the bulk of his labour was presumably drawn from the semi-free and from slaves (Charles-Edwards 1971:35). Clientship seems to have formed the basis of the nobleman’s prosperity and social status; it also formed a means of using a surplus to his benefit in an undeveloped economy. So,
according to the 8th. century law tract, the Crith Gablach, the Fer fothlai is defined as the man who gives the surplus livestock which his own land cannot bear, which he cannot sell for land, and which he does not himself need, in capital to acquire clients (C.G. IV.316, MacNeill E. 1924:293).

In early Ireland, a man's status was closely dependent upon his property, and the property of the different grades of free men and nobles is defined in the Crith Gablach. Of these, perhaps the most interesting is the boaire or mruigfer, the 'normal' freeman, who, as the possessor of a full plough-team and of the land which went with it (C.G. IV.310, MacNeill E. 1924:291), was capable of economic independence, whereas men of lesser status had to enter into joint ploughing arrangements with others or to hire ploughteams (Charles-Edwards 1971:53). A man could apparently be deprived of the status of boaire if his kindred lacked the land and stock to maintain it: so, the Crith states that, if four or five men were in joint heirship to a boaire, each of them could not easily be a boaire (C.G. IV.308, MacNeill E. 1924:290), presumably as, by the time the property which they inherited had been shared between them all, each man's share was too small to bring him into the boaire class. In the 7th. century, this system changed, apparently as a result of population growth which presumably predated the plague of 664 in which two-thirds of the population of Ireland was said to have died (Stokes and Strachan 1903:298-9, Charles-Edwards 1971:58-9): new classes of freeman were created with smaller property qualifications than that of the boaire so that, whereas hitherto kindreds which had been unable to provide their members with the property necessary to maintain the rank of boaire had become semi-free, after the 7th. century changes even a man with no land at all might remain a freeman (Charles-Edwards 1972C:8-10).
The Crith's statement that the 'normal' freeman should own 21 cumals, or about 290 hectares, of land (C.G. IV.310, MacNeill E. 1924:286-7 n.2) suggests that he would have had to draw upon labour from beyond his immediate family to work his lands, and thus presumably had free or semi-free dependants (Charles-Edwards 1972C:14). While it was the possession of a minimum holding of land which distinguished the 'normal' freeman from lesser men, it was the possession not of more land but of base clients which transformed the freeman into a lord (Charles-Edwards 1971:191-2); so, the lowest grade of lord, the aire desso, had five clients of vassalage and five free clients, the next highest ten of each, the next twenty, and so on (C.G. IV. 322, 325, 328, MacNeill E. 1924:296-9), and it has been suggested that these vassals would originally all have been 'normal' freemen (Charles-Edwards 1972C:18).

In addition to the noble warrior class on the one hand and the free and semi-free commoners on the other, there was a third class, the aes dana or skilled and learned class, which included men such as poets, jurists, physicians and other skilled craftsmen: these enjoyed special privileges, and their status was not determined by birth. They were protected by legal custom even outside the boundaries of their own tuath, and some of their privileges and functions seem to have been inherited by the clergy (De Paor and De Paor 1967:74); so, for instance, the Irish bishop was equal in status to a king (Hughes K. 1966:134-6).

Beneath these classes were the slaves whose existence is indicated both by the testimony of St. Patrick (Conf. 1.35) and by the slave gang-chains found at Lagore, some of which are certainly pre-Viking in date and seem to belong to the mid 7th century or earlier (Hencken H. O'N. 1951:6, 115-7). Moreover, the law tracts of the 7th. and early 8th. century refer to three units of currency or value, in ascending
order of value the sack of grain, the cow and the cumal or female slave (Charles-Edwards 1972:253).

12.5: Iron Age Society in Wales and the Marches: the Archaeological Evidence

It is clear that many details of the social structure such as are revealed by the literary evidence relating to Gaul and Ireland can never be disclosed by archaeological evidence alone: in this category fall, for instance, the probably very important role of feasting and display in the maintenance of status and patron-client links, and the creation of clientship by grants of land and stock. Nonetheless, the archaeological evidence, which may itself offer information of a different sort, may also become more suggestive if viewed with information such as that gleaned from the literary sources in mind.

In general terms, the size of the settlements of the period, and of the individual buildings which they contain, may provide some indication of the sizes of the units into which society was divided. The extent to which this approach may be carried has been demonstrated by Clarke in his reappraisal of the early excavations at Glastonbury. This analysis suggests that the Iron Age village there may have comprised a number of self-sufficient units, each averaging some fifteen to twenty persons, and probably representing an extended family of a man, his wife or wives, his unmarried children and his sons and their wives and children; the maximum population of the village itself seems about 120 (Clarke D.L. 1972:827, 830, 839).

Though the general level of wealth seems relatively uniform throughout the settlement, and the kin-groups were probably of broadly equal status, one unit seems slightly wealthier than the others, and may represent the residence of a ‘headman’ and his household. Two other family units, the poorest on the site, lacked the independent means of
production, the iron tools, workshops and draught animals with which all the other units were equipped, and may thus have been the dependants of the 'headman', whose household had a larger stable than the others, as well as a spare plough-beam and a workshop turning wagon parts (ibid. 833-7). Here, therefore, may be seen the workings of patronage in a form similar to that seen in the Irish literature. Each pair of familial houses apparently held in common a minor 'female' house, and it has been suggested that this may indicate the practice of polygyny of the type which Caesar mentions as found in the Britain of his day (B.G. 5.14.4, Clarke D.L. 1972:816-7, 847). In view of the enlightening nature of these suggestions, it is unfortunate that very few settlements in Wales and the Marches have been totally excavated, as this seems a necessary preliminary to such detailed analysis and evaluation: the conclusions which may be drawn from the archaeological evidence concerning society west of the Severn are therefore more general in nature.

When compared in simple terms, the size and type of settlements does not seem uniform throughout the region. Small defended or enclosed sites whose internal area is less than 1.2 hectares are considerably more common in the western than in the eastern half of the region. So, whereas in Herefordshire 90% of the 33 measurable hillforts are greater than 1.2 hectares in internal area, and the average area enclosed is 5.23 hectares, in Cardiganshire 82% of the 73 measurable sites and in Pembrokeshire 92% of the 166 defended sites whose area is known are less than 1.2 hectares internally; in Pembrokeshire, 88% of those are under 0.7 hectares, the overall average size being 0.6 hectares. Whilst it has been suggested that some of these small sites are the product of Irish immigration in the post-Roman period (Hogg 1972A:16), there is no clear evidence for this: of the few sites which have been excavated, some, such as
Merryborough Camp and Trelissey, were certainly occupied in the Roman period and may have originated earlier (Crossley 1966:115-7, Thomas W.G. and Walker 1960:296-303), whilst the most extensively excavated site of this type, Walesland Rath, is certainly Iron Age in origin (see chapter 3), and Bayvil Gaer, where VCP has been found (James H.J. 1979:46), would also seem to be so. There is therefore no reason to attribute such sites to the post-Roman period, and no certain evidence even that such enclosures were still built in the Roman period: such evidence as is available suggests an Iron Age origin for the type.

Evidently, then, the very different sizes of settlements in Herefordshire and Pembrokeshire suggest differences in the social or economic organisation of the two areas in the Iron Age. This in turn may reflect the relative fertility of the two areas, Herefordshire being capable of supporting the greater population grouped in larger nucleations. If it is assumed that all defended sites in both areas were occupied simultaneously in the later Iron Age, and that all fulfilled similar functions and so represent the same head of population per hectare enclosed, neither of which, it must be emphasised, need be true, it would seem that, in Pembrokeshire, the resources of a greater area may have been required to feed the same population: there, each hectare enclosed is matched by an average of 16 to 17 square kilometres of land outside the defended settlements, as opposed to only about 13 square kilometres of land per hectare in Herefordshire. However, despite the proliferation of small defended sites in all the coastal areas of Wales, where they outnumber the larger sites, the total area enclosed by the few large hillforts generally much exceeds that enclosed by all the smaller sites put together, the only exceptions to this being north, and possibly south, Pembrokeshire. Thus, although the most common settlement type in the
west was probably the single homestead, if the population of a settlement is directly related to its size, then the majority of the population may have lived in fortified villages (Hogg 1972A:14).

The small defended sites which are common in the coastal regions of Wales may have housed single families or extended family groups, perhaps sibling groups or large polygynous families. The small defended site of Walesland Rath may in its earlier Iron Age phase have provided as much as 430 square metres of living accommodation, perhaps housing a population of 17 to 28; in the later Iron Age phase, however, this population may have fallen to between 8 and 15 (see chapter 3). The stone-built enclosed homesteads of north-west Wales, whose internal plans are often visible without excavation, may generally have housed nuclear or extended families, ranging in size from five persons or fewer to ten or more (Smith C.A. 1978:42-9). However, any such estimates are very tentative, especially in view of the extreme scarcity of artefacts throughout most of the region, as the uses to which the different buildings may have been put are largely conjectural, and the density of occupation which was acceptable to the inhabitants is unknown.

The defences with which many sites were equipped may themselves have been significant in social terms. At some small sites, the defences seem only to have been strong enough to keep animals in or out, and this may have been the only purpose for which they were intended: nonetheless, such apparently slight defences were sometimes teamed with elaborate entrances, as at Walesland Rath (Wainwright 1971:52-62), whilst other sites such as Mynydd Bychan and Carreg-y-llam have disproportionally strong defences whose construction seems too great a task for their inhabitants alone (Savory 1954B:92-4, 101-2, Hogg 1957:48-51). In such cases, and especially at Carreg-y-llam, the element of display was clearly important (Hogg 1957:54).
Possibly, then, these sites housed a section of the population to which others owed allegiance and labour: it has been suggested that the fort at Harding's Down West, where large defences surround a small site which seems only to have contained one hut platform, housed aristocrats served by a peasantry which lived outside the fort in dwellings which have as yet escaped detection (Alcock 1979:137).

The strength of the defences was clearly also important to the builders of the larger hillforts: in particular, some of the Herefordshire hillforts are remarkable for the regular maintenance of their defences, their elaborate and strongly defended entrances, and their use of guard-chambers, all of which suggest the existence of a highly organised society directed by some coercive power which ensured that the community invested some of its surplus in this way (Cunliffe 1976B:136-8). The society which constructed such defences may have borne some resemblance to the warlike society depicted in early Irish literature in the tales of the Ulster Cycle (see, for instance, Kinsella 1970); in such a society, the possession of strong and well-maintained defences, essential for security, may also have conferred considerable prestige.

In some cases, the degree of organisation implied by the hillfort defences is also suggested by the internal plans of those sites which, as they display a considerable regularity, suggest a high level of social and economic organisation (Guilbert 1975B:203). If accepted, Stanford's reconstruction of the internal plan of Croft Ambrey (Stanford 1974A:126, fig. 60) would imply that the interior was uniformly occupied by evenly-spaced huts all of very much the same size and type. Such planning is apparently seen in the early Iron Age village of Biskupin in Poland, where a substantial proportion of the interior was excavated and about 100 huts, all of the same size and design, were found in a regular planned arrangement (Kostrewski
1938:312-3). At Croft Ambrey, however, only 3.5% of the hillfort has been excavated, whereas total or near total excavation would be required to ascertain that the pattern of building was indeed uniform throughout, and that no superior residential area or palatial structure existed elsewhere within the defences. If such a structure were found, it would still seem impossible to ascertain whether it formed the administrative centre of an egalitarian society or a princely residence in a stratified society (Guilbert 1975B:210-1). Alternatively, a superior social group may have differed from the rest of the community not in the type or size of the individual buildings which it owned but in their number: it may then have lived in less crowded conditions than the less fortunate, or used the extra buildings to house retainers or to store goods. Unless such buildings were fenced off in some way from those belonging to the rest of the community, it could prove impossible to distinguish the different tenurial patterns. So, although the smaller enclosure within the hillfort on Conway Mountain may have housed a superior group (see chapter 3), the huts which it contained were of the same type as those found in the remainder of the fort (Griffiths and Hogg 1957:52-62).

Whilst internal planning is absent, or apparently absent, in other hillforts, the communities which lived there need not have been less well organised than those which inhabited sites which display well-ordered internal plans. Some sites such as Moel Hiraddug and the Breiddin are topographically unsuited to the application of a regular plan and, though the sites may have been laid out under the same social conditions as a planned settlement such as Moel-y-gaer, these circumstances cannot therefore be reflected in their plans (Guilbert 1977:41). Other sites whose lay-out may originally have been planned may have been occupied for so long, with so much
rebuilding, that their initial plans may have been obscured (Guilbert 1975B:210).

It seems unlikely that Iron Age society in western Britain was egalitarian in nature, since the literary evidence indicates that kings were to be found in the late pre-Roman period even in the most advanced south-eastern parts of Britain where, if anywhere, one might expect to see the emergence of elected magistracies of the type found in Gaul. In Wales and the Marches, one might then expect to find a number of kings or chieftains ruling small kingdoms and perhaps commanding the allegiance of a warrior aristocracy. Such kings and aristocrats may have demonstrated their status by means other than the sizes of their dwellings: the archaeological and literary evidence suggests that the possession of fine weapons and other decorative metalwork (C.G. IV.310, 322, 326, MacNeill E. 1924:291, 297, 299), of chariots and the ponies to draw them, of large numbers of cattle and dependants, and the provision of lavish feasts and entertainments may all have served this function. The archaeological evidence suggests that fine articles of military equipment and horse and chariot trappings were more important later rather than earlier in the Iron Age (see chapter 3 and Appendix 2), suggesting the existence of a warrior aristocracy at that date at least. These late Iron Age warrior goods seem to concentrate in two main areas, in the north-west, as indicated by the Llyn Cerrig Bach and Tal-y-llyn hoards, and the south-east, with the Lesser Garth Cave and Seven Sisters hoards; these are the areas which seem later to have offered the greatest resistance to the Romans (see chapter 4). Whilst wealth and status could be displayed by the possession of such fine metalwork, it could also be demonstrated by the maintenance of large numbers of clients and the provision of lavish feasts such as those given by Lavernios and Ariamnes, and later depicted in the Gododdin (C.A. XXI, Jackson
1969:125 ) and in Irish heroic literature, which tells, for instance, of Bricriu’s year-long feast ( Henderson 1899 ). Such displays, though probably very important in Celtic society, need leave little archaeological trace for, as indicated by the cases of Louernios and Ariamnes, temporary open-air enclosures rather than large permanent buildings may have been used for such feasting.

The upper, warrior, class must have been supported by a substantial food-producing element which probably formed by far the greater part of the population; finds such as the ploughshares from Walesland Rath ( see chapter 9 ) may suggest that the two classes overlapped to some extent. As in Gaul and Ireland, the learned and skilled class may have been more closely identified with the warrior class than with the food-producing commoners. There may, however, have been two categories of craftsman, the particularly highly skilled specialist and the more commonplace worker who was also a farmer: ethnographic parallels suggest that this organisation may have applied at least to smiths, with a general local smith who produced common tools and weapons and a specialist smith who produced fine weapons and other luxury goods and who may have been attached to a high-status group ( Rowlands 1972:210-1 ). As the demand for the ordinary smith’s products fluctuates seasonally, he may rarely have been fully employed as a smith, but may, at agriculturally slack times of year, have produced the large numbers of similar implements which often appear in hoards ( ibid. 212-3 ). The Seven Sisters hoard, perhaps deposited on the site of a native farmstead where a smith may have had his workshop ( Davies J.L. and Spratling 1976:139 ), may indicate the presence of a smith of this type. Most smiths were probably sedentary, serving several small centres of population, though the range over which their goods might be traded or otherwise dispersed would vary in accordance with their skills ( Rowlands 1972:218-220 ). However, some specialist smiths may
have travelled in search of custom: although there is little specific evidence of an 'itinerant smith' organisation in Iron Age Britain, the Worms Head mould, of perhaps the 3rd. century B.C., which is continental in style and yet is made of local South Welsh sandstone ( Savory 1975B:170-2 ), may indicate some such activity.

At the bottom of the social spectrum there were probably slaves. Slave chains were found at Llyn Cerrig Bach ( Fox C. 1945:30-2 ) as well as at several sites in south-east England ( Cunliffe 1978A:336-7 ), and slaves were listed amongst Britain's chief exports in the late 1st. century B.C. or early 1st. century A.D. ( Strabo 5.4.2 ). Whilst it has been suggested that slave dealing only developed in the 1st. century B.C. in response to Britain's contacts with Rome which created a new market for slaves ( Cunliffe 1978A:337 ), it seems impossible to determine whether this was so: certainly, if the slave trade was not an innovation of the Caesarian period, it is likely to have expanded greatly at that date to meet the new demands. If slaves were used in pre-Roman Britain, they probably seldom or never originated in the social unit in which they were slaves: they are more likely to have been outsiders, perhaps prisoners of war or exiles, who could be treated as slaves only because they did not themselves belong to the tribes or kingdoms in which they now found themselves.

12.6: The Roman Period

The Roman conquest imposed new forms on native society from without. After an initial period when most areas were probably under military rule, while a few remained for a short while under client kings, most of the province was organised into civitates, or self-governing communities, and the kings who had probably previously ruled there were displaced. However, some parts of Wales may have remained under military rule throughout the Roman period ( see chapter 5 ).
Since very little is known of the exact course taken by the tribal boundaries of the pre-Roman period, and indeed by the civitas boundaries of the Roman period, the two cannot be compared with any degree of accuracy: however, it seems likely that in most cases the pre-Roman tribes and the later civitates which bore their names were at least approximately coextensive. It would not then be surprising if the organ of government of the civitas, the elected ordo of about 100 decurions, was at first composed of the former tribal aristocrats and their descendants, who possessed both the wealth and the social standing to occupy such positions. Later, as trade with the army and within the new towns distributed wealth by means other than those by which it had previously been acquired, a middle class may have emerged, and, as army veterans perhaps settled near their former regiments, the social order may have been disrupted and the old aristocrats joined in the ordo by such 'new men'. At Comum, the property qualification for membership of the ordo stood at 100,000 sesterces, or a quarter of the equestrian census (Pliny Ep. 1.19, Stevenson G.H. 1939:173), while a legionary centurion's savings and retirement bonus together probably exceeded 400,000 sesterces (Fentress 1979:152). Though there is no evidence that the Comum figure applied elsewhere, either in Italy or beyond, and the property qualification for membership of the ordo may have varied from place to place, probably varying in relation to the size of each individual city (Jones A.H.M. 1964:II:738-9, Garnsey 1970:243), similar qualifications were probably universal: in the 5th century, Valentinian III laid down a minimum qualification of 300 solidi for membership of the ordo; this figure, presumably of general application in those areas which still lay under Roman rule, seems to represent about 150 iugera or some 40 hectares of land (Val.III. Nov. 3.4 of 439, Jones A.H.M. 1964:II:738-9). The ex-centurion thus seems to have
formed a prosperous member of provincial society, probably set by his savings and retirement bonus firmly within the class of those eligible for membership of the ordo: whilst the ordinary veteran could establish himself at the level of peasant proprietor, the evidence from Numidia at least suggests that the veteran officer had every chance of integrating himself into the municipal upper classes (Fentress 1979:153-9).

Initially, membership of the ordo was probably an honour, but in the later Roman period the heavy expenditure involved made the position undesirable: so, for instance, although the decurions had apparently always been responsible for the collection of taxes, Diocletian made them personally responsible for the taxes of any defaulters (Wacher 1975:43). Those who could therefore sought exemption from service, but, by the 3rd. century, membership had become compulsory for suitably qualified persons, and, since sons normally inherited their fathers' properties, and since it was illegal to abandon curial duties for most other professions, membership of the ordo became in practice hereditary (Jones A.H.M. 1964:II:739, Frere 1974:244).

In the later Roman period, the decurions of the eastern empire were compelled by law to live in their cities rather than on their estates: the same was probably also true in the west (I.L.S. 6087.XCI, Frere 1974:245 and n.32). At Tarentum, indeed, they had apparently to own a house of a certain standard of opulence within the city or pay a fine (I.L.S. 6086). No British town is known to contain as many as a hundred houses which seem of decurial standard: there are for instance perhaps 25 or so at Caerwent and maybe slightly more at Wroxeter. Presumably, then, despite the legislation, the majority of British decurions still lived on their estates (Frere 1974:293). On these estates, and in the new towns in which some of the curial class and
the new mercantile class had their homes, a greater element of display in domestic building is apparent than is seen for instance within the hillforts of the Iron Age. Though some of the early and magnificent villas of south-east England may represent the residences of Roman officials or foreign entrepreneurs, those villas which developed gradually on the sites of Iron Age farmsteads presumably indicate continuity of occupation and tenure, and the buildings there seem to represent the expression of wealth and status by a native. At Whitton, where, in the last of its pre-Roman phases, the farmstead seems to have had at most 285 square metres of roofed accommodation, perhaps with two additional granaries which together totalled 66 square metres, by the late 3rd. or early 4th. century A.D. the roofed accommodation may have reached about 650 square metres (R.C.A.H.M. 1976:II:761). Presumably either the population had increased, with perhaps a greater number of farm hands and servants than before, or else the extra space provided less cramped accommodation, with a greater degree of luxury and privacy than hitherto, or a greater storage capacity for a surplus: as the buildings do not seem particularly luxurious, and the site was apparently never provided with baths, the increased size is perhaps likely to represent an increase in population or storage space rather than a great increase in luxury. Llantwit Major, the only known luxury villa in Glamorgan, also developed gradually, possibly again on the site of an earlier farmstead (Hogg 1974A:237); by the time the buildings reached their maximum extent in the 4th. century, the roofed area may have been as great as 1,750 square metres, divided into at least 42 compartments.

This division of buildings into separate rooms may suggest that more privacy was sought in the Roman period than had been normal in the Iron Age. However, this is difficult to assess, for the round houses of the Iron Age may have been subdivided by perishable
partitions such as wicker screens or leather curtains, while different houses may also have fulfilled the functions later taken by different rooms. It is difficult to know how to interpret the numbers of rooms found in some villas and town houses: though their numbers were sufficient to house a unit larger than the extended family, in the polygonal enclosed homesteads of Smith's class I'd, which seem to form the north-western equivalent of the lowland villas, a considerable proportion of the accommodation takes the form of rectangular rather than round structures, and if, as has been suggested, the former functioned as byres and workshops whilst only the latter provided domestic accommodation, the populations may have been low, of nuclear to extended family size, perhaps some five to nine persons, though the general level of wealth and investment may have been high (Smith C.A. 1978:46-7).

In general, then, the upper aristocratic class may have survived in the Roman period largely unaltered, though its ranks may have been swelled by retired army officers; its wealth was probably derived primarily from its landed estates. The martial inclinations of this class had presumably been diverted by other interests more congenial to the Romans: fine weapons and other such items of display were rejected in favour of other expressions of wealth and status, such as Romanised dwellings, fine glass and pottery and imported wines. Similarly, the movement away from the hillforts suggests that the threat which had occasioned the construction of their defences, presumably the threat of inter-tribal warfare, had now ceased: the new towns to which many now moved lacked defences until the late 2nd century or later (see chapter 6), when they were provided for reasons probably quite different from those which had prompted the defence of Iron Age sites.

Beneath the curial class was probably a growing middle class of
merchants, traders and skilled craftsmen, presumably resident chiefly in the new towns and the fort vici. The typical residence of this class, or at least of its humbler members, seems to have been the strip house, with its shop in front and living quarters behind and above the shop. With greater prosperity, one inhabitant of such accommodation at Wroxeter bought out his neighbours and extended his domestic premises along the back of three shops to form a good-sized house with its own baths (Wacher 1975:369), while others, more prosperous still, may have installed slaves or other dependants in the commercial premises and moved to houses which bore no indications of their connections with trade or industry. Such prosperous traders may also have moved, by reason of their wealth, into the curial class.

Below this class lay the foundations of the economy, the agricultural workers, whether independent peasants, tenant farmers or hired labour, and the agricultural and domestic slaves: of these, surely the greater part of the population, little is known. By the end of the Roman period, the majority of the agricultural workers may have become coloni, tenants tied to the soil by a hereditary bond and perhaps owing their landlords services as well as rents in money or kind (see chapter 13).

12.7: Post-Roman Society

In the post-Roman period, archaeological evidence is scarce (see chapter 7), and casts little light upon the forms of contemporary society; however, the literary evidence is relatively full and very interesting. The Welsh lawbooks (see Appendix 40) suggest the existence in post-Roman Wales of the same three classes of king, noble and villein as are seen in the earliest stratum of Irish law (Charles-Edwards 1971:65-8), whilst the picture of British society circa A.D. 600 in the Gododdin bears a considerable resemblance to the
picture of Gaulish society drawn from Caesar: it seems aristocratic and military in nature, with warfare seen as the nobility's raison d'être, whilst kings entertained and feasted their warbands in return for their support in battle (Jackson 1969: 36, 38) in a manner reminiscent of the Gaulish Dumnorix (see above).

Britain seems to have reverted to the rule of kings very shortly after the Roman withdrawal. The earliest literary statement to this effect is that of Gildas, writing in the first half of the 6th century, who states 'reges habet Britannia, sed tyrannos' (De Exc. 27). As one of the kings of whom Gildas writes, Vortipor, was aged at the time of writing, and as his father had reigned before him (ibid. 31), this kingdom at least would seem to have been created no later than about A.D. 500. Moreover, the writings of St. Patrick imply the existence of a similar kingdom in the later 5th century, probably in Strathclyde (Ep. 6, Thomas A.C. 1979:90-1). Later, in the 6th century, the Saxons killed three British kings when they took three of their cities, Bath, Cirencester and Gloucester (Whitelock et al. 1961:14), while the Gododdin commemorates the death, c. 600, of Gorthyn from Rhufoniog, 'mab brenhin teithiauc ud gwyndyt', 'the son of a rightful king, lord of the men of Gwynedd' (C.A. LXXXVIIIB, Jackson 1969:99-100). In Wales, the title rex is recorded on several Early Christian monuments, the earliest being the Catamonus Rex inscription of c. 625 (Nash-Williams 13); in south-east Wales, monuments of the 10th to 11th century at Llantwit Major mention the kings Samson and Iuthahelo (ibid. 222-3).

Kings thus reappeared swiftly on the Roman withdrawal, becoming such an accepted part of society that, in the 9th century, the author of the Historia Brittonum could not envisage their absence even in the Roman period (H.B. 24: 'Karitius imperator...transverberavit omnes regulos Britannorum'). It is not clear, however, how many kings were
to be found at any one time in post-Roman Wales. Gildas names as his contemporaries five tyrants, of whom two, Vortipor of Demetia and Maglocunus or Maelgwn of Gwynedd (De Exc. 31, 33), were certainly located in Wales; a third, Cuneglasus (ibid. 32), may perhaps be equated with the Cinglas of the Rhos dynasty who was apparently a cousin of Maelgwn (H.G. 1, 3) and whose seat, termed by Gildas 'receptaculum ursi', was perhaps Dinarth, the 'bear's stronghold', near Llandudno (Winterbottom 1978:152). Of the remaining tyrants, Constantine is located in Dumnonia (De Exc. 28), while the territory of Aurelius Caninus (ibid. 30) remains uncertain. In the early 6th century there thus seem to have been at least three, and possibly four, tyrants in Wales. This need not imply that the country was divided into only three or four large kingdoms: Gildas speaks only of those rulers whom he found unacceptable, and may have passed over an unknown number of kings whose rule was more tolerable, including presumably the ruler of the region in which he dwelt, perhaps Glamorgan or the Chester area (Davies W.H. 1968:139, Thompson E.A. 1979:225). It seems more likely that, at this early date, Wales was divided into a relatively large number of small kingdoms such as were found in Ireland at the same date: the early history of Wales takes the form of a constant struggle for supremacy between the major kingdoms, and this seems to presuppose a background of petty states whose rulers gave allegiance to one king or another according to the fortunes of war (Binchy 1970:23). Gildas' tyrants may then have been the equivalent of the Irish overkings or kings of overkings.

There is indeed some evidence to suggest that, in Wales, the original political unit was the tud, a term cognate with, and bearing the same meaning as, the Irish tuath, namely a small people ruled by a king (Charles-Edwards 1974:36). The Welsh personal names Tudyr and Tudri, from *tutorix and *tutorigos, suggest the existence of a
title for the king of such a tud or *touta corresponding to the Old Irish ri tuaithe (ibid. 36); however, such kings, whose existence is also indicated by one of the terms used for a noble, breyr, or *brgorix, again the equivalent of the Irish ri tuaithe, were later demoted in status as a result of the growing power of the overking or brenin (Charles-Edwards 1971:65-8). The cantref, which seems in some cases to have been a relatively late administrative division (Lloyd 1911:301-2), may sometimes at least have been the successor of the ancient tud. This is seen most clearly in Dyfed, with its seven cantrefi and seven bishop-houses (Charles-Edwards 1972B:251): on analogy with the Irish evidence of the Rule of Patrick that each tuath should have its own bishop (O'Keeffe 1904:218, 221), this suggests that, in Dyfed at least, the cantref was the equivalent of the tuath. The cantrefi of Dyfed average about 340 square kilometres in extent, rather smaller than the possible average size of the Irish tuath (see above), but not incomparable with it. However, as in Ireland the essentially tribal pattern was modified at the beginning of the historical period by the emergence of larger, more cohesive, units, the rate of consolidation varying in the different areas (Binchy 1970:34), so too in Wales the tud was replaced as the unit of jurisdiction by overkingdoms such as Gwynedd, Powys and Dyfed (Charles-Edwards 1972A:117). The transitional state of affairs is perhaps seen most clearly in Gwynedd, where the traditional filiation of the eponymous founders of the various lesser kingdoms to Cunedda indicates that, although the latter may originally have been independent units, they later became subkingdoms within the larger unit. The last to be subordinated in this way seems to have been Merioneth, which was apparently not incorporated into Gwynedd until about A.D. 800: by this date, the list of Cunedda's sons had apparently become fixed, and Meirion had therefore to be made a son of
one of these existing sons rather than a son of Cunedda himself. Such use of genealogies to express political unity and subordination is seen also in Powys, where the subkingdoms share an immediate ancestor, Gwrtheyrn, with the dynasty of the dominant kingdom (Dumville 1977A:82). Such genealogies may not be purely fictional: if the main dynasty was particularly powerful, it may have been able to place members of its own kindred in important positions, as in Ireland the powerful dynastic families, in particular the Ui Neill, succeeded in superimposing on the old tribal pattern a series of ‘mesne’ kingdoms ruled by scions of their own kindred. The tribal substratum seems to have remained unchanged beneath them: the new ‘mesne’ king simply acted as overking over the ri tuaithe, though he was more powerful than the previous overkings (Binchy 1970:36-7). In Wales, the name Gwynedd seems to be first recorded, in Latinised form, in the inscription of the 5th to early 6th century from Penmachno which commemorates a ‘Venedotis cive’ (Nash-Williams 103); as the name is cognate with the Old Irish fine, meaning ‘kindred’ or ‘kinsmen’, and was probably used as a collective form to mean ‘kindred’, it may thus indicate that the overkingdom had supplanted the old tud as the area within which a man was a native or full citizen if his kindred also belonged to that area (Charles-Edwards 1972A:117). This development may have occurred particularly early in north-west Wales. Its final phase is marked by the use of the term Cymry, later Cymru, ‘Wales’, which also denotes natives as opposed to foreigners, of the whole of Wales, indicating that all Wales could be envisaged as one legal and political unit which one king might hope to rule; this probably dates from Rhodri Mawr’s conquest of much of Wales in the 9th century (ibid. 118-9). This is comparable with the situation in Ireland where the old system based on the tuath was undermined by the Ui Neill and Eoganacht kings until, by the reign of Brian Borama in the early
11th. century, all Ireland had become a political prize which could be grasped by one man (ibid. 119, Binchy 1970:35-45).

In south-east Wales, the process of consolidation may have moved more slowly than in the north-west. The charter evidence suggests that, in the 6th. and early 7th. century, the area still comprised a number of minute self-contained kingdoms, and the whole area does not seem to have come into the possession of one dynasty, that of Meurig ap Tewdrig, until the early 7th. century. In this case, the emergence of one dominant dynasty may have been stimulated by external, Saxon, pressures (L.L. 123, 161, Evans J.G. 1893:141) rather than resulting from purely internal developments. Whatever the cause, Meurig established a kingdom larger than any previously known in the area, extending from the Wye to Gower (Davies W. 1978A:93-4, 1978B:8-9), but did not eliminate the previous rulers of that area: down to, and including, the reign of his grandson Morgan, there were occasional grants from and references to other kings within the area, and these may represent the older and originally independent dynasties which had ruled the smaller kingdoms now subsumed by Meurig’s kingdom, who remained as subkings within that kingdom until the late 7th. century. Thereafter, no kings who are not members of the main dynasty are attested until the 10th. century (Davies W. 1978A:94).

While the less powerful kings perhaps freely accepted Meurig as their leader and overking in the face of the Saxon threat, their cooperation may have been ensured by other means. In Ireland, the giving and taking of hostages was important in ensuring political stability. The free tribesmen there owed their king a specified period of military service, and each family contributed its quota of armed men; as there was no standing army in peace time apart from the king’s own small bodyguard, revolts by the more powerful kindreds or by rival contenders for the throne would be easily organised and potentially
very effective. To protect against this, the king always exacted hostages from each of the aristocratic kinroups, a method of enforcing allegiance which is found almost universally in primitive societies (Binchy 1970:21). Similarly, subordinate kings had to guarantee their relationship with their overking by giving hostages in this way (ibid. 32). In Wales, Llyfr Cyfnerth indicates that defeated or subject kings also gave hostages to their overlord, apparently being obliged to give at least one prominent noble (Wade-Evans 1909:115 11.11-12). In south-east Wales, the aristocrats and kings of the subordinate dynasties who are seen making or witnessing grants of land in association with Meurig, Athrwys or Morgan may therefore be hostages of this kind: such lesser kings are seldom referred to as kings when witnessing charters under the kings of the main dynasty, and may not yet have achieved that status, but may have been given to the main dynasty as hostages by their ruling relatives. So, under Meurig and Morgan, Guidgen witnessed charters not only from mid Glamorgan (L.L. 147, 152) but also from Gower (ibid. 144, 145) and Radnorshire (ibid. 149): chance alone is perhaps unlikely to have taken him to these relatively distant parts, and it seems more probable that he had been compelled to accompany the overking there on his circuit of his kingdom. He witnesses one of these charters in the company of Idguallaun, himself later a king (ibid. 152). Guidgen is accorded the title of king in only one charter, dated c. 680, in which he donates an estate in Gabalfa in south-east Glamorgan (ibid. 151a); as there seems to be only one later charter, claimed to date from c. 695 (L.L. 145, Davies W. 1979B:97-8, 100), on which Guidgen appears without a title, it is perhaps questionable how much reliance should be placed on this nicety of dating. Certainly, it is tempting to imagine that all the charters on which Guidgen appears without a title, in company with Meurig and Morgan, predate that in which, with
his title, he would seem to have inherited his kingdom and been allowed home to rule it, presumably after supplying Morgan with another hostage to take his place. This hostage may have been Guidgen's son Brochmail, who witnesses charters under Morgan and his brother Ithel in about 685-8 (L.L. 148, 157, Davies W. 1979B:99, 102) and is not there referred to as king, though he later appears as king without Morgan or Ithel perhaps about 708 (L.L. 205, Davies W. 1979B:117). This system of hostages, probably fundamental to the political structure, and clearly advantageous for the overking, may have had its benefits for the lesser kings also: whilst yielding their heirs or other close relatives as pledges of their allegiance, the main potential contenders to their thrones would thus have been removed to safe custody, lending a greater stability to the lesser kingdoms.

There may have been more than one king of the main dynasty at any one time. So, the four sons of Ithel ap Morgan who were named as kings in the mid 8th century may not have been strictly successive; there is not enough evidence to suggest any clear territorial division of responsibility between them, although there may have been a division into two principal areas, Gwent on the one hand and Glywysing or Glamorgan on the other (Davies W. 1978A:94-5). Similarly, in the late 9th century, Asser mentions both Brochmael and Ffernfael, sons of Meurig, as kings of Gwent (Asser c.80). Brochmael also appears in the Llandaf charters as king (L.L. 216a), though the region which he ruled is not clear: the estate referred to in the charter which he witnessed circa A.D. 872 has been identified as Llangiwa in Monmouthshire (Davies W. 1979B:119). Brothers may therefore have shared the kingship, which may very occasionally have been shared over more than one degree of kinship. When kingdoms were shared between members of the same dynasty in this way, there seems no evidence that
each king was associated with any exclusively defined territory or subkingdom (Davies W. 1978B:8-9). There is no indication of any legal mechanism to limit the succession to narrow degrees of kinship, and selection may have been achieved naturally or by the judicious use of murder (Davies W. 1978A:102-3, cf. L.L. 152, 180b, 244).

Beneath the royal dynasties were the aristocrats: in south-east Wales at least these seem to have been propertied families who were generally active only within an area 10 to 15 miles in radius (Davies W. 1978B:9). The nature of the evidence, the Llandaf charters, makes it impossible to determine whether there were also significant aristocratic groups who were not landowners (Davies W. 1978A:112), though at this date in an undeveloped economy this seems improbable. However, the charter witness lists suggest two quite different types of behaviour amongst the lay witnesses: one class appears throughout the south-east, apparently travelling with the king as his companions, whilst the second class consisted of local leading men who apparently met to transact local business, and who appeared in distinct regional contexts (ibid. 112-3). As intimated above, the former class may represent the sons of prominent families who accompanied the king as hostages while, in the latter class, although the groups of seniores, meliores or principes seen in Erging, Gwent and Glywysing seem to have represented each of those areas in its entirety (cf. L.L. 185, 190a, 198b, 240), most individuals appear in more restricted areas. Although about half of the men who regularly witnessed charters were also donors of land, very few of those closely associated with the king were such donors, thus confirming the suggestion that they may have been the younger members of prominent families who were held as hostages: as such, they would not yet have inherited their property and thus had no land of which to dispose.

Most of the evidence for local assemblies of magistrates falls in
the late 7th. to 8th. centuries (Davies W. 1978A:108) and, together with the magistrate attested in north-west Wales in the 5th. or early 6th. century (Nash-Williams 103), seems to indicate the existence of ordered systems of government in the earlier post-Roman period; the relatively early evidence may suggest that these were to some extent survivals from the Roman period. Although there were references in the 10th. century to optimates (L.L. 218, 240), after the late 9th. century there do not seem to be any references to assemblies of elders, suggesting a decline in social stability at this date; moreover, from the 9th. century onwards, the behaviour of the aristocrats seems to have become increasingly lawless and aggressive (for especially flagrant examples, see L.L. 222, 225, 264b). This coincides with the evidence for usurping dynasties on the one hand and indications of increasing fragmentation and fluidity in the structure of estates from the 9th. century onwards on the other, suggesting that there may have been far-reaching changes in society at this date, in south-east Wales at least (Davies W. 1978A:116); these may have been due, at least in part, to population pressures.

Beneath the aristocracy came the commoners, of whom little is known: some were free, while others were bond. As in Ireland, free status may originally have depended upon the possession of a property qualification, probably the possession of the rhandir of 312 erwau, or about 25 hectares, of land (Charles-Edwards 1971:192-7, see Appendix 13). Such an estate may have supported a relatively large population, larger than a nuclear family: comparisons with 8th. and 9th. century Frankia, where households of five to six worked mansi of 6 to 8 hectares, may suggest that the standard Llandaf villa of 3 modii or about 48.5 hectares may have supported a working population of about 40, including children, whilst also providing a surplus for the owner (Davies W. 1978A:39-40), and the population of the rhandir may thus
have been about 20, perhaps the landowner and his clients. Though at
first sight clientship, also important in contemporary Ireland, seems
absent from Wales, the Welsh lawbooks contain references to food
renders such as are in Ireland associated with the institution; these
are now offered to the king, whose rights are dwelt on in the lawbooks
at the expense of those of the nobles, but may originally have been
offered by the clients to their lords (Charles-Edwards 1971:65).

The bondman or taeog was not allowed to become a smith, bard or
priest without his master’s consent (Owen A. 1841:I:436-7). He was
also bound in other ways: he had to supply goods and services to his
lord (Latin D 337, 381-2), and was presumably also tied to the land.
The heres of the Llandaf charters may have been such a bondman: he was
occasionally given to the Church with his land (L.L. 207, 239), and
was sometimes himself associated in making the donation (ibid. 143).
He thus seems to have been a tenant on the land, his title implying
that his position was hereditary (Davies W. 1978A:44, 46); it seems
very similar to the position of the colonus of the late Roman period
(see chapter 13), and may possibly be derived from it.

The status of the smith and priest, both callings to which the
bondman could not aspire without consent, was apparently high, though
in neither case is the evidence as full as might be desired. In the
case of the smith, indeed, it is particularly slight, resting largely
upon the evidence of the 10th-century tale of Culhwch and Olwen:
there, the craftsman who brought his craft was ranked alongside the
son of a king (Jones G. and Jones 1949:97-8). This passage, and
another (ibid. 121-2), may suggest that, at this date, specialist
craftsmen were peripatetic, seeking the patronage of chiefs and
princes, and presumably also of the Church. The smith’s products could
certainly be valuable: the Llancarfan charters indicate that, although
a sword could be worth as little as four cows, one with a gilded
handle was worth 25, and another gilded sword, presumably gilded all over, was worth 70 cows (Wade-Evans 1944:130, 132), thus probably compelling the maker of such valuable items to travel in search of his markets.

The evidence for the status of the priest is a little fuller. His religious status seems to have been socially acceptable from an early date, as indicated by Maelgwn Gwynedd's entry into a monastery (De. Exc. 34), while at the same date episcopal office was evidently worth buying (ibid. 66-7). In general, the early saints seem to have been considered noble or royal by birth (see, for instance, V.S.C. 18, Wade-Evans 1944:62-3) and, although this may only reflect what the late compilers of such Lives thought appropriate, yet the earliest of the Saints' Lives, that of Samson, written in the later 7th. century, depicts Samson's parents as landowners of noble birth (V.S.S. 1, 30). Thus, the status of bishops in early Wales may have been similar to that which they enjoyed in contemporary Ireland where, according to the Crith Gablach, the dignity of a bishop was higher than that of a king (C.G. IV 338, MacNeill E. 1924:306). The status of other members of the skilled and learned class was probably also relatively high: the memorial of Meli medici at Llangian (Nash-Williams 92) indicates both that a doctor could afford a stone memorial and that he wished to commemorate his calling.

Slavery as an institution was still found in the Early Christian period, having been practised throughout the Roman period, at the very end of which St. Patrick refers to 'servos et ancillas domus patris mei' (Ep. 10). In the post-Roman period, the Llandaf charters contain a few instances of inhabitants of the land being given with that land to the Church in slavery (L.L. 207, 218), whilst in one case two men and their offspring were given to the Church 'in sempiterna servitute' (ibid. 236), and in another instance,
admittedly in a charter of dubious authenticity, a man gives himself and his offspring in two villae 'in perpetuo servitute' in recompense for an evil deed (ibid. 127a). However, not all slavery was so permanent, as indicated by a 9th. century case in which a slave bought his freedom for four librae and eight unciae (Chad 5, Evans J.G. 1893:xlvi). The working of the land may have depended to some extent on slave labour (Davies W. 1978A:46), and slaves also formed a unit of currency. In Dyfed, as in early Ireland, the female slave was apparently so used, for an insult to the bishop of one of the seven bishop-houses of Dyfed carried with it, as compensation to the bishop, a fine of seven pounds and a washerwoman: the latter seems a survival from a period when the female slave formed a unit of currency (Charles-Edwards 1972B:253-4). Though it might be argued that this unit was introduced to Dyfed by Irish settlers, the appearance of the slave as a unit of payment in Brittany also suggests that the use of such a unit of value was not confined to Ireland and the areas of Irish settlement: a fragment of the Canones Wallici of the first half of the 6th. century A.D., which seems Breton rather than insular British in origin, records payments in slaves in cases of homicide, though in the later Lex Salica and the Welsh lawbooks this payment had been commuted to animals or to silver (Fleuriot 1971:619). According to the Welsh lawbooks, the slave from beyond the seas was worth half as much again as the slave from this island (Bleg.59), perhaps because his kindred was unlikely to seek his return.

12.8: Conclusions

The social structures seen in Iron Age Gaul and Britain and those of early Ireland display remarkable similarities, suggesting shared origins in a common Celtic tradition. So, until the formation of states in some parts of Gaul in the 1st. century B.C., there seem to
have been no institutionalised positions of coercive power amongst the Continental Celts over and above the warrior chiefs. Though groups of nobles might acknowledge a common regional name or recognise the symbolic authority of one king or dynasty, political and military authority resided with numerous chieftains and military leaders: this is indicated by the way in which, in Armorica and northern Gaul, Caesar had to proceed by the reduction of fort after fort and not, as in Central Gaul, by the siege and capture of the central stronghold of a whole people (Nash 1978:468). A similar process of piecemeal conquest, seen a century later in Vespasion’s progress through southwest Britain where the reduction of two powerful ‘gentes’ involved the sack of over twenty ‘oppida’ (Suetonius Vespasion 4.1), indicates that the political organisation of southwest Britain at least had not by that date attained the degree of consolidation and centralisation found in Central Gaul at the time of the Caesarian conquest, but rather paralleled the condition of northern and western Gaul at that date; and apparently also that of Ireland in the Early Christian period. The large numbers of hillforts and other defended sites found in the Iron Age in Wales and the Marches suggest that, at this date, this area too fell under the sway of a large number of warrior chieftains; the planned interiors and carefully maintained defences found at some at least of these sites may illustrate both the coercive powers and the competitive nature of this warrior aristocracy. The Late Bronze Age origins of some hillforts in the region suggest that this aristocracy first emerged in that period, though fine weapons and other such items of military display are most common in the later Iron Age, perhaps the date at which a surplus adequate to permit their manufacture was first regularly generated.

Soon after the Roman conquest, most hillforts were abandoned, and the native kings and chieftains were for the most part no longer
recognised as such. Instead, the former warrior aristocrats probably now became the leading men, the magistrates and decurions, of their civitates. However, new elements in the form of the higher-ranking legionary veterans and perhaps some of the most successful merchants and traders probably now infiltrated this ruling class whilst, beneath them, the growing middle class of merchants, traders and craftsmen probably became more important than before, thus distorting the pre-existing social structure. The diversion of wealth from military display to more peaceful aims is illustrated by the construction of prestigious houses and public buildings, and by the use of imported and native luxury goods, as an expression of status.

After the Roman withdrawal, the social structure seems to have resumed a form closely resembling that found in Iron Age Britain and in Early Christian Ireland, suggesting that, in this respect, the Roman occupation may only have formed an interlude in which a veneer of Roman customs generally failed to create any far-reaching changes in the social patterns. Many of the forms of Celtic society may have continued in use throughout this interlude, whilst others may have been suppressed during the Roman occupation to emerge unchanged in the post-Roman period in response to conditions similar to those found in pre-Roman Britain. The size of the different kingdoms and political units which emerged on the Roman withdrawal is uncertain, and in most cases the relation which they bore to the civitates of the Roman period is also unknown. However, the Llandaf charters suggest that, in south-east Wales, the territory of the civitas Silurum did not remain a single autonomous unit but, in the early post-Roman period, fragmented into a number of very small kingdoms. Similarly, the later kingdom of Dyfed seems to have originated as seven small kingdoms which amalgamated during the course of the post-Roman period. Possibly, then, the Roman civitates had no influence upon the
succeeding political framework, or influenced it only insofar as they were themselves founded upon pre-Roman political structures. So, although the kingdom of Dyfed seems to bear a fairly close relation to the civitas of the Demetae, as it was apparently formed of the amalgamation of the seven tud kingdoms this may reflect not so much the influence of the Roman civitas as that of the Iron Age political geography of the area which had been subsumed in the Roman political structure: so, in the Iron Age, the area may have contained seven or more small kingdoms or chiefdoms, perhaps under an overking, or perhaps acknowledging an overall tribal unity or sharing a regional name, as pre-Roman Cantium seems to have done, despite its four kings (B.G. 5.22.1).

In the course of the post-Roman period, such small kingdoms consolidated to the point where, by perhaps the 6th. or 7th. century A.D., a few large kingdoms accounted for the greater part of the region. This process of consolidation seems to have moved at different rates in different areas, south-east Wales, which in the 6th. and early 7th. century apparently formed a number of very small kingdoms, and which had several kings at once in the 8th. century, perhaps being particularly slow in this respect. The reasons behind such processes of consolidation, seen for instance in the formation of the kingdom of Dyfed from the amalgamation of the seven tud kingdoms each of which retained some administrative identity as a cantref, and in the process represented by the filiation of the eponymous founders of the kingdoms of north-west Wales to Cunedda, are uncertain. Seen also in contemporary Ireland, such consolidation may represent a response to external pressures created by the Vikings and, in Wales, by the English also.

It is impossible to tell whether the kings found in the immediate post-Roman period were drawn from the same dynasties, or even from the
same class, as the pre-Roman rulers, or whether, on the Roman withdrawal, the most powerful men of the time seized power, regardless of their descent. The positions of Magnus Maximus, Constantius Chlorus and other Roman emperors in some of the genealogies of the post-Roman period (H.G. 2, 4, 16, J.C. 19) suggest that, by the 9th century at least, descent from a Roman emperor may have seemed to some a more important title to rule than descent from a pre-Roman ruler. However, as power was probably linked with wealth, which in turn was still largely associated with landed property, and as there seems no evidence of a major redistribution of land in the Roman period, the rulers who emerged at the end of that period were probably drawn from the same class as had wielded power in the pre-Roman period. The Roman occupation may have broadened the distribution of power within this class: the associations of elders seen in south-east Wales and the magistrate attested in north-west Wales in the earlier post-Roman period (see above) probably represent the continued influence of Roman forms of government rather than the operation of native developments paralleling the emergence of magistrates and councils of elders in Gaul in the late pre-Roman period.

Two elements of the pre-Roman social structure which seem to have survived the Roman period throughout which they probably continued in use, though they may perhaps have been suppressed to some extent, are the practices of polygyny and clientship. Polygyny seems to have been a universal feature of Celtic society: seen in pre-Roman Gaul and Britain, and in Early Christian Ireland, it appears also in post-Roman Britain where Gildas states that the kings and iudices of his day 'quam plurimos coniuges habent' (De Exc. 27). Clientship, certainly important in early Ireland, and apparently found in post-Roman Wales also, again seems a survival from the pre-Roman period. It has been suggested that the origins of the bond population are later in date,
forming the result of the subjugation of the earlier population of the region by Cunedda and his descendants (Jones G.R.J. 1954:71), but, as it is found throughout Wales and is not confined to the areas which Cunedda is claimed to have subjugated, and as a similar semi-free population was found in contemporary Ireland where there is no tradition of a similar conquest at a similar date, it seems most likely that such clientship, seen also in Gaul, forms a feature of the pre-Roman social structure which survived the Roman occupation rather than representing a development of the post-Roman period, or indeed being derived from the colonate of the later Roman period with which the bond population of the post-Roman period seems to display some similarities (see chapter 13). In general, then, the effects of the Roman occupation upon the native social systems seem, so far as may be judged from such evidence as survives, to have been relatively slight.
LAND TENURE

13.1: Introduction

This chapter studies the question of land tenure with especial reference to any possible Roman influence upon the systems native to Wales and the Marches. The concept of land tenure is wide, being concerned with all the conditions of which a parcel of land is held, with any obligations towards a superior which holding the land involves, and with any limitations on the disposal of the parcel during the tenant's lifetime or after his death (Jenkins D. 1967:222). Such information as survives on these topics is sadly meagre and difficult to interpret, yet may cast some light upon the social conditions of the time.

13.2: Land Tenure: the Iron Age

We have no direct information concerning land tenure in Wales and the Marches in the Iron Age. However, Caesar's comments regarding such processes in Late Iron Age Gaul may cast some light upon the probable situation in Britain, whilst some information may perhaps be extracted from the later lawbooks (see below). Unfortunately, Caesar's remarks upon land tenure in Gaul have been variously interpreted. D'Arbois de Jubainville argued from them that land was collectively owned by the different tribal communities, and that individual members of these communities held portions of the tribal land precariously; he considered that individual ownership of land in Gaul was a product of the censuses of the Roman period (D'Arbois de Jubainville 1887:66-86, 1890:xxiv-xxxii, 4-13, 61-2, 99-121). This view has not met with general agreement, and it is now generally held that Caesar considered the Gauls of his day to hold land individually. In this context, the most telling passage is that in which he contrasts the Gauls and the
Germans: as the Germans did not recognise private ownership of land, it seems to be implied that the Gauls did (B.G. 6.22.1-2). It is interesting to note that, in Tacitus' day, the Germans still did not seem to have progressed fully to private ownership, though they had approached it more closely: in Caesar's time, the German 'magistrates' decided each year what part of the land was to be ploughed, and allocated these lands to the clans whose members then ploughed and reaped these allotments in common, without dividing them up amongst the different families and individuals (ibid. 6.1.7, 22.1-2), whereas, according to Tacitus, although a communal decision was still made as to what land should be ploughed each year, the arable was now shared out 'secundum dignationem', perhaps to individuals rather than to kindreds, though, as each man cultivated a particular piece of land for one year only, private ownership of land was still unknown (T. Germ. 26.1, Thompson E.A. 1965:18, 25-6). A further indication that the Gauls of Caesar's day owned land privately is found in the passage in which Caesar discusses the role of the Druids, for their functions included deciding disputes 'de hereditate, de finibus' (B.G. 6.13.5): it is more natural to interpret this as referring to the boundaries of personal estates than, following D'Arbois de Jubainville (1887:76-82), to the boundaries of tribal territories. It is also clear from the writings of Caesar that there was in his day a division in Gaulish society between the eminent classes on the one hand and the plebs on the other (B.G. 6.13.1) such as would be likely to rest upon the concentration of land and other wealth in the hands of the fewer more powerful men: it seems improbable that a society which had developed a wealthy class, a coinage and extensive commerce should not have recognised private property in land. As, in most societies, status and land-owning are interdependent, even though two distinct principles are involved, so it is probable that, in Gaul, a man's
social standing either reflected, or was reflected by, the possession
of land (Wightman 1975:601): it may be seen below that, in Ireland
at a somewhat later date, status and land-owning were very closely
linked. Probably, then, private land-ownership was recognised in Late
Iron Age Gaul, and, though British society was not as advanced as that
of contemporary Gaul, and that of western Britain was probably less
advanced than that of the south-east, yet it is possible, and indeed
quite probable, that private ownership of land was recognised in this
region also.

13.3: The Roman Occupation and the Legal Status of Provincial Land

The advent of the Romans complicates the issue of land tenure, as
the imposition of a conqueror raises questions of the status and
ultimate ownership of provincial land. Mommsen considered that, at the
Roman conquest, the inhabitants of the provinces became dediticii, and
thus entirely devoid of rights, and that their land therefore became
ager publicus (Mommsen 1887:723-33): if, then, the Roman government
owned all provincial land and leased it back to the provincials, the
taxes paid by the provincials were in effect rent. This notion of
taxes as rent might appear to gain some support from Frontinus who, in
the reign of Domitian, explains that provincial landowners pay tribute
'possidere enim illis quasi fructus tollendi causa et praestandī
tributi condicione concessum est' (De agrorum quolitote et
condicionibus 2.36); however, his use of 'quasi' suggests that he
speaks figuratively here, and the parallel between a tenant and his
rent and a provincial and his tribute is clearly not exact, for a
tenant in perpetuity could be evicted for failing to pay his rent
whereas a landowner who failed to pay his tribute simply remained
liable to the state for the amount of that debt only (Gaius Inst.
3.145, Jones A.H.M. 1941:26). Though the inhabitants of a province
probably became temporarily dediticii on annexation, as a result of
the province's surrender or deditio to Rome, the effects of this would
soon seem to have been undone, insofar as the lex provinciae
reconstituted, or in some cases constituted, civitates whose members
now became peregrini and whose territories were returned to them as
solum peregrinarum civitatum ( Cicero In Verr. 2.90, Jones A.H.M.
1936:229-30, 1941:30 ). Where no such civitates were constituted, as
in Egypt, the inhabitants may have remained dediticii and their land
ager publicus, for the principle that the land of conquered
populations belonged to the Roman government unless and until a city
was constituted on it still seems to have prevailed in the Flavian
period ( Josephus B.J. 7.216-7, Jones A.H.M. 1941:30-1 ).

The Roman government therefore seems only to have owned provincial
land which did not form part of a legally constituted civitas: some
parts of Wales may have fallen into this category ( see chapter 5 ).
Elsewhere, confusion about the status of provincial land may have
arisen from some points of Roman law. The Romans had several concepts
which related to the ownership and transfer of land. The term employed
for ownership, dominium, or less commonly proprietas, means in
principle the total mastery over something, and this right was
exclusively vested in its owner. In addition to this, there were
limited rights such as servitus and usufructus which one man could
have in another man's property, and, more important, the right of
possessio, or actual physical control of the object in question ( Levy
1951:19 ). The jurist Gaius, writing circa A.D. 161, claimed that the
dominium over provincial soil rested with either the populus Romanus
or the emperor, leaving the provincials with only possessio or
usufruct of their land ( Inst. 2.7 ), but he would seem to have put
this forward as a solution to a technical legal problem rather than as
a reflection of the realities of the situation ( Jones A.H.M. 1941:27-
Certainly, Caesar seems always to have acted upon the principle that the provincials owned their land (Frank 1927:153-4), and a similar belief is implied by Augustus' claim that he paid for all the lands which he gave to his soldiers, in the provinces and in Italy alike (R.G. 16, D.C. 51.4.6). At this date, then, provincial land in general does not seem to have been regarded as belonging simply to Rome, though some specific areas had come into the possession of the Roman people or the emperor by gift, inheritance or confiscation: the inhabitants of such areas, which were easily distinguished under the Empire by the presence of officials such as procurators, were state tenants (T.A. 14.31, Frank 1927:155, Stevenson G.H. 1939:141). Confiscation of provincial land always remained a penal measure, though the charges of which the owners were convicted may on occasion have seemed trivial (Suet. Tib. 49.2); in general, provincial landowners were not arbitrarily dispossessed by the Roman government (Jones A.H.M. 1941:26).

Ownership of provincial land would thus generally seem to have remained with the provincials, whether as individuals or as cities. Gaius' conjecture that the dominium over provincial land rested with either the state or the emperor seems to derive from the fact that the processes by which land could be conveyed differed in Italy and the provinces. Italian soil could be conveyed by the processes of mancipatio and in iure cessio; it was also capable of usucapio, a process whereby ownership was acquired by possessing the object in question without interruption for a certain period (Gaius Inst. 2.14a, 31, 40-2, Watson 1968:21). These were all processes and concepts of ius civile and were therefore applicable to Roman citizens and to ager Romanus only; provincial land could thus not be conveyed by them (Gaius Inst. 2.14a, 31, 16) but had to be conveyed by traditio which, as a process of ius gentium, was applicable to all
negotiable objects and to all members of the empire (Jones A.H.M. 1941:27). Whereas the formal processes of mancipatio and in iure cessio transferred dominium, strict ownership as distinct from possession, from the seller to the buyer, traditio conveyed only possessio. When Roman citizens and ager Romanus were involved, possessio in good faith and with a iustus titulus, that is possessio gained by a legally recognised method such as sale, gift or dowry, for two years then conferred dominium by usucapio (Gaius Inst. 2.40-2, Watson 1968:48-9), but this process did not operate on provincial soil. The consequent lack, for this technical reason, of dominium over provincial soil may then have led to the conjecture that the dominium in fact existed but was vested in the conquering government.

Under the Republic, it was apparently assumed that the territory of any community which accepted Roman citizenship became part of the ager Romanus. So, though most of the ager Romanus which lay outside Italy took the form of ager publicus, formed by state tenants, some of this was converted into ager privatus when the Romans founded colonies overseas, and this ager privatus seems to have been deemed to possess the same rights as Italian soil, primarily exemption from taxation (Jones A.H.M. 1941:28). This later changed. Caesar and Augustus probably continued to view it as normal for colonies planted in the provinces to form part of the ager Romanus, for a large number of their colonies possessed the right later termed the ius Italicum whereby their soil had the same legal quality as that of Italy. However, very few provincial municipia are known to have possessed the ius Italicum, and the reason for this change in policy was probably fiscal: although in theory the ager Romanus was subject to Roman tributum, as this was never levied it was in practice tax-free. So long as the enfranchised communities were Italian, this did not matter, for the Italian allies had never paid tax to Rome, but the
fiscal consequences of Caesar's policy of granting the citizenship freely to provincial communities were potentially serious if their territories also became ager Romanus. Colonies were relatively few in number and therefore less important fiscally; moreover, they were felt to be more intimately a part of the Roman state than the municipia. The municipia on the other hand were both more numerous and less closely connected with Rome, and so could more easily be left without the ius Italicum: they thus housed whole communities of Roman citizens who were bound to use Roman law but who had to buy and sell land which was not Roman. Traditio was the only legal process which they could use for this purpose (Jones A.H.M. 1941:28-9). Peregrini, meantime, seem to have remained free to convey land between themselves by whatever legal processes they had previously employed.

In most instances, therefore, the Roman conquest is unlikely to have affected the pattern of land tenure by imposing a new master on the land, although the enforced use of the process of traditio, with the consequent lack of dominium, by substantial provincial communities may have led to the conjecture that it had done so: only relatively small areas, most notably the estates of former rulers, are likely to have passed into the hands of the emperor. However, the conquest may have brought other changes. So, the taking of censuses to enumerate and register the population for purposes of taxation may have lent to the pattern of landholding current at the time of the census a greater authority and stability than it might otherwise have enjoyed: the powerful man might thus find his position as a great landowner confirmed, but his opportunities for subsequent expansion at the expense of his neighbours curbed. The imposition of taxation may also have occasioned some change in the function of the land. Hitherto, it seems likely that it had essentially formed the basis of support for the chief and his followers. Such surpluses as were generated need not
have been regular, and would probably have been dissipated in extravagant gestures such as would have helped to maintain the chief's position (see chapter 12), or exchanged for luxury goods. After the advent of the Romans, a regular tribute had to be paid, and the land had therefore, perhaps for the first time, to produce a regular and calculable profit (Wightman 1978:102).

It is not known whether land had been freely alienable in the pre-Roman period: parallels drawn from post-Roman Wales and Ireland, including the evidence supplied by the process of dodannudd (see below), suggest that it may not have been. By Roman law, however, land could be bought and sold, and, in classical law, legal restrictions or prohibitions on the alienation of private property were relatively rare; when they occurred, they were regularly only temporary in character, and were intended to protect the interests of another person (Levy 1951:118-9). Though Roman law was compulsory only for Roman citizens, its forms are likely to have influenced the peregrini who in theory retained their own laws, and, as Roman law must inevitably have influenced native dealings, so native Celtic law and custom may perhaps have left their mark upon the Roman system. It has been claimed that some indication of this may be seen in the trace of a concept of 'double dominium', foreign to the classical Roman tradition, which is found in both West Roman vulgar law and Welsh law, and which may have arisen from the need to express customary Celtic multiple ownership in Roman terms (Stevens 1947:132-4, Wightman 1978:109). However, whilst it is not impossible that practices such as the undivided exploitation of jointly-owned family properties may have occurred in the Roman period, foreshadowing later practices and perhaps also looking back to the pre-Roman period (see below), the 'double dominium' found in West Roman vulgar law seems to arise not so much from these circumstances as from a confusion of dominium and
possessio in the later Empire. Thus, it was possible to have double dominium in one piece of land for instance when an imperial domain, although owned by the emperor, was let out by the long-term lease known as emphyteusis which was sometimes regarded as conveying dominium: ultimately, however, the one dominium was superior to the other (Levy 1951:19-21, 47-9, 67).

13.4: Taxation and the Colonate

Roman law probably tended to undermine the personal and hereditary nature of patronage in Celtic society by measures such as the injunction that peasant tenants had to be conveyed with the estates which they worked, a measure which was in operation by the later 2nd century at the latest (Digest 10.1.112. pr., Paulus Sent. 3.6.48): this measure seems to have been intended to prevent the bequest of rental property apart from the soil which went with it, and does not provide evidence for a bound colonate at this date (Goffart 1974:134 n.5). The binding of the colonate to the soil seems to be the result of changes in the system of taxation in the later Empire which burdened landlords with the responsibility of paying the taxes which related to their landless tenants who were now permanently registered as part of their landlords' estates. In the early Empire, rather than paying a direct tax on land or agricultural produce, the organised communities of the empire seem to have paid a fixed sum, or tributum, to Rome; the communities involved could decide how to recover this sum from their citizens, though doubtless certain specific taxes were recommended for this purpose (I.G. V.1. 1432-3, Goffart 1974:101-3). At this time, the colonus was a voluntary tenant, free to move, or to be replaced by his landlord, whenever his lease, normally of five years' duration, expired (Digest 19.2.9.1, 13.11, 14, 24.2). He probably normally paid his landlord a money rent, though an
alternative system, metayage or 'partiary' colonate, whereby the landlord and the tenant each took an agreed share of the crop, was also known (Cato De Agric. 136, Dio Chrysostom Or. 7.34-7, Digest 19.2.25.6, Pliny Ep. 9.37, Sherwin-White 1966:520-1).

By the late Empire, however, the colonus had become a serf tied to the land by a hereditary bond. The date at which this change took place is uncertain. It has generally been assumed that a rescript of Constantine of 332 (C.Th. 5.17.1) forms the first clear evidence that some coloni were already tied to their lands, with the first explicit reference to their hereditary nature falling in the 360s (C.J. 11.68.3, Jones A.H.M. 1974:294). Constantine’s legislation does not, however, seem to form evidence for a bond colonate at that date, for it states that the colonus had the duties and tax liabilities of a free man, and would therefore seem to be free: the legislation does not affect his right to change landlords in the normal legal ways, nor his landlord’s right to evict him, but simply stipulates that, for ease of tax collection, the colonus may not leave his place of registration. Thus the colonus is ‘bound’ only by his public obligations, specifically his tax liability, to meet which he must remain in his origo, an area surely wider than his specific tenancy, and probably regarded as his city or civitas of origin; similarly, by a law of 346, a landowner was forbidden to transfer his professio or taxable property from one city to another (C.Th. 11.22.1, Goffart 1974:70-1). The existence of a bond colonate is first clearly documented by a law of 371 binding the tenants of Illyricum to their fields (C.J. 11.53.1): as this law had yet to be extended to Thrace and Palestine, it was probably a recent innovation. However, the conditions which led to the creation of a bond colonate may be seen through much of the 4th century, when the colonus’ tax liability passed to the land and thus to the landlord (Goffart
1974:80-4), but, though rural populations were, for ease of tax collection, bound to their places of registration, this did not in all provinces have the effect of tying the coloni to their farms: there is, for instance, no sign of tied tenancies in Egypt until the 5th. century, while in 399 there seem to have been tied coloni in some but not all of the provinces which fell under the jurisdiction of the praetorian prefect of the Gauls, a prefecture which included the British provinces (C.Th. 11.1.26, Jones A.H.M. 1974:298).

Tying the colonus to his land thus seems to have been a byproduct of fiscal and administrative measures of wider scope, the critical factor being the devolution of taxation from persons to land in the course of the 4th. century, with the corollary that the land must at all costs be cultivated (Goffart 1974:64-8). In the 4th. century, landowners seem to have suffered from problems related to a general shortage of agricultural labour, and to that extent the bond colonate must have been useful in guaranteeing a steady reserve of tenants. There were corresponding disadvantages as, with a sitting tenant, rents could not be raised despite rampant inflation, and unsatisfactory tenants could not be evicted (C.J. 11.50.1, 63.3), and eventually Valentinian I forbade the sale of agricultural slaves and tied tenants apart from the land to which they were attached (ibid. 11.48.7, Jones A.H.M. 1974:299-301). Though successive laws increased the dependence of the coloni on their landlords, reducing them to a quasi-servile status, many must have felt that the security which they gained at the expense of their freedom was valuable: certainly, the status of colonus could be acquired voluntarily as well as being inherited, for in the 5th. century, by a law of Anastasius, a man could become a colonus if he lived as a tenant on the same estate for 30 years (C.J. 11.48.19), though he could escape this fate if he moved before the 30 years had elapsed, while, by a process ordained by
Valentinian III, he could also become a *colonus* in less than 30 years by marrying a *colona* and declaring in court his intention of becoming a *colonus* (Vol. III Nov. 31. 5-6). Clearly, then, the position of *colonus* was in some respects a desirable one.

13.5: Post-Roman Wales: the Role of the King

It is interesting to consider to what extent the late Roman situation may have influenced the patterns of land tenure found in post-Roman Wales. Again, it seems advisable to commence with the question of the actual ownership of the land, whether it was generally considered to belong to the people as a whole or to the king, the family or the individual. The situation seems to have been complex: though there is no evidence to suggest that the people as a whole was in any way involved, both the king and the kindred seem to have had different interests in the land, whilst in some cases individuals seem to have acted as though they could dispose of land freely.

The king was closely involved in some aspects of land tenure, to such an extent, indeed, that it could be claimed in the lawbooks that 'regis est tota terra regni sui' (Latin D 383). On first impression, the charters in the *Liber Landavensis* also seem to suggest that, in the 6th. and 7th. centuries, the king owned all the land in such a way that outright ownership, or *dominium*, was impossible for a private individual for, prior to circa A.D. 700, no land was donated to the Church by non-royal persons (Davies W. 1978A:162). Similarly, the late 7th. century Life of St. Samson seems to imply that, in the late 6th. or early 7th. century, the king of Brittany owned all the land in his kingdom, since it seems to have been his to give away at will (V.S.S. 59, Davies W. 1978A:63). On closer inspection, however, this picture may prove deceptive. All the royal grants recorded in the Llandaf charters seem highly localised, coming from cohesive blocks of
land rather than being scattered throughout south-east Wales, and this may suggest that the royal families owned specific estates from which they made these grants, but that, extensive though these estates seem to have been, the kings did not 'own' the whole of their kingdoms. The maintenance of their kingship may indeed have depended largely upon the maintenance of blocks of personal property capable of supplying them with an adequate income (Davies W 1978A:100-1). Possibly, then, all the known early grants were made by kings simply because they were at that date the only people whose economic resources enabled them to make such grants. Alternatively, as it seems likely that the aristocracy also owned substantial estates, the changes in the land law of the empire in the 4th. and 5th. centuries may have made the alienation of land increasingly difficult by confusing the distinction between the rights of ownership and possession; hence, we find increasing numbers of perpetual leases on imperial property alongside increasing state interference in the rights of private owners while, in those areas covered by perpetual leases, the alienation of land was technically impossible (Levy 1951:19-34, 43-9). As there must have been large estates with many tenants in south-east Wales in the late Roman period, the above-mentioned legislation affecting the colonate presumably created restrictions on the alienation of their tenures. However, restrictions on the alienation of land by its owners rather than of their tenures by tenants can be explained only by supposing that, in this area, the general late Roman situation was taken to extremes, or by invoking a peculiarly Celtic respect for the rights of the kindred (see below), or by some combination of the two (Davies W. 1978B:16-19). As in the late Empire restrictions on alienation even of private property could only be rescinded by direct imperial action, in the late 5th. or early 6th. century kings may have assumed quasi-imperial powers in order to release their own inalienable lands,
and may eventually have used these powers to consent to the alienation of land by non-royal persons (Davies W 1978A:162, 1978B:19-20). So, in the lawbooks, the consent of the lord, presumably originally the local king, was required for the sale of any land, though land could be rented out yearly without his consent (Owen A. 1841:I:180-1, II:408).

The lawbooks also indicate other areas of interest which the king had in land. If an heir died after his family's property had been divided up amongst all the heirs, and left no heir of his own body and no co-heir up to and including his third cousins, his land was inherited by the king (Latin D 387, Owen A. 1841:I:202-3). Similarly, if the number of heirs was too small to occupy all the family land, the king seems to have owned the unoccupied portion, and any land which lacked an owner belonged to the king at least until it was settled (Latin A 133, 120). Once settled, such land seems to have passed to its new occupants in a manner reminiscent of the way in which, in Latin vulgar law, agri deserti, whether or not they had previously been cultivated, could be gained in secure and lasting possession by anyone who cultivated them (Levy 1951:194-5).

13.6: The Position of the Kindred

Whilst the king clearly had wide-ranging interests in land, the lawbooks suggest that land belonged primarily to the family: as in early Ireland, land which was owned by the family could not be alienated. Thus, a father could not deteriorate or dispose of his sons' rights for land except in his own lifetime and, if he did deprive his sons of land, the land in question was recoverable unless an agreement had been made between the father and his brothers, cousins, second cousins and lord to yield the land as bloodland (Owen A. 1841:I:176-7, Ior. 87, Bleg. 74-8). A situation in which a man
could not alienate land without the consent of his kin presupposes the operation of one of the two forms of land tenure most commonly mentioned in the lawbooks, the system of *tir gwelyog*. By this form of land tenure, generally associated with free tribesmen, continued occupation of a piece of land for three generations converted bare possession of the land into legal proprietorship, the 'fourth man' becoming the proprietor (Owen A. 1841:1:172-3, 756-7). This system seems of purely native origin: the span of three generations differs widely from the period required in Roman law for the acquisition of *dominium* by *usucapio*, even after Justinian had extended the period of two years in Italy or one in the provinces to ten or twenty years (C.J. 7.31.1, Levy 1951:176-7). It has been claimed that the system of *tir gwelyog* is of great antiquity on the grounds that, in *Llyfr Iorwerth*, after the rights of proprietorship or *priodolder* had been established by the 'fourth man', subsequent abandonment of the land did not extinguish these rights until a further nine generations had elapsed (Ior. 85): the system was therefore thought to have been in use for at least 13 generations, or about 400 years, when the lawbooks took their current form, and, if this section formed part of the original code drawn up at the instigation of Hywel Dda in the 10th century, it should have been in use since the 7th century at the latest (Jones G.R.J. 1972:323-4). It has even been suggested that this system of land acquisition and tenure was known in Roman Britain where it may have come into conflict with Roman law, and, if so, it presumably originated in the pre-Roman period (Stevens 1947:132-4).

It seems more likely, however, that the compiler of *Llyfr Iorwerth* no longer understood this law, and mistook the 'ninth man', who was probably one of a four-generation inheritance kindred of the Irish type, with the ninth descendant of the original occupant of the land (Charles-Edwards 1971:202-6): though, for this confusion to arise,
the law in question would surely have been archaic at the time when Llyfr Iorwerth was compiled, the 13 generation period no longer seems relevant to its date of origin.

Once land had thus been acquired by occupation for three generations, on the death of the original proprietor it was shared equally between his heirs, apparently originally extending to the second cousins (Bleg. 75), though normally, by the time of the lawbooks, envisaged only as his sons (Ior. 82, Latin A 132, B 227, D 387): so too, Giraldus Cambrensis, writing circa 1190, terms the division of property amongst brothers as 'antiquus in hac gente mos' (Descr. 2.4). On the deaths of these original heirs, their sons could, if they wished, reallocate this tir priod, and their sons also possessed the right to revise the sharing of their common great-grandfather's property (Owen A. 1841:1:168-9, 758-61, Jones G.R.J. 1973:432-3). Such redistribution could, however, go no further than this ('Tribus vicibus debet terra dividi: primo, inter fratres; secundo, inter consobrinos; tercio, inter filios consobrinorum. Sed ultra de iure non dividatur': Latin A 132, cf. Ior. 82). In the form in which they survive, the references to such customs are late: the sharing of land between the wider inheritance group seems virtually obsolete in the Wales of the lawbooks for, despite references to the sharing of land between first and even second cousins, the normal term used of land to be shared, tref tad, literally the 'father's holding', used even of land shared between first and second cousins (Bleg. 75), implies that land was now normally shared only between brothers, though earlier it had been shared between the descendants of the same great-grandfather (Charles-Edwards 1971:189-91).

Such inherited land may not have been permanently divided up between the heirs but may rather still have been worked by the brothers and cousins as a unit. This is certainly suggested by the
passage in Llyfr Iorwerth which describes the practice of cyfar or joint ploughing (l. 148). As there described, this practice presupposes the use of a team of eight oxen yoked abreast, and seems therefore to predate the mid 12th. century when the use of such a team appears to have been obsolete (Charles-Edwards 1971:353-5). In the description in Llyfr Iorwerth of the division of the acres which were ploughed, the implication seems to be that the participants in the ploughing did not have property rights over the individual acres which were ploughed by the team: instead, they seem to have belonged to a group which owned the land collectively and ploughed it as open field, at the end of the ploughing leaving each participant with a number of strips in open field. The cooperating group was most likely to have been a group of kinsmen, most probably the normal inheritance kindred (ibid. 356-8), especially as, in early Ireland, joint ploughing seems to have been employed specifically as a means of assigning shares of land to kinsmen (ibid. 359). Further confirmation of the suggestion that inherited land was owned by the family as a unit rather than permanently divided up between its individual members comes from 9th. century Brittany, where any non-Roman elements in the laws of land and inheritance had probably been introduced by settlers from western Britain and should therefore represent practices current in that region. Here, the priest Druinet bought two villae or estates from four brothers who presumably owned them jointly (C.R. CLXVI, De Courson 1863:129), while five other brothers together donated a piece of land inherited from their parents to the Abbey of Redon (C.R. LXXX, De Courson 1863:62). In another instance, a certain Pascuethen, on donating a piece of land to the Abbey, anticipates objections to this action on the part of 'quoheredibus meis vel de propinquis meis' (C.R. CCLX, De Courson 1863:209-10), and elsewhere such complaint is seen when '...uenit Gedeon... interpellans fratem suum Eudon
sacerdotum, cur dedisset partem hereditatis suae quam tenebat jure hereditario... monachi (sic) rothonensibus (C.R. CCXLVI, De Courson 1863:197): this situation is perhaps most easily understood if the land in question was under some form of joint ownership. A more archaic form of family interest is seen when two of Lalocan’s cousins wished to reclaim a villa which Lalocan had given to the Abbey of Redon and which they claimed was more theirs than his (‘plus erat illis rectum illam hereditatem quam Lalocono’) though since, when their parents had shared their hereditas, this villa had fallen to Lalocan’s parents, it was finally agreed that it was more his than theirs (C.R. CLXII, De Courson 1963:125-6).

By the system of tir gwelyog, the proprietor’s freedom to dispose of land thus seems to have been severely restricted as his rights in land were exercised conditionally on behalf of his descendants: in effect, the land would usually seem to have been inalienable outside the kindred without its full consent.

The other system of land tenure which is particularly prominent in the lawbooks is that of tir cyfrif or tir cyllidus, the system thought most appropriate to bondmen: rights in tir cyfrif were not directly heritable, and land was distributed not between members of the same family, as by tir gwelyog, but between occupants of the same settlement. Thus, the land belonging to a township was reshared between all the adult male members of that township whenever any of the bondmen in that township died, or whenever any save the youngest of a bondman’s sons came of age at fourteen (Ior. 83, Jones G.R.J. 1972:334-5). The occupants of the bond townships owed food renders to the king and, as the land was communally held, so too the renders were a communal obligation: this is underlined by the way in which the summer foodgift included a cheese made from one milking of all the animals of the township as well as by references to the ‘communis
pastor' which imply communal grazing arrangements (Latin A 124, 136, B 204, D 382, E 458, Jones G.R.J. 1973:436-7). In addition to supplying these food renders, the bond population also fed the king and his retinue at certain seasonal circuits (Jones G.R.J. 1961:223): so, according to the Venedotian Code, the bond maenols of the commote had apparently to support the court on its progress while the free maenols had imposed upon them the 'great progress of the household in winter' (Owen A. 1841:1:188-9, 190-1). The bondmen of the maerdref, or king's demesne, also performed duties such as reaping and threshing, and the labour services of the other bondmen included the construction of the king's court, whilst the free nobles owed the king military services (Ior. 94, 43, 92).

Tir cyfrif is normally regarded as a system of land tenure which was already archaic by the time of the lawbooks (Jones-Pierce 1963:34-5): however, its absence from the South Welsh lawbooks may indicate that it was not one of the elements of the original 10th-century collection and, in view of the absence from the Old Irish laws of any distinction between the inheritance systems of the free and the semi-free, it may represent not so much an archaic stratum of the law as a system of sharing land which, when Llyfr Iorwerth was compiled, had been relatively recently introduced into Gwynedd (Charles-Edwards 1971:198-9). Despite this, it seems to contain elements of an earlier system in that the tref, originally the single holding shared between the kindred, was retained as the unit of land which was shared, though the group amongst which it was shared had changed: by tir gwelyog, on the other hand, the tref as a unit had been abandoned, though land was still shared between a defined kindred (ibid. 200-1). The render of treb guidouc, recorded in the charters of Chad 3 and 4 (Evans J.G. 1893:xlv), is very similar in its composition to the bondmen's food render or dawnbwyd recorded in the lawbooks (see Appendix 13) and,
like it, is a township liability, again suggesting that the system of
tir cyfrif tenure included earlier elements, in this case already in
existence by the mid 9th. century at the latest.

13.7: Land Grants and the Llandaf Charters

The picture of land tenure presented by the Llandaf charters seems
to differ in some respects from that found in the lawbooks. In the
charters, only royal persons donate land to the Church in the 6th. and
7th. centuries perhaps, as has been suggested, because only they could
override the general prohibition on the alienation of land, or perhaps
because they could alienate land which they had themselves acquired,
for instance as agri deserti, rather than inherited land over which
the kindred had a claim. Royal women as well as royal men could
apparently have rights in landed property ( L.L. 140, 190b, 207 ),
although there is no evidence that non-royal women played any part in
the disposal of property ( Davies W. 1978A:56 ). By the mid 8th.
century, free alienation of land seems to have become possible: though
the first lay grants were made with the king's consent, the first
grant made by a commoner alone without such royal consent seems to
date from about 735. Such grants are relatively few in number, and the
royal consent is generally found ( ibid. 50-1 ). At much the same time
as the first lay grants appear, the practice also begins of buying
royal land to donate: this may have been the resort of individuals
prevented by their kindreds from alienating family property ( ibid.
51-5 ). On occasion, several members of the same family seem to be
associated in a grant: so, for instance, we hear of an estate donated
circa 708 by four brothers ( L.L. 205 ), of another donated circa 750
by Iudbiu with the consent of the two sons of Riderch and 'concessione
generationis sui' ( ibid. 199a ), and of land donated circa 855 by
'Gulferi et ciniun et nir filii gurcan et bonus cum filiiis suis'
(ibid. 171a), and these examples suggest, as might be expected from the lawbooks, that brothers in particular were closely associated in the disposal of property. Nonetheless, the kindred is explicitly involved in relatively few of the total number of lay grants in the Llandaf charters, many of which would imply that alienation was totally free (Davies W. 1978A:54-6, 63). Surprisingly, the kindred becomes more prominent in these charters in the 10th. and 11th. centuries than it had been earlier: at this date, it takes compensation for injury, agrees to the alienation of family property, and is party to agreements made by its members. This apparent later prominence of the kindred may indicate the growing power of the aristocratic kindreds at that date, or may simply reflect the more detailed information which the charters provide for the later part of the period (ibid. 111, 1978B:9).

Perhaps the most important question raised by the charters is that of the real meaning to their new owners of the grants of land which they record. There is no evidence that the grants recorded in the charters precipitated any changes in the pattern of land use, except perhaps in the case of some estates which were donated to the Church in the 6th., 7th. and early 8th. centuries and which are referred to simply as 'land', ager; these may perhaps refer to hitherto unutilised land and may thus represent an extension of the cultivated land at this date. However, such an argument from silence is dangerous: in other instances the grants clearly deal with complete units of production, not with undeveloped land, and thus indicate only the redirection of a surplus and not the extension of the area of cultivation (Davies W. 1978A:62). The new owners of the estates which were thus donated were now endowed with an annual return from a tenant or tenants. So, for instance, King Athrwys gave the estate of Cariou, together with an uncia of land, to God and Bishop Catguaret,
and Leubrit received this land from Catguaret, becoming its hereditarius or hereditary occupant (L.L. 210a); in return for his hereditary rights over the land, Leubrit was to pay the bishop every year a render of six modii of beer, a sester of honey and the appropriate meat and bread. Similarly, though according to the Llancarfan charters Bronnoguid gave half the ager Idraclis to Cadoc's church, he himself continued to occupy it as he and his descendants owed the census of that land to Cadoc's church for ever (V.S.C. 56, Wade-Evans 1944:126). So too Gualluuir gave an estate to Cadoc's church but also entrusted that villa to his son Iudnou who was to pay its census to Cadoc's church (V.S.C. 59, Wade-Evans 1944:128), and King Morcant gave villam Cadroc to his foster-son Guengarth who gave to God and Cadoc 'censum prescripte ville' of which he and his heirs presumably retained the ownership; Morcant ratified this land free from all terreno servitio (V.S.C. 62, Wade-Evans 1944:130).

Occasionally, the new owners of an estate may have taken the profits from that estate rather than receiving a fixed render of this sort. In almost every case, the new owner was exempted from paying to the king the census or payment which was normally due to him (Davies W. 1978A:101). So, for instance, in about 955, the whole ager of the kindred of Guoruot with its woods and hawking rights and 'omni censu qui antea dabatur regi' was handed over to the Church, the census now passing to the bishop instead of to the king (L.L. 218): thereafter, the estate was exempt from gwestfa and from any other due payable to any other landlord (Davies W. 1978A:47-8).

Exemption from royal taxation does not seem to have been included automatically in every grant of land made to the Church, and in some cases it had to be bought. So, one of the Llancarfan charters records that Abbot Conigc bought the villa of Conguoret from Spois and Rodricus: this villa then passed to Cadoc's church iure perpetuo while
Spois and his sons, who presumably remained in occupation of the estate, were to pay the church an annual pensio of nine modii of beer, bread, meat and honey. So that 'ista possessio libera et quieta foret ab omnibus servitiiis et exactionibus terrenorum regum', Spois gave Guornemet, presumably the king, three cows (V.S.C. 55, Wade-Evans 1944:124-7). The property rights involved in such land grants could become even more complex, and the grantor might make payment to several individuals other than the king in order to hand over the full rights of ownership (Davies W. 1982:274-5). So, another of the Llancarfan charters relates how Guorcinnim bought villa Reathr from king Meurig in propriam hereditatem, and made payments to six persons in addition to Meurig in order to secure this land. Guorcinnim then gave the estate to the church of Cadoc in perpetuam possessionem, securing the acquiescence in this transaction of Mesioc, who had a hereditary interest in the land, by the gift of a horse (V.S.C. 65, Wade-Evans 1944:132-4). In other instances, either grants of land involved in church foundations were not initially freed from royal burdens or the latter may have been reimposed at a later date: so, in about 670, the church of Llantwit Major, which had perhaps been founded in the early 6th. century or before, was freed of the payment which it owed to the king (L.L. 152). As the phrase in the Llandaf charters which exempts the grantee from such royal census is nearly always a 12th. century interpolation, at first relatively few grants may have carried such fiscal immunity: however, some of the interpolated passages may be based on earlier originals (Davies W. 1978A:49), whilst in some cases (for instance L.L. 170, 174a, 184, 191) the phrases which record exemption from royal tributum and servitio are probably original. Grants made by kings, and lay grants in which the royal consent or guarantee is specified, may well entail fiscal immunity so that, in practice, many of the grants preserved in
the Liber Landavensis must represent the diversion of a food rent from
the king to the Church: the absence of a royal element from a grant
may then indicate that it was made at a time or in an area where there
was no effective royal authority, or that the land in question was
still liable to royal dues (Davies W. 1978A:49-50).

Though traces survive of a more austere self-sufficient approach,
perhaps reflecting the customs of the earlier rather than the later
Early Christian period, as when the monks of St. David's are said to
have worked the land themselves, without the assistance even of oxen,
to produce their meagre diet of bread and herbs (Rhigyfarch 21-4),
suggesting that some monks may themselves have worked the estates
which were donated to them, in general churchmen seem to have been
sustained by the surpluses produced by their tenants: these might
represent the food renders formerly paid to the king, as seen above,
or might form additional exactions. It has been suggested that, in
early England, the reason why early grants were always made by the
king was that, although the land in question may not have been his,
the privileges which were transferred were (Jolliffe 1935:7): so,
the vast majority of English charters of pre-Offan date take the form
of royal grants to named churches or churchmen, while in other cases
the king's sanction is prominent (John 1960:41-2). However, the
privileges which the king granted seem to be not simple food renders
alone but the freedom of the land from folk-right, by which the land
was apparently bound by rules of descent which operated in favour of
the kin, and from the king's interest in it: thus, the recipient of
the royal grant received land which was freely alienable and whose
holder was almost unassailable in his tenure (Jolliffe 1935:20-1).
This book right was, according to Bede, so desirable that men bought
land from kings on the pretext that they wished to found monasteries,
purely in order to acquire this privileged form of tenure: '... emunt
sibi sub praetextu construendorum monasteriorum territoria in quibus suae liberius uacent libidini, et haec insuper in ius sibi haereditarium regalibus edictis faciunt asscribi, ipsas quoque litteras privilegiorum suorum quasi veraciter Deo dignas, pontificum, abbatum, et potestatum seculi obtinent subscriptione confirmari. Sicque usurpatis sibi agellulis siue uicis, liberi exinde a divino simul et humano seruitio ...' (Bede Epistola 12). Clearly, by this device, men obtained land which was free from royal and ecclesiastical dues, and which was also endowed with hereditary right. Ordinary ownership did not bring with it this hereditary right: so, a document of circa 860 which is based on earlier material indicates that Osric, a noble who owned an estate at Gloucester, when he wanted to turn this into a monastery, first gained the king's permission and then bought the ius ecclesiasticum which gave him hereditary right over the estate before handing it over to his sister as the first abbess ( 'sibi in perpetuam haereditatem possidendum et adhabendum, et post se in suam genelogiam qualicunque manu voluerit donandum': C.S.I:60, John 1960: 46 ). Book-right thus seems to have taken land out of the royal power for ever, giving its owner full powers of bequest and alienation, perhaps at the expense of the kindred as well as of the king: so, an abbot could give, sell and in particular hand on unharmed to the next generation land which he had been so given. Other forms of land tenure seem to have been more precarious in these respects (ibid. 48-9).

The situation seen in England may cast some light upon that found in contemporary Wales. Clearly, in Wales, the privileges transferred when land was granted to the Church exceeded the food renders which were now paid to the Church instead of or as well as to the king, for otherwise the later lay grants which record royal permission would be meaningless in that the benefaction would be entirely the king's, the lay donac* giving nothing which was in any real sense theirs to give.
Whilst the food renders were, in many if not all cases, thus diverted from the king to the Church, grants of land must have entailed some additional privileges, such as the release of the land from the traditional inheritance practices which operated in favour of the kindred so that an abbot could then hand on to his successor his church’s estates in their entirety, without risking the possible demands of his kindred for the redistribution between them of this land. The major gift made by the lay donor when granting land to the Church would thus seem to be the renunciation, on behalf of his kin, of any claim to the ownership of that land either then or in the future, though he might secure for himself and for his descendants a position as its hereditary tenant.

13.8: Land Tenure in Early Ireland

The evidence which relates to land tenure in early Ireland indicates several important parallels between the systems used in Ireland and those seen in Wales: this suggests that some aspects of land tenure in Wales may owe more to a common Celtic heritage, perhaps reinforced by subsequent Irish influence, than to the effects of the Roman occupation. In Ireland there operated a rigid form of family land ownership reminiscent of that found in Wales: family land could not be alienated from the fine and, on a man’s death, his land was normally divided equally between his sons or, if he had none, distributed in fixed proportions amongst his next of kin (Byrne 1973:35-6). As the family’s inheritance must not be diminished, the property inherited by the individual had to be returned to the kin; a man could thus make grants outside the family only from property which he had himself acquired, and a proportion of even this property had to be left to the kin. These rules could apparently be waived only with the consent of the entire kin group (Hughes K. 1966:75). The king
drew for his support on mensal land attached to his office, and this
was inherited by his successors rather than by his natural heirs. He
was also supported by tribute which he received from all the free
families in his tuath, a tribute which had probably originally taken
the form of the right to entertainment for himself and his suite on
his periodic circuits of his territory; like other Irish aristocrats,
he too had his own personal clients who supplied him with food renders
( Binchy 1970:20 ).

The prevalent conditions of land ownership are likely to have
affected the development of the Church in Ireland, as in Wales. In
Ireland, laymen seem sometimes to have built churches on hereditary
land, presumably with the consent of the fine; the king then confirmed
this grant of land, thus 'freeing' the property from the obligations
such as tribute or billeting troops which were due to him as ruler
( Hughes K. 1966:74-5 ). Thus, in the 6th. century, as Christianity
gained in popularity, Irish aristocrats may only have been able to
reconcile their desires to found churches with their obligations to
their family properties if they persuaded the entire family to embrace
the religious life and to consent to use the family lands to endow
churches or monasteries whose property belonged by hereditary right to
the family of the founding saint or lay patron: succeeding abbots
would then be regarded as heirs to the founder ( ibid. 76-7 ). As, at
this date, celibacy was only optional within the Church and married
clergy were common, such hereditary succession of abbots was easy.
However, hereditary abbacies were not incompatible with celibacy, as
abbots could be succeeded by their nephews, cousins and other
relatives: so, at Iona, the monks and abbots seem to have been
celibate down to the 8th. century, yet before the death of Adomnan in
704 all Columcille's successors save one had been descendants of
Conall Gulban, though some were only distantly related to their
predecessors (ibid. 161). Such family inheritance was not universal in Ireland itself: though the houses of Slane and Lusk both provide characteristic examples of the practice there is, for instance, no evidence for it at Clonmacnoise in the pre-Viking period (ibid. 162-4, Ryan 1940:491-507), and other houses may have employed only a modified form of hereditary succession. So, in the early 9th-century Book of Armagh, Fith Fio’s gift of Druim lias to the monks of Druim lias is recorded: the estate was free of family right of inheritance, but it was understood that the descendants of Fith Fio should inherit it if they were noble, devout and conscientious and, if not, it was to pass to one of the monks of Druim lias, or to one of Patrick’s community (Book of Armagh 17a2, Stokes and Strachan 1903:238-9). In Wales, the situation seems to have been similar to that in Ireland: for instance, Samson’s entire family dedicated itself to the monastic life, offering the family property to God and using part of it to found churches referred to by Samson’s mother as ‘nostros ecclesias’ (V.S.S. 29, 31, 45, 52), while in the same work Illtud’s nephew is considered to regard the monastery of Llantwit Major as his inheritance, of which he is afraid that he may be cheated (ibid. 14, 16). Apparently, then, the same concept of the church or monastery as heritable property was to be found in both Wales and Ireland in the Early Christian period. It should be stressed that such concepts of heritability apply to the founders of the churches and to their descendants and successors, and not to the royal and lay donors who, by their grants of land to the Church, would seem to have renounced their claims to those estates for ever.

13.9: Conclusions

It is now time to consider which aspects of land tenure in Wales are native in origin, and which may have been borrowed from Roman law
and custom. It has been suggested that the labour services which the bond tenants of the post-Roman period owed to their king were foreshadowed in the Roman period when, for instance, in Africa tenants on the imperial estates were required to provide *operae*, presumably days' work, at the peak seasons of ploughing, harvest and hoeing: in some cases, six *operae* were required and in others twelve, whilst in addition the tenants seem to have had duties of brick-making and, apparently, wall-building (Percival 1969:459-60). Such labour services were also sometimes required in the Roman period of tenants on private estates, for Columella claims that they were more desirable than cash rents (R.R. 1.7.1). The law of 43 B.C. of the Colonio Iulia Genetiva in Baetica indicates that cities could also call upon local landowners and inhabitants to perform such services: in this instance, men between the ages of 14 and 60 were required to perform up to 5 *operae* a year on municipal building projects (Mommsen 1875:110-111). It has been claimed that the *operae* owed by imperial tenants, and sometimes by private tenants also, in the Roman period formed the pattern for the feudal system later found in Gaul and elsewhere (Percival 1969:472-3). This seems unlikely, for the labour services of Carolingian Gaul, which usually occupied several days a week rather than the few days a year apparently envisaged in the Roman period (Bloch 1966:240-1), only developed in the 7th. and 8th. centuries, and seem of Frankish origin (Verhulst 1965:153-4, 159); there is therefore no evidence of any continuity with Roman institutions.

The amount of time consumed by labour services in post-Roman Wales is not certain: though they may perhaps be more similar to the Roman than to the later Gaulish examples in their demands, yet even so this need not indicate survival from the Roman period. Although it has been argued that labour services form a relatively complex form of payment
which, if it recurs in the post-Roman period in areas which previously formed part of the Roman empire, is unlikely to do so through coincidence alone ( Percival 1969:459-60 ), it seems more likely that, in the context of a relatively undeveloped economy, this represents a natural form of exploitation, and cannot be assumed to bear any greater significance. Moreover, in Wales, the parallel with Ireland seems closer than that with the Roman world: in both Wales and Ireland, clients owed their lords food renders as well as labour services ( see chapter 12 ), suggesting that both elements alike represent native Celtic elements rather than Roman borrowings.

Roman influence may be seen, however, in other aspects of land tenure in early Wales. One particular borrowing seems the distinction between occupation and ownership or, in Roman terms, between possessio and dominium: this distinction is present in Welsh law though it is absent from Irish law by which, if occupation is not ownership, it is unlawful. That, in Welsh law, occupation which is not ownership can be justified legally thus seems to argue the influence of Roman law ( Charles-Edwards 1971:270-1 ). This idea is combined with Celtic ideas in the procedure of dadannudd, a ritual practice whose purpose was to support a hereditary claim to land against a sitting occupant: the land which was claimed was entered with animals or equipment which symbolised the right to cultivate that land, and actions were performed which symbolised the right to inhabit it. This procedure seems an archaic element in Welsh law as its equivalent, tellach, is in Irish law: the tract dealing with tellach dates to a period appreciably earlier than about A.D. 700, whilst confusions about procedure indicate that the practice of dadannudd was largely or entirely obsolete at the time when the Welsh lawbooks were drawn up ( ibid. 231-2, 266, 270-1 ). Dadannudd applied to land over which the rights of prydoloder or dominium had not been proven ( ibid. 267 ). By
dodannudd eredig, apparently the last of the three dodannudd processes to remain in use, a man could petition a judge for possessio of the property of a deceased man, and this could be awarded without reference to the question of priodolder but, as in the Roman interdict quorum bonorum, only the children of the deceased could petition for possessio. Once given possession, by Roman law the bonorum possessor could only be disturbed if someone proved dominium by means of the hereditatis petitio; similarly, once dodannudd eredig had been granted, it could only be disturbed by a man who brought an action of ach and edryf, corresponding to the Roman hereditatis petitio and vindicatio, which proved priodolder. So, as in the Roman procedure, by Welsh law the man who obtained dodannudd eredig shifted the burden of proof onto any opponent (ibid. 273). The Celtic element in dodannudd, on the other hand, lies in the notion of acknowledging a man's occupation of the land (Ior. 87, Charles-Edwards 1971:273-5), for the concept that uninterrupted and acknowledged occupation of land when rival claimants to it are in the same country disqualifies any subsequent claim against the occupant's possession (Ior. 87) is basically the same as the Irish notion of rudrad where, by the short rudrad, if a man is acknowledged as another's heir, and is allowed undisturbed possession of his land for a year or two during which he farms it successfully, no claim can then be raised against his possession (Charles-Edwards 1971:273-5). So, by both Irish and Welsh law, the acknowledgement of occupation destroys a claim which stands only if the claimant was not in the same kingdom at the time: there is no trace here of the distinction between dominium and possessio found in Roman law (ibid. 275). However, by the Irish long rudrad, and by a similar Welsh law best stated in Llyfr Cyfrneth (Wade-Evans 1909:50-1), it might take from four to five lifetimes for the alienation of family land to become complete and
absolute: this is a stratum older that that corresponding to the Roman law of *dominium* and *possessio* (ibid. 276-8), and presumably therefore has its origins in the pre-Roman period. The freedom to buy and sell land, seen in Roman law, seems to have had relatively little influence upon Welsh law.

Roman elements are, however, to be seen in the charters. The language of the Llandaf charters is too similar to that of the imperial rescripts and the early Mediaeval laws and charters which were produced on the continent under Roman influence, and too different from later Mediaeval and vernacular concepts, to derive from anything other than the late Roman tradition: for instance, their consistent retrospective form, whereby the charter forms the record of a transaction rather than the transaction itself, is unlike the form of western European charters of comparable date (Davies W. 1982:262-3, 274). The emphasis on the recording of witnesses, important on the continent from the late Roman period onwards, also seems a Roman inheritance (ibid. 275-6). Other features, such as the less than total ownership of land by the individual, the possibility of multiple rights in a single parcel of land, and the limits on its alienation, have been put forward as the products of the confusion between *dominium* and *possessio* which was characteristic of much vulgar law in western Europe (Davies W. 1979A:158): however, the clear parallels with Irish thought suggest that they are more likely to represent native elements. Such features of land tenure as the inalienability of family land and the possession of land by continuous occupation for four generations seem Celtic rather than Roman in their essence, even though the capacity of the king to override the limitations on alienation may recall both the powers of the emperor in the late Empire and other royal attempts to imitate those powers in the post-Roman kingdoms of western Europe (ibid. 158).
Broadly, then, the language of the charters, both in the simple sense of the use of Latin rather than of the vernacular, and more specifically in the formulae used, the institution and mechanisms of donation, and the early royal monopoly of donation, all seem borrowed from a late Roman or sub-Roman past (ibid. 158, Davies W. 1982:278).

In view of the similarity of the charter traditions of South Wales and of Brittany, the practice would seem to have taken form either before or at the time of the main migration to Brittany in the mid 5th century A.D., as otherwise Breton practice might be expected to display a greater deviation from insular practice and a greater similarity to the continental charters of the day than it in fact embodies (ibid. 278-9). Thus, though the forms in which Welsh land law survives are relatively late, many of the aspects of this law seem early, displaying Roman influences which seem direct survivals from the Roman period rather than scholarly revivals of a later date, and also possible survivals from the pre-Roman period: the whole may then be seen as a mixture of Roman and native ideas.