

# Durham E-Theses

---

## *Later prehistory from the Trent to the Tyne*

Challis, A. J.

---

### How to cite:

Challis, A. J. (1972) *Later prehistory from the Trent to the Tyne*, Durham theses, Durham University.  
Available at Durham E-Theses Online: <http://etheses.dur.ac.uk/7941/>

---

### Use policy

The full-text may be used and/or reproduced, and given to third parties in any format or medium, without prior permission or charge, for personal research or study, educational, or not-for-profit purposes provided that:

- a full bibliographic reference is made to the original source
- a [link](#) is made to the metadata record in Durham E-Theses
- the full-text is not changed in any way

The full-text must not be sold in any format or medium without the formal permission of the copyright holders.

Please consult the [full Durham E-Theses policy](#) for further details.

A. J. CHALLIS

LATER PREHISTORY FROM THE TRENT TO THE TYNE

Ph.D. Thesis, September 1972

ABSTRACT OF THESIS

The object of the thesis is to present a study of the later Bronze Age and Iron Age periods in the area from the river Tyne southwards to the English Midlands. A large quantity of unpublished material is illustrated, and is discussed in a suggested chronological sequence devised on the basis of site association and relevant British and European context. The evidence of settlement sites, economy, and burial is also reviewed.

Specific conclusions have been reached throughout all aspects of the discussion. To a great extent these conclusions are provisional, since much evidence is not yet published and research in many fields has been limited, but some are of considerable importance. Pottery forms owing much to earlier urn styles are identified in the Late Bronze Age alongside intrusive types. The widespread influence of Hallstatt traits is discussed. The scored pottery of the East Midlands is seen to have been introduced in the fifth century B.C. or even earlier. The identification of distinctive "angular" pottery in the East Riding adds credence to the theory of an early La Tène immigration. The importance of arable farming in the Iron Age food-producing economy, and the development of an enclosed, intensively-occupied landscape in parts of the south and east are shown. The fact that most excavated hill-forts in the area are demonstrably pre-fifth century B.C. is highlighted.

An analysis of the distinctive character of constituent parts of the area of study is made. The results of palynological investigations are cited whenever possible to demonstrate the presence, character, and effects of prehistoric populations. It is seen that the paucity of material evidence from the north and west is not wholly a result of an imbalance in research effort. Suggestions for future work are made.

LATER PREHISTORY FROM THE TRENT TO THE TYNE

A Thesis submitted for the Degree of Doctor of Philosophy in  
the Faculty of Social Sciences in the University of Durham

VOLUME 1 : TEXT

September, 1972

A. J. Challis,  
Van Mildert College.

The copyright of this thesis rests with the author.  
No quotation from it should be published without  
his prior written consent and information derived  
from it should be acknowledged.

Know most of the rooms of thy native country before thou  
goest over the threshold thereof. Especially seeing  
England presents thee with so many observables.



PREFACE

In recent years, a continued research effort, particularly orientated towards regional study, has contributed to the clarification of the Iron Age of southern England. Likewise, archaeological reconnaissance, excavation, and radiocarbon dating have helped to elucidate the later prehistory of Britain north of the Tyne. As yet, no systematic attempt has been made to examine the archaeology of this period in the intervening area.

With the grant of a Major State Studentship from the Department of Education and Science, a three-year research programme has been conducted. Initially, the field of study was to be the first millennium B.C. from the Trent valley in the south to the Scottish lowlands in the north. However, the diligence of other workers in the area north of the Tyne, and in the study of Late Bronze Age metalwork, coupled with the limitations of a three-year period of study, has allowed the writer to exclude these aspects from the main scope of this enquiry. The obligation to complete the programme within the time allotted has also limited the opportunity for surface fieldwork and the study of available air photographs to representative sample surveys in each case. (The Archaeology Division of the Ordnance Survey, the Royal Commission on Historical Monuments (England), and the Research Committees of the Council for British Archaeology are all engaged in exhaustive surveys by these methods.)

The research has, therefore, entailed an examination of Later Bronze Age and Iron Age sites and material remains (particularly coarse pottery) from the Trent to the Tyne. While the northern, western, and eastern areal limits are well-defined, the southern and south-eastern margin, through Cheshire, Shropshire, Staffordshire, Leicestershire, and Lincolnshire, has no unitary physiographical or archaeological basis. Evidence from the Trent basin, including that from the southern and eastern parts of the

drainage system, is considered in detail, but that from beyond Watling Street, Ratae Coritanorum (Leicester), and Ermine Street is not. The definition is principally one of convenience with regard to both the nature and the quantity of the evidence included.

The records of the Royal Commission on Historical Monuments (England) and the National Monuments Record, and the collections of most private and public museums with relevant material, have most generously been made available for study. Excavation directors from local archaeological societies, from museums, and from the Department of the Environment have likewise willingly offered unpublished evidence. Yet the extent to which this thesis relies upon such sources reflects a situation in which a high proportion of the evidence remains unpublished. It is understood, moreover, that to some extent the reliability of the whole is dependent upon the accuracy of the contributed parts, which have been accepted as trustworthy in most cases. Some sources of information may not have been fully utilised because of a shortage of time, but other evidence, which the writer expected to be able to consider, has proved to be lost or mislaid, or is otherwise not available.

The thesis is arranged in four parts. Introductory sections are followed by chapters considering material remains, chapters discussing settlements and structures, and a final part of summaries and conclusions. Following the Bibliography are the Notes on Figures, in which is incorporated a large quantity of evidence. The material remains drawn are described, the numbered layers of the section drawings are listed, and the sites entered on the distribution maps are identified. Locations and references are given in these Notes, so reducing the number of explanatory remarks necessary in the text.

It is hoped that all assistance is adequately acknowledged where appropriate. In particular, thanks must be recorded to Dr. W. J. Varley

for allowing the writer to assist with his excavations at Castle Hill, Almondbury, in 1970, to Mr. D. Hudspeth for photography, and to Mrs. J. Moore and Mrs. I. Riley for typing. The assistance of the writer's sister and wife is gratefully acknowledged. Without the enthusiasm and vision of Dr. D. W. Harding this work could never have begun; without his guidance and encouragement it would not have been completed.

A. J. Challis,  
Van Mildert College

September 1972

## CONTENTS

	<u>Page</u>
List of Figures	ix
List of Plates	xiv
Bibliographical Abbreviations	xv
Abbreviations of Sources: Mainly Museums	xvii

### PART I INTRODUCTION

i. The Object of the Research	1
ii. Summary of Past and Present Research	4
iii. Problems of the Material and its Interpretation	9
iv. Some Environmental Factors	14

### PART II MATERIAL REMAINS

CHAPTER 1 The Materials Used, and Some Technical Factors	19
i. Pottery	19
ii. Metalwork	25
iii. Wood	32
iv. Bone and Antler	36
v. Stone	38
vi. Other Materials	42
CHAPTER 2 The Late Bronze Age .....	44
i. Metalwork	44
ii. Pottery : General Considerations	51
iii. Pottery : Details of Types	54
CHAPTER 3 Hallstatt Influences .....	68
i. Metalwork	68
ii. Pottery	77

Page

CHAPTER 4	The Early La Tène Period .....	94
	i. Pottery .....	94
	ii. Metalwork .....	104
CHAPTER 5	The Middle La Tène Period .....	114
	i. Metalwork .....	114
	ii. Pottery .....	125
CHAPTER 6	The Late La Tène Period .....	141
	i. Metalwork .....	141
	ii. Pottery .....	153
 <u>PART III SETTLEMENTS AND STRUCTURES</u> 		
CHAPTER 1	Hill-Fortifications .....	168
	i. Fences .....	169
	ii. Walls .....	176
	iii. Dumps .....	188
	iv. Castle Hill, Almondbury, near Huddersfield .....	195
	v. Unexcavated Sites .....	205
CHAPTER 2	Types of Domestic Settlement .....	208
	i. Middle and Late Bronze Age .....	208
	ii. Iron Age Enclosures .....	217
	iii. Extensive and Unenclosed Settlement .....	230
CHAPTER 3	Dwelling Structures .....	237
	i. Circular Types .....	237
	ii. Rectangular Types .....	247
CHAPTER 4	Food-Producing Economy .....	252
	i. Arable Evidence .....	253
	ii. Pastoral Evidence .....	261
CHAPTER 5	Religious and Burial Sites .....	273
	i. The La Tène Burials of Eastern Yorkshire .....	273

Page

ii. Other Burial Evidence

285

PART IV REGIONAL SUMMARIES AND CONCLUSIONS

i. Cumbria

295

ii. Lancastria

297

iii. Co. Durham

298

iv. North-East Yorkshire

300

v. The Askrigg Pennines

302

vi. The Southern Pennines

303

vii. The East Riding

305

viii. The South-West

307

ix. The East Midlands

309

Bibliography

314

Notes on Figures

Vol. 2, N1

Notes on Plates

Vol. 2, N104

LIST OF FIGURESMaterial Remains (1-50)The Southern Pennines and the West (1-8)

1. Mam Tor (1-4).
2. Mam Tor (1-10).
3. Ball Cross (1-10). Thor's Fissure Cave (11). Reynard's Cave (12).  
Demon's Dale (13). Berth Hill (14). Black Tor (15).
4. Steep Low (1). Harborough Rocks (2-4). Beeston Tor (5). Fenny  
Bentley (6). Etches Cave (7).
5. Harborough Cave (1-19).
6. Ravencliffe Cave (1-9). Old Woman's House (10-11). Winster (12).
7. Thor's Cave (1-8). Elder Bush Cave (9). Longdendale (10). Roe Wood (11).
8. Lea Green (1-3). Grass Woods (4). Sherrieff Hill (5-6). Roomer Common (7-11).  
Coney Garth (12). Stanistan Hill (13-15). Flaxby (16). Crosby Garrett (17).

The Trent Valley and the East (9-18)

9. Sudbrook (1). Holme Pierrepont (2-3). Epperstone (4-5).
10. Brigg Brickyard (1-3). Red Hill (4-12).
11. Burrough Hill (1-4). Ancaster (5-7).
12. Breedon-on-the-Hill (1-12).
13. Breedon-on-the-Hill (1-10).
- 13A River Witham (1-2).
14. Willington (1-10). Bassingfield (11-12). Camp Hill, Farnsfield (13-14).  
Thrussington (15). Swarkeston Lows (16-17). Honington Hill (18).
15. Barrowby (1). Melton Mowbray (2). Loughborough (3). Bleasby (4).  
Swarkeston Lows Farm (5-7). Hungerton (8). West Keal (9). Stretton (10).
16. Attenborough (1-3). Scratta Wood (4-18).
17. Dragonby (1-10).
18. Old Sleaford (1-12).

South-East Yorkshire (19-38)

19. Rotsea (1). Barmston (2-3). Weaverthorpe (4-5). Kilnsea (6).
20. Staple Howe (1-15). Kelk Hill (16-19).
- 20A Octon Cross Roads (1-3). Thornham Hill (4).
21. Manor Farm, Kilham. Surface find (1-2). Pit 1 (3-9). Pit 2 (10-15).
22. Manor Farm, Kilham. Pit 3 (1-8).
23. Manor Farm, Kilham. Pit 3 (1-4). Pit 4 (5). Pit 5 (6-8).
- 23A Bracey Bridge (1).
24. Great Kendale (1-13).
25. Brandesburton (1-4). Brantingham (5). Grange Farm, Brough (6).  
Thornham Hill (7-8).
26. Atwick (1-4).
27. Rolston (1-3). Atwick (4-6). Ulrome (7).
28. Danes Graves (1-5). Emmotland (6). Eastburn (7-9). Riggs Farm (10-11).  
Brigham (12).
29. Garton Slack (1-7).
30. Garton Slack (1-11).
31. Garton Slack (1-9).
32. Ousethorpe (1-7). South Cave (8-9).
33. South Cave (1-7).
34. Hasholme Hall (1-2). Elmswell (3). Rudston Beacon (4). Rillington (5).
35. Driffield Aerodrome (1-3). West Furze (4-6). Gransmoor (7-8). Flixton (9-11).  
Staxton (12-13). Grange Farm, Kilham (14).
36. Faxfleet "A" (1-7).
37. Faxfleet "A" (1-7). Littlethorpe (8-13).
38. Saltshouse School (1-14).

The North-East (39-50)

39. Castle Hill, Scarborough (1-19). 1953 (1-11). 1921-25 (12-18).  
Casual Find (19).



40. Castle Hill, Scarborough, 1921-25 (1-13).
41. Castle Hill, Scarborough, 1921-25 (1-18).
42. Eston Nab (1-9). Ampleforth Barrow 2 (10-12). Boltby Scar (13).  
Heathery Burn Cave (14-18).
43. Pale End (1-4). Percy Rigg (5-7). Great Ayton Moor (8-13).
44. Catcote (1-19).
45. Normanby (1-12).
46. Levisham Moor, Enclosure A (1-5).
47. Levisham Moor (1-11). Enclosure B (1-9). Enclosure D (10-11).
48. Thornton Dale (1-4, 6, 8-10). Costa Beck (5, 7, 11).
49. Costa Beck (1-7).
50. Ell's Knowe (1). Huckhoe (2). Burradon (3-6). Gubeon Cottage (7).  
Gunnar Peak (8). Riding Wood (9). Tynemouth Priory (10).

#### Archaeological Plans and Sections (51-70)

51. Berth Hill, Staffs. Site Plan.
52. Berth Hill, Staffs. Site A. Plan.
53. Berth Hill, Staffs. Site A, Box 8. Section.
54. Berth Hill, Staffs. Site A, Box 1. Section.
55. Berth Hill, Staffs. Site B. Section.
56. Berth Hill, Staffs. Site C. Section.
57. Castle Hill, Almondbury, 1970. Site 31A. North Section.
58. Castle Hill, Almondbury, 1970. Site 31A. South Section.
59. Castle Hill, Almondbury, 1970. Site 31. South Section
60. Castle Hill, Almondbury, 1970. Site 31. Transverse Section.
61. Castle Hill, Almondbury, 1970. Site 33. East Section.
62. Huggate Dykes, East Riding. Section.
63. Ousethorpe Medieval Earthwork, East Riding. Site Plan.
64. Ousethorpe Medieval Earthwork, East Riding. Ditch Section.
65. Saltshouse School Settlement Site, East Riding. Plan and Ditch Sections.

- 66. Great Ayton Moor Iron Age Enclosure, North Riding. Site Plan.
- 67. Great Ayton Moor Iron Age Enclosure, North Riding. Hut Site Plan.
- 68. Great Ayton Moor Iron Age Enclosure, North Riding. Section through Defences.
- 69. Percy Rigg Iron Age Site, North Riding. Plan and Sections.
- 70. Scratta Wood Iron Age Site, Nottinghamshire. Site Plan.

#### Distribution Maps (71-97)

- 71. Pottery of Late Bronze Age Type.
- 72. Late Bronze Age Gold.
- 73. Metalwork of Hallstatt Type.
- 74. Pottery with Hallstatt Influence.
- 75. Early La Tène Material.
- 76. Scored Pottery.
- 77. Undecorated Pottery of Middle La Tène Type.
- 78. Pottery with Rouletted, Stamped, or Grooved Decoration.
- 79. Some Belgic Types of the Late La Tène Period.
- 80. Some Native Types of the Late La Tène Period.
- 81. Bronze Age Extensive Settlement.
- 82. Bronze Age Isolated Huts.
- 83. Stockaded Camps.
- 84. Hill-forts: Timber used in Ramparts.
- 85. Hill-forts: Stone-Revetted Box Ramparts.
- 86. Hill-forts: Dump Ramparts.
- 87. Hill-forts: Other Sites, Mostly Unexcavated.
- 88. Enclosures with Inner Ditch and Outer Rampart.
- 89. Small Rectangular or D-Shaped Enclosures.
- 90. Curvilinear Enclosures.
- 91. Extensive, Unenclosed, and Unidentifiable Settlements: Iron Age and Romano-British.
- 92. Pit Alignments.

93. Large Rectangular Enclosures and Boundary Earthworks.
94. Later Prehistoric Pits.
95. Beehive Querns.
96. First Millennium B.C. Burials other than those on Fig. 97.
97. La Tène Burials in Eastern Yorkshire.

LIST OF PLATES

- I. Castle Hill, Almondbury, Site 31. South Section.
- II. Castle Hill, Almondbury, Site 31. Rear revetment of timber-laced rampart.
- III. Boltby Scar, North-East Yorkshire. Rampart from the north.
- IV. Boltby Scar, North-East Yorkshire. Rampart from the interior.
- V. Green Land Hill-fort, East Riding.
- VI. Carrock Fell, Cumberland. Possible hill-fort.
- VII. Whickham, Co. Durham. Rectilinear enclosure.
- VIII. Maiden's Grave Slack, Reighton, East Riding. Oval enclosure.
- IX. Appleby Magna, Leicestershire. Oval enclosure.
- X. Boynton, East Riding. Stock enclosure.
- XI. Grindale, East Riding. Cemetery and fields.

# Bibliographical Abbreviations

<u>AA.</u>	<u>Archaeologia Aeliana.</u>
<u>ANNCW.</u>	<u>Archaeological Newsbulletin for Northumberland, Cumberland, and Westmorland.</u>
<u>Ant.</u>	<u>Antiquity.</u>
<u>Ant.J.</u>	<u>Antiquaries Journal.</u>
<u>Arch.</u>	<u>Archaeologia.</u>
<u>Arch. Camb.</u>	<u>Archaeologia Cambrensis.</u>
<u>Arch. J.</u>	<u>Archaeological Journal.</u>
<u>BAGB.</u>	<u>Bradford Archaeology Group Bulletin.</u>
<u>BMQ.</u>	<u>British Museum Quarterly.</u>
<u>CA.</u>	<u>Current Archaeology.</u>
<u>CBATVARC.</u>	<u>Council for British Archaeology Trent Valley Archaeological Research Committee.</u>
<u>DAJ.</u>	<u>Derbyshire Archaeological Journal.</u>
<u>D. of the E.</u>	<u>Department of the Environment.</u>
<u>EMAB.</u>	<u>East Midland Archaeological Bulletin.</u>
<u>ERA.</u>	<u>East Riding Archaeologist.</u>
<u>HDASQB.</u>	<u>Huddersfield and District Archaeological Society Quarterly Bulletin.</u>
<u>HMP.</u>	<u>Hull Museum Publications.</u>
<u>JRAI.</u>	<u>Journal of the Royal Anthropological Institute.</u>
<u>JRS.</u>	<u>Journal of Roman Studies.</u>
<u>KAGN.</u>	<u>Keele Archaeology Group Newsletter.</u>
<u>LAASRP.</u>	<u>Lincolnshire Archaeological and Architectural Society Reports and Papers.</u>
<u>LHA.</u>	<u>Lincolnshire History and Archaeology.</u>
<u>N.Phyt.</u>	<u>New Phytologist.</u>
<u>NSJFS.</u>	<u>North Staffordshire Journal of Field Studies.</u>
<u>PSAL.</u>	<u>Proceedings of the Society of Antiquaries of London.</u>
<u>PPS.</u>	<u>Proceedings of the Prehistoric Society.</u>
<u>PSAS.</u>	<u>Proceedings of the Society of Antiquaries of Scotland.</u>
<u>RAECE.</u>	<u>Revue Archéologique de l'Est et du Centre - Est.</u>
<u>SxAC.</u>	<u>Sussex Archaeological Collections.</u>
<u>SAF.</u>	<u>Scottish Archaeological Forum.</u>
<u>TAASDN.</u>	<u>Transactions of the Architectural and Archaeological Society of Durham and Northumberland.</u>
<u>TCWAAS.</u>	<u>Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society.</u>
<u>THAS.</u>	<u>Transactions of the Hunter Archaeological Society.</u>

<u>TLAHS.</u>	<u>Transactions of the Leicestershire Archaeological and Historical Society.</u>
<u>TLCAS.</u>	<u>Transactions of the Lancashire and Cheshire Archaeological Society.</u>
<u>TLCHS.</u>	<u>Transactions of the Lancashire and Cheshire Historical Society.</u>
<u>TSDAS.</u>	<u>Transactions of the Scarborough and District Archaeological Society.</u>
<u>TTSN.</u>	<u>Transactions of the Thoroton Society of Nottinghamshire.</u>
<u>ULAAA.</u>	<u>University of Liverpool Annals of Anthropology and Archaeology.</u>
<u>VCH.</u>	<u>Victoria County History.</u>
<u>WAM.</u>	<u>Wiltshire Archaeological and Natural History Magazine.</u>
<u>YAJ.</u>	<u>Yorkshire Archaeological Journal.</u>

Abbreviations of Sources : Mainly Museums

BM.	British Museum.
BiM.	Birchover Private Museum (Mr. J. P. Heathcote).
BuM.	Buxton Museum.
BNT.	Mr. B. N. Tinkler, Marton-in-Cleveland.
DM.	Derby Museum.
DMM.	Dorman Memorial Museum, Middlesbrough.
DPM.	Driffield Private Museum (Messrs. C. and E. Grantham).
DU.	Durham University Department of Archaeology.
GM.	Grantham Museum.
HaM.	Harrogate Museum.
HuM.	Hull Museum.
LeM.	Leicester Museum.
LiM.	Lincoln Museum.
LU.	Leicester University Department of Archaeology.
MM.	Manchester Museum.
MPBW.	Ministry of Public Buildings and Works.
MTFC.	Malham Tarn Field Centre.
MU.	Manchester University Department of History.
NCM.	Nottingham Castle Museum.
NUM.	Nottingham University Museum.
OS.	Ordnance Survey Card Index of British Antiquities.
PYCM.	Pig Yard Club Museum, Settle.
RC.	Mr. R. Close, Kildale.
RCHM.	Royal Commission on Historical Monuments (England).
SbM.	Scarborough Museum.
ShM.	Sheffield Museum.
SkM.	Skipton Museum.
St.Jo.A.P.	Dr. J.K.S. St. Joseph, Cambridge University Collection of Aerial Photographs.
TVARC.	Trent Valley Archaeological Research Committee.
WM.	Worksop Museum.
YCM.	York Castle Museum.
YM.	Yorkshire Museum.

To these private individuals and to the staff of these public institutions  
the writer records his thanks.

PART I

INTRODUCTION



## i. The Object of the Research

The accelerating progress of archaeological reconnaissance and excavation is as evident in those counties between the Trent and the Tyne as it is elsewhere in Britain. In recent decades, however, there has been no work of collection and reconstruction in this central region such as would serve as a source of reference and a measure of progress. Most archaeologists within the area, professional and private, work within an enclosed geographical horizon, and often seem unaware of how their findings might relate to progress beyond their local hills. There is thus a need to attempt an interpretation of the evidence now available for the later prehistoric period, to highlight those areas in which least progress has been made, to provoke a reaction of criticism, and so to challenge a better co-ordination and regional balance in future research.

It is not only the size of the area, over 150 miles from north to south and often more than 120 miles from coast to coast, which ensures its importance to the prehistorian. Its central position in Britain immediately suggests its relevance to the archaeology of the other provinces bordering the Irish Sea, and as a potential link between north and south in the development of, for example, fortifications and metalwork types. The east is deeply cut by navigable rivers, and thus is open to influences from Continental contexts, particularly, perhaps, from the Dutch and German coasts. The northward sweep of the Jurassic Way implies the possibility of close relationships with the south-west of England. Sites in the northern counties are clearly to some extent related to trends north of the Tyne. Moreover, the area provides an excellent archaeological study, with deep internal contrasts in terrain, in the quantity of material remains, and in the impact of innovating cultures. There is also a unique opportunity for the correlation of the palynological record of environmental change with the

archaeological evidence (or the apparent lack of evidence) of the cultures responsible.

The absence of evidence for a succession of Iron Age cultures in parts of our region has often prompted comment. Some forty years ago, M. R. Hull could maintain that throughout the counties of Northumberland, Durham, and Yorkshire not a single find of the pre-Roman Iron Age had been recorded, "apart from the well-known invasion of the Parisii" (in Kitson Clark, 1930, 168). More recently, I. M. Stead has complained that the only Iron Age settlements in eastern Yorkshire either "defy close correlation because of the paucity of artifacts", date earlier than his Arras Culture, or belong to the immediately pre-conquest period (1971, 29-30). As for pottery, that from Derbyshire sites at Ball Cross and Mam Tor has been grouped with that from Stanwick in the North Riding as "Brigantian Ware" (Bartlett and Preston, 1956, 113), and social reasons have been sought for the absence of fine early La Tène wares in eastern Yorkshire (Brailsford, 1958, 93). Over large areas of the north and west where evidence for any Iron Age is limited or absent, the reaction has been to invoke substantial Bronze Age survivals, carrying not only their own traditions, but also those of the Neolithic period, through to the end of the first millennium B.C. (For example, Collingwood, R.G., 1933a, 189-192) As recently as 1965, J.M. Coles has suggested that in northern parts of Britain metalwork of normal developed Late Bronze Age types continued in use into these closing centuries (Fell and Coles, 1965, 50).

In some small areas of particular isolation and paucity of artifacts, it may be that the case for complete cultural stagnation throughout the first millennium B.C. might be acceptable, as in Furness (Barnes, 1968). However, there is often a high density of Late Bronze Age metalwork finds in areas where such an explanation might be in differing degrees convenient, such as Cumbria (Clough, 1969), West Yorkshire

(Raistrick, 1929), and north Lincolnshire (Davey, 1971). Recent research has shown that most of these metalwork types are quite closely datable, and that material in the different parts of Britain can be related within a well-defined chronological framework (Burgess, 1968a; 1968b). Moreover, radiocarbon dating techniques applied to sites within our area, such as ~~Marn~~ Tor, Grimthorpe, Ampleforth Moor, and Staple Howe, have produced results which, as we shall see, are to some extent compatible with the evidence of the material remains from these sites and which suggest dates for pottery types and structures at least as early as those now available for similar evidence north of the Tyne and in southern England. With the consequent extension of the time-scale to which our evidence in the first millennium B.C. must be related, it is becoming increasingly difficult to accept interpretations of the archaeology of northern England involving the extensive invocation of cultural decline and chronological retardation. Other explanations, such as variations in the economic basis, possible land exhaustion, and problems of the recovery of evidence, must be sought in specific cases.

The object of the thesis, therefore, is to present the material remains of the region in a suggested chronological relationship, devised on the basis of site association and relevant British and European context, and to examine the evidence of settlement sites, economy, and burial in relation to that from adjacent areas. Wherever possible, emphasis will be placed upon a consideration of unpublished material. The extent to which indigenous tradition or intrusive innovation are represented will be examined, and supposed conditions of overall unity or areal division within the area of study at different times will be critically considered. Discussions of the implications of all the evidence from each of the constituent geographical parts from the Trent to the Tyne will follow, and from this will emerge tentative historical interpretations, inferences

about those aspects of our knowledge which are most fragmentary, and, where possible, conclusions about the possible cultural and political divisions of the area in the immediately pre-Roman period.

## ii. Summary of Past and Present Research

Historically, the study of the later prehistoric archaeology of the region has been marked by an uneven intensity of research from area to area, and by outstanding publications by a few diligent workers. Amongst the most significant of early contributions were those by H. MacLaughlan (1849) in the northern Pennines, by H. S. Cowper (1893), C. W. Dymond (1893a; 1893b), and J. Dobson (1907; 1912) in Cumbria, and by J. Ward (1890), E. Howarth (1899), and W. S. Fox (1909; 1911) in the southern Pennines. The pioneer work of J. R. Mortimer (1905; 1911) on the burials and dykes of the East Riding, and the publication of the Holderness "Lake Dwellings" and the Scarborough pits by R. A. Smith (1911; 1927) were of great European importance. The years leading up to the Second World War saw a series of classic regional studies, by F. Elgee in north-east Yorkshire (1930), R. G. Collingwood in Cumbria (1933), C. W. Phillips in Lincolnshire (1934), M. Kitson Clark in eastern Yorkshire (1935), A. Raistrick in west Yorkshire (1929; 1939), and the Royal Commission on Historical Monuments (England) in Westmorland (1936). The first important programmes of hill-fort excavation were undertaken by W. J. Varley at Bickerton and Eddisbury, Cheshire (1935; 1936; 1950), and at Castle Hill, Almondbury, Yorkshire (1948), and by K. M. Kenyon at The Wrekin, Shropshire, and Breedon-on-the-Hill, Leicestershire (1942; 1950). There followed two substantial works of historical interpretation, by Sir Mortimer Wheeler in his report on the excavations at the Stanwick fortifications (1954) and by I. A. Richmond in his study of the Brigantes

(1954). Further regional surveys followed, by F. J. Sobae on the Pilling region (1953), F. L. Preston (1954) and J. Forde-Johnston (1962) on the hill-forts of the southern Pennines and of Lancashire and Cheshire respectively, W. J. Varley on Cheshire (1964, following an earlier version in 1940), A. J. H. Gunstone on Staffordshire (1964; 1965), and F. Barnes on Furness (1968). Significant excavation programmes, often mounted by local archaeological societies, were undertaken on native sites in Cumberland (Blake, 1959), on defended enclosures in south-west Yorkshire (Raistrick and Holmes, 1962), and on sites in the Worksop area (White, 1966), in addition to many others, particularly in eastern Yorkshire. Notable efforts of rescue excavation, field survey, and research were carried out by those in correspondence with the Archaeology Division of the Ordnance Survey.

There seem to be five major spheres of activity in recent research, all to some extent interlinked, but often taking place in an uncoordinated manner. The first is a continuation of the tradition of independent local research, as best illustrated in the work of T. C. M. Brewster at Staple Howe (1963). Much of this local interest is now shepherded by museums and local archaeological societies, and, in general, high standards of excavation and recording are maintained. Examples here are the work of the Keele Archaeology Group at Berth Hill and Maerfield Gate (Emery and Mills, 1964, et seq.), and of the Excavation Committee for Portfield Camp, Whalley (Beswick, 1970). Municipal museums such as Hull, Nottingham, and Leicester have undertaken significant work. Salvage operations over a long period by Messrs. C. and E. Grantham of Great Driffield have resulted in the accumulation of a large pottery collection in their private museum.

The second sphere of activity is the excavation and research by professional University and College of Education staff. Particularly

relevant is the work of T. G. E. Powell at Skelmore Heads, Lancashire (1963), D. Coombs and others from Manchester at Marn Tor, Derbyshire (1967; 1971), and Castercliff, Lancashire (unpublished), J. May and others from Nottingham at Ancaster and Drangonby, Lincolnshire (May, 1966, et seq.), D. D. A. Simpson and J. S. Wacher at Breedon-on-the-Hill and Burrough Hill, Leicestershire (Wacher, 1964), W. J. Varley at Barmston (1968) and Castle Hill, Almondbury, both in Yorkshire, F. A. Aberg at Eston Nab and Horse Close Farm, Skipton (also in Yorkshire, largely unpublished), and G. Jobey at West Brandon, Durham (1962). The importance of each of these sites cannot be over-emphasised. The trend towards quick publication or the production of detailed duplicated interim reports is particularly welcome, but not yet totally established.

The third aspect of current activity is surface fieldwork, mapping and recording. The Archaeology Division of the Ordnance Survey proceeds, county by county, in the investigation, mapping, and brief description of individual field monuments and other finds, providing a basic record of the location and condition of sites. A recent study of the West Riding is complete, and has added a number of new sites to our knowledge. Much more detailed work is undertaken by the Royal Commission on Historical Monuments (England). The approach adopted is more geographical and analytical, examining the constituent historical elements in their context within a total landscape. A study of the East Riding, and particularly of its linear earthworks, is in progress. The results of research by these organisations are always made available to other archaeologists on request, but problems stem from the small size of the professional staffs and the resultant slow rate of progress and publication. There are large variations in the depth of detail of the regional coverage, but the evidence obtained provides a basic source for a study of any period of Britain's past.

Fourthly, the Department of the Environment, by the work of its own staff and by the granting of financial aid to societies, museums, and excavation committees, seeks to meet the demand to excavate and record archaeological sites threatened with destruction. Most notable excavations on behalf of the Department have been directed by, for example, Mrs. M.U. Jones at Old Sleaford, Lincolnshire, T. C. M. Brewster at Garton Slack, East Riding, and I. M. Stead, whose careful and systematic excavations and publications of the Grimthorpe hill-fort and of La Tène burials (Stead, 1965; 1968; 1971) have added in large measure to our knowledge of the prehistory of eastern Yorkshire. It seems that, in our region, most of the effort is confined to southern and eastern areas. Brief comments on excavations are published in annual reports (Department of the Environment, 1966, et seq.), but it is unfortunate that the adequate publication of so many Department of the Environment excavations is still awaited.

To some extent connected with each of the afore-mentioned activities is the fifth, and perhaps the most important, major aspect of recent research, which is the application of air photography and reconnaissance. Air photographs form a basis for the field surveys of the Royal Commission and the Ordnance Survey, a source of evidence for those involved in the rescue of archaeological material from destruction, and a detailed guide at all stages of research excavation. The collection of Dr. J. K. St. Joseph at the University of Cambridge is perhaps the most detailed and representative of sites throughout the region, but other particularly valuable collections are held by the National Monuments Record, the Ordnance Survey, the Royal Air Force, the Universities of Newcastle and Durham, the Yorkshire Archaeological Society, the University of Nottingham, Mr. J. Pickering and other private individuals, the Ministry of Housing and Local Government, and most local County and County Borough Council offices. It is perhaps because of the new awareness of the value of air reconnaissance in research

and rescue archaeology, and the obvious need to co-ordinate flying effort because of the high cost involved, that the local groups and committees of the Council for British Archaeology are beginning to achieve some success in mounting programmes of work which utilise the efforts of all the existing active groups in a unified policy. A good example here is the Trent Valley Archaeological Research Committee which, within a year of its formation in 1967, had listed and classified nearly 500 sites in and around Nottinghamshire, and which has already carried out rescue excavations on over 20 sites, of which at least four are of relevance to this thesis.

Since before the war, the need for emergency rescue excavation of archaeological evidence under threat of destruction has been an over-riding commitment of the Department of the Environment, the Council for British Archaeology, museums, and local archaeological societies alike. The more immediate dangers of sand and gravel quarrying, open-cast mining, road-building, and urban expansion tend to attract salvage activity more readily than farming activities of bulldozing and deep-ploughing which, although finally resulting in a destruction equally complete, often take place without warning or at a steady, year-by-year rate. Most of the ground-surface burials and settlement evidence, on areas currently under intensive cultivation such as the East Riding and the Trent gravels, are now removed, and only ditch, post-hole and pit profiles remain. Rescue excavation has indeed resulted in some of the most outstanding discoveries of modern times, such as the cart-burial at Garton Slack (Brewster, 1971), but the major concomitant problem of the continuing crucial need for rescue excavation is that excavators tend not to allow themselves time, and financial resources are rarely extensive enough to fully provide, for the equally vital process of publication.



### iii. Problems of the Material and its Interpretation

Following in part from the above considerations are a number of fundamental limitations imposed upon a study of the kind here attempted. Without the basis of complete excavation reports, reliance is placed upon interim reports and, more commonly, on verbal description, which are obviously less satisfactory in detail, accuracy, and accomplishment. In some cases it appears that there is little chance of publication in the near future, and in others accurate information regarding the provenance of the material, or even a plan of the site, is lost or was never obtained. The loss of the material itself when in museums and in private hands is not an occurrence confined to discoveries from the early days of archaeology. The pottery from Grafton (Waterman, et al., 1955) is now unobtainable, and that from the Stanwick fortifications (Wheeler, 1954) was mislaid throughout the time during which this thesis was in preparation. For all these reasons, the evidence presented here is distressingly incomplete.

Although it may be said that material remains from the region as a whole have proved to be more abundant than was at first expected, comparison must be made with the quantity of pottery from a site like Dragonby, Lincolnshire, which produced 2.5 tons in the first five seasons of excavation up to 1968 (May, 1968, 4). In such a case there is a possibility of statistical analysis, and there is some likelihood that, when excavations are complete, a full range of coarse, and probably also fine, wares in use during at least some of the sites' phases will have been accounted for. There are no such possibilities open to this thesis, which is seen, therefore, in its true position as a basis for future work. Future work on settlements throughout the midlands and the north, on the same scale as excavations at Dragonby, is necessary if Iron Age studies are to make satisfactory progress. The quantity of pottery from the Trent-Tyne area is high in relation to other available dating evidence, however. Its importance to the prehistorian,

therefore, cannot be over-emphasised. Only in the case of the coarsest or smallest body sherds is it not possible to infer some chronological indications.

Whenever pottery is found within structures or in some stratified context, the picture is complicated by the element of rubbish survival. This is perhaps one of the most useful lessons to be learned from the Dragonby excavations, where most of the pottery was recovered from a complicated series of intersecting ditches and gullies. It is to be noted that much of the new material presented in this thesis is from ditch and gully sites, such as Saltshouse School, South Cave, and Hasholme Hall, all in south-east Yorkshire. Rubbish survival also has a bearing on the interpretation of the evidence from sites such as Staple Howe. At that site, all three palisade trench phases as defined by Brewster contained sherds of, for example, bipartite bowls with a horizontal groove below the rim, burnished wares, finger-tip decoration, and large, high-shouldered, undecorated jars. The earliest-looking forms, with internally-bevelled rim and applied, finger-tipped cordons, come from the third phase. An important factor evident from Brewster's published notes is that most of the pottery from the palisade trenches is from infilling, and not from packing. With domestic debris accumulating behind the palisades, particularly to the west of the main entrance (Brewster, 1963, 11 and 13), the case for extensive rubbish survival seems complete, particularly considering the fact that the fragments of the burnished bowl with lightly-grooved chevron decoration (op. cit., fig. 33, 6) were found at two locations in the first phase palisade trench and also in the packing of the second phase trench. It follows that the presence of quantities of material remains of a given period within a structure cannot be taken willy-nilly as indicating the date of that structure. Further warning of the dangers is afforded by the finds of entirely Iron Age date in the ditch of the Roman military fortification at Ancaster (EMAB, VIII, 13).

Moreover, any argument suggesting a short phase of occupation on settlement sites, and thus confining large groups of pottery within a narrow dating bracket, is to be examined with care. A recent consideration of the pottery from West Harling (Cunliffe, 1968, 176), for example, seems to overlook the likelihood that, particularly in the case of Site II, the structural evidence suggests a longer period of occupation than the excavators propounded (Clark and Fell, 1953, 7). The pottery includes vessels with finger-tipped decoration in double and triple rows and other patterns (op. cit., fig. 12, 20-21, 26-27) which recall the bucket urns of the Ardleigh Group (Erith and Longworth, 1960, figs. 2 and 5), and cordoned bowls of Hallstatt CI derivation (op. cit., fig. 16, 89; cf. Kossack, 1959, Taf. 25, Mindelheim tombe 11, Bavaria), in addition to later forms (such as op. cit., fig. 14, 43). Similarly, one should beware of treating the fillings of pits as associated assemblages without question. Although groups of material from individual pits often exhibit straightforward contemporaneity, unpublished material presented in this thesis from the pit groups at Manor Farm, Kilham, and Great Kendale, both in the East Riding, suggest by their wide variety of forms that a longer period of time may be represented.

The implications of these considerations for our study of material remains are fivefold. First, that, as much of the new material here presented has not been scientifically excavated, and in view of the fact that the pottery and to a considerable extent also the metalwork are predominantly of local manufacture, the study has to be essentially subjective. It is possible, however, to see certain types within the material which can be arranged in a chronological sequence. Second, that the keys to this chronological sequence must be the few independently datable and stratified associations which are present within the area, supplemented by similarities from relevant British or European contexts

which may be taken as broad dating indicators, although because of predominantly local manufacture the parallels to coarse pottery drawn from far afield are unlikely to be very close. Third, that because of the comparatively small quantities of material available for study, a major inadequacy is likely to be the unrepresentative nature of the types selected for discussion, although most of these can be viewed in a context broader than the areal limits of this study. Fourth, that because of uncertainties in the chronology of first millennium B.C. pottery sequences elsewhere, it is rarely possible to pin down the dating range of individual types, particularly in the earlier periods, to within a single century. Fifth, that, although some of our considerations are hypothetical, it is possible to define external influences or regional conservatism, particularly in the case of the finer pottery and the metalwork, and thus to progress towards an elucidation of the prehistory of the area as a whole, and in its various parts.

Problems of a similar nature are encountered when attempting to deal with the evidence for settlement types. The results of excavations, particularly in the north and west, are often unsatisfactory because of the remarkable paucity of material remains, coupled with the very shallow soil profile, often only one sod thick, which denies the archaeologist the presence of a stratigraphical section. In addition to those mechanisms of destruction of archaeological sites already mentioned, stone structures, particularly in Westmorland and west Yorkshire, are suffering increasingly from extensive commercial stripping of loose surface stone. The overall picture in these areas, therefore, is a desperate one. Moreover, on fortified sites, where there is more likelihood of stratified deposits in ditch sections and behind ramparts, the absence of material associated with the defences, as in the case of ~~Mann~~ Tor (Coombs, 1971), or the complications of the possibility of rubbish survival, as in the case of the Huggate Dykes (this thesis, Fig. 62), preclude definite conclusions.

Although a consideration of unexcavated sites known from air photography or surface fieldwork is obviously necessary in a study of an area where few systematic programmes of excavation have been undertaken, it is never possible to be certain regarding the identity or date of a site on the basis of surface finds or parallels to the structural alignment. Often in our area, whenever real evidence of the date of a site has been lacking, an attribution to the Iron Age period has been tentatively conferred as a convenient conclusion, either because of the massive flexibility with which the term 'Iron Age' is often used, or as if the very absence of other material of this period makes such a suggestion plausible. Field workers seem to be divided between those who choose the greatest antiquity that analogies will allow, and those who tend to favour dates in historic times. Two illustrations of the obvious difficulty may be given. A small stone circle, which appeared to be the remains of a hut, in Hirst Wood, Shipley, west Yorkshire (approx. SE 1537), reported to be Iron Age in 1952, was investigated in 1954 and found to be nineteenth century (BAGB, 3, 1954). An irregular oval-shaped upland village on the Longshaw Estate, Hathersage, Derbyshire (SK292796), reported in 1937 as a possible Iron Age site (THAS, IV, 4), was excavated in 1959 and 1960 and found to be late Saxon or early Medieval (information at Sheffield Museum).

Thus, the writer has had to be very critical of the evidence and opinions at his disposal before deciding which sites to include on the distribution maps. In many cases, particularly the small defensive enclosures and supposed hill-forts, great difficulty has been experienced, especially since only a small proportion of the sites in any area have been visited in the course of the research. However, it is hoped that the maps give some picture of the overall distributions, if not thoroughly complete or accurate in detail. Given, for example, that only a percentage of the sites marked on Fig. 91 is likely to be Iron Age, at least the general

characteristics of the distribution are likely, subject to the qualifications mentioned in the text, to reflect a trend. // Because of the limitations of the material, therefore, few of the conclusions, taken individually, are likely to remain uncontradicted by future work, or even to stand without criticism at the present time. We should be thankful, however, that the reports and finds of nineteenth century antiquarians and their descendants exist at all, in whatever state, and that programmes of archaeological rescue and research are gathering steam.

#### IV. Some Environmental Factors

It is a notoriously dangerous task for one who is not a palynologist and geologist to attempt to reconstruct a prehistoric environment. Because of the size of the area under study, and the great variations in surface geology and earlier prehistoric land use, most of the environmental detail will be reserved for later chapters, to be discussed in relation to economy and settlement density. There are points of general importance, however, which need to be considered at the outset.

The position and character of the shore-line of Britain have varied considerably in post-glacial times. It is thought that, during the greater part of the first millennium B.C., the mean sea level was considerably higher than at the present day. Evidence is particularly abundant for parts of the east coast. In the southern Fenlands, a gradual onset of marine incursion took place sometime between 1300 and 300 B.C., reaching its maximum extent in the Iron Age, and depositing saltmarsh clays and marine silts to heights of from 5 to 7 feet O.D. Possibly by the first and certainly by the second century A.D., Romano-British settlement had extended onto the silt flats and levees left by this Bronze Age - Iron Age transgression (Churchill, 1970, 142). In the northern Fenlands, the situation in the first millennium seems to be broadly similar, with marine transgression

extending virtually to the fen margin (Smith, A.G., 1970, 157). Further north, work by H. H. Swinnerton at Chapel Point, near Chapel St. Leonards, suggested a sea level 7 feet higher than today, dated by radiocarbon determination to c. 680 B.C. ( $2630 \pm 110$ ; Q - 688; Godwin and Willis, 1964, 129). A similar marine transgression is suggested in the Ancholme and Humber estuarine area by a series of radiocarbon determinations, lying mostly between 850 and 600 B.C., for material on or above a brushwood peat deposit (Godwin and Willis, 1964, 130) which lies below estuarine clays which suggest a mean sea level up to 9 feet higher than at present (Smith, A.G., 1958, 44). The conclusion is, therefore, that there was considerable marine encroachment along low-lying coasts during the first millennium B.C., which retreated to allow re-settlement of clay and peat deposits during and after the first century A.D.

The implication of this evidence for the marshland areas of the Trent, Witham and Yorkshire Ouse drainage systems, and possibly also for the lower reaches of the rivers draining into the Irish Sea, is obvious. Conditions of flooding and waterlogging must have affected larger areas to a more serious extent than in the majority of historic times. It is not surprising then, that the Romans found the Vale of York sparsely populated (suggested by Stead, 1971, 21), or that finds of the first millennium B.C. which one might expect to have been deposited in watery conditions, such as dug-out canoes and decorative martial metalwork, are quite regularly found during modern drainage activity. It is likely also that marshland and flooding conditions prevailed further up the drainage systems where local topography allowed poor drainage. Corroborative evidence of this was discovered during excavations at Barmston, East Riding (Varley, 1968), conducted with the elucidation of environmental history as a major aim. The site is a natural hollow at 15 feet O.D. The conclusion reached was that after the main phase of settlement, dated to about 1000 B.C., poor

drainage conditions favoured peat accumulation over the area until about the sixth century, after which the site was flooded and covered with down-wash. Marshland areas and regularly-flooded zones were extensive in the first millennium B.C., therefore, and they acted as a natural areal restraint on permanent settlement.

Further limitations to permanent settlement would have been set by the configuration of highland areas. This question is a very complex one, and factors affecting land use are different at each locality, but, to generalise, on west-facing upland areas settlement would be depressed below about 650 feet because of exposure to prevailing winds and heavy rainfall, whereas on the gentler-sloping, more sheltered, east-facing uplands, settlement would creep up above 1000 feet. In some areas the habitat was restricted by unstable scree, or was otherwise too rugged even for grazing land. The extensive areas of ombrogenous and blanket peat above about 1000 feet, and raised mosses in parts of the Cheshire and Shropshire plain, south Yorkshire, north Lincolnshire, and the Cumberland lowlands, would also have been unattractive, although virtually all palynological studies in these areas have provided unequivocal evidence of agricultural activity or, at least, minor clearance nearby in the Bronze Age and Iron Age periods. Studies in areas such as the gritstone uplands of north Derbyshire (Phillips, S.P., 1969) and the central watershed of the North Yorkshire Moors (Cundill, 1971) suggest that a major clearance and land use phase took place on these upland areas during the Middle Bronze Age, whereas Iron Age occupation was probably confined to peripheral flanks of the hills and to lower levels.

The areas other than those mentioned as unattractive are thus likely to exhibit the most evidence of first millennium B.C. occupation. Hill-top settlements such as Mam Tor, 1696 ft., Ingleborough, 2373 ft., and possibly also Carrock Fell, 2174 ft., are indeed exceptional, but these



either overlook extensive lower valley slopes or are situated on the fringes of a highland area. It is to the lower slopes of hilly country, uplands with broad plateaux, and slightly raised gravelly or sandy areas in valleys and plains that we must look for the main zones of land use, and more particularly to slight eminences within these zones for the sites of domestic settlement. Some areas, such as parts of the Cumberland lowland (Pennington, 1970, fig. 17) and the East Riding chalklands, experienced continuous occupation from the beginning of the Neolithic period, although elsewhere, as in parts of north Lincolnshire, it seems that second century B.C. settlements intruded into areas of relatively undisturbed, moist, mixed oak woodland (Hayes, A.J., 1968). This latter case is probably representative of an expansion of settlement onto medium and heavy clays at lower altitudes during the closing centuries of the first millennium B.C.

The importance of marshland and broad tracts of highland as barriers to movement must not be underestimated. Rivers themselves, however, are not likely to have hampered traffic: rather, the reverse is true, particularly since the extent to which they were navigable in prehistoric times is reflected by over eighty examples of dug-out and other boats now known in our region. The river Trent itself was shallow, and easily forded above Newark. Trackways well-known in archaeological literature are the York and Escrick moraines across the Vale of York, terminating to the east at the natural ford of the river Derwent at Stamford Bridge (Ramm, 1965), and the Jurassic Way (Grimes, 1951). Many others of regional and local importance may be inferred from local topography and from the distribution of metalwork finds and settlements, such as the trans-Pennine Aire-Calder and Ribblesdale routes, Rombalds Way (Cowling, 1946), and those reconsidered for the southern Pennines and the East Midlands by Posnansky (1956, 19, fig. 2). Trackways, often with a ditch running at either side, are a common feature of air photographs of the East Riding and the Midland river

gravel terraces. Although some are Romano-British, probably of the first century A.D. (Simpson, 1966, fig. 22), some can be shown to be Iron Age. The subjects of trackways and traffic control will be examined further elsewhere in relation to settlements and linear earthworks.

We now turn in Part II to a detailed consideration of the material remains of the peoples of the first millennium B.C. This is followed by an examination of settlement types, economy, and burial in Part III, and by historical and environmental regional summaries in Part IV.

PART II

MATERIAL REMAINS

## CHAPTER 1

### THE MATERIALS USED, AND SOME TECHNICAL FACTORS

#### i. Pottery

The pottery of later prehistoric Britain has been unfavourably compared with that from the Continent on the grounds of its general crudeness, aesthetic poverty, and interminable variety, and its value as a cultural indicator has been rejected (Hodson, 1962, 154). Apart from the small proportion of finer and smoother wares, a relative lack of skill in manufacture is apparent, and has led to the assumption of a domestic industry by women-folk, reflecting a similar division of labour regularly found in other primitive communities. It is true that the extreme roughness of finish of much of the pottery from the north and west scarcely suggests professional craftsmen. However, the value of pottery to the archaeologist lies partly in its quantity, and partly in the fact that it does directly reflect the cultural affinities of its makers. The large sizes and good symmetry amongst much of the material from the area studied and the neat finish of some of the smaller vessels indicate that the potters were capable of producing whatever shapes and decoration they intended, however coarse the ware.

It is usually assumed that coarse, hand made pottery is generally of local manufacture. The evident variations in the character of the wares found on different sites affirms this assumption, and work on the materials from which the pottery is made substantiates it. As long ago as 1890, Ward demonstrated (1890, 108) that the coarse, uneven, silicious clay of the majority of the pottery from Harborough Rocks, Derbyshire, was derived from the deposits of sandy clay found in the poorly-drained hollows of the Mountain Limestone in the vicinity. Analysis of the Staple Howe pottery (Brewster, 1963, 58) showed that most of it was made from Speeton Clay, a deposit

located beneath the white and red chalk of the Wolds and outcropping at its foot immediately to the east and west of the site. Crushed calcite crystals from the upper levels of the chalk were added as a temper within the range 20% to 30% calcite to 80% to 70% clay. Examination of the pottery from Harston, Leicestershire (Kenyon, 1950, 46), revealed it to have been made from local Lias clay, heavily tempered with fossil oyster shell. That from Melton Mowbray nearby (op. cit., 50) probably contained a hard, gritty sandstone derived from erratics brought south from the Pennines during the Pleistocene Ice Age.

Valuable petrological examinations have recently been conducted (Harbord and Spratt, 1970) on the temper material of pottery from three north-east Yorkshire sites: the Eston Nab hill-fort (Fig. 42, 1-8), the enclosure on Great Ayton Moor (Fig. 43, 8-13; Figs. 66-68), and the hut-circles on Percy Rigg (Fig. 43, 5-7); Fig. 69). Thin-sections showed that some grit came from the Cleveland Dyke, an igneous intrusive feature exposed at several places in the Great Ayton and Kildale areas, but that the fragments seem to have been derived from the parent deposit by an abrasion process rather than by chipping. Of the samples taken, Cleveland Dyke was predominant in the case of Eston Nab, and present in smaller quantities in the pottery from the other sites. That contained a larger proportion of a rock which closely resembles the dolerite Whin Sill, which outcrops in north-west Durham and Northumberland but which is present in erratic boulders in the Cleveland area. The conclusion reached was that the pottery was locally made, probably at the sites where it was used.

If we accept that in most cases individual communities manufactured most of their own pottery, it follows that because of the considerable variety of naturally-occurring deposits it is relatively easy to identify intrusive, imported wares on a site from which a reasonable quantity of material is available for study. Less conveniently, the often deep contrasts in the

character of the ware from sites relatively close in either time or space render any attempt at a chronological division on the basis of the types of material used quite unworkable in the present state of research in the Pennine and north-eastern areas. Even within the later period there are considerable differences between groups in the same area in consistency, thickness, and coloration, as for example between the material from Garton Slack (particularly Fig. 30), South Cave (Fig. 32), and Hasholme Hall (Fig. 34, 1-2). Hence, paramount attention is paid in the following analysis to the form of vessels, to their rims and profiles, in the belief that form is much more likely to demonstrate chronological and cultural affinities.

Methods of vessel construction exhibit variation within the area, although different methods are often to be seen on the same pot. Brewster (1963, 59) considered that, without exception, the pottery from Staple Howe was hand-modelled, vertical laminations showing that pieces of clay may well have been added to the walls of the original lump during working. No indications of the coil-building process were present. It is likely that the many small jars and open bowls of the East Midlands Iron Age were likewise modelled from a single lump of clay (Figs. 11, 4; 13, 1; 14, 3; for example), whilst the larger jars were probably built up by the careful joining and smoothing of the edges of broad clay panels (Kenyon, 1950, fig. 9). The joining of clay slabs to form rectangular vessels is also known, as at Castle Hill, Almondbury (reported in Cotton, 1954, 86), but the small rectangular vessel from Octon Cross Roads (Fig. 20A, 2) is drawn up from a single lump. In these examples all but the final smoothing seems to have been done by hand.

The classic ring-coil method of manufacture is also evident, as in such cases breakage often occurs along the lines of the joints, presumably because the clay was allowed to become too dry during manufacture, so

resulting in unsatisfactory bonding of the coils. There are many examples of circular pad or disc bases, roughly moulded (Figs. 1, 3; 16, 15; 24, 12; and 28, 12), upon which the walls of the vessel were built. Breakage planes around the walls showing the usually concave and convex, and often oblique, configurations of the moulded coils (Fig. 10, 12; Fig. 22, 1; and particularly examples from north of the Tyne such as Fig. 50, 1, 3, 7) suggest the likelihood that, in most cases, individual circular rings of clay rather than a continuous spiral were used. The completion of an approximately horizontal rim was then easier to achieve. The adding of a final clay ring to form a moulded rim can sometimes be seen (Fig. 3, 3; Fig. 14, 18). It is common to find that more attention has been paid to the finishing of the upper parts of a vessel than to the lower, and occasionally an attendant change from very coarse paste below to finer above can be distinguished (Fig. 27, 5).

It is likely that, when either the hand-modelling or the ring-coil methods were used, construction took place upon a wooden or stone platform which could be rotated as the work proceeded around the vessel. Such techniques would have been maintained throughout the first millennium until the first century B.C. when the potter's wheel proper was introduced. Even then, manufacture by hand continued as the predominant method, particularly in the north and west and also to some extent elsewhere, alongside the new, more professional, techniques. That improvements in potting in the north during this later period were being made is shown by the even consistency and excellent symmetry of the group from South Cave (Fig. 32, 8-9; Fig. 33). The use of a simple, hand-operated wheel is perhaps shown by the complicated rim profiles of the basically hand made vessels from Garton Slack (Fig. 30, 3, 7). North of the Humber, evidence of local use of the potter's wheel is not frequent, and is probably confined to the first century A.D. (Garton Slack, Fig. 31, 4; and possibly Salthouse School Fig. 38, 4, 9, 13). Further south, its use begins earlier and is more widespread as Belgic influence is

more direct, as at Dragonby in the second and later phases of the site (May, 1970, 236). Discussion of the detail of this southern and eastern material will follow in a later section.

The finishing of pottery surfaces with stiff, horizontal or random brushing is a common characteristic throughout the period. The effect of covering projecting temper material with a thin layer of clay, thus making the surface less abrasive when fired, is so marked in a few cases that it seems possible that these brushings are evidence of the technique of applying a thick clay slip, although not necessarily a coloured one. Otherwise the brushing, or deeper tooling as it sometimes becomes, is the last stage in the smoothing process. Later in the period, smoothing or shaving with a broad spatula or knife is commonly exhibited (particularly Figs. 32, 8; 33, 7; 36, 1; 37, 7; 38, 1; and 46, 1). Burnishing of pottery has a broad range in time and space, from Staple Howe (Brewster, 1963, fig. 33, 6; fig. 35, 3; fig. 40, 1) to Breedon-on-the-Hill (Fig. 13, 8). Decorative processing of pottery surfaces, including finger-tipping and other plastic ornament, cordons, grooves and incisions, will be encountered in later sections.

There seem to be no chronological inferences to be drawn from the size, quantity, and type of temper material used in pottery from the area, as have been evident in the Upper Thames (Harding, 1972, 98). It is quite common for individual vessels to contain several types, and individual fragments are often broader than the average thickness of pottery profile in which they occur. From the beginning to the end of the first millennium B.C., calcite is used, leading to similar "corky" fabrics when the pottery is fired at such a temperature that the calcite disintegrates (Fig. 41, 3; Fig. 33, 1). That many examples of calcite gritted pottery retain their temper unreduced (Fig. 20, 1-15; Kenyon, 1950, 46) indicates that firing temperatures were often low, between 550° and 750° C. Light buff, brown and



black colorations also suggest low firing temperatures, whereas the appearance of reddish tones (Fig. 33, 2), through to orange (Fig. 31, 3) and sometimes purple, is evidence that in later periods firing temperatures were often higher. The main function of temper is thought to be the facilitation of the dehydration process, and thus the prevention of warping and cracking of vessels under conditions of intense, uneven, and fluctuating heat. It is not possible to regulate to any great extent the temperature of primitive "bonfire" or "pit" kilns, and that such variations in temperature occurred is shown by the uneven zones of different colours on individual vessels, often from bright orange through to brown or black. Extensive black coloration seems to indicate a lack of oxygen around the pots during the firing process, probably a result of collapse of fuel and the accumulation of ash during combustion. The use of a floored pit-kiln is not considered likely in the case of Staple Howe (Brewster, 1963, 59) but it is probable for the more evenly-fired wares of the later Iron Age, particularly the curvilinear-ornamented and rouletted wares of the second half of the second and the first centuries B.C.

There is no satisfactory evidence of a kiln from the region. However, Messrs C. and E. Grantham (on whose information this account is based) recovered a possible example at 'Embankment Cross', Gransmoor (TA132593). Salvage operations made necessary by road-building revealed a "floor" of at least nine inverted rough-out beehive querns beneath a later linear earthwork of uncertain date. The querns were badly reddened by fire, and upon them it seems that a kiln or oven had been placed. The kiln fragments are over six inches thick, and probably represent the remains of a dome-shaped structure with a single vertical side beneath which the fuel would have been laid. Two sherds of pottery were found (Fig. 35, 7-8): one, a small shouldered jar fragment, could be earlier than the other, which is

of an uneven S-shaped profile, probably dating to a late phase of the Iron Age. There is no satisfactory evidence of exact association, and it may be that, because of the lack of pottery in large quantity in the vicinity, the structure should be seen as an oven of some kind rather than as a kiln. Circular clay oven-bases are known elsewhere: one has been reported from the later Iron Age settlement at Ancaster (Barley, et. al., 1968, 1), and there was another at Staple Howe (Brewster, 1963, 36).

It remains to be pointed out that, due in part to the low firing temperatures of the pottery, and in part to the fact that most of the material is the domestic rubbish of settlement rather than the deliberately-buried contents of graves, complete and undamaged vessels make up a small proportion of the total. Uneven manufacture, compression under overlying deposits, and the small size of many sherds make the estimation of diameters and angles for drawing purposes a hazardous task. It may be that some of the shapes suggested on the pottery drawings (such as Figs. 3, 3; 4,4; 5, 16; 14, 15; 21, 8-9; and 35, 2-3) are not completely accurate.

## ii. Metalwork

Because of the skills required and the value of the tools and products involved, it is generally considered that the manufacture of metalwork in prehistory was a professional occupation. From the many diagnostic features of most metal artifacts, both functional and decorative, it is often possible to determine their chronological context and area of manufacture with considerable accuracy. Hence the attitude amongst specialist students of the later prehistoric metalwork of western Europe that theirs is the material which is datable and that it is the types of settlement and other artifacts that have no firm chronology (Burgess, 1970, 214).

Moulds for Bronze Age metalwork have a thin distribution over the region. Particularly notable finds of an early date are the stone moulds for casting plain flat axes found at Hurbuck, near Lanchester (VCH of Durham, 1905, I, 207), and the sandstone moulds for bronze ingot and rings found at Hope Woodlands, Derbyshire, and attributed to the "Marnoch Group" (Britton, 1963, 324 - 5). For later phases we have, for example, the bronze mould for axes combining something of both palstave and wing-flanged axe from Hotham Carr, Yorkshire (Burgess, 1968a, fig. 3, 8), the clay mould fragments for casting swords, long-tongue chapes, socketed axes, and socketed spearheads from Fimber, Yorkshire (op. cit., fig. 21, 1), the stone moulds for twin-looped, leaf-shaped spearheads from Croglin, Cumberland (op. cit., fig. 18), and the bronze moulds for "Yorkshire type" socketed axes found on White Edge, Baslow, Derbyshire (EMAB, III, 1), in the Heathery Burn Cave hoard (Britton, 1968, no. 72), and in the Roseberry Topping hoard (Elgee, 1930, Pl. XXIV, 1 and 3). The distribution of hoards containing evidence of metalworking processes (in particular, note the long, narrow, spring-handled bronze tongs from Heathery Burn Cave; Britton 1968, no. 70) and recent metallographic examinations have emphasised the impression of independent industry in the region, particularly in the first half of the first millennium B.C.

Between the tenth and the eighth century B.C., northern artifacts of the Wallington Tradition are not leaded, as are their counterparts in the Wilburton Tradition of the south. There was some northward penetration by Wilburton material (Burgess, 1968a, fig. 23), as shown by, for example, the fine lozenge-sectioned spearhead from Fenny Bentley, Derbyshire (BM, 1896, 7 - 6. 1), but not until the later eighth century and the period of Heathery Burn Tradition was leaded bronze generally used in the north of England (Tylecote, 1968, 55). During this later phase the area saw the

manufacture of a new range of products (Burgess, 1968b, 39-40). To the south-west in Cheshire, Shropshire, and probably Staffordshire, an independent south-western and Marches Broadwood Tradition has been identified in this period (op. cit., 40-41). Regional bronze-working industries were thus well-established, and were significantly different from their Scottish, Welsh and southern counterparts. There seems little detailed evidence of the actual sites of bronze-manufacture, as might compare with the workshop at Jarlshof in Shetland (Hamilton, 1956, 21-9), but that bronze was worked on settlement sites is indicated by the fragments of a rough pottery crucible with bronze scoriae, and a jet from a bronze casting, found at Castle Hill, Scarborough (Wheeler, 1931, 22).

There is evidence that iron was used in the region from around 600 B.C., if only in small quantities. (This evidence will be reviewed later.) Outcrop iron ore deposits are available at many locations south of the Forth, particularly in western Co. Durham, north-east Yorkshire, and north Lincolnshire. In each of these areas we have evidence of iron-working, although mostly of a later date within the Iron Age.

Perhaps the best-known structures are the two rock-cut bowl furnaces for iron smelting excavated by Jobey (1962, 19-21) at West Brandon, Co. Durham. These were of similar size, one just within the line of the double-palisade at the south-west corner of the site, and the other some 45 feet to the east. They were slightly over 12 inches in diameter, and 8 inches deep below the present rock surface. In the bottom of each was a 2.5 inch layer of charcoal and slag droplets, covered by large runnels of slag forming a layer of similar thickness. Above this, truncated by ploughing, was a fallen fragmentary clay furnace-lining, the pieces, up to two inches thick, mostly showing vitrification on the inside surfaces. The type of structure was conjecturally reconstructed as a clay dome with a tuyère hole to one side and an opening in the top to allow gases to escape and to

feed in additional charcoal (entirely of oak). Jobey considered it likely that these furnaces were in use during the occupation of the homestead, which was tentatively ascribed to the third or second century B.C. Large fragments of clay lining from the western furnace were retrieved from the replacement palisade trench at a position beneath the packing-stones, pointing to deposition whilst the trench was open.

A similar furnace has been found at Catcote, near West Hartlepool (Long, 1964, 2). This was a clay structure, complete with its tuyère hole, situated in the eastern half of a hut. There is a considerable quantity of coarse late Iron Age pottery from this site (Fig. 44), but there is also Roman material, including a silver denarius of Elagabalus (A.D. 218 - 222). More certainly datable to the first century A.D. is the structure at Enclosure D, Levisham Moor. (Unfortunately, detailed information about these furnaces is not available, but a little has been kindly offered by J. G. Rutter.) On the southern edge of the North York Moors, north of Pickering and close to quarriable ironstone deposits, the site lies immediately to the south and west of a series of rectilinear earthworks and probable enclosures, all of which have been excavated by the Scarborough and District Archaeological Society. Surrounded by two concentric penannular drainage ditches, 48 and 33 feet in diameter, 2 - 3 feet deep; dug into natural limey sandstone, and with the terminations on the south-eastern, downhill, side, was a circular hut about 20 feet in diameter, defined by a single ring of post-holes. Within the hut, a shallow depression contained a small clay furnace of the type envisaged at West Brandon, partly superimposed upon the remains of two earlier furnaces. A large deposit of slag had been dumped to the south of the hut between the terminals of the inner penannular ditch. The pottery from Enclosure D (Fig. 47, 10-11) is similar to that from other enclosures in the complex (Fig. 46; Fig. 47, 1-9), and suggests a date within the first century A.D.

One of the few large outcrops of iron ore in Britain may have influenced the choice of site for settlement at Dragonby, near Scunthorpe. Although no furnaces or associated structures have been discovered, it seems that both bronze and iron were worked on the site, since cup-shaped and triangular clay crucibles and quantities of slag have been found in Iron Age layers (G.C. Knowles information). Triangular crucibles similar to those from Dragonby have been found at Traprain Law, East Lothian (Curle and Cree, 1916, fig. 36), and Breedon-on-the-Hill (Kenyon, 1950, fig. 6, 6), as well as at Maiden Castle, Dorset (Wheeler, 1943, fig. 119, 1), and it seems that they were usually used for bronze-working.

At least by the later Iron Age, therefore, one must envisage a series of small smelting industries in those areas where ore was obtainable. In addition, it is reasonable to assume that most large communities wrought their own ironwork, and probably also bronze. The tools used are likely to have been little different from those of the hand-forges of relatively modern times. Exciting new evidence of this was recovered by T. C. M. Brewster in salvage excavations in 1970 at Garton Slack, eastern Yorkshire (D. of the E., 1971, 14). Carefully concealed in the bottom of a grain storage pit 10 feet in diameter and about 4 feet deep, and covered over with gravel of the same consistency as the surrounding natural deposit, was a container, probably a wooden box, enclosing three forging tools of iron. The best-preserved was a pair of tongs, 17.5 inches long, quite similar to the pair from Llyn Cerrig Bach, Anglesey (Fox, 1946, Pl. VI, 131), with short, rectangular-sectioned jaws and long handles, designed for the tight gripping of narrow objects. The other two were both about three feet long. The first was a square-sectioned, counter-twisted bar with a narrow two-edged blade at one end and a stout ring at the other. The second was a simple square-sectioned bar with a similar stout ring,

in which remained a loose iron ring, at one end and a short, pendant, rectangular-shaped, single-edged blade at the other, probably a tool either for twisting iron bars or for cutting them. The site as a whole (Garton Slack, IX) produced no material other than that assignable to the late Iron Age of the first century B.C. and the first century A.D.

It is possible to suggest, therefore, an increase in the availability of iron in the later centuries of the Iron Age, on the basis that most evidence of its working is of that period. The useful range of domestic iron objects found at Hunsbury hill-fort, Northampton, including knives, sickles, saws, chisels, spearheads and plough-shares, probably reflects its situation over workable ironstone deposits (Fell, 1937, 65 ff., 95-6). There is little domestic ironwork from sites further north, probably partly because of a high corrosion rate; and the situation is confused since the basic functional shapes evolved for Iron Age tools continued largely unaltered into the Romano-British period. It is thus not possible to date accurately the many iron knives from west Yorkshire (Fig. 8, 3; Raistrick, 1939, fig. IV), except to say that because of the wealth of contemporary evidence they are likely to belong to the later period. Spearheads such as those from Manor Farm, Kilham (Fig. 21, 2), Stone, Staffordshire (TNSFC, 1896, XXX, 113), Lincoln (LiM, 55-59), and Dragonby (G. C. Knowles information) may be Iron Age as they have unsplit sockets. The spring-handled iron shears found in a shallow hut-gully at Stanwick (Wheeler, 1954, Pl. XXVII c.) are just like those used by shepherds today.

Recent studies of outstanding products of Early Celtic Art found on the eastern and southern margins of our area point to flourishing local workshops. Jope (1971, 64-5), in his discussion of the Witham shield, considers it unnecessary to suggest that the finished product was brought northwards from Thames valley workshops, and perceives a local industry in the Lincoln area. The failure of the casting and the fragility of the metal

of the Glascote gold torc led Painter (1971) to conclude that this priceless antiquity, together with a similar torc from Needwood Forest, was a product of a goldsmith settled in the Lichfield-Tamworth area of Staffordshire. It is reasonable to concur with Fox (1958, 29) who envisaged armourers and other metalworkers as present in all "grouped communities". Stead (1965, 63) stops short of proposing an independent metalworking school in La Tène eastern Yorkshire, relating artistic features to those found in Lincolnshire, but he does imply separate development in many cases, particularly in his discussion of inlay ornament (*op. cit.*, 65-6). Large workshops would have been required to produce domestic metalwork in addition to the considerable quantities deposited with burials as, for example, the cart-fittings at Garton Slack (Brewster, 1971, Pls. XLII and XLIII). Simpson (Simpson, M., 1966) has felt able to propose at least two schools of metalworking in Brigantian territory in the late Iron Age period, one possibly in the Vale of Eden, and another, more conjectural, to the south.

The study of metalwork is a specialist occupation, requiring a knowledge of laboratory techniques and manufacturing skills. By the later Iron Age, complex methods of casting, working and decoration, and the potentials of different alloys were fully utilised. It has not been possible in this study to completely reconsider the evidence and interpretation of all metalwork artifacts found in the region. In particular it has not been felt necessary to retrace the steps of Stead (1965) in his study of the grave goods from the La Tène burials of eastern Yorkshire, or of Simpson (1966) in her analysis of Celtic metalwork in north Britain from about the first century B.C. onwards. Considerable amounts of detailed information about methods and techniques of manufacture are also available in existing literature: for example, techniques of gold alloying and working



are examined by Hawkes and Clarke (1963) and by Painter (1971). However, metalwork types and individual pieces relevant to the discussion will be considered in later sections.

### iii. Wood

The extent to which wood was used in later prehistory, and the skill with which it was worked throughout the period, has been highlighted by the early date now indicated for at least two of the sewn boats from North Ferriby (Wright and Churchill, 1965, 11-16). Radiocarbon determinations suggest that these smoothly-finished sewn boats, probably over 50 feet long, were in use during a period of estuarine conditions in the Humber area from about 1500 to 1200 B.C., prior to the marine transgression mentioned previously as taking place in the first millennium.

It is seldom possible to date dug-out canoes on the basis of their structure, since they must have been used from earliest prehistory until relatively modern times. The radiocarbon date of A.D. 1300  $\pm$  120 (D-71; McAulay and Watts, 1961, 37) for the boat from Kentmere, Westmorland, warns of the dangers of assuming great antiquity without evidence, and although an error of several hundred years is quite likely in the radiocarbon dating of artifacts by samples from large timbers, such laboratory methods at present provide the most reliable indicators. A comprehensive new survey of dug-outs is required, as much new evidence has emerged since Fox published his survey (1926). From our area, several representative instances should be quoted. A dug-out in badly damaged condition was recovered from silt, 18 feet beneath ground level, at Chapel Flat Dyke, Sheffield (SK407915). It produced a radiocarbon date of 1500  $\pm$  150 B.C. (BM - 213; YAJ Arch. Reg., 1967, 7). Probably marking the onset of wetter conditions in estuarine and riverine situations are the dug-outs from the river Ancholme

at Brigg ( $834 \pm 100$  B.C. ; Q - 78; Godwin and Willis, 1961,73), and from the river Witham at Short Ferry, near Lincoln ( $846 \pm 100$  B.C.; Q - 79; op. cit., 72). Both these examples had separate stern-boards, and are thus similar to three boats, probably associated with bronze implements of the Middle, or early Late, Bronze Age, from the river Trent at Clifton, above Nottingham (Phillips, C.W., 1941). Of three boats from Holme Pierrepont some six miles downstream (MacCormick, 1968), No. 3 was very similar to the Clifton examples, but was not stratigraphically related to the others, of which No. 1 was punt-shaped and No. 2 was smaller (probably originally 18.5 feet long ) and rounded, both completely monoxylous. A Birmingham University radiocarbon date of  $230 \pm 110$  B.C. was obtained probably from hardwood in the gunwale of No. 1. However, it is not safe to postulate a chronological sequence from sewn boats to stern-board dug-outs followed by simpler punts and dinghies. It is likely that differences in function and conditions of use account for the structural varieties.

Trapped between bed-rock and the hull of Boat No. 1 at Holme Pierrepont, and thus probably lost in the same flood, was a most remarkable wooden wheel. As the radiocarbon date for the boat refers to the age of the wood rather than to the date of deposition, we may consider the wheel to have been used late in the Iron Age period. Originally about 33 inches in diameter, it had twelve spokes of squarish section, six felloes held together at simple flat joints by floating tenons, and an iron rim, now corroded away. The square-ended tenons of the spokes projected through the felloes to the rim. The nave was 14 inches long, cylindrical, plain and symmetrical, lathe-turned externally, its interior trimmed with a chisel. It bore traces of iron nave-bands. The spoke-housing zone was marked out by light lathe-turned lines, and the spoke ends were tapered into rectangular tenons. The complete wheel was recovered. There seems to

be no parallel to this multi-felloe construction in prehistoric Europe (no mention in Kossack, 1971), although those from Pit LXX at Newstead and from the outer ditch at Bar Hill, both Scottish Roman forts, are similar (Curle, 1911, 294). A close parallel to the wheels from the two four-wheeled ritual wagons from Dejbjerg, Jutland (Kossack, 1971, fig. 28, 1), however, is a wheel found beneath 16 feet of alluvial deposits of sand and clay lying on gravel, from the river Tyne at Ryton (Piggott, S., 1949). 38.75 inches in diameter, it had a single felloe 2.5 inches wide with a levelled joint, into which the nine 12.5 inch spokes were morticed. The massive hub was 15.5 inches long with external diameters of 5.75 inches at the ends and 8.5 inches in the centre. The remains of an iron tyre were visible.

Only when they have been preserved in waterlogged conditions can any definite conclusions be reached about wooden artifacts. Thus there is little to be said of the detail of the wheels from the Garton Slack cart-burial (Brewster, 1971, Pls. XLII and XLIII), except that they were 34 inches in diameter, had felloes 2.75 inches deep, 12 spokes, hubs 14 inches long and 5.75 inches in diameter with gilded bronze nave-hoops, and wrought-iron tyres. The felloe-construction type is not known, but apart from the number of spokes these wheels seem broadly similar to the Ryton example. Other woodwork in the Garton Slack burial would have included the coachwork and pole-shaft, of which traces remained. Additional examples of wooden artifacts from East Riding burials include the possible shield from the Hunmanby cart-burial (Stead, 1965, 94-5), and at least three examples of wooden coffins for contracted inhumations in Area I of the 1968-9 Burton Fleming cemetery excavations (Stead, 1971, 26).

The extent to which wood may have been used for domestic purposes, and even as a deliberate alternative to pottery in areas of the north and west,

is shown by a discovery at Stanwick (Wheeler, 1954, 52-3). This was a shallow bowl or tray of oak, 17 inches long and 2.5 inches deep, found in the waterlogged ditch termination at the Phase II entrance. Wheeler draws attention to the evidence for wooden troughs for water-storage, and quotes an undated example, 5 feet 4 inches long and 13 inches deep, from the river Esk in Cumberland. To these may be added the carbonised remains of a trough or chest found in a small oval pit within a late Iron Age enclosure at Site V, Garton Slack (D. of the E., 1971, 12). An earlier example of a wooden container is the oak box, fastened with wooden pins, which contained the hoard of bronze socketed axes, socketed spear-heads, and probably a dagger, from Wirmarleigh, Lancashire (Sobee, 1953, 17). The ash-wood scabbard of the sword from Stanwick, also found in the ditch of the Phase II entrance (Wheeler, 1954, Pl. XXVI), is a further example of delicate and expert wood-working, and again demonstrates the value of waterlogged deposits to the prehistorian.

The lathe-turned and excellently-proportioned Holme Pierrepont wheel is a tribute to the high standards of craftsmanship in the late Iron Age period. On a different scale, the widespread use of wood in defence, enclosure, and dwelling construction was doubtless usually of rougher character, with lashed or pegged joining. The carefully-squared timber planks and beams of a rectangular structure were found at Barnston, eastern Yorkshire (Varley, 1968, 20), a site to be discussed later. Apparent hut-circles visible on the clay slopes above Ingoldmells Point, Lincolnshire, associated with salt briquette manufacture (Warren, 1932), had floors artificially raised on piles, with wall structures incorporating mortising and dowelling. The planks found at the base of the rampart structures at Castle Hill, Almondbury, in 1970 were carefully cut (Fig. 59; Plate I). The sheer quantity of timber used in stockaded and timber-boxed defences

and in hut structures must not pass without comment. Equally, great effort was involved in the construction of the timber roadways at Kate's Pad, Pilling, a track of longitudinally placed split logs, traceable for at least 70 yards (Sobee, 1953, 18-21; 810  $\pm$  120 B.C.; Q - 68; Godwin and Willis, 1960, 69), and at Brigg, where similar longitudinal split logs overlay trunks and branches at right-angles, and were secured by mortise joints to vertical stakes (Smith, A. G., 1958, 32; 602  $\pm$  120 B.C.; Q - 77; Godwin and Willis, 1964, 130).

Wood seems to have been used invariably on all types of site in later prehistory, and it is rare that some indications are not evident. Wooden carvings of ornamental or ritual type, such as the Roos Carr images (Lindqvist, 1942), would have been common. The Iron Age well lined with birch stakes interwoven with hazel twigs at Dragonby (G. C. Knowles information) and the small fragments of hazel and willow basketry from Stanwick (Wheeler, 1954, Pl. XXVb) are further examples of domestic crafts. Of the use of other perishable materials we have little evidence. There are two instances from the area of the discovery in peat of well-preserved human bodies. In 1747 the body of a woman with moccasin-type sandals and excellently preserved skin and hair was found, six feet deep in peat at Amcotts, Lincolnshire (Peck, 1815, 8). All that remains of a similar discovery at Laverton, Yorkshire (SE163743), is a sandal and part of a stocking (Elgee and Elgee, 1933, 166). Both these finds have been presumed to be Romano-British, but the use of leather, particularly for footwear, would have been common in earlier times.

#### iv. Bone and Antler

Simple tools and other objects of worked bone and antler seem to form a substratum of domestic material common to most excavated sites of the

first millennium B.C. in the region. The cannon bones of oxen were often used as working pieces; they are known from Staple Howe (Brewster, 1963, fig. 70) and from Manor Farm, Kilham, Pit 3 (C. and E. Grantham excavations), and from them pointed implements were made, as from Ravencliffe Cave (Fig. 6, 2). The small limb-bones of sheep and deer served as simple points, probably for leather work, as from Harborough Cave (Fig. 5, 5-8), Catcote (Fig. 44, 1), Normanby, Cleveland (Fig. 45, 3), and Heathery Burn Cave (Britton, 1968, nos. 121-132). Antler levers and picks, probably used in quarrying pits and gullies, are also common, as at Staple Howe (Brewster, 1963, fig. 71), Manor Farm, Kilham, Pit 3 (C. and E. Grantham excavations), Grimthorpe (Stead, 1968, fig. 10, 9), and Weaverthorpe (Greenwell, 1877, 201-2), all in eastern Yorkshire. Alongside these objects of general utility are those with particularly specialised functions. Bone combs, as from Harborough Cave (Fig. 5, 2), Thor's Cave (Fig. 7, 1), Breedon-on-the-Hill (Fig. 12, 3), Boston Spa (Kitson Clark, 1936; similar to one from All Cannings Cross - Cunnington, 1923, Pl. 11, 2), and Catcote (C.D. Long information), may have been used in weaving, but the distinct greasy smearing of the teeth, particularly of the Breedon-on-the-Hill example, suggests sheep-plucking as an alternative function (as considered likely by Ritchie, 1969, 10). Such combs appear to have been used throughout later prehistory, and on into the Roman period.

Other types of bone implements seem to have a more restricted chronological range. The toggle, or handle-piece, of antler from Staple Howe (Brewster, 1963, fig. 69, 5) is paralleled at Harborough Rocks, Derbyshire (Ward, 1890, fig. 9), and at Heathery Burn Cave (Britton, 1968, nos. 162-167), and so seems to be representative of the second quarter of the first millennium B.C. The Staple Howe netting-needles (Brewster, 1963, fig. 69, 1-4) may also be early types, although there is an example from Great Kendale (Fig. 24, 1). The shuttle-bobbin, made from a sheep's metacarpal, from Normanby, Cleveland (Fig. 45, 1), is closely paralleled at the Trundle (SAC, LXXII, 142, fig. 40) and at Glastonbury (Childe, 1940, 236), and belongs to a later period. A similar example has come from the Roman villa

at Harpham, eastern Yorkshire (DPM). Also later are the perforated antler objects, most of which may be interpreted as horse harness cheek-pieces (Harborough Cave, Fig. 5, 1; Ravencliffe Cave, Fig. 6.3; Thor's Cave, Fig. 7, 3-7; Elder Bush Cave, Fig. 7, 8; Burrough Hill, Fig. 11, 2; Breedon-on-the-Hill, Fig. 12, 4; and Costa Beck, Fig. 49, 1). The bone pegs found with the Grimthorpe warrior burial (Stead, 1968, fig. 16) are quite common elsewhere in Yorkshire at Blealands Nook (Mortimer, 1905, fig. 493) and Langton (Corder and Kirk, 1932, fig. 19), and also at Bishop Middleham, Co. Durham (Raistrick, 1933, fig. 3). They seem to be of late La Tène or early Roman date.

Dogs' canines and boars' tusks seem regularly to have been perforated and used for ornaments. The former type have come from Heathery Burn Cave (Britton, 1968, nos. 21-3) and Harborough Cave (Fig. 5, 4). Similar perforated canines are known abroad, as at Hallstatt (Kromer, 1959, Grab. 139, Taf. 11, 14). The Harborough Cave perforated boar's tusk (Fig. 5, 3) is paralleled at Breedon-on-the-Hill (Fig. 12, 3) and Staple Howe (Brewster, 1963, fig. 72, 1). These types of presumed magical significance may have had a long currency, and no specific cultural inferences may be drawn from them. Some artifacts of bone and antler do seem to have distinct chronological ranges, however, and if evidence from later prehistoric sites throughout Britain was collected, some meaningful distinction between earlier and later assemblages would probably emerge.

#### v. Stone

The most common surface finds from later prehistoric sites in central and northern England are of stone. Small, flat rubbing-stones and flints are particularly evident. An impression of a profuse if inexpert domestic stone-working activity is supported by the finds from excavations. Flint chippings, of which those from Staple Howe (Brewster, 1963, fig. 76), Grim-

thorpe (Stead, 1968, fig. 10, 10-12), and Scarborough (Wheeler, 1931, fig. 18) are typical, are virtually ubiquitous amongst collections of material from settlement sites. Staple Howe also produced characteristic hammer-stones or pounders (Brewster, 1963, fig. 75, 1 - 3), found elsewhere in eastern Yorkshire at Thornham Hill, Ennotland, and Manor Farm, Kilham (DPM), and at Ravencliffe Cave, Derbyshire (Fig. 6, 7). A carefully-made stone hone was found at the latter site (Fig. 6, 6), a type also seen at Heathery Burn Cave (Britton, 1968, no. 183). Stone, like bone, therefore, seems to have been widely used throughout the period.

Amongst more specialised items of stone equipment, the most common is the quern. The saddle quern was used throughout the first millennium B.C. until it was gradually superseded in the closing centuries. Probably fairly early examples are from the bottom of the ditch of the Roman signal station at Scarborough (Wheeler, 1931, 22), two from the Ball Cross fort, Derbyshire (Stanley, 1954, 98), and at least two from the berm of the barrow at Swarkeston, also Derbyshire (Posnansky, 1955, 132). Four were found at Breedon-on-the-Hill in excavations by Wachar (1964, 134 - 5). One was broken and showed appreciable signs of wear, but the other three had seen little use and consequently have clear features. The method of manufacture seemed to be that the stones were roughly dressed so that when placed on level ground the upper surface would be tilted in a lengthwise direction. The grinding face was then prepared by pecking at the surface in a series of closely contiguous parallel rows across the width. The variety of rock types used suggests that no particular preference operated. Chance finds of saddle querns are on record from Eggleston, Co. Durham (NZ009234; OS information), near Owler Bar, Derbyshire (Arch. J., CXXIII, 10), and Totley Bents (SK303799; Sheffield Museum) and above Wharnccliffe Chase (SK313971), both south-west Yorkshire. That the type was superseded over the area, gradually from south to north,



by the beehive quern is suggested by its rarity at the earlier Iron Age site at Ancaster (Barley, et al., 1965), where rotary querns were manufactured probably in the second century B.C., and by its presence on the late Iron Age site at Granger's Pit, Staxton, eastern Yorkshire (Brewster, 1963, 145). The dating evidence for the beehive type itself will be discussed in a later section.

The working of stone on an industrial scale for beehive querns is very likely. There is evidence for a number of quern-factories throughout the area, but perhaps the most conclusive comes from Wharnccliffe, in south-west Yorkshire (SK2997 - 2998; Butcher, 1970). This site covers nearly 200 acres, and consists of several hundred larger and smaller working floors. The natural screes of Millstone Grit of the Yoredale Series in the area provide convenient blocks from which the stone for a quern was split off by wedge. Over 1000 stones, from unfinished rough-outs to those with finely-pecked surfaces but without feed-pipes, hoppers, or handle-sockets, are still scattered over the area. Three types of quern were made: two flat types of the Roman period in addition to the earlier beehives. Excavation in adjacent Romano-British settlements has produced only flat types alien to Wharnccliffe. It seems that the unfinished stones were removed from the site, and that the feed-pipes and other features were drilled out elsewhere.

Other quern-factories have been proposed or reported, in north-west Yorkshire by R. H. Hayes (on the basis of the large number of millstone grit beehives found in north-east Yorkshire), at Dalton, Westmorland (1774 discovery of about 20 pairs of querns near Dalton Hall; RCHM, 1936, 34), and at Horton in Ribblesdale, West Riding (A. King information, obtained from RCHM York Office). This latter site consisted of two hut-circles. One was excavated, and proved to be 25 feet in diameter with a double-faced

stone wall three feet thick. Romano-British pottery was found which was dated to the second to fourth centuries, and also 17 pieces of beehive quern of glacial erratics of Millstone Grit, not of the local Silurian Grit. These pieces had been broken during the drilling of feed-pipes, handle-sockets, and hoppers, an activity which evidently took place on the site. The evidence from chance finds supports the conclusion that, after initial quarrying or collecting, rough-out stones were sent to central or major domestic sites for finishing. It has been suggested that the Hunsbury hill-fort, already mentioned as an iron-working centre, also acted as a finishing and distribution point for a distinctive type of quern of Derbyshire gritstone (Fell, 1937, 100; Philips, 1950, 75) found on the site. Millstone Grit, sandstone, and other conglomerates were the most commonly used materials. (For further general comments on querns see Curwen, 1937 and 1941.)

Further types of stone artifact also have specialist functions. The studding of the heels of wooden mould-board ploughs with pebbles, presumably to lessen friction on the wood, is known particularly from Jutland in probable early Iron Age contexts (Clark, 1938, 230). Quartzite pebbles with characteristic striations on flattened surfaces are also known in north Lincolnshire from the Lincoln Edge and near Scunthorpe, and from the East Riding (Phillips, C.W., 1938). It is possible that these represent Iron Age activity. To the west in the mid-Wharfedale and Bradford areas, rounded boulders with basin-shaped hollows, traditionally interpreted as Iron Age mortars, are quite common (BAGB, 1966, XI), but their chronological position is similarly uncertain despite a parallel amongst the material from Manor Farm, Kilham (DPM). More securely datable are the squared, cone-shaped loom-weights of roughly tooled chalk from Garton Slack, from Emmotland, and from Manor Farm, Kilham (all DPM, the last a surface find). Clay examples of the same size and shape are known from Staple Howe (Brewster, 1963, fig. 73). The cylindrical, bun-shaped type known from Bronze Age sites in the

south (Rahtz and ApSimon, 1962, fig. 22) and from the East Riding (Octon Cross Roads; Fig. 20A, 3), and the triangular type found on later Iron Age sites in Lincolnshire including Foston (EMAB, VII, 6) and Couthorpe (Lincoln Museum), are usually also of clay. Small, rounded stone beads are known from Thornham Hill (DPM) and cylindrical ones from Heathery Burn Cave (Britton, 1968, nos. 14 - 15). At least six small stone boxes about 1 foot across have been reported from a supposed Iron Age site at Topstone Folley, Egton, north-east Yorkshire, associated with flint wasters, a beehive quern, and a small pottery sherd (R.H. Hayes information).

The working of stone for small artifacts seems therefore to have been a fairly common activity. With over 400 Celtic stone heads now known, particularly from south-west Yorkshire (Sheffield Museum information), it seems that the carving of ritual objects would also have been of some importance. The quarrying of rock-cut ditches, stone defence erection, and the use of loose boulders and stones for hut construction will be noted in later sections.

#### vi. Other Materials

Of other materials worked, jet is the most common on settlement sites. A considerable range of objects is represented in the small collection from Staple Howe (Brewster, 1963, figs. 66 - 68). On the basis of partly-worked objects and several angular pieces, Brewster considered that jet was worked on the site. Great skill was evident in the curvature and smooth finish of the rings and armlets, and from the pendants it seems that both pointed-bit and flat-bit drills were in use. The jet deposits exposed along the beaches of the north-east Yorkshire coast from Ravenscar to Port Mulgrave may have been utilised, but large lumps are known from the north-eastern end of the Vale of Pickering, brought by glacial activity (op. cit., 118). One of the

Staple Howe objects was crescent-shaped; a similar pendant fragment with a suspension loop is among the collection of penannular bracelets and other objects from Castle Hill, Scarborough (Wheeler, 1931, fig. 17, 2). Further jet material includes bracelets, probably penannular from Grimthorpe (Stead, 1968, fig. 10, 1-3) and probably circular from Heathery Burn Cave (Britton, 1968, nos. 7 - 11), a jet pendant from Thornham Hill (DPM), and a jet bead from Ball Cross (Stanley, 1954, 85). That jet working was not a prerogative of the earlier period is shown by the bracelets, beads, and rings from the La Tène burials in eastern Yorkshire, especially from Arras (Stead, 1965, 116-7). A shale bracelet in a grave-group from Burton Fleming is particularly fine (Stead, 1971, fig. 5, 3).

Amber was used, but in smaller quantities than jet. There are small beads from Heathery Burn Cave (Britton, 1968, no. 13) and Scarborough (Wheeler, 1931, 24), and rings from the Queen's Barrow and another burial at Arras (Stead, 1965, 117). The working techniques seem to have been the same as those used for jet and the softer stones.

An early example of the use of glass for personal ornaments comes from one of the pits at Scarborough, where there was a fragmentary yellow glass bead (Wheeler, 1931, 24). Glass beads from the La Tène burials of eastern Yorkshire are particularly well-known, and must have been produced from the beginning of the period, as 70 were found in the early Barrow L at Cowlam (Stead, 1965, 105). Elsewhere, blue glass beads with inlaid blue or white chevrons or spirals are known from Fulwood, Sheffield (Sheffield Museum), Cold Kirby, north-east Yorkshire (Elgee, 1930, 188), and the earlier Iron Age site at Ancaster, from which there is also a translucent pale green bead (J. May information). These examples are likely to date from the second or first century B.C. Bracelets from Great Kendale (Fig. 24, 2) and Levisham Moor Enclosure B (Hayes, 1968, 126), both of pale blue glass with raised corded bands of coloured glass or paste, are likely to be pre-

Roman, although Stevenson (1966, 28), on the basis of many finds, particularly from southern Scotland, considers the type to have been traded by some Romanised Gaul within the frontier. However, the manufacture of coloured glass as early as La Tène I is shown by the Cowlam blue beads with their white wavy lines or impressed annulets, and inlaid red glass is present on the foot of the Eastburn I involuted brooch (Stead, 1965, 65). Manufacture was probably by modelling in glass paste, followed by firing to cause fusion of the particles. The bangles could have been made in several stages by the same methods, and may well have been La Tène products.

## CHAPTER 2

### THE LATE BRONZE AGE

#### i. Metalwork

The later Bronze Age metalwork of the Trent-Tyne area has been the subject of extensive research programmes in recent years, by C. B. Burgess (1968a) north of Derbyshire and Cheshire, by D. Coombs (not yet completed) south of the Humber, and by P. J. Davey (1971) in Lincolnshire. The results of this work, where available, have shown traditions of metalworking over the area which, demonstrably contemporary with those of the south, produced ranges of products and used technological methods which were distinctively northern. Burgess (op. cit.) has demonstrated that for the Middle Bronze Age the six northern counties of England can be grouped with Scotland and Ireland rather than with areas to the south on the basis of the axes employed. In the north, ha ft-flanged and wing-flanged axes produced in stone moulds were dominant, whereas in the south palstaves produced in bronze moulds prevailed. The sequence suggested for the majority of northern England is from a Pickering Phase (c. 1400 - 1200 B.C., possibly beginning earlier) to a Hotham Carr Phase (c. 1200 - 1000 B.C.), both composed mainly of indigenous metalwork types, followed by a Penard Phase (c. 1050 - 950 B.C.), of more widespread significance for Britain as a whole and including a strong injection of early Urnfield Continental material. The hoard from Ambleside, Westmorland (op. cit., fig. 4), with its pointed ferrule, Lambeth/Rosnoën straight-bladed sword, and "transitional" palstave, can be firmly set in this Penard Phase.

The "transitional" palstave, although produced in the Penard Phase, is also characteristic of the Wallington Tradition, which is the earlier of the two great metalworking industries of the northern English Late Bronze Age

(centered on 950 - 750 B.C.). The characteristic types are listed by Burgess (op. cit., 7 - 23). The extreme rarity of leaf-shaped swords in the period suggests the survival of dirks and rapiers. A typical hoard of the period is that from Kilnhurst, near Rotherham (op. cit., fig. 13), which probably represents the tools and weapons of an individual craftsman. The six items were a "transitional" looped palstave, two plain leaf-shaped spearheads, one with a plain peg-hole and the other broken, a small socketed chisel or wedge, and two plain socketed hammers, one long and the other short. Metallographic examination by Tylecote (1968) has shown that types made in the north during this period were straight tin bronzes, and not leaded bronzes as were the products of the Wilburton industry of southern England.

Alongside the density of Wallington complex material in the north there is very little penetration by Wilburton equipment, and such finds as there are come mainly from the south and east of our area (Burgess, 1968a, fig. 1). Particularly notable finds are the hoard of clay mould fragments from Fimber, Yorkshire, the V-shouldered sword from the river Tees, and the fine lozenge-sectioned spearhead from Fenny Bentley, Derbyshire. Continental influences in the Wallington phase are practically absent, moreover. Receiving its ideas, perhaps second hand, from Ireland (op. cit., 34), the tradition seems to have continued in isolation.

A wide range of new material is to be seen in the hoard from the Heathery Burn Cave, Co. Durham (Britton, 1968), which is the rich type-site of the comparatively prosaic subsequent tradition (c. 750 - 600 B.C.). That leaded bronze became widely used has been shown by spectroscopic and metallographic analyses (Brown and Blin-Stoyle, 1959, 202, 208; Tylecote, 1968). A further important departure is the use of swords of Ewart Park type. The hoard of scrap weapons from Bilton, west of York, is perhaps typical, with its two sword hilts of Ewart Park type, seven plain leaf-shaped

socketed spearheads, those sufficiently complete showing peg-holes and one carrying grooved decoration of chevrons within circumference lines on the shaft, and six socketed axes of plain "northern" type (Sheffield Museum). Chance finds such as the East Angli an socketed axe from Peak Forest, Derbyshire, and that of slender type, common in southern Wales and southern England, from Leeds (both Sheffield Museum) show movements from the south.

The Wallington and Heathery Burn Traditions may be roughly equated with Hawkes' Late Bronze Age 1 and 2 (as suggested in 1960, 5-6). His Late Bronze Age 3 was mainly distinguished by the intrusion of Hallstatt I, or C, material (from c. 650 B.C.) which led to the creation of the first Iron Age cultures of Britain. This Hallstatt I influence can be seen as instigating our earliest Iron Age in the seventh century B.C. (Harding, 1970, 235-6), and as such it will be considered later. However, the presence of metalwork in the Heathery Burn Tradition on settlements thought to be Iron Age on the basis of pottery and small quantities of iron, as at Scarborough ("Yorkshire" and plain "northern" socketed axes, tanged chisel, and socketed gouge; Wheeler, 1931, fig. 16) and Staple Howe (fragmentary socketed axe, tanged chisel, and tweezers; Brewster, 1963, figs. 61-2), demonstrates a survival of this tradition through to the sixth century and, one might expect, possibly later in some areas.

Metalwork finds showing Continental influences are not common in the north, but the few examples indicate a continued pulse of contact. A gold spirally-twisted torc with hooked terminals from Scalby, near Scarborough (Elgee, 1930, fig. 56), is closely similar to those considered by Smith (Smith, M.A., 1959, 149) as part of an "Ornament Horizon" in south-west England with Montelius II and III connections. The strange bronze pin from Lea Green, west Yorkshire (Fig. 8, 1), for which no exact parallel can be found, may be in context here. The solid bronze bucket-handle from Rotsea, East Riding (Fig. 19, 1), is a rare type in Britain, paralleled by a smaller



example possibly associated with a Group IIc early Urnfield sword, found at Barrow, Suffolk (BM, 1929.10-22. 1; WG 1239). Similar bucket-handles are known in Montelius III/IV contexts in northern Germany, as at Weisdin (Hollnagel, 1958, Taf. 18, h-i), and so our example might date to the tenth century B.C. or shortly afterwards.

Finds showing later Urnfield influence are thinly scattered over central and northern England. Their comparative rarity and the preponderant indigenous nature of British metalworking suggest a limited movement, but this, coupled with the evidence of fortifications to be considered later, places our area firmly within the general western European scene. The vase-headed pin from Fenny Bentley (Fig. 4, 6), very similar to one from Totternhoe, Bedfordshire (Hawkes, 1940b, fig. 491), was found with another with spherical head and swelling shank, now lost. The association with a Wilburton spearhead indicates a ninth or eighth century date. The large bronze disc-headed pin from Ingleton, west Yorkshire (PYCM), with a perforation on its expanded shank protected by a diamond-shaped plate, recalls the similarly perforated pins from Kent which are more directly paralleled in Picardy (Hawkes, 1942). The distinctive swelling of the shank of the smaller nail-headed pin from the Breiddin hill-fort, Montgomeryshire (Musson, 1970b, 217), provides a further link with Urnfield contexts and a point of reference for the various pins from Heathery Burn Cave (Britton, 1968, nos. 95 - 107), Scarborough (Wheeler, 1931, fig. 16, 10 - 12), and Brigg Brickyard, north Lincolnshire (Hawkes, 1949, 13; dished head similar to Heathery Burn, no. 104). The rolled-headed pin from Heathery Burn Cave (op. cit., no. 108) is another familiar late Urnfield type. (For a recent useful corpus of late Urnfield pin types, see Audouze and Courtois, 1970.)

Late Urnfield infiltration is also suggested by the horse and waggon gear from Heathery Burn Cave (Britton, 1968, nos. 27 - 57). This collection seems devoid of Hallstatt influence, but others from Parc-y-Meirch, Denbighshire

(Savory, 1971, Pl. XXXIX), Welby, Leicestershire (Powell, 1948), and Horsehope, Peebleshire (Piggott, S., 1953), are not, and suggest a continuing influence rather than a single movement. The bronze antenna-hilted sword from the river Witham (Hawkes, 1949, 12, Pl. III) is an outstanding piece, paralleled in the later Urnfield period of Italy, more particularly in period 2a (later eighth century) of the Bologna sequence (Kossack, 1958, 47, Abb. 11, 9).

The riverine provenance of the Witham sword just mentioned is a characteristic reflected by much fine later prehistoric metalwork, and by no type more unequivocally than the bronze shield. From our area, those from Bagley, near Ellesmere, Shropshire, Broomyholme, Co. Durham, Burringham Common, Lincolnshire, and near Leeds, Yorkshire, all of the Yetholm Type and from Carlton-on-Trent, Nottinghamshire, and Brumby Moor, near Scunthorpe, Lincolnshire, both of the Trent Type, have all (apart from the doubtful Leeds example) been recovered during drain-cutting, from peat, or from rivers, suggesting the possibility of votive offering (detailed information of the shields in Coles, 1962a). Coles indicates a date in the eighth and seventh centuries B.C. for these shields, and considers that the British types can be seen to be derived from European Urnfield types and ultimately from the eastern Mediterranean world in the early first millennium. The ribs, bosses, and corrugations on the shield surfaces, the rolled and wire-strengthened rims, and the use of domed rivets (lozenge-shaped on the Carlton-on-Trent example; Baggaley, 1950, fig. 1) link the shields with the Irish/British buckets of the same period. The buckets also exhibit indigenous development, perhaps best seen in the progress of base-plate design: the abutting cast edge-plates of the Bagmoor bucket (north Lincolnshire) have been seen by Hawkes (1949, 9 - 11) as intermediate between the earlier Irish radially-placed angle-plates, themselves an improvement on the simpler Etruscan ones, and the later continuous wheel-shaped casting of

the Heathery Burn bucket.

Heathery Burn also leads us to consider the various types of gold penannular ornament from northern England. It has already been noted that Burgess, in seeking the origins of the bronzework of the Wallington Tradition, considered that Irish sources of inspiration were most likely. Hawkes and Smith (1957, 155) assign the Heathery Burn gold in general to c. 750 - 700 B.C. on the basis of evidence from throughout western Europe in the late Urnfield period, and more particularly to the repertory of gold ornaments produced by Irish smiths. (For detailed consideration of Irish gold, see Hawkes and Clarke, 1963. For finds from the region and their references, see Notes on Figures for Fig. 72.) The penannular gold lock-ring from the Cave, hollow and made from three overlapping strips (Britton, 1968, no. 1), is paralleled by two found in 1850 at Cooper's Hill, Alnwick, Northumberland, with a socketed axe (Maryon, 1939), by one found with two Ewart Park swords at Startforth, North Riding, and by one from the hoard of bronze and gold at Portfield hill-fort, Lancashire. Amongst the bronze objects at Portfield were "Yorkshire" and "faceted" socketed axes. The gold bracelet with concavo-convex section and buffer terminals from Heathery Burn (Britton, 1968, no. 2) has no direct parallel within the area, but buffer terminals occur on gold bracelets of plano-convex section from Cottingham, East Riding, and Aspatria, Cumberland, of circular section from Greta Bridge, north Yorkshire, and of ribbon section from High Hunsley, East Riding, and Stanton, Staffordshire. That bronze copies were in use is shown by those from Beacon Hill, Leicestershire (Powell, 1950, 68), and again from Heathery Burn (Britton, 1968, no. 3). Two gold bracelets with outwardly-expanded terminals and concavo-convex section from Cottingham, and another from the Portfield hoard with sharper D-section, are similar in general appearance to those of bronze from Covesea, Morayshire

(Benton, 1931, fig. 6), although the latter are of solid, rounded section. A further type represented at Cottingham has a broad ribbon section and sharply narrowed terminals, tightly coiled externally. Other gold bracelets are recorded from Tideswell, Derbyshire, Woodhouse, Leicestershire, and Cawood, Yorkshire. The association of different designs and types at Heathery Burn, Portfield, and probably Cottingham suggests their broad contemporaneity, and the bronze types at Heathery Burn, Portfield, and Startforth give a firm date within the Heathery Burn Phase, reflecting the developing contacts of the Irish smiths of the Dowris Phase (Fig. 72). Bracelets of bronze from Thirlmere, Cumberland (Collingwood, W. G., 1903), with expanded terminals but incised, beaded decoration probably represent influence of a later date. It is most unfortunate that the fine gold dress-fasteners with trumpet terminals, one from Swinton Park and two, said to be similar, from Ripon, both sites in Yorkshire, are now lost.

The occurrence of Late Bronze Age metalwork on settlement sites has already been briefly mentioned. The discovery of pottery with metalwork hoards in our area is rare, and apart from the Heathery Burn Cave material the reported sherds have now disappeared. Two bronze socketed axes, a leaf-shaped spearhead, and some bones were found at Spring Gardens, Buxton, with a coarse pottery vessel, light brown in colour, 6 inches in diameter and about 6 inches tall, with projecting knobs below the lip (Salt, 1900). The surviving axe (Buxton Museum) is of slender, funnel-mouthed form with twin raised lines beneath the mouth. It is similar to two from Traprain Law, East Lothian (Curle and Cree, 1921, fig. 11), and may belong to the eighth / seventh century B.C. Bosses below the rims of coarse pottery vessels are known from Eldon's Seat I (Cunliffe and Phillipson, 1968, fig. 11, 10-11) for which a seventh century date has been suggested. The reported fragments of a large, coarse, undecorated vessel with the hoard from Westow, Yorkshire (Arch. J., VI, 382), are less helpful. It is upon the

relation of pottery to radiocarbon dates, as at Mam Tor, Derbyshire, and the association with metalwork, as at Heathery Burn Cave, that the following sections on Late Bronze Age pottery are largely based.

## ii. Pottery : General Considerations

Although radiocarbon dates have obvious advantages to the archaeologist in the construction of chronological frameworks and cultural sequences, particularly in cases of especial uncertainty on other grounds, their reliability, taken individually, must not be over-estimated. In conformity with agreed practice, dates are here quoted based on the "Libby" half-life for carbon - 14, that is  $5568 \pm 30$  B.P., and the error term used is equivalent to plus or minus one standard deviation. As such, the limits given are not those in which a true date is bound to fall, as there is a 1 to 3 chance that it may, still pegged to the "Libby" half-life, occur outside these limits. Moreover, further correction is necessary as a result of a revised calculation of the half-life of carbon - 14 and the effects of research on tree-ring dating. Such revised calibration has a greater effect on determinations within the second than within the first millennium B.C. Recent useful assessments of the use and limitations of radiocarbon dates have been made by Renfrew (1970) and Waterbolk (1971).

In a recent statement of views on the chronology of the Bronze Age in Britain, Burgess (1969a) could conclude that Food Vessels, Enlarged Food Vessels, Collared, Cordoned, Encrusted, and Southern Biconical Urns and their related cultures were all in evidence in the Early Bronze Age, and that they cannot at present be shown to have been current in the Middle, let alone in the Late Bronze Age. Moreover, over much of the British Isles he could see no non-metallic cultural material which could safely be assigned to the Middle or Late Bronze Age (that is, the period c. 1400 - 550 B.C.), apart

from a few localised exceptions. No unequivocal Middle Bronze Age associations were accepted for any form of urn. Such interpretations are not unquestioned, however. Longworth (1965, 35, 43) considered that, in Yorkshire, although the Food Vessel passed out of use by c. 1300 B.C., Collared Urns were still being made down to about 1000 B.C. It is important to briefly examine the radiocarbon dates available, and so to define the extent of the period for which the complete absence of settlement sites, burials, and pottery over wide areas, claimed by Burgess, might be apparent.

A useful series of dates from Derbyshire may be examined. The large cairn on Harland Edge, Beeley Moor, covered three pits, each with Food Vessel burials, charcoal from two of which produced dates of  $1750 \pm 150$  B.C., and  $1490 \pm 150$  B.C. (BM - 210 and BM - 178; Riley, 1966; CBA, 1971, 4B. 1). It may be that the overlap of the two ranges at 1640 - 1600 B.C. dates the complex. In secondary positions in the cairn the remains of three Collared Urns were found. Two cremations with Primary Series Collared Urns have been dated: that sealed by a ring-cairn at Barbrook II, Ramsley Moor, was dated from associated carbon to  $1500 \pm 150$  B.C. (BM - 179; Lewis, 1966), and that from Brown Edge, Totley, to  $1050 \pm 150$  B.C. (BM - 177; Radley, 1966). It is suggested that the latter date is incorrect because of contaminated samples (Lewis, 1966), and that a more accurate assessment may be made on the basis of dates from cremations on the same site with a flint point and a "decayed" urn, which appeared to have been deposited at the same time. These results were  $1530 \pm 150$  B.C., and  $1250 \pm 150$  B.C. (BM - 212 and BM - 211; Radley, 1966). A Secondary Series Collared Urn from a cremation pit, a secondary burial in the barrow at Swarkeston, has been dated by a reading from charcoal to  $1395 \pm 160$  B.C. (NPL - 17; CBA, 1971, 4B. 2). It seems from this evidence that an overlapping sequence

of urn usage from Food Vessels to Primary and then Secondary Series Collared Urns can be upheld, but that the latest examples could have been deposited within the Early Bronze Age as defined by Hawkes (1960, 3-4), to which these uncorrected dates can be related.

There is no reason why a continuation of types of urn into the Middle Bronze Age should be completely ruled out, however, and this the marginal dates from Brown Edge and Swarkeston indicate. It is true that a radiocarbon date of  $1500 \pm 110$  B.C. (GaK - 2287; Phillips, S.P., 1969) for a phase of extensive clearance on the gritstone uplands of north Derbyshire, likely to have been the result of the activities of the population which used Collared Urns, has been obtained, but similar ecological conditions on the North York Moors, for which a comparable culture is likely to have been responsible, have been dated to  $1260 \pm 90$  B.C. (GaK - 2712; Cundill, 1971, 256). Although such reasoning relies upon the assumption that the culture of which most remains in the funerary record is that which also had the greatest impact on the environment, the general conclusion that Collared Urns continued in use in some areas at least down to the thirteenth century seems clear.

That the main currency of "Deverel-Rimbury" culture followed, centred on the period 1200 - 1000 B.C. rather than any later, was comprehensively demonstrated by Smith (Smith, M.A., 1959), whose conclusions have been amply confirmed by radiocarbon dates of  $1180 \pm 180$  B.C. (NPL - 19; Rahtz and ApSimon, 1962, 290) for the settlement at Shearplace Hill, and  $1380 \pm 90$  B.C. (NPL - 74; *Ant.*, XL, 227 - 8) for material from the Wilsford shaft associated with Deverel-Rimbury pottery. In our area, cremations in flat cemeteries with bucket and barrel urns of exceedingly coarse character are scattered particularly in the south and east, from Catfoss (McInnes, 1968) and Flaxby (Fig. 8, 16) in Yorkshire to Kirton Lindsey, Scunthorpe, Frieston, Belton, and Wilsford in Lincolnshire (Phillips, C.W., 1933, 145-6)

and Hoveringham, Nottinghamshire (CBATVARC, 1968, 2-3). From the evidence at Catfoss, probably supported by observations at Hoveringham, it seems that the cremations were deposited in pits within and around a circular or penannular ditched enclosure. A similar type of burial occurred at Bromfield, near Ludlow, Shropshire (S.C. Stanford information), where a series of ring-ditches with interior and outlying burials in pits, about 100 in number, were found. It is suggested that at this site those with bucket and barrel urns, decorated with applied horseshoes, cordons, and finger-tipping, are earlier than burials without urns. Charcoal from cremation pits with a Wessex-type urn and a simpler finger-tipped example gave dates of  $850 \pm 71$  B.C. and  $762 \pm 75$  B.C. respectively (Birm - 63 and Birm - 62; CBA, 1971, 48. 1). However, charcoal from cremation pits without pottery at Sharpstones Hill, Shrewsbury, Shropshire, was dated to  $1255 \pm 130$  B.C. and  $1020 \pm 118$  B.C. (Birm - 206 and Birm - 207; Shotton and Williams, 1971, 154). Although it seems that sites such as Catfoss, Hoveringham, and Shrewsbury may be placed in the middle or later Middle Bronze Age, it does seem that in certain areas, such as the central Welsh Marches, bucket and barrel shapes continued in use well into the Late Bronze Age, to span the gap of some 500 years leading down to Iron Age beginnings as indicated by Hallstatt influences.

### iii. Pottery : Details of Types

The evidence of the types of pottery vessel which can be identified in the Late Bronze Age in the Trent-Tyne area must now be outlined. A most convenient reference collection of types to which almost all the material can be related has been provided by excavations at Mam Tor, Derbyshire (Coombs, 1967; 1971). Work in the interior of the hill-fort revealed timber hut platforms, gullies, stake-holes, and storage pits. Pottery (Figs. 1 and



2) was found in large quantities as a general scatter, together with shale bracelet fragments, a polished stone axe, and a fragment of a bronze socketed axe with rib decoration. Coombs considers that the virtual absence of stratigraphy indicates a short period of occupation (1971, 102). Radiocarbon dates obtained from the charcoal of a layer into which were cut the gullies and post-holes of Huts 2 and 3 are  $1180 \pm 132$  B.C. and  $1130 \pm 115$  B.C. (Birm - 202 and Birm - 192; Shotton and Williams, 1971, 154). It would seem unwise to base a discussion of essentially Late Bronze Age pottery on material from a site producing these dates of the central Middle Bronze Age, but the situation of the dated charcoal suggests that it might be appreciably older than parts of the settlement. The socketed axe fragment with parallel ribs is of a type usually dated to the eighth century at the earliest, being absent from the Wallington Tradition, so it seems that the occupation of the hill-top site was not short. It is possible to distinguish three structural phases in the perimeter defences: a palisade followed by two superimposed ramparts (see Part III, Chapter 1, i and ii). It is unfortunate that the lack of stratigraphy in the small area excavated and the absence of large assemblages of comparable pottery limit the opportunity to define distinctive horizons in the Mam Tor material.

The most common type of ware in the later Bronze Age is typically coarse and thick, heavily gritted, and roughly hand worked. This character is evident from even the smallest sherds, as <sup>from</sup> Mam Tor (Fig. 1,1), Ravencliffe Cave (Fig. 6, 8), Roomer Common (Fig. 8, 9-11), and Eston Nab (Fig. 42, 2-4). That such wares may have had a lengthy history is shown by the bronze awl from Ravencliffe Cave (Fig. 6, 1), similar to those in Wessex I contexts (Annable and Simpson, 1964, 300-5; Winterbourne Stoke). In later phases, denser, thinner, and better-fired wares occur, as at Grimthorpe (Stead, 1968, figs. 6-8), Epperstone (Fig. 9, 5), and

Heathery Burn Cave (Fig. 42, 14-15). There is almost always considerable difference in detail between the wares of various sites as a result of the use of local materials, but in most assemblages it is not difficult to identify alien or imported pieces (for example, Fig. 1, 4).

It is perhaps not surprising to find urn types of earlier Bronze Age periods represented in the Mam Tor material. Fig. 1, 1 is strikingly similar in form, though undecorated, to the biconical urn found between Budel and Weert, southern Netherlands (Butler and Smith, 1956, fig. 8), and paralleled in southern England (op. cit., 40). Similar large, coarse, plain biconical urns are represented by sherds found widely dispersed over the hill-fort site at Portfield, Lancashire, and also in association with the defences (P. Beswick information). Again from Mam Tor, Fig. 2, 1 is a rather different biconical shape which may be seen in decorated form at Mildenhall Fen (Clark, 1936, fig. 6, 1), a Suffolk site which also produced pottery in the Overhanging-rim Urn tradition, all stratified beneath peat. The *vestigial* overhang at the shoulder of the large jar from Epperstone (Fig. 9, 5) places it in the same category, although it may be a later example. Again different is the coarse jar from Octon Cross Roads, East Riding (Fig. 20A, 1), found with a bun-shaped loom-weight, the Middle Bronze Age connections of which have already been briefly mentioned. A further biconical or bipartite jar form is shown at Grimthorpe (Stead, 1968, 16), Ivinghoe Beacon (Cotton and Frere, 1968, fig. 16, 12), and Eldon's Seat I (Cunliffe and Phillipson, 1968, fig. 11, 17). Rims tend to be simple or flattened earlier and everted in various ways later, through a continued series of sub-types.

At this early stage, a general consideration of the Grimthorpe material should be offered. Most of it came from the hill-fort ditch, and two groups were stratified in Layers 4 and 5 of Section W - X on Site D (Stead, 1968, fig. 3). Two radiocarbon dates from groups of animal

bone from the same ditch section were  $690 \pm 130$  B.C. for Layer 5, and  $970 \pm 130$  B.C. for the lower Layer 9 (NPL - 136 and NPL - 137; *op. cit.*, 190). Although Layers 4 and 5 are at a fairly high level in the ditch, the lack of evidence from the structures for anything but a short period of occupation of the site suggests that the pottery may have accumulated from the same occupation layer, now removed, and thus may be considered contemporary with the occupation of the fort. Structural parallels, to be considered later, indicate that an eighth century date for the timber-framed box rampart is not unlikely, and that a ninth century date is possible. However cautious one needs to be about radiocarbon measurements from bone, pretreatment of the samples was carried out, and a date around or before 800 B.C. would seem to be indicated. The material assemblage is thus to be approached as possibly a Late Bronze Age one and not mid-Iron Age as suggested by Stead (1968, 164), but although some pottery forms can be paralleled in this early period others demand extension into at least the later seventh century.

Returning to a discussion of those pottery forms which seem to recall earlier urn types, the simple bucket shape as from Mam Tor (Fig. 1, 3) is common. This example with distinctively moulded rim is closely similar to those from Kilnsea (Fig. 19. 6) and Boltby fort (Fig. 42, 13), and seems to be related to similar shapes with horizontal mouldings below the rim from the Catfoss cemetery (McInnes, 1968, fig. 2) and Dalnaglar, Perthshire (Coles, 1962b, fig. 10). The smaller vessel from Old Woman's House (Fig. 6, 11) could belong here, but it may be considerably later. Coarse bucket-shaped vessels have been reported from a circular hut site underlying part of the La Tène cemetery at Burton Fleming, eastern Yorkshire (1971 excavations; I. M. Stead information). Other bucket forms have internally-thickened rims (Mam Tor, Fig. 2, 5; Scarborough, Fig. 40, 8). The vessel from

Flaxby (Fig. 8, 16), considered to be Late Bronze Age/Early Iron Age transition ware (Addyman, et al., 1964), is a perfectly normal Middle Bronze Age cordoned bucket urn, and its discovery during gravel-working after numerous previously-discovered urns had been destroyed (C.E. Hartley information) recalls the discovery of the cremation cemeteries at Catfoss and Hoveringham, also during gravel-quarrying. The decorative punching below the rim is also seen at Catfoss (McInnes, 1968, figs. 3-4), and coarse pottery from Kirkhead Cave, Lancashire (OS information, SD37NE24), may be similar. More open bucket shapes at Catfoss (op. cit., fig. 3) are comparable with the large coarse jar from North Ferriby (Wright and Wright, 1947, fig. 16, 2). This latter vessel has a rim decorated with thumb-impressions. Extensive plastic decoration on bucket-shaped vessels, as at Skendleby (Phillips, C.W., 1936, fig. 23) and Deverel-Rimbury settlements in the south (as at Thorny Down: Stone, 1941, fig. 5), does not seem to assert itself in our area, and later, perhaps seventh century, decoration of this type is a result of separate influences, to be discussed in the next chapter.

The Mam Tor vessel with an applied or raised circular or semi-circular design (Fig. 1, 4) has been described as unique (Coombs, 1971, 101). It is in a dense, evenly fired, well smoothed ware, quite different from other material from the site. Unfortunately there is insufficient remaining to determine whether the decoration described a complete circle or was horse-shoe-shaped, or whether the vessel was globular or shouldered. There are other sherds of three similar vessels from Mam Tor, none of which gives any further indication. The designs are not true circular arcs and one shows an almost angular apex, perhaps suggesting that a completed circle was not intended. Sherds with applied circles are known from British Late Bronze Age sites at Balevullin, Tiree (MacKie, 1965, fig. 4,77),

a site with many other of the pottery types described in this section, and Minnis Bay, Kent (Worsfold, 1943, fig. 8, 8), perhaps a late seventh or sixth century site. Apart from the possibility of an indigenous innovatory origin, there are three possible influences which may have given rise to the type. Pottery with circular mouldings is common in Joffroy's Urnfield III of eastern France (as at Roche à Courchapon; Kimmig, 1954, fig. 3), but this and other related Continental bossed ornament is not strictly comparable. A more likely context is as a copy of an Atlantic cauldron, complete with handles, assuming the vessel to have had a globular body. One such example from Lannvréon en Peumerit (Finistère) has recently been illustrated by Cowen (1971, fig. 5). In this connection the circular patch on a cracked cauldron-plate from Sompting (Curwen, 1948, fig. 4) is worth mentioning. A date in the late seventh or sixth century is not impossible for the Mam Tor material, considering the socketed axe, but in view of the earlier Bronze Age connections of the vessel types already mentioned a further possibility involving the interpretation of a shouldered vessel with horse-shoe decoration must be considered. The most striking parallel is offered by the urn from Amesbury, Wiltshire (Butler and Smith, 1956, fig. 6). Its association with a Class I razor, and other similar associations there quoted (op. cit., 33), show that sharp shoulders are not the prerogative of the situlate skeuomorphs of the early Iron Age, and it may be that the Mam Tor vessel, with its similar rim, was shouldered, and that the decoration was of penannular form. The sherds are so tantalisingly incomplete that no definite conclusions are possible, but the writer favours the Amesbury parallel. The use of the completed roundel, as at Balevullin, may have followed as a later development.

All the Balevullin pottery is hard and well fired and of a

characteristic reddish colour. As such it is not unlike the Mam Tor sherd (Fig. 1, 4). Another feature common to the two sites is the occurrence of the internally-bevelled rim. That such a form is common in the Scottish Late Bronze Age has long been evident from outstanding examples at Covesea (Benton, 1931, fig. 11), at Balmashanner, Angus, and at Old Keig, Aberdeenshire, all commonly referred to as "flat-rim ware" (Coles, 1960, 44). This term has been applied to vessels with rims not only bevelled but also flattened and even simply rounded, although that some form of rim-levelling can be seen on Late Bronze Age pottery is not a reliable diagnostic feature but rather an essential part of the modelling process. Invalid comparison of vessels of greatly disparate age can result from a use of the misleading flat-rim concept (as in Addyman, et al., 1964), so in this section a greater subdivision of vessel shapes and rim forms is attempted. Three types of internal bevel can be recognised: first a simple type with no attendant thickening or broadening of the rim, second one with a marked broadening of rim profile almost producing an eversion, and third a more carefully moulded, broad bevel with a concavity below on the interior of the vessel.

Of the first type, the Mam Tor example (Fig. 2, 2) is a shallow jar of similar form to one from Eldon's Seat I (Cunliffe and Phillipson, 1968, fig. 13, 46), a site where internally-bevelled rims do occur (op. cit., fig. 13, 50). More common is the rather different variety, seen at Roomer Common (Fig. 8, 7), Staple Howe (Fig. 20, 11), Heathery Burn Cave (Fig. 42, 17; a thickened example), and Harborough Cave (Armstrong and Jackson, 1923, fig. 10, 5), which has a concave surface. A decorated example, which accompanied a probable burial in a barrow (T. Lord information), is known from Coney Garth (Fig. 8, 12), a form similar to a vessel from Grimthorpe (Stead, 1968, fig. 8, 27). A less sharply bevelled type is seen on the jars from Green Knowe, Peeblesshire (Feachem, 1961, fig. 4, 1), and from the

presumed site of salt briquette manufacture at Ingoldmells Point (Baker, 1959, fig. 1, 1). This latter site is probably dated on stratigraphical grounds to the Late Bronze Age and by radiocarbon determinations on nearby contemporary deposits to the eighth or seventh century B.C. (Godwin and Willis, 1964, 129). The reliable associations of some of the sherds here mentioned suggest a longevous type. Continuation into the early Iron Age must not be ruled out because of examples in Hallstatt contexts abroad (for example, Kicklingen, Dillingen; Kossack, 1959, Taf. 40, 2).

The bevelled rim accompanied by a broadening of rim profile is similarly widespread and of various types. That from Mam Tor (Fig. 2, 9) is remarkably similar to a sherd from Harborough Cave (Fig. 5, 17). Rather different are those from Harborough Cave (Fig. 5, 16) and Staple Howe (Fig. 20, 3) on rounded or shouldered vessels as at Eldon's Seat I (Cunliffe and Phillipson, 1968, fig. 10, 7). A wide variety of bevel-detail is represented by sherds from Broughton, Lincolnshire (EMAB IX, fig. 1, 1), Heathery Burn Cave (Fig. 42, 14-15), Eston Nab (Fig. 42, 2-3), Scarborough (Fig. 39, 5; Fig. 41, 10-12, 18), and Weaverthorpe (Fig. 19, 5). From examples of possible Middle Bronze Age coarse pottery from Beeston Tor (Fig. 4, 5) and Etches Cave (Fig. 4, 7), to those from Mam Tor and Harborough Cave, and then Heathery Burn and Scarborough, it seems that, again, a considerable range of time is represented. Further examples are known to the south-east, from Skendleby (Phillips, C.W., 1936, fig. 23, 1-2) and Mildenhall Fen (Clark, 1936, fig. 4).

A type of more restricted range is more carefully made and has a marked concavity beneath the bevel on the interior of the vessel. The examples from Scarborough are the best-known (Fig. 41, 13-14). Close parallels come from Weaverthorpe (Fig. 19, 4) and Staple Howe (Brewster, 1963, fig. 38, 2). Outside our area, the almost complete vessel from Eldon's

Seat I (Cunliffe and Phillipson, 1968, fig. 10, 1) is broadly comparable. It is to be noted that all these vessels have finger-tip decoration, and all have applied cordons apart from at Scarborough (where cordons are present on other vessels). The implications of the decoration will be considered later, where a seventh-sixth century date for the most profuse of plastic ornament will be suggested.

The overall profiles of the vessels which carry the rim shapes just discussed vary to some extent. Some may be well rounded and others shouldered but by far the commonest shapes are the simple straight-sided bucket and the gently-incurving barrel. Of the former type, already discussed, further examples are Figs. 2, 9; 19, 4; 20, 11; and 41, 14. The latter shape is best seen in the decorated example from Coney Garth (Fig. 8, 12). Simple, undecorated barrel shapes, often extremely coarse, are quite common as at Mam Tor (Fig. 2, 6), possibly Harborough Cave (Fig. 5, 13), and Grimthorpe (Stead, 1968, figs. 6, 8; 7, 19; 8, 25). The coarse pottery from the Northumberland stockaded sites of Ell's Knowe and Huckhoe (Fig. 50, 1-2) may be considered alongside these. It is not altogether safe to attempt to draw parallels to such common shapes which undoubtedly recur throughout the first millennium B.C. in northern England, as will become apparent. However, similar curving profiles are known across the North Sea, as at the Aalter-Oostergem urnfield in Flanders (De Laet, et. al., 1958, fig. 11, Tombe 6, for example; dated to Hallstatt C/D). That a seventh-sixth century date is acceptable for some of the British examples is clear from the Huckhoe radiocarbon date of  $510 \pm 40$  B.C. (GaK - 1388; MacKie, 1969, 21; Jobey, 1959), but the Mam Tor, and possibly also the Grimthorpe, examples are probably earlier. A number of the Balevullin sherds show a similar incurving profile (MacKie, 1965, figs. 2, 1; 3, 53; 4, 60 and 68), some with scored or finger-tipped decoration. The small vessel with lugs



below the rim from Buxton (Salt, 1900) was probably a squat barrel shape.

One of the most frequent Late Bronze Age forms seems to be the medium-sized or small jar with a curving or slightly shouldered profile and an upright or slightly out-bent neck and a flattened rim. The small stubby jar from Mam Tor (Fig. 2, 8) is typical, and perhaps related to the nearby surface find at Black Tor (Fig. 3, 15). Sherds of the type are also seen at Harborough Cave (Fig. 5, 14), Roomer Common (Fig. 8, 9-11), Eston Nab (Fig. 42, 5-6 and 9), Ampleforth Moor Barrows 2 (Fig. 42, 10) and 7 (Wainwright and Longworth, 1969, fig. 4, 13-14), and Grimthorpe (Stead, 1968, figs. 6, 4-5; 7, 13-14; 8, 21-26), at which latter site they make up a considerable proportion of the total collection. It is not possible to subdivide these into categories, as the shapes are so often indecisive and the sherds of small size, but it does seem that in general they are undecorated apart from restrained rim-cabbling. Later examples from which Stead draws parallels (*op. cit.*, 163) are generally more profusely decorated.

Attention has already been drawn to the fact that sharp shoulders are not the prerogative of the early Iron Age period. Can the Mam Tor fine jar (Fig. 2, 4), described by Coombs as 'situla-shaped' (1967, 158), be reconciled with the predominantly Late Bronze Age dating of the other material from the site? The most important diagnostic feature seems to be that, above the sharp shoulder, the neck and rim form a continuous, graceful, upward curve, and it is this type which Hawkes (1939b, 272-3) considered to be a major element in an Urnfield immigration via France to create his Late Bronze Age 2. The pots from Newhaven which he discussed are indeed smoother and finer than usual, and often undecorated (*op. cit.* fig. 1, 4-6). An eighth century date for the Mam Tor vessel, to be seen as an intrusion into an existing settlement, would not seem out of place.

That this shouldered form is important in the north is shown by the examples from Ampleforth Moor Barrows 2 (Fig. 42, 11-12) and 7 (Wainwright and Longworth, 1969, fig. 6, 3-4). These sherds were scattered on the old land surface beneath the barrows. Radiocarbon dates for charcoal so situated beneath Barrows 7 and 3 were  $537 \pm 90$  B.C. and  $582 \pm 90$  B.C. respectively (BM - 368 and BM - 369; *op. cit.*, 294). There are similar vessels from Eston Nab (Fig. 42, 1), Grimthorpe (Stead, 1968, fig. 6, 7), Scarborough (Fig. 40, 3-4), and also, it must be admitted, from Staple Howe (Brewster, 1963, fig. 48, 8). The type may thus have had a long life, and it is not certain that the Mam Tor example should be considered to be as early as the eighth century. All our examples are undecorated, however.

How far those shouldered bowls and jars with a more angular neck may be seen to have been in use before the period of Hallstatt influence is not clear. That examples do occur in assemblages with Late Bronze Age traits at Grimthorpe (Stead, 1968, figs. 6, 1; 7, 10, 12 and 15; 11, 28), Mam Tor (Fig. 2, 3), and Epperstone (Fig. 9, 4) may indicate that a longer period of occupation than hitherto suspected may have taken place on the former two sites, and that Late Bronze Age forms continued down to the later seventh and sixth centuries in the latter case. The Mam Tor sherd is one of the very few from that site to exhibit finger-tipped decoration, albeit in an unusual, pinched form. That such types might have been current in the eighth or seventh centuries is shown at Ivinghoe Beacon (Cotton and Frere, 1968), where a plain, sharply-angled shouldered jar (fig. 18, 71) is closely similar to one from Grimthorpe (Stead, 1968, fig. 7, 10), and where finger-tipped jars similar to the Mam Tor example do occur (fig. 16, 3). That the carinated jars and bowls at Eldon's Seat I (Cunliffe and Phillipson, 1968, fig. 10, 2 and 6) may have had a pre-Hallstatt history

is also shown at Ivinghoe (op. cit., fig. 16, 1). However, the excavators at Ivinghoe Beacon indicated a late seventh or sixth century date for the site, pointing out a Hallstatt influence on the pottery despite a possibly earlier dating for most of the metalwork.

A major factor in the excavators' dating of the Ivinghoe Beacon occupation seems to have been the presence of finger-tipped decoration on much of the pottery. It is true that on much Deverel-Rimbury material from the south plastic decoration is profuse (as at Thorny Down; Stone, 1941, fig. 5), but that Late Bronze Age pottery in the north of England is little influenced by a survival from this style is indicated by the largely undecorated groups from Mam Tor, Grimthorpe, Ampleforth Moor, and Eston Nab, as well as by most of the other pottery finds. It seems, therefore, that despite the occurrence of Urnfield pottery on the Continent with finger-tipping, perhaps more widespread than it may seem because of the prevalence of burial remains in archaeological studies, northern English material only bears extensive plastic decoration in the seventh and sixth centuries B.C., with particular parallels in the Bronze Final III of France and the early Hunsrück-Eifel Culture wares. The details of this material will be examined later. It may be that in some areas, such as East Anglia, finger-tipping continued throughout the period, but further north it seems to mark a fresh movement, perhaps seen at its earliest in some of the vessels from Scarborough (particularly Fig. 41, 9, which is very similar to a vessel from Newhaven; Hawkes 1939b, fig. 1, 2).

Other types of decoration occur earlier in the Late Bronze Age, however, of which linear scoring is the most common. The incised herring-bone pattern on the small sherd from North Ferriby (Wright and Wright, 1947, fig. 16, 1) is also seen at Eldon's Seat I (Cunliffe and Phillipson, 1968, fig. 14, 81), and may have been present on the urn which contained the hoard

of two gold lock-rings and a socketed axe at Cooper's Hill, Alnwick, Northumberland (Maryon, 1939, 102). Small barrel-shaped pots with rims similar to the Huckhoe sherd (Fig. 50, 2) from West Hartlepool (Woodhead 1966, fig. 1) and Balevullin (MacKie, 1965, fig. 3, 53) have two horizontal scored lines below the rim with irregular vertical rungs in a trellis pattern. The familiar Urnfield open chevron as found at Plumpton Plain B (Hawkes 1935, fig. 12, 84) is present on the Coney Garth vessel (Fig. 8, 12), to which the horizontally-grooved bowl from Grimthorpe (Stead, 1968, fig. 8, 27) may be related. Similar scoring can be seen on sherds from Skendleby (Phillips, C.W., 1936, fig. 23, 9-10). Both closed and open chevron motifs are present at Staple Howe (Brewster, 1963, fig. 33, 6-7), showing continuation into the Hallstatt period here, as in Bohemia and Upper Austria.

To summarise, therefore, in the Middle Bronze Age we see a continuation of some Collared Urns at first, and longer in some areas, to be superseded by bucket and barrel urns, and possibly also some globular urn influence (Fig. 4, 1), mainly over the south and east. Metalwork sequences were virtually uninterrupted by any Ornament Horizon, and the Wallington phase saw further isolated development after Irish influence. Pottery styles continued to owe much to earlier urn forms, and were largely undecorated apart from some linear scoring. With the Heathery Burn metalworking phase, Continental influence gained momentum whilst Irish gold declared new wealth. New shouldered pottery styles were adopted, although wares continued to be predominantly undecorated until late in the period, when more dynamic influences were heralded.

Of the major pottery collections from the area, Mam Tor begins perhaps at a date as indicated by the radiocarbon evidence with urn-like pottery, but occupation continued through into the eighth century when shouldered

vessels and a ribbed socketed axe were acquired. Grimthorpe begins weakly in the pottery record with bucket and barrel shapes, just possibly as early as the ninth century, but most sherds indicate a continuation down to the late seventh. Epperstone and Ampleforth Moor provide seventh or sixth century evidence. The distribution of Late Bronze Age pottery types (Fig. 71) indicates a remarkably even spread over the area, with a marked preference for the margins of upland areas and for coastal and hill-top locations.

## CHAPTER 3

### HALLSTATT INFLUENCES

#### i. Metalwork

The change from a bronze-using to an iron-using economy marks a theoretical beginning to an Iron Age period in Britain. That such a change was rapid and complete has never been envisaged, but the extent to which bronze predominates on nominally early Iron Age sites, and the greater rapidity with which iron decomposes under most soil conditions, complicate the picture still further. An iron-working industry of considerable skill has been identified on the basis of iron daggers of Hallstatt D type from the Thames Valley (Jope, 1961, 307), probably preceded by the manufacture of domestic implements such as the Llyn Fawr socketed sickle (Fox and Hyde, 1939, fig. 2), but how far this activity in the sixth century reflects a situation of broad scale use of iron for domestic and more pretentious tools throughout Britain is uncertain.

That the continuing bronze-using traditions were infiltrated by the use of iron, at least by 600 B.C., is shown by the occurrence of ironwork or rust with hoards of bronze. The Llyn Fawr collection, with its distinctive iron sword and lozenge-sectioned spearhead, and its bronze razor, strap-link, harness-mountings, and cheek-pieces, of Hallstatt C type, is a unique hoard of immigrant character, but it shows by its socketed sickle the indigenous use of iron for an artifact type of British Late Bronze Age development (op. cit.). The extensive encrustation of iron on one face of a socketed axe with rib and pellet decoration from the hoard at Sompting (Curwen, 1948) indicates the association of an iron article with a Class B2 Atlantic cauldron with cast staples, shoulder-straps, and rim-corrugations. Further north, the large hoard from Balmashanner, Angus, containing Covesea bracelets and a small semi-circular

cast bronze bowl of the shape associated with cross-handle attachments, also included an iron ring (Coles, 1960, 43-44). These examples suggest that iron may have been more widely used from the beginning of Hawkes' Late Bronze Age 3 than is evident from the archaeological record, even though the early phases of the British Iron Age, thus heralded, may have remained predominantly bronze-using.

In our area, the few finds of early iron are of great significance. We have already seen that some of the pottery forms from Grimthorpe, East Riding, imply a continued occupation down to the late seventh century; this is also indicated by the four metalwork finds from the hill-fort excavations, which were of iron and included a peg and two nails. Three finds were in stratified ditch deposits, one between Layers 4 and 5 and another in Layer 4 of the Section W-X, whence came most of the pottery (Stead, 1968, 166, fig. 10, 4-7). From Castle Hill, Scarborough, the single iron object, said to be from one of the pits, was a plain rod, slightly curved, about 2.5 inches long (Wheeler, 1931, 22). The metal was similarly scarce at Staple Howe: the two small objects recovered were a fragmentary curved iron rod from the Phase I palisade trench, and an iron ring from a hollow in the floor of Hut III (Brewster, 1963, 118). The rod, like the one from Scarborough, may have been a pin. These small finds suggest a local manufacture, but the preponderance of bronze again indicates the continuation of Late Bronze Age technology into this period of Hallstatt influence. Although iron may have reached northern England by the later seventh century, it was certainly very scarce. Appearing in Greece and Crete before the beginning of the first millennium B.C., a knowledge of the techniques of iron-working might have spread to Italy, probably by sea, and thence into Continental, followed by western Europe in later Urnfield times (Piggott, 1965, 186).

This movement through Austria and central Europe, eventually to Britain,

is probably similar to that followed by the finds of Italic metalwork types in England. Their predominantly southern and eastern distribution (Harden, 1950, fig. 4), coupled with the discovery of a likely burial in a tumulus near Castor, Northamptonshire (with a later serpentiform brooch and three different Italic bracelet types; *op. cit.*, fig. 3), and the remarkable group of six brooches and embossed bronze bowl rim supposed to have been found in and near to Ixworth, Suffolk (Clarke, 1939, 30-1), leads to the conclusion that these finds are likely to have been contemporary imports rather than the dispersed contents of more recent collections.

Of the examples from our area, there are four poorly-authenticated finds from Cumberland (Ridgeway and Smith, 1907, 111-115): a large thickened-bow brooch with medium catch-plate, a much smaller ribbed-bow brooch of similar proportions, a small boat-brooch with long catch-plate, and a horned serpentiform brooch. Similarly uncertain is the Boroughbridge provenance of the well-known boat-shaped brooch with long catch-plate and faceted bow (*Ant. J.*, X, 54-5). Two decorated examples are known from York or the immediate neighbourhood (Hawkes, 1932, figs. 1-2): one is of bow-type with engraved chevron decoration and short catch-plate, and the other is of solid leech-form, with its catch-plate broken off, with geometric linear engraving interrupted by pairs of transverse lines enclosing two rows of ring-and-dot designs. In Lincoln Museum are two deep boat-shaped forms with short catch-plates, one from the river Witham with linear and ring-and-dot engraving very much like the one from York, and another from the site of a Roman villa at Greetwell with a simpler design of parallel grooves and lines of dots. From further south there is a leech-brooch from Hinckley Castle, and a developed boat-brooch, with knobs and long catch-plate with knobbed terminal, from Barrow-on-Soar (both Leicester Museum). Most of these forms, if of genuine contemporary appearance, could be ascribed to the seventh century on Italian parallels. The simpler short catch-plate types may be



viewed as similar in origin and date to the antenna-hilted sword from the river Witham, already noted (see Müller-Karpe, 1959, Abb. 57).

Similar decoration to that noted on the York leech brooch is seen on a hollow strip-bronze armlet, said to have been found in Furness, Lancashire (Cowper, 1905). The overlapping terminals are considerably narrower than the gently-expanded centre, although still circular in section. The decoration is of double incised transverse lines, interrupted around the outer circumference by a spine of ring-and-dot designs, delimited by single lines. Quite unlike any English type, the armlet is also difficult to parallel abroad, but a date in the seventh century again seems likely. All these south-central European metalwork finds indicate the continued pulse of Continental penetration throughout the first half of the first millennium B.C.

The "horsey" element in metalwork hoards, already met at Heathery Burn Cave, continues in new types, well represented in the hoard from Welby, Leicestershire (Powell, 1948). The five circular slided discs are identical to an equal number from a hoard at Dinnyés, Hungary, similar to those found regularly in Hallstatt I contexts in Bohemia, and provide a link with the Parc-y-Meirch hoard, north Wales. Although the cruciform handle attachments suggest the possibility of an earlier date, Powell points to similar Hallstatt parallels for these throughout the upper Danube region (op. cit., 36). The association at Welby with socketed axes, a spearhead, and a sword fragment of common British type, current in the later phases of the Late Bronze Age, suggests that the deposit is a travelling merchant's scrap collection, dating most likely to the second half of the seventh century B.C. The appearance of a bronze cup with omphalos base and broad furrows above the carination, with closest parallels in the Urnfield pottery tradition of France (Sandars, 1957; many illustrations) and ultimately in the furrowed bowls of Wessex, suggests a mutual adoption of ideas by potter and metalworker.

The question of whether this Hallstatt influence represents a penetration by travelling metalworkers and the results of trade rather than a population movement on some scale is highlighted by the remarkable discoveries at Aldro, East Riding. Mortimer's Barrow No. 108 of the Aldro Group (1905, 56-7) was 27 feet in diameter and encircled by a ditch 48 feet in diameter, 3 feet deep, and 8 feet wide at the top. In the centre beneath the barrow was a pit, 2 feet deep and 2.5 feet across, containing a cremation and, as a separate deposit to the north side, a large collection of objects, badly burnt and fused. These included parts of a bronze sheath of an iron weapon, a bronze curved blade and a long bronze tapering dagger blade with ribs running along the edge, lens-shaped glass or crystal discs mounted in sheet bronze, and a bronze disc-shaped mounting. Above these deposits there were numerous small pieces of burnt and melted bronze, and at the top of the pit was a fragment of <sup>a</sup>pottery vessel with finger-tipped decoration. Some of this material was available for Piggott to study some 20 years ago (Piggott, 1953, 178-9), but Hull Museum cannot now locate it. There are four features worthy of comment: first, the finger-tipped pottery suggests an early date in the Iron Age, and most likely a pre-La Tène one; second, the ribs running along the only remaining edge of one of the weapons when seen by Sir John Evans suggests a characteristic feature of Cowen's Gündlingen Type Hallstatt swords (Cowen, 1967, 394); third, the curved blade with two small rivet-holes and a central rib with a smaller rib to each side again recalls a Hallstatt form (op. cit., fig. 5d?); and fourth, the disc-headed socketed mounting, with central perforation in the disc and the socket decorated with three groups of four parallel engraved horizontal lines, was quoted by Piggott (1953, 178-9) as a parallel to a mounting from the Horsehope hoard, Peeblesshire, although it has a longer socket. This latter object is of utmost significance, for it is a type interpreted elsewhere as a top-piece mounting at each of the four corners

of the coachwork of a Hallstatt four-wheeled waggon.

The closest parallel for the Aldro mounting seems to be from the Tumulus d'Ohnenheim in Alsace (Joffroy, 1957, 230-236, fig. 74, with reconstruction of waggon). Here the mountings have dished disc-heads, but with the central perforation (Kossack, 1959, Taf. 25), and quite long sockets. Not only had the tumulus a surrounding circular ditch, probably 33-34 metres in diameter, 1 metre wide and 15-20 cms. deep, but the extended skeleton, laid alongside the vehicle, had a ritual deposit of pottery fragments at its feet. Although the Aldro burial rite was cremation, there are enough points of comparison with the Hallstatt D, sixth century waggon burial in Alsace to suggest a further link with the equestrian, waggon-burying peoples of Hallstatt central and Western Europe to add to the other evidence from our area of the Welby harness attachments. The fact of a burial implies, even more than do the hoards, a movement of people or at least a direct assimilation of culture.

Equally important metalwork evidence for Hallstatt connections comes from the Staple Howe settlement, nine miles to the north-east of Aldro. A small cup-shaped cast-bronze fragment (Brewster, 1963, fig. 62, 13) is likely to have formed part of the decorative panel of a broad strap-link, of the type known from Llyn Fawr (Fox and Hyde, 1939, fig. 1, 7) and Court-Saint-Étienne, Belgium (Mariën, 1958, fig. 3, 115), probably late seventh to early sixth century in Britain. The 120 bronze studs found on the floor of the Quarried Hollow (Brewster, 1963, fig. 63, 2) are strikingly similar to those found with burials at Hallstatt itself (Kromer, 1959, Taf. 11, 7) as well as at Court-Saint-Étienne. The double-looped razor is of familiar Hallstatt I form, seen in a variety of individual styles, single and double-looped, as at Llyn Fawr (op. cit., fig. 1, 6), Traprain Law (Curle and Cree, 1921, fig. 12), and Richmond (Burgess, 1968b, fig. 18, 8). The Traprain Law example, from a hill-top settlement which has produced

considerable quantities of Late Bronze Age metalwork and pottery with finger-tipped decoration and bevelled rims, is particularly significant. The Staple Howe razor with strongly-recurved suspension loop (Brewster, 1963, fig. 61, 2) is a short plain form of a common north European type, as found in later Urnfield burials at the Kratzeburg "höhensiedlung", northern Germany (Hollnagel, 1958, Taf. 32f). None of the exotic Staple Howe bronzes was found in unequivocal palisade packing, but the single-looped razor and the studs were from occupation layers. The collection suggests a strong influence beginning at the very latest in the early sixth century. The radio-carbon date, from carbonised grain obtained mainly from the Quarried Hollow, of  $450 \pm 150$  B.C. (BM - 63), giving a range, when "corrected", of 660 - 360 B.C., is less specific than the metalwork evidence.

The bronze bracelet found 0.25 miles west of the occupation site at Castle Hill, Scarborough (Fig. 39, 19; Ant. J., XIV, 301-2), seems to be a distinctive Continental product with close parallels in Central Europe (Kossack, 1959, Taf. 55, 18; Kromer, 1959, Taf. 3, 29), often in the Hallstatt C2 period, that is the second half of the seventh century. As such it accords well with the evidence of the pottery from the nearby site, as we shall see, and can reasonably be interpreted as a contemporary import. The sharply beaded form of the decoration of its exterior surfaces is a characteristic which becomes less decisive on later examples. In the La Tène period, however, knobbed bracelets of a similar character usually have the individual beads demarcated more obviously by sharp constructions (for example, Stead, 1965, fig. 28, 2; fig. 29, 1, 4-5), and it is with this distinction in mind that the newly-discovered beaded bronze bracelet from Yearby, at the Cleveland's' foot near Redcar, north Yorkshire (Middlesbrough Museum information), is ascribed to Hallstatt influence. Although broken

it is complete, and similar to the Scarborough example in that its internal surface is perfectly plain and its outer surface is boldly beaded with double narrow collars between broader, bulbous ones. The eastern situation of the new find is significant, and further suggests coastal penetration.

Further important evidence of both the eastern penetration and the new equestrian modes is afforded by the Hallstatt C sword of Gündlingen Type, recently discussed by Cowen (1967). That this was a cavalry weapon has been convincingly re-argued on the basis of the blunt sword points and the characteristic winged shapes, of which the Ebberston find is a fine example (op. cit., fig. 12). Successive waves of movement of this distinctive type from its origin in central Europe are distinguishable in the typology and distribution of its sub-types, defined largely on the basis of the design of the pommel-piece. In our area, those with rectangular pommell-pieces, Class b, come from Ebberston, Pickering, and from Holne Pierrepont and Newark, both Nottinghamshire. The Ebberston sword is one of two (of which that in Scarborough Museum from "near Scarborough", unfortunately lacking all its tang, is likely to be the second), found with a chape and a quantity of human bones. Both swords have evidently been broken into four tranches each, a constant factor in the Hallstatt cemeteries of south Holland and Belgium. It seems, therefore, that we have a burial, or two burials, with swords of Continental type, and further evidence of small-scale population movement. The Holme Pierrepont and Newark swords were found during gravel-digging and river-dredging operations respectively.

Of the other Hallstatt swords from the area, distinctive in general but of clearly British manufacture on account of their notched pommel-pieces, we have two of Class c from dredging operations in the river Tyne, and one of Class d from the Holme Pierrepont gravel-diggings. Others

which are incomplete, and therefore not classifiable, come from Billingham Dales, Lincolnshire (close to the river Witham), Temple Newsam, near Leeds (found in gravel-screening), and another from the river Tyne. Burgess has suggested (1968b, 26) on the basis of the lack of Hallstatt swords in British metalwork hoards and the indigenous tradition represented by the Hallstatt-influenced Ewart Park swords, that these examples represent the settlement of an intrusive population, if only of Hallstatt smiths. Equally important, the fact that all the swords from our area, apart from the Ebberston examples, were evidently deposited in wetness; as above indicated, suggests ritual activity ( a point to be returned to later). As for chronology, Cowen has indicated a dating range beginning in the second half of the seventh century B.C., and has declined to offer a latest limit. The evidence from Aldro, albeit unsatisfactory, suggests that the Hallstatt sword may have continued in use down to the beginning of the fifth century B.C.

That native traditions of bronze-working continued throughout the seventh and sixth centuries B.C. is shown by finds from Welby, Scarborough, Staple Howe, and Grafton, west Yorkshire (Waterman, et al., 1955). Three-ribbed "Yorkshire" and plain "northern" socketed axes continued, as at Welby (Powell, 1948, 29) and Scarborough (Wheeler, 1931, fig. 16, 1-2). Fluted and "massive" axes seem current in the period (Burgess, 1968b, 43-4), as the examples from Holme Pierrepont gravel pit suggest (EMAB, IX, fig. 7, 10-11). Sompting and related forms of socketed axe with rib and pellet/roundel decoration were probably deposited during the period of Hallstatt C influence, as the example from Llyn Fawr demonstrates (Fox and Hyde, 1939, fig. 1, 2); these forms have a wide British distribution, with notable concentrations in the southern Pennines, eastern Yorkshire, and north Lincolnshire (Burgess, 1969b, fig. 2). Plain leaf-shaped socketed spearheads and small straight-shouldered leaf-shaped swords probably also

continued in use. The small tweezers from Staple Howe (Brewster, 1963, fig. 61, 4) and Grafton (op. cit., fig. 6, 5), also known from Ivinghoe Beacon (Cotton and Frere, 1968, fig. 11, 16), and the tanged chisels or leather workers' knives from Staple Howe (op. cit., fig. 61, 5) and Scarborough (Wheeler, 1931, fig. 16, 3), were part of a repertoire which also included simple bronze pins, rings, and bracelets.

The metalwork of the later seventh and sixth centuries B.C. thus indicates a much increased stream of Continental import and influence, probably reflecting, at least in part, some limited intrusive settlement. The introduction of the use of iron occurred probably early in the period. Intrusion seems to have been predominantly from the east; this the distribution map (Fig. 73) clearly shows, particularly when the dots indicating poorly-authenticated Italic bronzes are removed. It does not appear possible to distinguish a primary wave of raiding followed by settlement since, together with that of the two burial sites, the evidence of the metalwork other than likely imports suggests settlement by small communities including smiths from the earliest Hallstatt C phase. That existing traditions continued basically undisturbed can also be seen. For further widespread changes in the archaeological record we may turn to the pottery.

## ii. Pottery

The pottery which reflects Hallstatt influences during the two centuries following the mid-seventh century B.C. is nearly all completely different from that of the previous period. Generally the ware is thinner and smoother, even when the coarsest of the time. Shapes are more varied and distinctive, decoration is more profuse, and rims are often everted but not bevelled (apart from the above-mentioned third type). A broad scale and continuous stream of types influenced directly or indirectly by

Continental forms can be recognised, and although association with the metalwork just discussed is not frequent, there is no doubt that common movements were responsible. There seems to be some chronological overlap from area to area with Late Bronze Age types, particularly within the seventh century, but a greatly increased degree of Continental influence is recognisable.

As did Mam Tor in the later Bronze Age, so Castle Hill, Scarborough, in the following period exhibits many of the forms which need to be considered. A plan of the Simpson excavations of 1921-25 has been published by Wheeler (1931, fig. 15), whose account contains some important information additional to that given in Smith's earlier report (Smith, R.A., 1927). It is unfortunate that it is not possible to reconstruct in any satisfactory manner the individual contents of the 42 or more pits cleared out: for 27 of them, Simpson's records (now in Scarborough Museum) give no precise details of the pottery contained, and although the Museum has numbered most of the diagnostic sherds, no information of pit association other than that contained in Smith's report is obtainable. Only in one instance was bronze found in a pit, and that only a small fragment in Pit 20. Smith's statement that the bronze implements were found on the occupation level away from the pits and that they possibly had nothing to do with the main period of habitation represented by the pottery is directly contradicted by Wheeler who, on Simpson's authority, states that the tools and distinctive pottery were in definite association. Unfortunately no clarification can be offered. Excavations by J. G. Rutter in 1953, about 100 feet to the south of the ditch of the Roman site, located and cleared four additional pits, three cobbled areas to the north of them, and eight post-holes. Of the latter, two appeared to be a pair, three feet apart, and three within three feet of each other defined a right-angle, but the others were unrelated. Pottery was found scattered throughout the area and in large



quantity in the pits, but no metalwork or evidence for hut sites was recovered. The publication (Rutter, 1959) contained no plan and no description of the finds.

From Wheeler's plan of the site, it can be seen that, in two rather doubtful cases, features overlap: Pit 14 with Pit 15, and Pit 27 with a hearth. It is possible, therefore, that the occupation may have lasted for some time, and on a settlement site with pottery debris in such profusion extensive mixing of rubbish and survival of different deposits would have been inevitable. It is possible to postulate a division of influences on the site into two main phases, however, as there seems to be a difference between that pottery assigned in Smith's article to the pits, and that from other occupation levels. In general, the tall, rounded, flared-rim vessels, those with internally-bevelled rim, and the majority of those with finger-tipping and applied cordons come from the pits, with a proportion of rubbish material elsewhere, whereas those forms with relatively sharp shoulders, either jars or bowls, are not from the pits. The main qualification necessary in this argument relates to Pit 26, or East Pit. This was particularly shallow, 10 feet by 8 feet, and oval (Rutter, 1959, 39), and from a well-defined top layer came a considerable proportion of the sharper forms (Fig. 39, 12, 14-16). However, this upper filling of a broad, shallow hollow could well have accumulated some time after the lower filling. That there are exceptions to this proposed division is to be expected; one of the forms previously mentioned as being of Late Bronze Age type came from the upper layer of East Pit (Fig. 41, 9). A consideration of the pottery does indicate a dualism of influence and chronology, however, which reflects an apparent division in the material from elsewhere in northern England, the later material having much more profuse parallels this side of the North Sea than the earlier.

Amongst the best-known of the Scarborough profiles is the tall, rounded

jar with sharply constricted neck and flaring rim (Fig. 40, 1). The most outstanding British parallel is from Harborough Rocks, Derbyshire (Ward, 1890, fig. 4), a sherd in probably rather coarser ware, unfortunately now lost. Such a form is widespread in Hallstatt contexts on the Continent, in plain and decorated types which exhibit considerable variety, with everted or upright rims and simply rounded or hugely expanded bulbous bodies, all of which seem to be current from early in Hallstatt C (for example, Kossack, 1959, Taf. 117, 8; Taf. 95, 19; Taf. 15, 16) through to Hallstatt D (for example, Dehn, et al., 1954, Abb. 1B, 4). A similar range may be represented in Britain, with probable examples with upright rims at Scarborough (Fig. 40, 7) and Staple Howe (Brewster, 1963, fig. 48, 4). Rounded jars with flaring rims from Brigg (Fig. 10, 1), Traprain Law (Cree, 1924, fig. 13), and West Harling (Clark and Fell, 1953, fig. 17, 110), decorated with impressed applied cordons at their necks, represent a related form, paralleled at Thiverny, Oise (Durvin, 1964, fig. 2, 4).

Often seen in Continental Hallstatt contexts where it derives from previous Urnfield traditions is the form again represented at Scarborough (Fig. 40, 2) with sharply everted rim, tall cylindrical neck, and rounded body. Brewster has suggested that the finger-tipped, cordoned vessels from Staple Howe (1963, fig. 38, 2) may be related, and although this seems unlikely, other sherds from the site could possibly be (for example, this thesis, Fig. 20, 9, 13 and 15; and Brewster, 1963, fig. 47, 11). It is possible that the form is derived from examples more particularly in the Flanders Urnfields (De Laet, et al., 1958, Aalter-Oostergem, no. 15), a suggestion made more credible by the horizontal grooving on a body sherd from Scarborough (Fig. 40, 10) which is likely to have come from a vessel of the same shape (but note a similar sherd from Minnis Bay; Worsfold, 1943, fig. 8, 4).

Low Countries parallels for some of the Scarborough material were highlighted by Wheeler (1931, fig. 23), and remain valid. Fig. 41, 4 is very similar to the bipartite urn from the Temse-Veldmolenwijk cemetery (De Laet, et al., 1958, fig. 174). A coarse vessel from Ulrome, East Riding (Fig. 27, 7) may have the same origin (cf. op. cit., fig. 181?). Also typical of the Hallstatt C/D period in the Low Countries are the "Schragrandurnen", found particularly in the Campine Group (op. cit. 166), the rounded profiles and finger-tipped rims of which may have influenced much of our coarser pottery. The vessel from Sudbrook, Lincolnshire (Fig. 9, 1), which was probably deposited with a cremation burial, is a good example of the form. Other types with quite tall rims, nearly vertical or flaring, and rounded bodies without high shoulders, found at Scarborough (Smith, R.A., 1927, figs. 25 and 29) and probably also at Staple Howe (Brewster, 1963, fig. 33, 1; and in "alien ware" a less likely example, fig. 50, 1), may be paralleled at the Saint-Vincent cemetery, Bellefontaine (Mariën, 1964, fig. 107, particularly II).

Of the bowl forms, the Saint-Vincent cemetery in its Hallstatt phase provides some parallel to the tall, open vessels from Scarborough (Smith, R.A., 1927, fig. 28; this thesis, Fig. 40, 13), but these and similar ones from Staple Howe (Brewster, 1963, fig. 46, 1) have closer analogies in forms from further east (Kossack, 1959, Taf. 37, 21). Lower, rounded types with in-curving rim as at Staple Howe (op. cit., fig. 42, 8) are similarly common abroad. The problem with these, as with many other of the forms already discussed, is that material of differing chronological context on the Continent may come together at one time in more or less related forms in Britain, and that as the forms may have a considerable dating range on the Continent so they may also in Britain. Thus it seems that vessels such as Fig. 40, 3-4, seen previously as probably Late Bronze Age types in Britain and Europe, are to be considered as part of the early phase at

Scarborough alongside more certainly early Hallstatt influence. As for Staple Howe, most of the early forms already noted, such as the tall, open vessel (op. cit., fig. 46, 1), have plastic decoration and are in locally-made ware in contrast to the more purely Continental character of the finer Scarborough material. Others are of types which have a fairly continuous range on the Continent through to Hallstatt D. It thus seems that the major infusion of influence at Staple Howe took place at a rather later date than on the coastal site, and that there may have been a larger indigenous component.

The very distinctive finger-tipped cordon decoration on many of the Scarborough sherds (such as Fig. 39, 7; Fig. 41, 2 and 6) must now be discussed. Extremely close parallels for both the decoration and the forms of the vessels on which it is placed can be seen in material from the Heuneburg hill-fort (Dehn, et al., 1954, Taf. 12b). Other south German examples are similar in character (Kossack, 1959, Taf. 76, for example). Outstanding analogies exist amongst the latest Bronze Age pottery of France, as in Montbéliard (Pétrequin, 1966, fig. 9), and at Ouroux-sur-Saône, where the presence of iron is an interesting side-issue (Bonnamour, 1964, fig. 41). Although such decoration seems to occur throughout the Urnfield period, particularly in Central Europe, it seems that its presence at Scarborough marks a new influence from the seventh century B.C. rather than at any earlier date, and rather than a continuation of British Middle Bronze Age traditions. Finger-tipped cordons occur in assemblages of the seventh and sixth centuries nearer to Britain than southern Germany and eastern France, particularly in the Middle Rhine. They are an important component of the earlier Hunsrück-Eifel-Kultur, as shown by Neuffer (1938, Abb. 3; Abb. 10, 1; Taf. 10, 2, 1-2). This link is further stressed by the fine ware open bowls (op. cit., Abb. 2, 12; Abb. 8) similar to one from Thornham Hill East Riding (Fig. 20A, 4), and patterns of geometric ornament (op. cit.,

Tafeln 12 and 15) similar to those from Scarborough (Smith, R.A., 1927, fig. 57). Alongside that of the late Urnfield cultures of the Low Countries, Hunsrück-Eifel influence is strong.

Finger-tipping directly onto the rims and shoulders of vessels is a widespread characteristic of Early Iron Age pottery in the north of England. Its origin cannot be divorced from that of the finger-tipped cordon, although its use is less specialised. It occurs abroad particularly on rounded, slack-profiled vessels of the Hunsrück-Eifel culture (Neuffer, 1938, many illustrations) and at the Heuneburg (Dehn, et al., 1954, Abb. 18, 1-2), often in the Hallstatt D period, and in Britain particularly on shouldered vessels of types to be discussed shortly, as at Harborough Rocks (Fig. 4, 2-4), Red Hill (Fig. 10, 7 and 9), Grafton Hills (Waterman, et al., 1955, figs. 3-4), and most obviously at Staple Howe. It seems that the particular impetus gained by the decoration type in northern England in the later Hallstatt period marks an indigenous development. It is much less common in the succeeding phases of the Iron Age, as will be seen, so most finger-tipped sherds are included on the distribution map of Hallstatt pottery influences (Fig. 74: for individual sites, see Notes on Figures). That traditions of plastic decoration continued even in the earliest La Tène cultures of northern France, however, has been suggested by recent work at Chassemy, Aisne (Rowlett, et al., 1969), where pottery of types Domestic I, II, and III bears it extensively. One must beware, therefore, of drawing excessively rigid chronological divisions; domestic coarse early La Tène pottery might be expected to show earlier trends continuing.

Before leaving the question of finger-tipping, note should be made of a type of slack-shouldered small jar with decoration predominantly on the top of the rim. Such may be seen at Grimthorpe (Stead, 1968, fig. 7, 14; fig. 8, 26; perhaps late examples of the Late Bronze Age vessel type

already discussed) and Scarborough (Fig. 41, 16-18). A group of coarse, slack shaped pottery which bears finger-tipping on the rims rather than on the shoulders of vessels is to be found on later Urnfield settlements of the Lower Rhine and western Germany, as on the "Harpstedt" ware of Lommel, Hoever Heide (De Laet, 1961, figs. 7-9). This possible connection adds extra weight to the conclusion that a large proportion of the pottery from Scarborough is evidence for a substantial influx in the seventh and early sixth centuries B.C. which, although composed of various disparate influences, was despatched from the southern Dutch coast.

The second phase of influence at Castle Hill, Scarborough, is marked by the use of pottery vessels which copy metal prototypes. Earlier forms would have continued to some extent, and the techniques of decoration introduced earlier certainly flourished on coarser wares. The new forms often have sharply-angled shoulders and necks, but are of a completely different character from those current in the earliest La Tène period, or "Angular Phase" (Harding, 1972, 86), as they have high shoulders, sharply constricted necks, and low, short rims. This difference and the obvious skeuomorphism serves to indicate a date earlier than 450 B.C., most probably beginning in the mid-sixth century. The types seen at Scarborough are found in greater variety in the locally-made products of Staple Howe, so it is possible to ascribe our Scarborough II to the same chronological phase as the first major impact of ceramic influence at the stockaded site.

The sherds of the vessel in Fig. 39, 11, were found not in a pit at Castle Hill but on the occupation "floor". They show a graceful jar with high, sharp shoulder and short rim, and with a fairly wide but not conical base which has a possible narrow foot-ring. Apart from the simple rim, which does not incorporate the rolled thickening necessary for the strengthening of the metal prototype, the form is identical to that of the bronze buckets known from the cemetery at Hallstatt (Kromer, 1959, Taf. 30, 3, Grab. 217; Taf. 36, 5, Grab. 260; for example). In the absence of the

genuine metal article it is not surprising to find a pottery copy on a contemporary settlement with strong Continental connections, even though such pots do not seem to have been current on the Continent. The only fact likely to destroy this argument is the use of similar high-shouldered vessels in the early La Tène period of Belgium (Mariën, 1952, figs. 338 and 370). It seems possible, however, to disassociate the Scarborough vessel from these, as it is a squat bucket-shape rather than a tall vase-shape, and as it has not the expanded, conical base, in imitation of the pedestal foot, of the later forms.

Examples of this "necked situla" type are widespread in eastern and northern England. There are particularly outstanding decorated ones from Staple Howe (Brewster, 1963, figs. 41, 5; 43, 2; 44, 3; 46, 4; and 47, 3), Thornham Hill (op. cit., fig. 79, 2), Epperstone (Fig. 9, 4), Holme Pierrepont (Fig. 9, 2), Red Hill (Fig. 10, 7), and Harborough Rocks (Fig. 4, 3). A high proportion of smaller, slacker, decorated and undecorated vessels seem to be derived from the "necked situla" idea. Large, plain pots from Staple Howe (op. cit., fig. 34, 1; fig. 48, 6 and 8), Grimthorpe (Stead, 1968, fig. 7, 10), and Maiden Castle, Bickerton, Cheshire (Varley, 1964, fig. 38, 4) are obviously related.

The similarity of profile of the carinated bowl from Scarborough (Fig. 39, 16) to the jar just described (Fig. 39, 11) shows that a whole series of bowl and smaller jar forms which may also have metal prototypes are broadly contemporary. Also from Scarborough, Fig. 39, 15 is of the same bowl shape, and others can be seen at Grimthorpe (op. cit., fig. 7, 15) and Staple Howe (Brewster, 1963, fig. 56, 5; fig. 41, 7). The small jar from Scarborough (Fig. 39, 14), similar to one from Grimthorpe (op. cit., fig. 7, 12), is very like a Sussex form (Cunliffe, 1966, fig. 3, 15), a coastal link to be referred to later. Other bowl forms at Staple Howe are at

present unique in northern England and are directly related to Continental types. The burnished bowl with gently curving, concave-footed profile (Brewster, 1963, fig. 42, 8) has already been mentioned as a Hallstatt form. In addition should be noted the similar but lower bowls (op. cit. fig. 53, 1; this thesis, Fig. 20, 4) and the low carinated bowl (op. cit., fig. 50, 1), very like Low Countries late Hallstatt types (as at Saint-Vincent; Mariën 1964, fig. 35; and at Breuvanne; *ibid*, fig. 110, 1), and the "Mecklenburg bowls" (Brewster, 1963, fig. 43, 9: note the related bronze form at Hallstatt; Kromer, 1959, Taf. 98, 7).

A further form of Hallstatt large bronze vessel, with upstanding rim, is broad and low, with a bulbous body profile (as seen at Aislingen, Dillingen; Kossack, 1959, Taf. 38, 4). This type, current in Hallstatt D, has ceramic parallels at Staple Howe (Fig. 20, 14) and probably also at Harborough Cave, Derbyshire (Armstrong and Jackson, 1923, fig. 10, 6; now lost).

A more common skeuomorph is the "bipartite situla", which derives from the bronze situla of Meppen-Gladbach type. (The writer is particularly indebted to D. W. Harding for help with this point.) There is a possible example from Scarborough (Fig. 41, 8), but one of the best is a lost sherd from Harborough Rocks, Derbyshire (Ward, 1890, fig. 2). These are jars, but an important related bowl form is seen in distinctive vessels from Staple Howe (Brewster, 1963, figs. 33, 8; 35, 4; 37, 5; 40, 2 and 7), often with grooves immediately below the rim. That there is a bipartite bowl form in the early La Tène period is not in doubt (as at Pernant, Aisne; Lobjois, 1969, fig. 120, 044.02), and it can be argued that the form persists in Britain under La Tène influence (as in the West Harling report; Clark and Fell, 1963, 26). A likely fifth century example from the north is from Thornham Hill (Brewster, 1963, fig. 78, 1), and it may be that the lower of the Staple Howe bowl forms mark fifth century influence as well.



Related to this bipartite form may be the continuation of biconical shapes in extremely coarse ware, as seen at Scarborough (Fig. 40, 12) and Red Hill (Fig. 10, 5). Possibly a better made example of the same phenomenon is another Scarborough sherd (Fig. 40, 5). A recently published selection of similar forms from Kimmeridge (Cunliffe and Phillipson, 1968, fig. 23) has drawn attention to the wide distribution of bipartite forms in the early Iron Age, provisionally dated by Cunliffe to the sixth/fifth centuries B.C.

A much less common pottery copy of a metal prototype must be considered: a sherd found in excavations by Stanley at the small defended site at Ball Cross, Derbyshire, subsequent to those reported in 1954 (Stanley, 1954; other pottery, Fig. 3, 1-10). This sherd is not now available for study, and the only sketch of it is one by C. F. C. Hawkes in a letter to J. Bartlett, then of Sheffield Museum (dated 30. 4. 1955). It was a rim sherd with a thick, flat top, curving evenly downwards and inwards from the vertical to an angle of about 60 degrees. A depth of section of about two inches remained, and within this on the interior surface were three distinct horizontal corrugations. The curvature indicated a vessel of large diameter, very like that from Colroger, Mullion, in Cornwall (Patchett, 1946, fig. 11). Hawkes considered (in the same letter) that the Ball Cross sherd was indeed a copy of a Class B2 Atlantic cauldron with corrugated rim. Such types are dated to the later seventh and sixth centuries B.C., and since the sherd was of a coarse fabric, similar to the remainder from the site and so not likely to be a stray find, a date for the occupation is thus suggested. Rims with internal corrugations or flutings are also known from the French Urnfield cultures (Sanders, 1957, fig. 78, 10, for example), and related sherds have been recovered in excavations at Clickhimin, Shetland (Hamilton, 1966, Pl. 4), and at Vaul, Tiree (MacKie, 1969, 22), but on these examples the interior surface of the rim which bears the corrugations describes a generalized convex downward curve, whereas that of the Ball Cross sherd is concave.

The idea of a cauldron copy seems thus a sound one.

Of the remaining material from Ball Cross, most is of simple, gently-curving bucket or barrel shape, with simply squared, rounded or moulded rims (Fig. 3, 1-8). Others comparable can be seen at Reynard's Cave (with decorated rim; fig. 3, 12), Red Hill (Fig. 10, 6), and Staple Howe (Brewster, 1963, fig. 37, 9-10; fig. 48, 14). Similar unspecialised shapes have already been considered for the Late Bronze Age, and will be met again later. Here we have a possible context for a sherd from Burradon, Northumberland (Fig. 50, 6), although in the absence of material dating indicators other than such coarse pottery it is not safe to make firm statements. It has been suggested that the large, coarse, bucket-shaped vessels with perforations below the rim from Walney Island Sites IV and VII, Barrow-in-Furness (Barnes, 1955, fig. 5), may be paralleled by the Eastbourne straight-sided, bucket-shaped jars (Hodson, 1962, fig. 2). The latter are of distinctive character, often with two pairs of opposing holes, and seem to be derived from the straight-sided Hallstatt bronze bucket, seen in pottery form elsewhere at Les Jogasses à Chouilly (Favret, 1936, fig. 45). The Walney Island sherds, however, seem to relate much more closely to finds from sites across the Irish Sea, particularly to the "Freestone Hill Ware" discussed by Raftery (1970, 53). Found on Irish hill-fort sites in Counties Kilkenny, Wicklow, Tyrone, Armagh and Down, this bucket-shaped pottery, typically with a row of small perforations below the rim, has a central date in the fourth century A.D. The presence of large quantities of iron slag with the sherds at Walney Island Site IV makes such a date more likely than one in the earlier fifth century B.C.

A very limited amount of influence from the Wessex Early Iron Age can be seen in the north, implying a measure of overland contact with the south. One of the most outstanding forms in the Wessex material is the furrowed bowl, a type with a very limited distribution in central-southern England (Harding,

1972, Pl. 3). An example with a tall, flaring neck and broad, wavy, U-shaped furrows, quite unique north of the Trent, was found above the peat layer which covered the late Middle Bronze Age settlement of Barmston, east Yorkshire (Varley, 1968; this thesis, Fig. 19, 3). The sherd may indicate minor settlement on the peat surface or, more likely, has been washed out of occupation layers on adjacent higher ground. The vessel is of a shape considered by Harding (1972, 80) to be possibly later in the furrowed bowl sequence. As it has no haematite wash it seems that this east Yorkshire outlier does not represent a direct independent movement from the Continent but is probably an import from the south. The second sherd from the site (Fig. 19, 2) is also quite unlike any other material so far north, but is of a well made coarse ware vessel typical of Wessex (Hawkes' comments reported in Varley, 1968, 23). In the absence of local comparable material, the suggestion is that small scale population movement of some kind occurred. The furrowed sherd, in view of the French late Urnfield affiliations of the Wessex types, may belong to the early sixth century B.C. No especially direct connection with the low furrowed bowl in bronze with short everted rim in the Welby hoard (Powell, 1948) is thought likely, as this vessel is nearer in form to the type of furrowed bowl thought to be earlier in the Wessex sequence. A haematite coated example of this lower rimmed, carinated type, with five furrows on its gently-curving neck, is reported by Varley to have been found in the circular stone-kerbed huts behind the original defences of the hill-fort at Old Oswestry, Shropshire (Varley, 1964, 90, fig. 38, 2). This certain Wessex import has not been available for study, and the excavations remain largely unpublished (plans in Varley, 1948, 56).

A further major element of early Iron Age Wessex pottery is the use of incised geometric ornament with chalky white infilling, on vessels of fine

ware (Harding, 1972, 81). The only similar sherd in the north is a fine burnished bowl fragment with shallow, white-infilled chevron decoration from Pit 3 at Manor Farm, Kilham, East Riding (Fig. 23, 4). Although the inlay is a Wessex feature, the shape of the vessel, with a fairly sharp carination and almost vertical, slightly flaring rim, is close to some of the forms from the late Hallstatt site at Les Jogasses à Chouilly (Favret, 1936, fig. 45). This possible Continental connection is further emphasised by the sharply-angled, chevron-grooved shoulder fragment in fine brown ware from the same site (Fig. 23, 2), which is similar to examples from an early phase of settlement on the Iron Age site at Fengate, Peterborough (Hawkes and Fell, 1945, fig. 2, D2), dated by a bronze and iron swan's-neck, disc-headed pin of east German type to the fifth century B.C. A source of ceramic styles at Fengate in the modified and diffuse late Hallstatt cultures of the Lower Rhine has been suggested (*op. cit.*, 216 - 8). The horizontal grooving on sherds from Pit 2 at Manor Farm, Kilham (Fig. 21, 10-11), also recalls Fengate examples (*op. cit.*, fig. 2, E2; possibly fig. 7, R1). It seems, therefore, that in the late Hallstatt period of the earlier fifth century there was a considerable mixing of ceramic influences in the East Riding. The few sherds from the very limited excavation at Manor Farm, Kilham (a site to be considered in more detail later), imply that, if excavation on settlement sites in the area was to proceed at a rate comparable with that of La Tène burial sites, in advance of further agricultural destruction, a wealth of Wessex, Jogassien, and Lower Rhenish styles might well emerge.

Emergency excavations at Red Hill, Nottinghamshire, in 1963 (EMAB, VII 26), limited to trial trenching only, produced a small collection of early Iron Age pottery from an area also occupied later, probably in the third century B.C. and in the Romano-British period. This pottery (Fig. 10, 4-10),

in addition to crude forms already mentioned, includes sharply-shouldered finger-tipped types, a neatly-slashed neck-cordon on a sharply-curved small vessel, and an undecorated neck-cordon with possible grooved decoration below on a small sherd of a fine ware vessel. All these features can be found on Fengate material (Hawkes and Fell, 1945, figs. 1, A2; 3, F2; and 4, G1), suggesting an extension inland of a coastal influence. Further tentative evidence of such a spread comes from excavations at Tallington Site 38, in the Welland Valley, which produced a sherd (Fennell, 1961, fig. 1, 7) with diamond-shaped incised decoration on an angular shoulder (cf. Hawkes and Fell, 1945, fig. 3, C3). That some widespread influence on southern and eastern coasts took place is suggested by similarities in Sussex (Cunliffe, 1966) and at Minnis Bay (Worsfold, 1943). A common feature of the Sussex material is the emphasis of the shoulders of jars and bowls with an offset projection (Hawkes, 1939a, fig. 8, 7; Cunliffe, 1966, fig. 1, 2-4). The date of this type probably centres in the later sixth century. Good examples are to be found at Staple Howe (Fig. 20, 5 and 8) and at Kelk Hill (Fig. 20, 17), jar and fine bowl forms respectively. The undecorated cordon of Sussex and Fengate is seen at Scarborough (Fig. 40, 11) and at Manor Farm, Kilham (Fig. 22, 2). The conclusion is that, in addition to receiving its own distinctive influences, the Trent-Tyne area also felt the effects of Continental probing on a much broader basis.

Of the pottery forms believed to have been developed in the Upper Thames Basin, particularly the heavily-expanded rim with pronounced inward or outward flange developed from cauldron prototypes (Harding, 1972, 75-78), little reflection can be seen north of the Trent. The pronounced inward flange of a vessel from Scarborough (Fig. 41, 1) may be related, but the series of types from Catcote, Co. Durham (Fig. 44, 4, 9-10, 12), although superficially similar, is certainly of much later date and will be discussed elsewhere. The unrecorded find from Brigham, Yorkshire (Fig. 28, 12), may

be of seventh or sixth century date, on analogy with vessels from Chastleton Camp, Oxfordshire (Harding, 1972, Pl. 43), but its similarity with later wares further north (such as Fig. 11, 4; Fig. 28, 7) renders this unproven.

In summing up the evidence of pottery influences, therefore, we can see a major influx in the seventh century B.C., particularly important at Scarborough, emanating from the Low Countries. From the sixth century B.C., Hallstatt forms again typical of the Low Countries can be seen at Staple Howe, alongside copies of metal prototypes which provide a later horizon at Scarborough. Although much of the distinctive earlier Scarborough material in its pure form is unique in the north of England, the influences of the late Hallstatt period are apparent over a much wider area, in part reflecting the extension inland of movements to southern and eastern coasts. Particularly important areas of settlement, judging from the pottery distribution (Fig. 74), appear to be the limestone plateaux of eastern Yorkshire and the southern Pennines and their environs, upland margins as in Cheshire and Shropshire, and areas of glacial or river gravel deposit. Hallstatt forms make up a proportion of the wares at Grimthorpe, suggesting continued occupation, whilst the very sparse evidence from fifth century settlement sites in the area indicates a possible Jogassien element heralding early La Tène intruders.

It is not easy to correlate the ceramic and metalwork evidence into a unitary explanation, particularly since it seems obvious that the few groups of excavated material which are available must present nothing approaching a complete picture. It is possible, however, to add to the conclusions already reached.

It seems reasonable to correlate the primary wave of Hallstatt C swords into Britain with the seventh century influx at Scarborough. The tall, flaring

rims and rounded bodies of some of the Scarborough vessels, presenting S-shaped profiles (Smith, R. A., 1927, figs. 25 and 27), are exactly like one found with a broken Hallstatt sword in the Gedinne cemetery of "Chevaudos", Namur, in Belgium (Marien, 1952, fig. 265). The burial evidence from nearby Ebberston is acceptable, so the conclusion of primary immigration seems clear. Later, around 600 B.C., peoples exhibiting divergent Belgian, north and south German contacts, emerged from the same Low Countries coasts to form settlements of distinctive character as at Staple Howe, later still at Fengate, and doubtless at other eastern sites yet undiscovered.

Following these early immigrations, expansion and absorption occurred further inland, as at Harborough Rocks, Red Hill, and Grafton Hills. Knowledge of iron-working would be spread during the sixth century, although traditional indigenous bronze tools continued in use alongside the new sword types made by the immigrant element. These new and other imported types, probably quite rare, would have been diffused along waterways and on horseback.

Late in the Hallstatt period, influence from northern France is discernable in the little evidence available from the East Riding. Possible Jogassien ceramic influence at Kilham and a strange mixture of indigenous and immigrant burial rites at Aldro point to movements around 500 B.C. which, more than any other phenomenon, demand clarification by future research excavation.

## CHAPTER 4

### THE EARLY LA TÈNE PERIOD

#### i. Pottery

In a recent study, Harding (1972) has achieved a clarification of the earlier Iron Age of southern Britain in general, and of the early La Tène period in particular, by a careful reappraisal of the ceramic evidence from the Upper Thames. From the sites of Long Wittenham, Woodeaton, and Chinnor, a series of jars and bowls with angular profile and flaring rim, previously often considered as typologically the earliest of the region's Iron Age, were seen as representing an innovating style, deriving from the early La Tène vases carénés of the Marne in northern France, making its appearance from the second half of the fifth century B.C. The apparent absence of early "Marnian" pottery from eastern Yorkshire, where burials of the La Tène period are so outstanding, has often aroused comment (Brailsford, 1958, 93; Stead, 1965, 85), and has been explained either by an immigration without womenfolk or by an origin for the movement outside Champagne. Even accepting these explanations as possible, a complete lack of such pottery would still be most unusual, considering that even the vessels from the Upper Thames are predominantly of native manufacture, and that "Marnian" pottery influence is so widespread in the western Continent.

Work by C. and E. Grantham of Driffield at Manor Farm, Kilham, in 1965 and 1966 located five pits within 100 yards of each other. These were either single pits, or two or three connected pits, each bowl-shaped, 6-8 feet across and 3-5 feet deep. A most important collection of remains was recovered from these areas. Much of the bone and stone material has already been mentioned; a selection of the pottery is illustrated on Figs. 21-23. Some of the pottery has been considered in relation to a possible influence of the late Hallstatt period, probably in the fifth century, and it is likely



that the collection represents a period of over a hundred years. A most important further feature is the presence of locally-made pottery of "angular" type. From Pit 1, the small vase (Fig. 21, 6) is an outstanding example, very similar in profile to one from Allen's Pit, Dorchester, interpreted by Harding (1972, 88; Pl. 52, B) as a native attempt at a flaring rim with the profile straightened near the top to prevent collapse during construction. The sherd of a larger jar (Fig. 21, 9) is also very similar in profile to Upper Thames examples. The more complete vessel from Pit 5 (Fig. 23, 8), with its slightly bulging body and rim well-flared at the expense of its height, compares well with a profile from Long Wittenham (Harding, 1972, Pl. 53, C). The grooved sherds (Fig. 21, 10, and more particularly 11) are probably also from "angular" vessels.

Earlier rescue activity by C. and E. Grantham and others in a sand quarry at Thornham Hill, four miles to the south-east, in 1950-51, located two different occupation levels in section. From the upper came material of immediately pre-Roman date, to be noted later, but <sup>from</sup> the lower came a variety of stone, bone, jet and pottery material, some of which has been illustrated by Brewster (1963, figs. 77-79). The site was much destroyed before the Granthams discovered the occupation, and no plan can be reconstructed; but the configuration of the glacial sand end-moraine would have been suitable for a hill-top settlement of Staple Howe type. Brewster considered that Thornham Hill's early material showed no La Tène influence (op. cit. 141), but the few battered sherds shown here in Fig. 25, 8 (certainly from the lower layer, according to C. and E. Grantham) are of a vessel of undoubted "angular" type. Its fine, smooth, leathery and probably originally burnished surface is sufficiently unlike the other early material from the site to suggest that it might have been imported by Continental immigrants.

As for other "angular" material, a sherd from the Morfitt Collection in the Yorkshire Museum, probably from Atwick, north of Hornsea, may be an

example (Fig. 27, 4), as the Upper Thames collections do include jars with very constricted necks. Later angular forms are more varied, and will be looked at later (Fig. 27, 2; Fig. 24, 6, 8, 10 and 11; for example). There is little from areas south of Yorkshire which can compare: a vessel from Ravencliffe Cave in black ware but with uneven profile (Fig. 6. 9) and chance-find sherds from Farnsfield (Fig. 14, 13-14) are inconclusive. However, there is undoubtedly now sufficient material from eastern Yorkshire to suggest a distinct "angular" influence in the later fifth century B.C., as such forms are much in evidence amongst the two main collections of the period: Thornham Hill and Manor Farm, Kilham. The lack of comparable material from the English midlands indicates an independent movement from the Continent.

That the intrusive influences did not completely engulf native tradition is perhaps shown by the use of finger-tipping on the smaller and less distinctive vessels at Manor Farm (Fig. 21, 14; Fig. 22, 4-6), and amongst later material at Great Kendale (Fig. 24, 5) and Brandesburton (Fig. 25, 2). The picture may be complicated, however, by the factor of rubbish survival in an intensively-occupied area. The sherds of a shouldered vessel with finger-tipped decoration from Arras 23 (Stead, 1965, 103; Yorkshire Museum, but mislaid) may have been turned up during construction of the barrow and not deposited with the burial, and the barrows at Cowlam contained much earlier pottery in their make-up (Greenwell, 1877, 208-13). A case for the survival of plastic decoration might be made out at Thornham Hill. Sherds in the lower layer include forms directly comparable with West Harling. (Brewster, 1963, figs. 78, 1; 78, 4; 79, 2; and 79, 3; are respectively very similar to Clark and Fell, 1953, figs. 15, 72; 13, 34; 10, 1; and 12, 14; in the treatment of decoration.) Another (Brewster, 1963, fig. 77, 3) is very similar in profile to an undecorated vessel from Manor Farm (Fig. 21, 15), although this shape may be a pre- La Tène form (as possibly at Stoke Clump, Sussex; Cunliffe, 1966, fig. 1, 9). The Thornham Hill bipartite jar

(op. cit. fig. 78, 1) may be related more to the "situlate" series than to the later bowl series, and a jar form (op. cit. fig. 77, 1) does itself suggest a round-shouldered necked situla. The fragments of a bowl in fine ware (Fig. 20A, 4) may represent an earlier import. It is suggested, therefore, that at Thornham Hill the "angular" influence was probably intrusive into a settlement which was already in existence.

A number of other new forms can be recognised in the early La Tène assemblages of eastern Yorkshire. One of particular importance is the jar or bowl with rounded profile, very slightly constricted neck, and everted rim, often thickened internally. The best example comes from Manor Farm (Fig. 23, 1). The form is simple, but there are parallels in the early La Tène cemeteries of northern France, in particular from one of the most recently published, at Pernant, Aisne. Two vessels are very similar (Lobjois, 1969, fig. 114, 039.01 and 053.01) and it is suggested that the East Riding form derives from the French one. The Manor Farm open jar characteristics are repeated on larger and smaller vessels of more upright shape (Figs. 23, 3; 22, 3, 7 and 8). These undecorated wares with slightly constricted necks are obviously a common denominator type, and it may be that from this early beginning they had a long life. The particularly rounded shape of Fig. 23, 3 is exactly repeated on sherds from excavations of the palisaded site at Catterick (T.C.M. Brewster information), and much later similar shapes are known from the north-east at Pale End, Kildale (Fig. 43, 2), and Catcote (Fig. 44, 7), although these have bevelled rims. The very simple jar shapes of Fig. 22, 7 and 8 may indeed be the fore-runners of some of the later pots deposited with burials (as at Danes Graves, Fig. 28, 3; and Eastburn, Fig. 28, 8), and also one of the most characteristic shapes from the Stanwick fortifications (Wheeler, 1954, fig. 12, 1). This latter vessel came from a low level in the Phase II ditch on Site B, near the gateway, above the layer in which the famous sword was found.

About other probable early La Tène forms, the Morfitt Collections at the Yorkshire Museum are informative. It is unfortunate that the excavations of the pits in coastal East Riding and the recovery of their contents were not reported in more detail (Greenwell and Gatty, 1910), that the finds in the Museum are not intelligibly labelled, and that Morfitt's notes, however inadequate, cannot now be traced. It is not possible, therefore, to be certain of the provenance of some of the items, and of association nothing may be said. However, the vessels are of interest individually. The globular S-shaped examples (Fig. 26, 2 and 4) from Atwick are similar to those in the early La Tène cemeteries of Gijemelberg, Langdorp, in Brabant, and Saint-Vincent, Bellefontaine, in its latest phase, both in Belgium (Mariën, 1952, fig. 328; Mariën, 1964, fig. 107; respectively). It may be that this relationship is more likely than a direct derivation from the vases piriforme of the Marne. As for the tall jar with finger-tipped rim (Fig. 26, 3), the most obvious parallels are with southern Britain, particularly with Wessex, as at Swallowcliffe Down (Clay, 1927, Pl. V, 2 and 3). The small barrel and bucket shapes from Atwick (Fig. 26, 1; Fig. 27, 5 and 6) are too crude to allow much comparison, but it is perhaps not irrelevant to mention that coarse "micro-vases" often accompany Continental early La Tène burials (for example, Lobjois, 1969, fig. 112).

On the evidence of the globular vessels it seems that movement from an area other than the Marne, probably to the north, may have taken place. In this connection, a satisfactory analogy to the low, sharp-shouldered burnished bowl with slightly omphalos base from the earlier, lower level at Thornham Hill (Fig. 25, 7) is also to be found in Belgium: a vessel recovered in 1905 excavations at the Court-Saint-Étienne cemetery, and considered by Mariën to be La Tène III (Mariën, 1958, fig. 34, 5). The omphalos base on the Yorkshire vessel suggests a much earlier date (but note the

omphalos bases at Dragonby; May, 1970, fig. 7, 3 and 7; and the low carinated bowl probably of Period I at Camulodunum; Hawkes and Hull, 1947, Pl. LXXVI, 224). That horizontal grooving (as at Manor Farm; Fig. 21, 10 and 11) was common in the early La Tène period in Belgium is well-known (Mariën, 1971, fig. 50). It seems possible to conjecture that a movement to the East Riding stemmed from some area around the present Belgian/French frontier between Lille and the Moselle, or perhaps began further to the east.

Of other sherds in early La Tène groups, small, moulded forms seem common. The strange wall-sherd, with broad, moulded horizontal furrow, from Manor Farm, Kilham (Fig. 21, 13), is paralleled at Brandesburton (Fig. 25, 3), probably in a later context. The only other example seems to be a wall-sherd from a Period IIc level at Eldon's Seat, Dorset (Cunliffe and Phillipson, 1968, fig. 17, 170). Amongst the forms hitherto not illustrated from Staple Howe, there is a smoothly-moulded rim-sherd with an offset overhanging rim, curving probably to a sharp shoulder (Fig. 20, 2). A small sherd from Manor Farm (Fig. 21, 12) vaguely reflects it. Small, stubby, shouldered vessels are also present (Fig. 21, 7), providing one of the few possible links with the East Midlands (Breedon-on-the-Hill; Fig. 12, 6).

The occupation at Staple Howe may have continued down to the period of the beginning of early La Tène influence. One small jar with finger-tipping on the exterior of the rim and on the shoulder has a distinctively "angular" character (Brewster, 1963, fig. 52, 7; cf. Harding, 1972, Pl. 53, E), and a large open bowl with sharp shoulder and flaring rim may be similarly late (op. cit., fig. 48, 3). The low bipartite bowls with a groove beneath the rim, already considered, are indeed similar to those from north French early La Tène cemeteries (Lobjois, 1969, fig. 120, 036.04), and that with squat, bevelled rim (op. cit., fig. 35, 4) may be also (Lobjois, 1969, fig. 120, 044.02). This evidence is slight, however, compared with the weight

of that of the Hallstatt period. There are two further sherds of significance: a small wall-sherd with vertical, rough scored decoration, and three joining sherds in "alien ware" with the body finely combed or grooved (op. cit. fig. 43, 7; fig. 52, 4).

Together with the thin, sandy vessel with distinct vertical striations from Manor Farm, Kilham (Fig. 21, 14), these sherds provide the best evidence for fifth century scored "decoration" in the north of England, and of these the Staple Howe wall-sherd is the most convincing. Scored pottery has long been known in the East Midlands of England, where it is often referred to as "Trent Valley A/B ware". Post-war studies by Kenyon (1950 and 1962) concluded that these vessels, of characteristic round-shouldered or barrel form, often of large size, and usually with deep, random, ragged body-scoring, were to be dated to the first century B.C. and the first century A.D. on the basis of association with beehive querns and sometimes with vessels of Belgic type, and of the weak, rounded profiles, thought to be "devolved". A separate immigration from a very backward region of the Continent, perhaps the Low Countries, was invoked to account for the distribution of the type, thought to be limited to the southern and eastern tributary areas of the Trent Valley (Fig. 76).

A re-examination of the origins of scored pottery is now necessary. Recent work by J. May, particularly at the eastern sites of Ancaster and Dragonby, has shown that characteristic scored wares are found in certainly second and probably third century B.C. contexts, and that in certain areas new pottery types largely excluded them certainly by the first century and probably by the later second century B.C. The details of this evidence will be considered later, but the implication for the present discussion is that origins for scored pottery should be sought at least before the middle La Tène period. It would indeed be surprising if over large areas of the

Midlands there was to be no material evidence of Iron Age occupation before the distinctive curvilinear styles of Hunsbury, particularly in view of the first phase timber-framed rampart of that site (R.J.C. Atkinson excavations, 1952; unpublished), and the stockaded enclosure and the timber-revetted ramparts now envisaged at Breedon-on-the-Hill, Leicestershire (Norwood, 1967; Wachter, 1964).

At Mildenhall Fen, Suffolk, vertical and diagonal crossed scoring on bucket-shaped vessels, often with finger-tipping on the top of rounded rims, has been demonstrated to be contemporary with a later Middle Bronze Age pottery assemblage which included bevelled rims, bucket and barrel shapes, impressed-cord decoration, and vessels in the Overhanging-rim Urn tradition (Clark, 1936, fig. 8). There may be some considerable length of occupation represented by the collection, but all was stratified beneath a peat covering which probably accumulated over this fen-edge site before the beginning of the Iron Age. In our discussion of Late Bronze Age material, lattice scoring was noted at Balevullin, Tiree, and at Hartlepool, Co. Durham, and diagonal herring-bone scoring at Eldon's Seat I and North Ferriby. Deep-scoring thus has an indigenous history, but probably not one which can be seen to develop into such a dominant characteristic of the East Midlands Iron Age. Obvious brushing and deep tooling are quite common on early vessels, such as the Epperstone jars (Fig. 9, 4-5), but are not comparable.

As for the Continent, sherds of predominantly slack-shouldered vessels with rounded, slightly everted rims, and with body-decoration of diagonal, vertical, upright lattice, and random deep scoring on different vessels, are known from the Kratzburg "höhensiedlung" in Brandenburg (Hollnagel, 1958, Taf. 29). Figured with other sherds with internally-fluted rims of more usual Urnfield type, these were all surface finds, presumed to be of the same date (op. cit., 17), possibly of the ninth century B.C. That such pottery might have been introduced along with some of the earliest hill-

fortifications of Britain, from the Lausitz Culture of eastern Germany, is an attractive possibility, especially since sherds from Hunsbury (Fell, 1937, fig. 7, D13) and Breedon-on-the-Hill (Fig. 13, 7) bear a decoration very similar to that on some ~~from~~ the Kratzeburg. This suggestion is dramatically reinforced by structural evidence: the defence at Breedon-on-the-Hill reconstructed by Wachter as his Period I (1964, fig. 2) is virtually identical to that of the Lausitz Culture fort of Sornewitz, Middle Germany, to which attention has been recently drawn by Hawkes (1971, fig. 1a); and the timber, masonry, and rubble wall of the fort of Schafberg, also Middle Germany (op. cit., fig. 1d), is strikingly similar to that described for Hunsbury (R.J.C. Atkinson lecture). The details of these structures will be discussed later.

Nearer to our area in measured miles, but not necessarily so in distance of over-land travel, there are other possible precursors to our scored pottery in the seventh and sixth century B.C. Hunsrück-Eifel culture of the Middle Rhine and areas to the south and west. Here, there is both roughly crossed horizontal and vertical scoring (Neuffer, 1938, Abb. 3, 3) and much thicker, deeper vertical combing (op. cit., Taf. 7; Abb. 2, 1-5) on vessels with slack bucket and barrel profiles and finger-tipping on top of and below the rim. Fig. 12, 10 from Breedon-on-the-Hill is particularly similar, and Fig. 13, 2 also has close analogies (op. cit., Abb. 6, 9). There is certainly an affinity of effect between the Midlands jars with harsh, all-over random scoring (Kenyon, 1950, fig. 11, 1, for example) and the "Kalenderbergware" of the Rhinelands (Neuffer, 1938, Taf. 17, Abb. 1) and Belgium (Roosens and Beex, 1960, Afb. 14). The predominantly slack shapes of the jars in these areas further encourages the suggestion of a possibly sixth century connection. There is certainly no reason why forms at Breedon-on-the-Hill such as Fig. 12, 6-8 and 10, and Fig. 13, 2 should not have been current



at a pre-fifth century date.

Having examined these early parallels, it must be noted that scored decoration on necked bowls and jars with rounded profile does continue into La Tène times in Belgium. Such a date has been suggested for "Kammstrick-decoration" (light combing) and deep, irregular twig-scoring on vessels found in the immediate vicinity of Urnfield burials at Temse-Velle and Aalter-Oostergem, Flanders (De Laet, et al., 1958, figs. 38, 58, 59, 61, 63, and 68). Scored decoration of different types is in fact widespread during the La Tène period, both on the Marne and as far north as Denmark. Its distribution on later La Tène sites in England is also quite extensive. For the time being, however, we are concerned with origins.

An important further consideration is the occurrence of a barrel-shaped vertically-scored jar, very similar to a Hunsbury vessel (Fell, 1937, fig. 7, D13; already noted), from the hill-fort site at Budbury, Wiltshire (Wainwright, 1970, fig. 13, 48). The material from this stone-box ramparted site included furrowed and cordoned bowls, circular-stamped decoration, and rounded shapes, and it is unfortunate that in a statistical approach to the pottery analysis the excavator failed to give any detail of locations and associations. A fifth century B.C. date was suggested for the whole collection. It may be that this type of scoring (as at Breedon-on-the-Hill, Fig. 13, 7) may have been more widespread than has hitherto been recognised, and contemporary with other material from Hunsbury for which a sixth-fifth century date has already been suggested (Fell, 1937, fig. 7, FT3). In envisaging an early date for the first rampart at Breedon-on-the-Hill, therefore, one need not be disconcerted by a presumed first century currency for scored pottery, which did occur in occupation material of this Period I (Wacher, 1964, 131, fig. 3, 20). The horizontal rows of stamps on another Breedon-on-the-Hill vessel (Fig. 13, 5) may possibly also have early analogy in a sherd from Budbury (Wainwright, 1970, fig. 12, 27), and even in one from the Heuneburg

which seems to have a similar profile (Dehn, et al., 1954. Taf. 12b, 9).

A characteristic feature of the Breedon-on-the-Hill coarse ware is its orange-buff colour, sandy texture, and harsh crystalline grit. This is just the description of the "alien ware" combed sherds from Staple Howe (Brewster, 1963, fig. 52, 4), so the conclusion seems to be that there was contact between the East Riding and the East Midlands, by Trent or Jurassic Way, in the sixth or fifth century B.C. It is to be hoped that future research will lead to the excavation of a further pre-fourth century site in the East Midlands, and so to a clarification of the pottery types current there in the earlier Iron Age. Meanwhile, a fifth century date for the introduction of scored types is a useful compromise, but one which may prove unduly retarded.

## ii. Metalwork

There is very little metalwork from northern England which can be ascribed to the early La Tène period, before the middle of the third century B.C. Later, a much greater variety of types, many of distinctively British conception and manufacture, and often displaying considerable inventiveness and decorative skill, was to blossom in a healthy indigenous development. However, the few early artifacts of plain but refined character, coupled with foreign parallels for the types which later evolved in diverse manner, suggest that initial La Tène dates for the introduction of the basic forms into Britain are very likely. In the north of England, most evidence comes from the east, and particularly from the East Riding, where Stead's recent work (1965 and 1971) is a definitive commentary.

Harding (1972, 127) has suggested that the Arras Culture had origins in a later fifth century movement, allied to the "angular" incursion of the south-east. Now that early La Tène pottery has been identified with

certainty in eastern Yorkshire, the idea gains greater credibility than when based on the single find from Cowlam. Of the five barrows excavated by Greenwell (1988, 208-13), evidently overlying an earlier Iron Age settlement, three have been re-excavated by Stead (1971, 22-3), who found that they contained burials on the old land surface and that they had been surrounded by square-plan ditches. Of the five female inhumations, two were accompanied by grave goods. Barrow L included a bronze brooch, a bronze bracelet, a fragment of a shale bracelet, and seventy glass beads. The brooch is high-bowed, four-coiled, and has a recurved foot which terminates in a flat disc. Assigned to La Tène Ia contexts at the cemetery of Münsingen-am-Rain, near Berne (Hodson, 1964a, 137), this type also occurs in Grave I at Yvonand, Lake Neuchâtel, Switzerland (Stead, 1965, 82). The latter grave-group provides a close parallel for the bronze bracelet from Barrow L, which is of "tongue-in-glove" type, with five regular swellings in body thickness which are decorated with curvilinear engraved designs. Barrow LI contained a further bracelet, but of the "knobbed" type, which experienced continuous and varied development throughout the Hallstatt and La Tène periods but which, in this Yorkshire example, can be well paralleled in French La Tène I contexts (op. cit., 52). It seems that all these types, including the blue glass beads, were introduced from western Switzerland or north-eastern France during the later fifth century (or earlier fourth century at latest).

Other aspects of East Riding burial practice also point towards early La Tène movement from north-eastern France. Simple square-ditch enclosures around barrows in Champagne seem to be an early La Tène type, and there is evidence to suggest that more elaborate forms were used at a later date (op. cit., 28). As for the cart-burials, distinctive features of the Yorkshire Wolds examples, such as the dismantled carts, are particularly paralleled by late Hallstatt burials in Switzerland and eastern France (op. cit., 16),

whereas the North Riding examples with upright wheels in separate holes suggest Marnian connections. Certain inconsistencies, such as the small size of the barrows, the absence of pottery and weapons, and the lack of evidence for chronological overlap, suggest that the Yorkshire examples already known are developed from an early La Tène influx yet to be discovered archaeologically. Similarities in the detail of grave goods between Yorkshire and the cart-burial at Somme-Tourbe ("La Gorge-Meillet"), Marne, such as the three-link horse-bits and brooches similar to that from Cowlam, are most important: the Marnian burial is securely dated by the presence of an Etruscan beaked flagon to the fifth century B.C. Perhaps after the introduction of a dominant early La Tène group, favourable economic conditions enabled the new population, whilst developing independently, to greatly increase numerically, so leading to our greater knowledge of the burials from the third century onwards.

One of the several metalwork types to have experienced especial development in eastern Yorkshire is the penannular brooch. Bronze examples associated with distinctive "flattened-bow" brooches, probably around 200 B.C., come from Sawdon (one, with medial moulding and bulbous knobbed terminals) and from Huntow (two, without medial or terminal knobs) (Watson, 1947). A thinner bronze example comes from recent excavations at Burton Fleming (Stead, 1971, fig. 7, 1), and iron examples are known from Arras and Danes Graves. All these probably accompanied burials. From the settlement site at Manor Farm, Kilham, a further iron example (Fig. 21, 4) with flattened, knobbed terminals has been recovered, and its association in Pit 1 with distinctive "angular" pottery indicates the likelihood that the type was current from the earliest La Tène phase in the area. Belonging to Fowler's types Aa and A (1960, fig. 1), the Yorkshire examples mentioned stand with others, mainly from southern England, at the head of the British

series. Recent work in the Aisne Department of France has revealed a simple plain bronze penannular brooch in a single grave with a La Tène Ia torc at the Pernant cemetery (Lobjois, 1969, fig. 127, 033.06), and another, similar, with a late La Tène Ia iron bow-brooch and bronze torc from a double grave at Trugny (Rowlett, 1966, fig. 1). Rowlett has drawn attention to late Hallstatt examples in Jutland (*op. cit.*, 135). A late fifth century date for the introduction of the type to Britain is not, therefore, inconceivable, and it is important in this connection to note the iron example from a pit at Breedon-on-the-Hill (Fig. 12, 1).

The iron pin from Breedon-on-the-Hill (Fig. 12, 5), most unfortunately a casual find, seems to have a bun-shaped head with a slight expansion in the shank below. Its form is therefore not typical of the bronze vase-headed pin sequence of the Urnfield period, and indeed its iron construction suggests a date after 600 B.C. The best British parallel is from All Cannings Cross, Wiltshire (Cunnington, 1923, Pl. 21, 5), a site which seems to have had an extended life at least from the seventh to the fourth centuries B.C. That indigenous development of headed and moulded pins might have continued down to the third century B.C. is suggested by an iron example from the first period hut site behind the inner rampart at Bredon Hill, Gloucestershire (Hencken, 1938, fig. 9, 3).

The similarity between the bronze ring-headed pin from the same hut site at Bredon Hill (*op. cit.*, fig. 4, 1) and that from Manor Farm, Kilham, Pit 1 (Fig. 21, 3) should be noted. There is certainly a variety in the form of British ring-headed pins, and the type with pronounced swan's-neck and small ring-head is distinctive. Perhaps the most usefully-associated similar example is that of iron, with square-sectioned ring-head, from Hearth I at Chinnor Common, Oxfordshire (Richardson and Young, 1951, fig. 10, 3), found with "angular" pottery. The derivation of the ring-headed pin from the swan's-neck pin, as suggested by Dunning (1934, 272-4), seems reasonable,

especially considering the similarity of outline between the Woodeaton swan's-neck and the Chinnor ring-headed pins, pointed out by Harding (1972, 90-1). Further confirmation of such a development is given by the notched termination of the ring-head on the Manor Farm example, reflecting the similar notching of the swan's-neck pins from Jordan Hill, Weymouth, and from Ham Hill, Somerset (Dunning, 1934, fig. 2, 3-4). A later fifth century beginning for the Manor Farm type ring-headed pin is suggested, with a currency either side of 400 B.C. The beaded type of swan's-neck pin and its derivatives are widespread in Germany, Switzerland and eastern France. Could Yorkshire have acquired yet another artifact type direct from the Continent?

As for pins with larger ring-heads, these are thinly distributed in the north, with bronze examples from Harborough Cave (Fig. 5, 12) with notched, diamond-sectioned ring-head, from Dove Point, Birkenhead, Cheshire (Hume, 1863, Pl. XXII), Crowland Abbey, Lincolnshire (Dunning, 1934, 289), and Giants' Hills, Skendleby, Lincolnshire (Phillips, C.W., 1936, fig. 13). It is not necessarily correct to assume that these differently-proportioned examples represent a much later development, since the Harborough Cave section is similar to that of the other iron examples from Chinnor Common (Richardson and Young, 1951, fig. 10, 1-2), and since the Skendleby example was discovered in the same lower part of the layer of Iron Age ploughsoil, in the ditch of the Long Barrow, as a bronze finger-ring of distinctive type (Phillips, C.W., 1936, 69, fig. 13). This seems from the illustration to be made of a single bronze wire, expanded near the terminals into a flattened rectangular section. These flattened bands are divided on the exterior surface into three ribs by grooves, the outer two ribs of each terminal forming wire spirals of three revolutions in the plane of the flattened bands. The closest parallel is a fragmentary example from the hill-fort at Rainsborough, Northamptonshire (Avery, et al., 1967, fig. 31, 158-159).

Avery has discussed the chronol<sup>o</sup>gical implications of the type (op. cit., 286-8), suggesting a possible range from the Hallstatt period to the second century B.C., and accepting a fourth century date as the most likely for his example on stratigraphical grounds. A fourth century date has also been suggested for the bronze ring-headed pin from Hunsbury (Fell, 1937, fig. 3, 1).

Two miles south-west of the settlement at Manor Farm, Kilham, in a valley-floor situation at Bracey Bridge, an iron anthropoid dagger was recovered during road-widening operations. Messrs. C. and E. Grantham of Drifffield later cleared the immediate vicinity, and found the base of a pit, which contained no trace of archaeological material. It seems likely that the dagger was disturbed from its position in the pit, and possible that it was deposited with a burial. The dagger (Fig. 23A) is of most unusual type. Its iron blade, although badly corroded in parts, is evidently a boldly-curved leaf-shape with a long and savage point. The circular-sectioned hilt spine is probably of the same piece as the blade. Some corroded hilt-plate material remains. The hilt-guards are separate castings with solid spherical knobbed terminals. The lower guard bears a groove into which the blade is set, whilst the upper is retained in position on the narrowed hilt spine by the latter being roughly hammered flat over it.

The Bracey Bridge dagger is in detail quite unlike any other known to the writer. Significantly it bears no unequivocally humanised features, lacking any central "head". In the absence of hilt-plates, the shape of the grip is not known, but it may have been plain rather than moulded. The blades of anthropoid short-swords and daggers are usually straight-sided or triangular, and when leaf-shaped are only slightly so. The V-arms and legs, the lack of a head, and the probably expanded grip all place the dagger in Hawkes' Class B (Clarke and Hawkes, 1955, 206). However, although the blade may be seen as a gracefully-curved caprice, a relatively early date seems to

be indicated, since there are close parallels with daggers from abroad, particularly at Hallstatt. Kromer (1959) illustrates nine daggers with leaf-shaped blades from this cemetery. That from Grab. 756 (Taf. 141, 3), with rounded, bun-shaped terminals on the "arms" and its hilt plate material on a bar-tang, is quite similar, as is that from Grab. 458 (Taf. 74, 5) with small button-head. The graceful leaf-shaped blade from Grab. 766 (Taf. 165, 1) is comparable in outline to that from Bracey Bridge. Although there are these factors in common, the Hallstatt daggers do not have knobbed or expanded terminals to the "legs", or lower hilt-guard. In this respect, a much better parallel is, significantly, the general appearance of the hilt of a La Tène I sword from Kysice, Bohemia, when the terminal sockets on that weapon had their non-metallic knobs in place (Clarke and Hawkes, 1955, fig. 2). Two daggers from Britain have leaf-shaped blades: those probably of the fifth century from West Buckland, Somerset (elegant sheath only; Jope, 1961, fig. 3, no. 21), and from the river Thames (op. cit., fig. 3, no. 27). A date in the decades around 400 B.C. may not, therefore, seem inappropriate for our Yorkshire specimen. An alternative interpretation might compare the Bracey Bridge spherical knobbed terminals with those on the bronze hilt of the iron weapon from Hertford Warren, considered by Hawkes (Clarke and Hawkes, 1955, 208-9) to be of second century date, but placed by Jope slightly before 400 B.C. (1961, fig. 6, no. 15). The elaborate openwork design of this latter weapon is itself more likely to be the derivative, later type, however. Perhaps at Bracey Bridge we have one of those elusive La Tène I links between the antenna-daggers and the true anthropoids.

There are no other daggers of early La Tène date from the north of England. As for swords, Jope (1961, 320) has found it impossible to point to any between 500 and 300 B.C. and more recently has seen the Standlake sword as the earliest known in Britain, probably made up about 200 B.C. (1971, 69). In this long period for which no swords are known, fighting with daggers



and spears would have been traditional amongst warriors. Certain types of anthropoid dagger are known after 300 B.C., but to what extent the use of swords was imposed before the end of the third century in Britain is most uncertain. It may be useful here to examine the earliest evidence of swords of this period: a fine iron specimen with its iron scabbard from the river Witham below Lincoln which, since its brief and obscure initial publication (Petch, 1957, fig. 1), seems to have been ignored in archaeological literature.

The sword (Fig. 13A, 1a) is of gently-tapering early La Tène form, with a pronounced lozenge-section. The scabbard front-plate (1c) is also of early character, with pronounced mid-rib (as found on some early daggers: Joze, 1961, 317), with a fairly low, double-curving mouth of graceful but well-flattened form (slightly damaged), and with three-quarter-round edge mouldings of normal type (Navarro, 1966, Pl. 3b, for example). The scabbard chape-binding is the most outstanding feature, extending for 4.5 inches up the sheath-sides. At the base it forms an open ring-moulding, with non-functional bosses at its widest points and at its return to the front-plate edge. The terminals of the binding are marked by expanded studs or clamps, rivetted to the front-plate. This is a good example of a stage in chape development from the earlier anchor-type, and is characteristic of Champagne (Joze, 1961, 312; British Museum, 1905, fig. 48, third from the left). Its date is uncertain but probably around the end of the third century B.C. That it is no earlier is suggested by the narrowness of the chape itself and the small size of the open areas. Of equally great significance is the small fragment of a similar chape-binding and scabbard front-plate, presumably from the same stretch of the river Witham (Fig. 13A, 2). It is either of a slightly narrower sword or the terminal clamps of the chape-binding are set further down the scabbard. The separately-attached, plain bridge-band across the back-plate behind the rivetted clamps

is not an uncommon feature abroad.

The interpretation of these two weapons is difficult; how many more might have been destroyed or not recovered during Witham-dredging should not be guessed. Their deposition in the river does suggest ritual activity by a sword-using group. A change in hand-fighting method would indeed involve imposition or considerable pressure on the indigenous warrior classes, and it may be that here we have the first evidence, perhaps around 200 B.C., for the movements which led to the creation of the distinctively British later sword types. The only weapon from the British Isles with a similar chape is that represented by a scabbard front-plate from Lisnacrogher, Co. Antrim (Piggott, 1950, Pl. III, 14-5). Piggott considered that the decoration on the Lisnacrogher scabbards was developed from a "Witham-Torrs Tradition". Perhaps in the Witham sword, just described, we have one of the prototypes of early La Tène derivation to which the development of Group IIIA swords may be related, as Piggott anticipated.

It seems that after early La Tène introductions, much of the evidence of material remains in the Trent-Tyne area is of developed insular character, based on the foreign influences just reviewed. It is difficult to date accurately much of this later material because of the lack of firm Continental parallels and because of the limited quantity of evidence of the preceding period. Thus it has been convenient for the present sections on the early La Tène to consider origins rather than a distinct time period. It is likely that the changes in the types of material remains in the early La Tène ~~period~~ in eastern Yorkshire were accompanied by new trends in the economic basis. This possibility will be examined later.

The period from about 450 B.C. saw the foundation of completely new cultures in the Trent-Tyne area as reflected in the material remains. The number of finds of the period is small (Fig. 75; note that four of the out-

lying dots represent ring-headed pins) but their significance is great. The possibility of two relatively substantial immigrations into the East Midlands and the East Riding is very real. The changes may have been to some extent gradual, being assimilated into pre-existing settlements as suggested by the pottery of eastern Yorkshire. In the East Midlands, a beginning for the distinctive scored pottery in the fifth century or even earlier can be entertained. A series of new metalwork types was introduced which, along with the pottery, provided a repertoire upon which inventive British development took place in succeeding centuries, into the first century B.C. in most areas. It is to these developments that we now turn.

## CHAPTER 5

THE MIDDLE LA TÈNE PERIODi. Metalwork

The ingenuity of British craftsmen in the Middle La Tène period is well demonstrated in the art of brooch-making. No examples of local production before 300 B.C. are known from the Trent-Tyne area such as might compare with the early La Tène shapes from Hunsbury, with high-arching bows, large coiled springs, and characteristic foot-return (Fox, 1958, fig. 7, a-b). The simple curvilinear ornament and enclosed palmette patterns on these and similar brooches from the south (op. cit., fig. 13, b and d) define a stage of unadventurous design before the later third century, when a new inventiveness and an increased production can be distinguished within our area.

The regional treatment of evidence adopted by Fox in Pattern and Purpose reflects local developments which do occur from time to time. Such is strongly suggested by two brooches from the East Midlands. At the earlier Iron Age settlement at Ancaster, associated with distinctive scored pottery (Fig. 11, 6-7), was found a small bronze brooch made of circular-sectioned wire (EMAB, VIII, fig. 3, 1). Its fairly high-humped bow and four-coiled spring with external chord firmly place it as an early La Tène type, but the catch-plate foot is not recurved towards the bow but is tightly curled at its end. It is similar to a lower iron example from Burrough Hill (Fig. 11, 1), unfortunately broken and most likely incorrectly reconstructed, found in excavations in 1960 (unpublished; note in EMAB, III). These seem to represent a local La Tène I subtype, perhaps as early as the later third century B.C.

To the same period or slightly earlier may be ascribed the small bronze brooch from Red Hill, Nottinghamshire: a bird model with folded wings,

unfortunately seriously damaged (Hawkes and Jacobsthal, 1945; Fox, 1958, fig. 8). The head, with beady eye on one side only, is adapted as a catch-plate, and on the underside of the throat are two cupped hollows for settings, probably of coral. A much larger hollow beneath the body has an upstanding peg to retain a setting. The pin and spring structure are missing, but a deep-curving pin, similar to the Woodeaton "strawberry-shaped" brooch (Harding, 1972, Pl. 74, L) and the Maiden Castle coral-mounted brooch (Wheeler, 1943, fig. 82), is likely. This squat but spirited moulded design, one of the earliest examples of specifically British imagery, probably dates to around 250 B.C. Significantly, it was found in an area which has produced early Iron Age pottery with Fengate links (Fig. 10, 4-10) and also scored sherds of characteristic Trent Valley type (Fig. 10, 11-12). It is tempting to suggest a link between the brooch and the latter material.

In eastern Yorkshire, probably the earliest brooch after Cowlam is an iron one from Burton Fleming (Stead, 1971, fig. 6, 3), by far the earliest yet recovered from that cemetery. It reflects the fashion of the later fourth century for lower arches and smaller spring-coils, having a fairly long, low bow. The foot, recurved to touch the bow, is expanded into a disc with central iron pin to hold a domed iron oxide setting, decorated with a curvilinear engraved design. The coiled spring has an external chord, but has domed rivet-heads at each end indicating a central bar. In several respects, therefore, it resembles a brooch from Deal, Kent (Hawkes, 1940a, fig. 1), and it can be paralleled by its foot-setting in La Tène Ib and c contexts at Münsingen. Dating probably to the earlier third century, its use of domed inlay and modified spring sets it at the head of a blossoming development.

That long cross-springs, tightly-coiled on a spindle, were known to British broochmakers by 300 B.C. is shown by the strange low-arched example from Hunsbury (Fox, 1958, fig. 7, c), where the mechanism is copied by a

solid casting. The disc-footed brooch from Queen's Barrow, Arras (op. cit., Pl. 9, C-D), has a similar representation, particularly in evidence from below as it is embellished above and at the ends by settings. In fact, the pin is simply hinged on a pivot-bar through the long-spring representation. The recurved foot of the brooch is in one piece with the arched bow, and thus typologically associated with the transition to La Tène II. It has a central domed setting surrounded by radial branches, originally seven in number. The bow is similarly covered with a thick composition setting, providing a further point of similarity with the disc-footed brooch from Harborough Cave, Derbyshire (op. cit., Pl. 8, c), which originally had 16 radial settings around the dome above the foot, and a similar but much plainer hinged pin. Transitional between La Tène Ic and II at Münsingen (Stead, 1965, 48), this ornate type may date to around 200 B.C. in Britain.

The only brooch from Yorkshire other than Cowlam with a simple spring-fastening is a bronze example of "flattened bow" type from Huntow (Watson, 1947, Pl. XXVII, 3), thus likely to be the earliest of its class. The long, straight rod-bow seems to be a distinctively British development, from the beginning of the second century B.C., as the manner in which the recurved foot is clasped to the bow beyond its circular plate by a moulded collar on the Huntow specimen indicates La Tène II influence. This example is plain, but a similarly proportioned one from Sawdon (op. cit., fig. 1) has a perforation on the circular plate of its recurved foot, presumably for a domed setting, and delicate incised decoration along the bow, describing a flowing yoke with spiral terminals. The spring mechanism of this Sawdon brooch is ingenious. The ringed terminal of the bow revolves on a narrow cylinder, held at its ends by coils which, with external chord, are of the same single wire strand as the pin. This drum-swivel mechanism seems to be copied in iron on two "flattened bow" brooches from Burton Fleming (Stead,

1971, 35, fig. 5, 4). Three further examples from Danes Graves (Stead, 1965, fig. 26, 1-3) are badly corroded so the hinge type is not evident. The three beautifully-modelled penannular brooches from Huntow and Sawdon have already been noted.

The drum-swivel mechanism may have developed from the type with a bar through the coiled spring, as at Burton Fleming, Deal, and Ham Hill (Fox, 1958, fig. 13, g). The drum-swivel is also seen on involuted brooches: on those from Danes Graves 43 and Eastburn 1 (Stead, 1965, 47) and possibly on one from Garton Slack (Fig. 29, 4). The involuted brooch is later than the "flattened bow" brooch in typological succession, probably current from shortly after 200 B.C. for well over a century. Other pin mechanisms used on "involute" are the solid disc type, with the pin-head held between two circular plates attached to the bow and moving on an iron pivot between the three, as at Eastburn 2 (Stead, 1965, fig. 26, 6) and Garton Slack (Fig. 29, 6), and the simple hinge below a simulated drum-swivel, as at Danes Graves 57 (Fox, 1958, Pl. 9, E-F) and Burton Fleming (Stead, 1971, fig. 6, 4). Eight other involuted brooches come from the Burton Fleming cemetery, and a fragmentary one has been found at the earlier Iron Age site at Ancaster (J. May information).

The hinged pin, moulded settings, and lipped foot-tip of the Burton Fleming "involute" illustrated by Stead (1971, fig. 6, 4) link it with the fine and most elaborate decorated brooch with nearly flat bow from Danes Graves 95 (Hawkes, 1946). With its three groups of hemispherical cup-shaped settings for inlaid bosses, the neat corrugations of the cast bow, and the settings on the foot and ornamental ring-hinge, the latter is one of the most profusely embellished small objects from Yorkshire. Despite its slightly bowed form and sharply recurved foot, the non-functional ring-hinge points to a date contemporary with at least some of the involuted

brooches within the second century B.C., rather than before 200 B.C. as suggested by Hawkes (1946, 190).

The inlaid white material around the outer circumference and the edges of the ring-hinge of the brooch from Danes Graves 95 links it directly with the wheel-headed pin from Grave 41 of the same cemetery (Fox, 1958, Pl. 9, B). This is also cast, with four spokes, and a small domed setting on the kinked swan's-neck below. A second century B.C. date seems likely. Another cast ring-headed pin from Sawdon, possibly from the same cemetery as the "flattened bow" and penannular brooches, has a similar projection on the sharply-curved neck, and three roughly-spherical knobs on the circular head, similar in character to those on the penannular. Dunning (1934, fig. 8 and Pl. 1) has published quite close parallels to these pins from Ireland, but Stead (1965, 58) has pointed out that all the separate features of the Yorkshire pins can be paralleled in eastern France. Particularly important there is a cast pin from Pont-Faverger, Marne, dated to La Tène Ic (op. cit., fig. 32, 2), probably around 200 B.C. It seems that the cast ring-headed pins are generally later than the wire ones, therefore. The Danes Graves and Sawdon pins, although of a character distinctive of eastern Yorkshire, probably reflect a fashion for cast pins in eastern France. A more recent discovery at Garton Slack (Fig. 29, 1) can be similarly paralleled in principle. This cast pin has a large cupped head, hollowed to receive a setting. Around the sides of the head, relief ornament of six oval lobed motifs is arranged diagonally as a zig-zag band. The piece is beautifully finished, and indicates a simpler inventiveness alongside the gaudier Danes Graves wheel-head. Like the latter pin, it was found in a burial at the back of the skull, indicating use as a hair-ornament.

Of the other types of small personal ornament from eastern Yorkshire



cemeteries, the gold finger-ring from the Queen's Barrow, Arras, is the most outstanding (Fox, 1958, Pl. 8,b). Unfortunately now lost, it seems to be made of two parallel gold bands, forming an openwork pattern of triple-looped coils and intervening beads at the front. The general proportions of the design are common in torcs, bracelets, and rings of earlier La Tène phases in eastern France and Switzerland, and it may be that the ring was imported in the later third century. Less opulent bronze spiral finger-rings are known from Wharram Percy (Stead, 1965, 117), Garton Slack (Fig. 29, 7), and Burstwick (YAJ Arch. Reg., 1967, 2).

Amongst recent finds from Garton Slack, the iron mirror with simple bar-handle with terminal rings and moulded bronze attachments from Barrow 2, Site VII (D. of the E., 1971, Pl. II) is important. It is very similar to the iron example from Lady's Barrow, Arras (Fox, 1958, Pl. 56b, J), except that the handle is shorter and has a bronze moulding in its centre in addition to those at the top and bottom. An earlier second century date for the former mirror has been suggested by T. C. M. Brewster (in conversation). The circular or penannular rolled strip-bronze object with carefully hammered decoration from Garton Slack (Fig. 29, 2) is likely to be a bracelet, although the closely-comparable form from West Coker, Somerset (Fox, 1958, fig. 10), is considered to be a bit-ring.

Since rescue activity at Garton Slack was undertaken by the Department of the Environment with T.C.M. Brewster as director of excavations, one of the most outstanding archaeological discoveries in the East Riding of modern times has been made: a cart-burial, intact and thus recorded in detail (Brewster, 1971). It was of the dismantled, horseless type, known from previous discoveries in the Wolds. The two horse-bits were of stout iron construction, of the three-link type with side-rings. They are similar to those from King's Barrow, Arras (Stead, 1965, fig. 18, 1), except that the latter are of iron coated with bronze. (Note an iron bronze-coated

bit-ring with stop-knobs from Harborough Cave, Derbyshire; Fox, W.S., 1909, no. 14.) The five D-shaped terrets were of bronze with iron cross-pins, a distinctive Yorkshire form (Stead, 1965, 43). The presence of five, one of larger size than the others, supports the idea that the five terrets at the King's Barrow, Arras, consisted of two pairs and an odd one, the latter corresponding with the single terrets from the Lady's Barrow and Hunmanby (ibid.). Two broad harness buckles may have served the same function as two small rings from Arras. Details of the wheels, coachwork and pole-shaft were apparent in staining and in the survival of a little wood. The material remains from the discovery thus fit well into the framework for discussion adopted by Stead (1965). Much more evidence will doubtless result from laboratory research on the finds, but no close chronological indicators seem to be present. Perhaps a late third or second century date may be acceptable, linking with the evidence of finds from other burials in the Garton Slack valley.

In general, no weapons have been found with Arras Culture burials, apart from during recent excavations at Burton Fleming. In the third area of excavation of that cemetery, a group of 13 extended inhumation burials, orientated from east to west, were accompanied by a completely different range of grave-goods, including knives, a spearhead, and a hammerhead, but without pottery, pig-bones, or brooches. In the fourth area of excavation, one east-to-west extended burial had a short iron sword laid diagonally beneath the body (I. M. Stead information). These iron objects may be thought of as tools rather than weapons, apart from the latter example. There are four other finds of middle La Tène weapons from our area, however, all of which are well-known antiquities.

The front-plate of a scabbard from the river Trent at Sutton Reach, Nottinghamshire, has recently been considered in detail by Navarro (1966,

148-150; also Fox, 1958, Pl. 21). The most distinctive feature is the incised laddering in alternating panels either side the midrib, with intervening zones of incised curvilinear ornament. The laddering is a Swiss feature, designed to achieve an optical contrast, and is unlikely to be fortuitous. It is found on two swords and a scabbard of early La Tène type in Switzerland, and on three Group A swords of middle La Tène date at the type-site itself. As for the curvilinear motifs, they are closely related to those on the horns from Torrs, Kirkcudbrightshire (Fox, 1958, Pl. 20), and probably ultimately derived from the Hungarian "sword style". Both elements in the decoration are thus likely to have been long-lived, so the date of the Sutton plate is uncertain. The earlier second century B.C. seems probable.

From the bed of the river Witham, some 12 miles east of Sutton-on-Trent, has come the famous iron sword with its gilt-bronze mounting to a fragmentary iron sheath (Fox, 1958, Pl. 22, b). The gilt-bronze repoussé relief panel is the sheath-mouth decoration, and has a gently-curved upper edge, not narrowly-pointed in the centre but characteristic of the earlier Group A of middle La Tène swords at La Tène itself (Navarro, 1959, 107). The decoration is assymetric, with two linked groups of curvilinear relief work, emphasised by incised designs which include rocked graver lines. The pattern is again comparable to that on the Torrs horns, the Witham shield upper and lower roundels (Jope, 1971, Pls. XXIII - IV), and the round shield-boss from Wandsworth (op. cit., Pl. XXV). Again, the "sword style" of Hungary and Switzerland has been seen as an ultimate source (Fox, 1958, 25), and a date before 200 B.C. has been suggested. However, a bronze chape belonging to the same sword scabbard has been lost since discovery. Piggott has stated (1970, 7) <sup>that</sup> its style was similar to that of the Bugthorpe sheath. The presence of a chubby, heavy chape of this nature would suggest a date for the sword around 100 B.C. at the very earliest.

Said to have been found with a quantity of bones is the Clothesholme anthropoid sword (Clarke and Hawkes, 1955, 212; Manby, 1963a, 15-17). Entirely of iron, its blade is flat and forged with the pommel and tang from a single piece. The hilt-guards are of separate pieces, two for the lower and one for the upper. The very slightly ribbed surface of the iron strip grip-wrapping, the sharply-curved U-shaped arms and legs, and the sunken head (features effaced) place it in Hawkes' Class F. Its overall similarity to the Shouldham anthropoid of Class B (Clarke and Hawkes, 1955, Pl. XXIV) also indicates a second century date, probably around 150 B.C.

Two iron swords, bronze and iron rings, the greater part of an extended human skeleton, and other articles were reported by Mortimer (1905, 354-7) to have been found in a grave at North Grimston, eastern Yorkshire. The best-known piece from this burial is the anthropoid short-sword with bronze hilt of Hawkes' Class F (op. cit., 211-2; Fox, 1958, Pl. 18). Its modelled head, in "barbaric" style with long combed-back hair, and its sharply ring-moulded grip are characteristic of the class, and on the basis of a close parallel at Chaternay-Macheron in the Haute-Marne, Hawkes has suggested that the short-sword is an import of the second half of the second century. The North Grimston long-sword of iron, with gently-curving scabbard-mouth and slim chape with moulded expansions at its sides and its tip (not a split lipped moulding: see illustration in Mortimer, 1905, fig. 1019) also seems to be of La Tène II type and may itself be an import. It is different from the characteristically British forms with heart-shaped or long chapes. That the burial has some links with the usual East Riding La Tène burials is shown by the several joints of pork also deposited. A link with probably later sword-burials at Grimthorpe (Stead, 1968, fig. 12, 4-5) and Eastburn (Sheppard, 1938, Pl. 1, 3-4) is afforded by lengths of the bronze spine-cover of a wooden shield.

British Iron Age shields have been considered by Stead (1968, 173-8) with particular reference to the Grimthorpe example. The remaining bronze fragments of this include a small central boss with punched and engraved decoration, two flat crescentic bronze plates which would have provided a decorative surround, and two lengths of sheet-bronze, semi-circular in section, which would have served as spine-covers. It is similar spine-covers which survive at North Grimston and Eastburn. Stead sees the Grimthorpe shield as the only British example to derive directly from Continental La Tène II types, such as those from St.-Etienne-au-Temple, Marne (op. cit., fig. 18, c), and Horath, Kr. Bernkastel, Rhineland-Palatinate (op. cit., fig. 18, d). These have single-piece spine-covers, it is true, but no fittings from La Tène I shields are known apart from hand-grips. It is possible, therefore, that the distinctive type of oval shield reflected in these spine-covers from Yorkshire, and probably also the decorative discs from Bugthorpe (Fox, 1958, Pl. 11, c), was a La Tène II introduction, first seen in Yorkshire in the North Grimston burial of the later second century. The Witham shield (Joze, 1971; Fox, 1958, Pl. 15) is again of the well-known shape, but with more complete bronze casing of the wood together with elaborate central spine, executed with most magnificent repoussé craftsmanship. A third or second century date has been suggested for this piece. Since all our other examples above discussed come from burials, the riverine provenance of the Witham masterpiece is significant.

It remains to consider two bronze vessels which, having important bearing on pottery studies, may serve to introduce the following section. The first is strictly speaking from outside our area of study: the damaged bronze bowl from Hunsbury, Northamptonshire (Fox, 1958, Pl. 77, B). This is decorated with three horizontal zones of "duck-pattern" stamps: in the upper and the lower the motifs are set nearly vertically, but in the central zone they are fewer in number and are inclined, very much like

the row of stamps set between grooves around the hanging-bowl from Cerrigy-Drudion, Denbighshire (op. cit., fig. 1). West of Hunsbury, the presence of "duck" and V-pattern stamping on pottery from the Welsh Marshes hill-forts of Midsummer Hill and Croft Ambrey in the fourth and third centuries B.C. (Stanford, 1972, fig. 12) marks a firm horizon in the material remains. Stanford has dated this pottery in relation to a major defence horizon and reconstruction sequence on hill-fort sites, and has linked it with the guard-roomed western entrance and the first dump rampart at Maiden Castle, Dorset (Wheeler, 1943, 36 ff.). Perhaps the first dump rampart at Hunsbury (R.J.C. Atkinson excavations, to be discussed later) should also be seen as fourth or third century B.C.

The second beaten bronze vessel is from York or the immediate neighbourhood (Hawkes, 1932, fig. 3). It is gracefully pear-shaped, with sharply incurving rim and with expanded, pedestal-like foot with a slightly recessed base. Shield-shaped scars reveal the former presence of escutcheons for handle-attachments. Hawkes considered it to be reminiscent of middle La Tène pottery of southern Germany and the Marne, and so of the third or second century B.C. rather than any earlier, despite the similarity of the rim to the sharply incurving form found on the cauldrons of Hallstatt D type (Hawkes and Smith, 1957, fig. 11, for example). The closest parallel in Britain seems to be the pottery vessel reported to have been found in gravel at West Keal, Lincolnshire (Fig. 15, 9). Although the shape is less gracefully-curving, this might be expected from a recreation in coarse pottery. The general dimensions are alike, and the appearance, particularly when viewed from above, would be quite similar because of the incurved, sharply-thickened rim. The occurrence of these two vessels as outliers to the main northern concentration of La Tène material in eastern Yorkshire may suggest that, after initial early La Tène immigration, the Continental contacts of the dominant groups in the East Riding were limited.

## ii. Pottery

The pottery of the middle La Tène period is predominantly slack in shape, with simply moulded or flattened rims, and is either undecorated or has distinctive grooved and impressed or scored decoration. Fingertipping is almost entirely absent, apart from upon the top of the rims of vessels, mainly those decorated on the body with rough scoring which is characteristic of the East Midlands throughout the period. The ware is often rough and coarse with large grits, as at Great Kendale (Fig. 24, 7-13) and Barrowby (Fig. 15, 1), but it can be finer and denser with small sandy grits, particularly in the south and east as at Bassingfield (Fig. 14, 11-12) and Breedon-on-the-Hill (Fig. 13, 3-6). There seem to be distinct regional differences between eastern Yorkshire, the Welsh Marches, and the East Midlands during the period, towards the close of which Lincolnshire acquires new assemblages. These differences will be discussed later. For the present, some of the common shapes will be considered.

One of the most widely-occurring forms is the "barrel jar", defined by Harding (1972, 99) with especial reference to the Upper Thames. The profile is very simple, with flat base, convex walls, and rounded rim, and if it is clear that in southern Britain the form had a long currency this is even more evident in northern England. Perhaps the best example is one probably from Rolston (Fig. 27, 3), of distinctive hunched form not unlike those from Cassington and Chadlington, Oxfordshire (op. cit., Pl. 60, C-D). Together with those from Danes Graves (Fig. 28, 4), Atwick (Fig. 26, 1), and Burrough Hill (Fig. 11, 3), the Rolston vessel may be roughly contemporary with the southern examples of the third and second centuries B.C. One from Willington (Fig. 14, 8) seems to belong to the second century B.C., a date indicated by other material from the same pit (apart from Fig. 14, 10, which may be intrusive). "Barrel jars" from West Furze (Fig. 35, 6) and Melton Mowbray (Kenyon, 1950, fig. 13, 4) may be later, as

each was probably associated with thickened-rim forms (op. cit., fig. 13, 3; Fig. 35, 4-5) which will be seen to be typical of the late La Tène period. From the southern Pennines we have vessels from below Harborough Cave (Radley and Radford, 1969, fig. 1, 2), from the cave itself (Fig. 5, 13), and probably from Winster (Fig. 6, 12). The latter was found with two contracted inhumation burials, two iron spear-heads, and a beehive quern, and may have been deposited late in the Iron Age (Ozanne, 1962, 49). The Harborough Cave vessel may be earlier, but it is very similar to one from Catcote (Fig. 44, 16) which is from a late context. As for the north, Harding has suggested the "barrel jar" form as the inspiration for vessels from Stanwick (Wheeler, 1954, fig. 12, 29) and Traprain Law (Curle and Cree, 1916, fig. 16, 1 and 3), and although these and other sherds from Tynemouth Priory (Fig. 50, 10) and Burradon (Fig. 50, 3), in addition to Catcote, may be so related, others are much earlier (Fig. 50, 1-2) and cannot be. Even though there may be true "barrel jars" at Rolston and West Furze, it seems that slack, uninspired pots provide lowest-common-denominator domestic utensils throughout later prehistory, from Mam Tor to Scarborough, Ball Cross, Atwick and Stanwick.

Probably related to the "barrel jar" are those vessels with the same rounded profile but with slightly moulded or flattened rim. Particularly important are those from Breedon-on-the-Hill (Kenyon, 1950, fig. 3, 5; fig. 4, 4) and Stretton (Fig. 15, 10) with deliberately incurved, thinned or slightly beaded rims, and those from Red Hill (Fig. 10, 11-12), usually with deep-scored decoration. Probably later are those in dense grey ware from the Jewry Wall site, Leicester (Kenyon, 1948, fig. 34, 9; fig. 35, 2). More sharply beaded, incurved rims are represented at Harborough Cave (Fig. 5, 15), Honington Hill (Fig. 14, 18), and West Keal (Fig. 15, 9). Simply beaded forms make up most of the collection at Willington (Fig. 14, 1 - 3 and 7), and related forms occur at Burrough Hill (D.D.A. Simpson



excavations, 1967; unpublished), Ancaster (Fig. 11, 6), Old Woman's House (Fig. 6, 10-11), Winster (Fig. 6, 12), Emmotland (Brewster, 1963, fig. 86, 4), and Levisham Moor (Fig. 47, 2). The latter two examples seem to be first century B.C. and A. D. respectively, judging by their associations, but the others are likely to indicate a third and second century currency. Apart from the later ones from the north, moulded rims on barrel-shapes seem to be predominantly from the southern parts of our area.

Somewhat similar to the Breedon-on-the-Hill jars mentioned at the beginning of the previous paragraph (Kenyon, 1950, fig. 3, 5; fig. 4, 4) are barrel-shaped vessels, again usually with scored decoration, which have a rim and slight shoulder moulded by a thinning of the profile. A good example is from Ancaster (Fig. 11, 7), and others are from Breedon-on-the-Hill (op. cit., fig. 4, 6) and Lancaster Road, Leicester (op. cit., fig. 15, 3). Some have the rim drawn up to produce a more curving profile, as at Breedon-on-the-Hill again (Fig. 12, 11-12; Kenyon, 1950, fig. 4, 1). A complete vessel from Burrough Hill (Fig. 11, 4) should also be noted here.

More representative of the north is the bucket-shaped pot with short, flaring rim, typical of the La Tène cemeteries of Danes Graves (Fig. 28, 1-3 and 5), Eastburn (Fig. 28, 7-9), Burton Fleming (Stead, 1971, fig. 5, 1; and many others), and Riggs Farm (Fig. 28, 10), most likely to be of second century date. It may be that those from Emmotland (Fig. 28, 6), Great Kendale (Fig. 24, 8 and 12), and Faxfleet "A" (Fig. 36, 3) represent the same type in domestic use. An example from the Great Ayton Moor enclosure further north (Fig. 43, 8-9) is significant. All these vessels seem to be of similar size. Those from Brandesburton (Fig. 25, 4) and Thrussington (Fig. 14, 15) are larger, but still of bucket shape. More rounded related vessels come from Costa Beck (Fig. 49, 3), Emmotland (Brewster, 1963, fig. 85, 11), and Riggs Farm (Fig. 28, 11).

In addition to the "barrel jar" and simple, probably related, types, there are two other characteristic profiles of the middle La Tène period:

the necked jar and the S-shaped jar. The necked jar is known in the East Riding from two chance finds at Brantingham and Grange Farm, Brough (Fig. 25, 5-6), and from rescue excavations at Brandesburton (Fig. 25, 1). The latter sherd was found in a narrow, shallow, V-shaped ditch about 18 inches deep, stratified in the lower filling with burnt clay fragments and cinder material, cattle teeth, worked flints, and other sherds (Fig. 25, 2-4). The pottery may represent a considerable length of time, as one sherd has a finger-tipped rim and another has a horizontal moulding, forms already considered. The necked jar is a tall, round-shouldered vessel with short, upstanding neck and flattened, externally expanded and rounded rim. No firm chronological range can be offered, but that it is current at least from the middle La Tène period is evident from East Midlands examples. Perhaps the best is from Breedon-on-the-Hill: a large scored jar with impressed rim-top (Kenyon, 1950, fig. 3, 8). Others are from Ancaster (Fig. 11, 5), Loughborough (Fig. 15, 3), and Barrowby (Fig. 15, 1). Superficially similar shapes at Harston (op. cit., fig. 11, 1) and Breedon-on-the-Hill (Fig. 12, 10; Fig. 13, 1 and 9) either lack the sharp neck angle or have no deliberately thickened rim. Perhaps these are earlier and related to Hunsrück-Eifel culture pottery as suggested in a previous chapter. The tall profile from Harston and the types of scoring on the last-mentioned sherd from Breedon-on-the-Hill suggest this. The true necked jar is not achieved in the Middle Rhenish material, however, and so it must be seen as a separate development in the Trent-Tyne area, perhaps inspired from regions to the south. There are examples from Upton, Northamptonshire (Jackson, et al., 1969, fig. 8, 3), and from Swallowcliffe Down (Clay, 1927, Pl. V, 6 and 10). The form might well assume more importance, particularly in Yorkshire, if excavation was conducted on middle La Tène settlement sites. (There is some similarity, however, between the necked jar and the certainly late La Tène type of rounded jar with upright neck but broadly-grooved rim,

best seen at South Cave (Fig. 33, 1), and to be considered in detail later. The possibility must be admitted that there may be no chronological distinction between these forms.)

Rounded, S-shaped profiles are rare, apart from at Breedon-on-the-Hill. Usually they are not completely S-shaped, the rim curving to the vertical rather than becoming everted. Particularly good examples are the fine jar with curvilinear ornament (Fig. 13, 10) and the burnished vessel (Fig. 13, 8). Often there is a smaller proportion of the profile above its widest part, producing a more-or-less globular shape with short rounded or everted rim (Fig. 13, 4-7; Kenyon, 1950, fig. 4, 2). Other good examples decorated with scoring are from Quorn (LeM, 40.53). Assemblages including these rounded forms are fairly common further south, as at Upton, Northamptonshire (Jackson, et al., 1969, fig. 8), and Cassington, Oxfordshire (Harding, 1972, Pls. 61-4). Taller rounded jar forms also occur, but are quite varied. One with very shallow random scoring on the body and a deeply cabled rim is known from the earlier Iron Age site at Ancaster (J. May information), and is similar to a jar from Laken heath, Suffolk (Clarke, 1939, Pl. VII, 2). A rather different large jar comes from Littlethorpe (Fig. 37, 13). Late La Tène examples have sharply everted rims (Fig. 37, 2; Fig. 38, 7).

The generally slack profiles of all these forms, large as well as small jars, and the little variety in the moulded rims, together with the few sample parallels quoted, serve to underline the notion propounded by Harding (1972, 101) of a broad degree of uniformity in the sub-stratum of coarse pottery of the Iron Age B period. The lack of a marked shoulder and of finger-tipped decoration (apart from on the top of the rim) distinguish it from earlier material, although the "barrel jar" in particular does seem to have a long chronological range. The distribution of "common denominator undecorated B ware" is significantly extensive (Fig. 77).

Despite this overall uniformity, however, distinctive regional groups can be recognised in the middle La Tène period on the basis both of the continuation of traits remaining from the earlier period, and of local decorative fashions.

In the East Riding, the probable continuation of flared rim forms recalling "angular" wares is shown by the material from a small group of pits at Great Kendale, just north of Driffeld (Fig. 24). The pits were cleared out by Messrs. C. and E. Grantham, who reported them to be cut into the solid chalk of a hill-slope, with a vertical back wall up to 8 feet deep and a sloping front wall, and up to 12 feet across. Significant are the flaring rims of some vessels (Fig. 24, 6, 8, 10 and 13), although in all cases the body below the rim is rounded and has no angular shoulder. This suggests a date probably in the third century B.C. rather than any earlier. The only vessel with more authentic "angular" appearance is that with offset shoulder and hollowed neck (Fig. 24, 11), but even here the low sharp shoulder particularly distinctive of "angular" pottery is absent. The sherd with an applied handle (Fig. 24, 7) is of no direct chronological help, but the S-profile with tooled surface (Fig. 24, 9) heralds shapes in late Iron Age contexts (for example, Fig. 36, 1; Fig. 34, 2), and a carefully-squared rim (Fig. 24, 13) may indicate affinity with vessels in the Garton Slack collection (Fig. 30, 3 and 7). The blue glass bangle with brightly-coloured corded inlay (Fig. 24, 2) is a type with firm connections from the beginning of the first millennium A.D. rather than any earlier, although it could have been made in the middle La Tène period (brief discussion in Part II, Chapter 1, vi). A couple of centuries at least may be represented in the Great Kendale material.

From other finds in eastern Yorkshire it seems that the necked jar was fairly common, and that generally all pottery was undecorated. The distinctive coarse pots deposited with contemporary burials are seen reflected on settlement sites, as already discussed, and probably also at

Atwick (Fig. 27, 5-6). The material from the coastal pit-groups dug by Morfitt includes strange forms with everted rim and groove at the base of the neck (Fig. 27), and it is possible that these may be of middle La Tène date. Chronology is uncertain, but from the larger groups of later material north of the Humber it will be seen that some of the rounded shapes already discussed continue on into the first century A.D., although often with different rim forms.

A useful pottery group, probably dating to the first century B.C. but lacking typical characteristics of late La Tène assemblages in the East Riding, comes from Littlethorpe (Fig. 37, 8-13). Apart from the large S-shaped jar (13), distinctive features are the finger-nailing of the rim of a small jar (8) paralleled by that of similar character on a sherd from Melbourne, Derbyshire (Manby, 1963b, fig. 19, 2), and the strange flattened, constricted rim of a (?) globular vessel (11) seen in more marked form on sherds from Levisham Moor Enclosure A, north of Pickering (SbM, not illustrated). The pottery and several beehive quernstones were recovered from a field after deep-ploughing (J. Bartlett information).

As for the south-western frontiers of our area, no evidence is yet available for a northward extension beyond the Breiddin (Musson, 1970a, fig. 69, 4, 6-7) of the distribution of the stamped and grooved wares recently provisionally published by Stanford (1972, fig. 12). From the Welsh Marches hill-forts of Midsummer Hill and Croft Ambrey, distinctive duck-stamped and V-stamped vessels often with complicated fluted rims have been found in relationship with defensive phases. From an analysis of post-replacements, correlated with radiocarbon dates, a chronology for these wares has been proposed. A useful corpus of linear-tooled and stamped pottery, some with fluted rims, from the Wye-Cotswold region has been published by Peacock (1968, figs. 3-4), in a study which concluded that manufacture was by specialist potters in three separate groups, selling over broad areas. The only

related material from the East Riding seems to be the fluted and grooved rims from Garton Slack (Fig. 30, 3 and 7) which are not unlike those from Midsummer Hill, Croft Ambrey, Bredon Hill, and Sutton Walls (Stanford, 1972, fig. 10, 2-5). The overall vessel shapes are also similar. Unfortunately there is no detailed stratigraphical evidence from the ditches at Garton Slack, which were cleared by Messrs. C. and E. Grantham. As for the East Midlands, a sherd from Breedon-on-the-Hill with grooved decoration (Fig. 13, 6) may be related to the Welsh Marches sequence, as may another stamped and grooved vessel (Fig. 13, 5). That with deeply-moulded rim (Fig. 12, 9) has no close parallel, but may be related to the channel-rim jars so common in Group IIb pottery from the Primary School Site at Hardingstone, Northamptonshire (Woods, 1969, fig. 11). Apart from this, there is no comparable material to the east and north. Excavation in the interior of some Staffordshire hill-forts (such as Castle Ring, Cannock; work forthcoming) may well produce it. There is as yet very little evidence from the West Midlands area between the Trent and the middle Severn.

The most outstanding characteristic of pottery from the East Midlands is the extensive use of scored decoration (Fig. 76), the origins of which have already been sought. It seems possible that more deliberate vertical or diagonal scoring may have been the earliest type, followed by that of a random nature, although this is by no means certain. Detailed analysis of types is not possible because of a lack of stratigraphical evidence. The best indication of date comes from the earlier Iron Age site at Ancaster, Lincolnshire. To the south-east of the village, on a hill-slope, an open settlement has been excavated by J. May. Pits, post-holes, hearths, and gullies have been located. Two hut sites were defined, one by a drainage gully 41 feet in diameter. A few of the 84 pits excavated by 1964 may have been storage pits. Among the finds were the fragmentary iron involuted brooch, the La Tène I variant bow-brooch, and the two glass beads already

mentioned, in association with a quantity of distinctive pottery (J. May information), a selection of which is here illustrated (Fig. 11, 5-7). The date of this association would seem to be second century, extending back into the third century B.C. This is perhaps supported by the discovery of scored pottery (Fig. 10, 11-12) and the well-known bird-brooch over the same area at Red Hill, Nottinghamshire.

Although a consideration of areas to the south of Leicester is well beyond the scope of this thesis, it must be noted that an extension of the distribution of typically scored pottery southwards into Northamptonshire and Bedfordshire is evident, mostly from evidence not published when Kenyon made her assessment (1952, 67-8). To the well-known vessels from the inhumation burial at Egginton, Bedfordshire (Gurney and Hawkes, 1940, fig. 3), may be added other assemblages from Irthlingborough, Bozeat, Strixton, and Wollaston (Hall and Nickerson, 1969, figs. 1, 1; 3, 16; 5, 50-52; and 6, 84 respectively), from Upton (Jackson, et al., 1969, fig. 8, 12), and from Hardingstone (Woods, 1969, fig. 24, 148-151), all Northamptonshire. Egginton does seem to be an outlier, all the others lying to the north of Yardley Chase, but the Northamptonshire sites do seem to be south of the line suggested as the southern frontier of Coritanian territory by Whitwell (1970, 9-10) on the basis of Roman sacred sites. Clearly, much more research needs to be done in Northamptonshire, Bedfordshire, and Huntingdonshire, but it does seem likely that in this zone between three great tribal areas archaeological groupings did not remain static.

As for other types of pottery in the East Midlands, curvilinear decoration on fine ware seems to be limited west of Lincolnshire to the single outstanding example from Breedon-on-the-Hill (Fig. 13, 10), recovered in rescue excavations by S. E. Thomas in 1960 (unpublished). The closest parallels are from the enclosures at Hardingstone, Northamptonshire (Woods, 1969, fig. 24, 158; fig. 25, 161-7), where the same horizontal rows of

grooves and enclosed dots defining the upper edge of a bold curvilinear design, the rough overlapping of the tooled grooves, and to some extent also perhaps the vessel form, can be seen. There are a few similarly-decorated sherds from Rainsborough (Avery, et al., 1967, fig. 22, 46-48 and 50, from the same pot), in a phase 4 context on that site, of the second century B.C. Much more carefully-executed and complex designs in the same style are found on the well-known "goldfish bowls" from Hunsbury (Fell, 1937, fig. 6, D1-D9). Prominent among the decorative motifs is the running scroll, or yin-yang, also seen on bowls from Draughton and Desborough, Northamptonshire (Grimes, 1951, Pl. VI, A; fig. 41, 3), and, significantly, on a carinated vase from Puisieulx, near Reims, Marne (Ertel, 1957, fig. 48), in an early La Tène context. Elsewhere in Britain, the same dotted rows between grooves are known at Chinnor Common (Richardson and Young, 1951, fig. 8, 82; suggested date down to the mid-third century), at Ram's Hill, Uffington (Piggott and Piggott, 1940, fig. 5, 14), and at Blewburton Hill, Berkshire (Harding, 1972, Pl. 66, F). However, as Harding has pointed out, the decoration of the Hunsbury bowls is much less formal than that generally found in the Upper Thames area, which is different again from that in south-west England (op. cit., 110). Perhaps this evidence of regional types of linear and curvilinear ornament indicates a general trend towards such decoration on pottery from the third century B.C., arising in each area out of a common influence. An earlier second century date for the Breedon-on-the-Hill vase may be acceptable. Other rather uneven grooved and dotted pottery decoration at Breedon-on-the-Hill (Fig. 13, 3-4) is probably part of the same trend, seen elsewhere in the area at Swarkeston Lows (Fig. 14, 16).

How far does scored decoration on pottery survive into the late Iron Age period? The association of scored vessels with Belgic wares at Loughborough and Denton (Kenyon, 1950, figs. 14 and 16) is likely but not



certain. More convincing is their occurrence with a few fragments of Romano-British wheel made vessels in the larger of the two working hollows at the enclosed farm of Tallington 37, Lincolnshire, occupied from 50/60 to 80/90 A.D. (Simpson, 1966, 15-16, fig. 1), and with a Fowler Type C pennannular brooch at Casthorpe Hills, near Grantham (J. May information). Scored decoration occurs on pottery with rim forms typical of the late La Tène period (Fig. 15, 2; Kenyon, 1950, fig. 13, 3), to be noted later, and on vessels in late assemblages north of the Humber at Faxfleet "A" (Fig. 36, 7) and <sup>S</sup>Salthouse School (Fig. 38, 12 and 14). Random scoring of large jars from Wheathampstead (NUM), Old Sleaford (LiM), and Swarkeston Lows Farm (Fig. 15, 7) also indicates its currency in the closing decades of the first century B.C. and later.

There seem to be distinctive types of scoring in the late Iron Age period, however. The scoring of some late vessels from Leicester (Kenyon, 1948, figs. 34, 9; 35, 2; 36, 19) and Twyford (Kenyon, 1950, fig. 15, 1) is often finer and more deliberately horizontal. Other probably typically late forms are incised vertical lines divided at intervals by horizontals as at Leicester (Kenyon, 1948, fig. 34, 14) and Horncastle (LHA, 1969, fig. 1, 15), and all-over, adjacent groups of broad, multiple combings, made by the use of a toothed tool in repeated, short, downward strokes, as at Salmonby (LHA, 1968, fig. 2; LiM). Single horizontal grooves as at Scratta Wood (Fig. 16, 16-17), Dragonby (Fig. 17, 7), and Burrough Hill (Fig. 11, 4) may be a separate phenomenon of the first century B.C. and later.

It is only in the period before about the second half of the second century B.C., however, that scored pottery assumes its outstanding development in the East Midlands. After that date, assemblages of different character can be distinguished which indicate the intrusion of new forms and styles. Perhaps the most useful group west of Lincolnshire comes from a gravel terrace site at Willington in the Trent Valley, north of Burton upon Trent. A hut site and a pit produced a broken beehive quern, triangular loom-weights, and

a small quantity of pottery (CBATVARC, 1970, 9-11; Fig. 14, 1;10). The pottery was predominantly dark and hand-smoothed, with moulded, beaded rims. Three small sherds (Fig. 14, 4-5 and 9) had scoring, and only one of these was of the usual deep-scored type (4). A lighter red/brown to grey pedestal base-fragment (10) is of different character, and may not be contemporary, probably being over a century later than the rest for which a second century date is suggested. The pit may have been re-cut. (The writer is indebted to J. May for discussion of this material.) The relative lack of scoring at Willington may, however, reflect the position of the site on the western fringe of the distribution (Fig. 76).

Most extensive evidence for the supercedence of scored pottery is available from sites near the line of the Jurassic Way in Lincolnshire, and in particular from Dragonby, near Scunthorpe (May, 1970). A very complicated series of intersecting gullies and ditches probably forming rectilinear enclosures, parts of circular gullies 28 and 30 feet in diameter probably defining huts, and a few pits have been excavated, and large quantities of pottery and metalwork, together with some coins, have been recovered. Three phases of Iron Age occupation have been defined by an analysis of the pottery (op. cit., 235 - 6). The earliest includes predominantly hand made vessels, usually profusely gritted with fine shell. Forms include a vessel with low globular body, omphalos base, tall, slightly flaring neck, and beaded rim, a rather larger globular vessel with omphalos base, constricted neck, and everted rim, and graceful S-profiled jars, usually of small size (op. cit., fig. 7, nos. 3, 7 and 1 respectively). Decoration includes linear and curvilinear rouletted and incised decoration, using single and double-line square-toothed rouletting wheel, various kinds of stamps such as simple dimples, concentric circles, and rosettes, and burnishing often in separate linear zones. The best British parallels outside Lincolnshire are from the "South Eastern B" pottery discussed by Ward-Perkins (1938, fig. 10), amongst which a vessel from Langenhoe is of globular

shape and has interlocked swag decoration very similar to one from Dragonby (May, 1970, fig. 7, 7), and also has concentric-circle stamps. The decoration on some vessels from the Upper Thames is comparable in pattern (Harding, 1972, Pl. 67), but there the similarity ends. To the north, particularly notable is a wall-sherd with concentric circle stamped and grooved decoration from Thornton Dale, Pickering (Fig. 48, 8).

Useful analogies to the early material at Dragonby come from northern France. Globular vessels with omphalos bases and tall cylindrical necks are known from La Tène I cemeteries, particularly at Pernant, Aisne (Lobjois, 1969, fig. 107, 063.02), but the most convincing parallels are with La Tène II period material. The cemetery of that date at Les Pothées, Ardennes, affords excellent parallels to the globular and S-shaped profiles of Dragonby Phase I (Fromols, 1955, 20 and 24, Fouilles Nos. 1 and 5), and also to those forms considered by May to be transitional at the end of his Phase I, in particular a type of pedestal urn with spaced cordons, grooves and bulges, but with angular shoulder (*op. cit.*, 23, tombe à char; May, 1970, fig. 8, 16). The Gaulish La Tène II material lacks the distinctive curvilinear decoration of Dragonby, but indicates a date in the later second century B.C. for the forms, running through to the mid-first century. Perhaps we are seeing an amalgam of this with distinctively southern British ornament, occupying an area previously relatively empty.

Related to this new influx at Dragonby are vessels with similar distinctive decoration from elsewhere in the county. The first phase of occupation at Old Sleaford is marked by hand made pottery with S-shaped profile and with grooved, notched, rouletted, dimpled, and stamped decoration (EMAB, VI, 5-6; Fig. 18). There seems to be some chronological range represented in this material; a full excavation report is awaited. As for Ancaster, the earlier Iron Age settlement previously described was abandoned and a new site some 500 yards to the north-west was occupied. Hand made

pottery in fine black ware, most strikingly similar to that from Old Sleaford in form and decoration, marked the earliest phase (J. May information). Other stamped and rouletted pottery is known from Kirmington and Ewerby (EMAB, VIII, fig. 3, 2; VII, fig. 3, 4), both surface finds. Although the material from these four sites is likely to date from the first century B.C. onwards, the origin of the style in the second century beginnings at Dragonby and in curvilinear ornamental styles makes possible their consideration here. It suggests by the high quality of surface and decoration a professional pottery industry comparable with that studied by Peacock in the west of England, and it marks a distinctive phase of occupation leading into the late La Tène period. Although scored pottery is present in these assemblages, as at Old Sleaford, its supremacy is completely broken. To what extent these new Lincolnshire communities were of immigrant descent is not at all certain. That they marked a significant advance on the old order is clear from the pottery. No such fine wares are known from north Leicestershire or Nottinghamshire at present, so we must envisage some kind of separate and expanding cultural grouping east of the Trent from the mid-second century. From the mid-first century, characteristic Belgic wares became established, and these will be examined later.

It remains to consider whether it is possible to correlate the earliest currency of the area (for distribution maps see Allen, 1962, Maps 1-7) with this material which denotes a more advanced society. It is interesting to note the find some two miles south of Dragonby of four sword-shaped currency bars from a presumed hoard at Frodingham (Allen, 1967, 330; said not to have been made from local ironstone). The nearest hoards of sword-shaped bars are further south along the Jurassic Way from Hunsbury and Burton Latimer, Northamptonshire. No Gallo-Belgic C coins are known from Lincolnshire, but a number of derivatives, British H and British I, types having a fairly wide distribution in central and eastern England and dated by Allen within the first half of the first century B.C. (Allen, 1963, 32), have been found

in the county. Significantly, one British I coin has been found at Dragonby (May, 1970, 142). Allen (1963, 10) has considered British H and British I to be characteristic of a phase of invasion and settlement by Gallo-Belgic people from the ~~Somme~~, probably reaching the area from the Wash and extending inland and northwards as far as the East Riding coast. There seems little evidence north of the Humber for such an assertion, apart from the coins themselves. As for Lincolnshire, it seems likely that there the new coinage took root and blossomed into the uninscribed and inscribed Coritanian series because already in this area there was a young, dynamic, and receptive community, perhaps contrasting with those to the north and west. Dragonby is unlikely to have been unique, as pottery finds from Ancaster, Ewerby, Kirmington, and Old Sleaford indicate.

/// The middle La Tène period saw a continued development of types of material remains already known from early La Tène times. In the East Riding, brooch styles following Continental trends in certain details flourished, particularly from 200 B.C., and increases in population are shown by the large number of burials of the period. Some new influence can be seen, but the emphasis of the material remains and the burial types is on continuity. Pottery shows a lack of originality in common Iron Age B forms. In the East Midlands, scored pottery is dominant and local brooch manufacture can be seen. A well-defined regional grouping to the south-west of our area is characterised by pottery with stamped and grooved decoration from intensively-occupied hill-fort sites. New influence is indicated by this and by the Northamptonshire curvilinear styles, an extension northwards of which to Breedon-on-the-Hill can be seen.

An especial eastern impact of La Tène II culture from the Ardennes and the Haute Marne is evident from the pottery at Dragonby and from the weapons and shield fragments at North Grimston. These influences of the later second century B.C. are most significant, especially for Lincolnshire east of the

Trent where a new and dynamic community seems to have been created which, assimilating a knowledge of coinage and, later, Belgic pottery, was to form a nucleus of the tribal group of the Coritani. Meanwhile, areas to the north and west of the Yorkshire Wolds provide little evidence.

## CHAPTER 6

### THE LATE LA TÈNE PERIOD

In discussing the material remains of the first century B.C. and the earlier first century A.D. it is evident that upon indigenous traditions were imposed new techniques of manufacture, new styles of decoration, and new forms of the objects themselves. Imported and industrially-produced pottery, small items of metalwork, and coins indicate specifically Belgic characteristics. The main question which arises is to what extent these intrusive phenomena in the archaeological record represent the arrival of people from the primary Belgic settlements further south, and thus whether any of the tribal groups of our area can be termed 'Belgic' in any sense. In his definitive summary of the Celtic background to Roman Britain, Rivet (1964, 46-53) considered the Brigantes of northern England, the Parisi of eastern Yorkshire, and the Cornovii of Shropshire and Cheshire to be immune to Belgic influence: they may be termed "native" tribal groups. The Coritani of the East Midlands, with their coinage and Belgic-type pottery, were said to display secondary Belgic influence reflecting the imposition of a dynasty rather than a major settlement: the term "para-Belgic" tribe may be used. There is a basic truth in this admirable generalisation which will be re-examined after a survey of the material evidence.

#### i. Metalwork

Swords provide the best examples of continuing insular traditions of metalworking in the late Iron Age period. The famous iron sword with its scabbard comprising a sheet-bronze front-plate and a fragmentary iron back-plate from Bugthorpe demands attention. It was found with two decorated discs and two bronze studs when draining a field on the eastern edge of the Vale of York, and was said to have accompanied a burial. There are a number of decorative and structural features to be noted (Piggott, 1950, fig. 2; Fox, 1958, Pl. 53, c). The incised curvilinear ornament down the length

of the front-plate is of an assymetric freehand nature. Its flowing scrolls and lobes are similar to those on the Sutton scabbard-plate, but the incised, cross-hatched infilling of the design relates it more closely to those on the back-plates of mirrors, as from Birdlip, Desborough, and the Mayer Collection, Liverpool (Fox, 1958, Pl. 57). The heavy chape, cast onto binding strips, is also hatched, but has low relief ornament of trumpet spirals producing an effect not unlike that on the Snettisham torc terminal (op. cit., fig. 34). The base of the chape is bodily lipped, a feature seen less exaggerated on a sheath from Hunsbury and also on the moulded feet of brooches from Burton Fleming and Danes Graves (already noted). Two pairs of decorative bronze studs on the front-plate parallel the enamelled knobs and studs on the Witham anthropoid dagger (op. cit., Pl. 10, e). The incised linear ornament on the fragmentary back-plate of the Bugthorpe scabbard is in openwork and not hatched; again, there is similar decoration on the Witham anthropoid, particularly the back-plate, and also on the scabbard-chape from Little Wittenham, Oxfordshire (Harding, 1972, Pl. 79, D). The parallels to the main decorative elements therefore, are firmly of the first century, so although the scabbard-mouth is low and not pointed, and the chape is a distinct British type derived from the early La Tène sequence, a date in the second quarter of the first century B.C. would seem reasonable.

The two bronze discs from the Bugthorpe burial have already been mentioned as possible shield-mounts. They are also important for their decoration of pinned beads of red enamel, presumably as imitation coral (Stead, 1965, fig. 36, 2-3; Fox, 1958, Pl. 11, c). Enamelling seems generally to be a post-100 B.C. feature in Britain, with pinning being widely used for attachment, as had been necessary earlier with other forms of stone, glass, and coral beaded ornament, until the technique of *champlevé* was introduced under indirect or direct Belgic influence. Various substitutes for coral were widely used in La Tène Yorkshire, and so it



is interesting to note the identification of a genuine coral bead in the decoration of the chape of the slightly later sword from Grimthorpe (Stead, 1968, figs. 14-15, 170).

The Grimthorpe iron sword has a fragmentary scabbard with bronze front-plate and iron back-plate. It is much less ornate than the Bugthorpe specimen, and that it is later is suggested by its sharply-arched bronze hilt-guard, typologically later than the gently-curving form, by the more symmetrical and restrained decoration, and by the bulbous bifid base to the chape, which has lipped mouldings above on each side. The chape binding extends up the scabbard edge, and is clasped at its top with a broad bronze band. Below this band, across the back-plate, are two narrow bronze panels, decorated with incised circles and matted lobes, the lower roughly symmetrical and the upper a spiral lobe pattern. At the front of the chape there are three small sockets at each side to receive pinned settings, the remaining one of which survives and has been almost certainly identified as genuine red coral of the Mediterranean. The two small loose studs from Grimthorpe (op. cit., 13, 2-3) are very similar to those superimposed on the decorated front-plate of the Bugthorpe scabbard.

There are two anthropoid daggers from our area of Hawkes' Class G, probably dating to the first half of the first century B.C. That from the river Witham has already been mentioned in parallel to decorative features of the Bugthorpe weapon. All its details are typically British in style. The enamel knobs on the hilt-limb terminals and studs on the sheath front-plate are retained by pegs, similar to the bosses from Bugthorpe but less technically advanced (Clarke and Hawkes, 1955, 216). The heart-shaped chape is narrower, with lip-mouldings at the sides but not at the tip, and is thus closer to chapes from Wood Eaton and Spettisbury (Fox, 1958, fig. 24, 5 and 7). The imp-form squatting between the arms is a unique feature. The engraved open-linear ornament of the back-plate, of concave-sided triangles

within circles, assymmetrically placed, is distinctively British (op. cit., 38). The foreign Class G model for this native product must have arrived shortly after 100 B.C. (Clarke and Hawkes, 1955, 216). Also considered to be a copy of a Gaulish Class G short-sword is the second dagger, now in the British Museum, and probably from Yorkshire. It is of inferior quality, with crudely-formed head, still in "barbaric" style, projecting sharply from between Y-shaped arms. The grip has five deep but uneven ring-mouldings. No scabbard survives.

Continued distinctively northern English development is seen in Piggott's Group IV, Brigantian swords (1950, 17-20). A considerable variety of detail is represented, but common features seem to be an exaggeration of the previous lipped chape form into a sharply bifid moulding, the use of a single broad strap-loop, centrally placed on the scabbard, with decorative strip-attachments above and below, the square-cut scabbard mouth of La Tène D type, and the use of polychrome enamel inlay. (For individual swords see Notes on Figures, 80.) Hawkes has drawn attention to certain features of the group as reflecting the earlier Class G anthropoids (Clarke and Hawkes, 1955, 217), in particular the multiple ring-mouldings of the Cotterdale hilt and the relief decoration on the Warton pommel and hilt. He has also seen the enamelled polychrome ornament, as on the Embleton sword, as characteristic of the seventh decade of the first century A.D. (Corder and Hawkes, 1940, 353 -5). A date within the first century A.D. seems likely for all members of Group IV, including those with cocked-hat hilts, but until more detailed analysis than Piggott's of 1950 is published, relative chronology within the group will remain uncertain.

As for Piggott's Group V (1950, 21-22), which is regarded as Belgic in origin, there are two examples to consider. One is from the river Witham near Lincoln (Fox, 1958, Pl. 49 b). The bronze scabbard of this iron weapon has a simply-curved semi-circular chape, and a square-cut mouth which

is marked by a ribbed and decorated cross-binding. There are two similarly designed bindings below. The top of the front-plate has a rather formal incised curvilinear design of dots, circles, and arcs, with opposing zones of pecked texture. A similar pattern on the back-plate is defined by the curved upward and downward extensions of the broad bronze belt-loop. The scabbard bindings, unimaginative curvilinear decoration, broad rectangular belt-loop, straight scabbard-mouth, and overall slim shape are characteristics held in common with the sword from the Stanwick fortifications (Wheeler, 1954, fig. 14). The wooden scabbard of this weapon is bound by nine horizontally-ribbed bindings, the top three being broader than the rest, clamping the belt-loop and decorative mouth-moulding in position. This latter moulding is of semi-circular form, with double-ring and dot motifs within "vesica-shaped" elements, all enclosed within triple border-lines. The chape is of unusual type, having a terminal knob below a reel-moulding. Knobbed chapes are typical of Piggott's Group VI, and reflect Roman inspiration. The position of the Stanwick sword in the ditch of Phase II adjoining the entrance on Site B enabled Wheeler to date its loss within the time bracket A.D. 50-74 (op. cit., 44). The river Witham scabbard has been dated by Fox (1958, 117) to the early first century A.D. There is an obvious difference between the restrained but unimaginative style of these weapons and the gaudy enamelling of some of the Brigantian Group IV. Both are regarded as acquisitions from south-eastern England.

There are two examples from eastern Yorkshire of iron swords of plainer and more plebeian type, each of which at the time of discovery gave evidence of a wooden sheath. One was found in the excavations of the La Tène cemetery at Eastburn (Sheppard, 1938, 40-1, Pl. IV). 28 inches long, with a broad parallel-sided blade 1.5 inches wide tapering to a point, it was found with a contracted inhumation burial. A similar weapon was found by Messrs. C. and E. Grantham in their work at Garton Slack in advance of gravel quarrying.

Said to have been found with a small carved chalk figurine (CA, 17, 170, lower plate) in the filling of an Iron Age ditch beyond the limit of an early Roman re-cutting, it is thus of the first century B.C. or slightly later. 33.5 inches long including a stout, rectangular-sectioned tang, it has a broad, parallel-sided, slightly ridged blade, tapering to a point within the bottom 4 inches. Less than half of a flat, oval hilt-guard, 1.5 by 2 inches, made of a separate iron plate, remains. Of the pommel-piece, a surviving small plate-iron fragment is retained by the hammered-over tang end. That there was sword-manufacture in the East Riding around the first century B.C. is very likely. Earlier iron swords of common type were probably slimmer and more sharply lozenge-sectioned, judging by a very fragmentary and badly-corroded example from Breedon-on-the-Hill (casual find; LeM, 1951).

Apart from coinage, perhaps the best evidence of Belgic influence is provided by brooches. It is not certain how far the use of "flattened bow" and involuted brooches extended into the first century B.C., but the collection of material from the Eastburn cemetery, including a late-looking bracelet and toggle (Sheppard, 1938, Pl. 1; Stead, 1965, 54 and 61), does suggest that "involutes" were still common down to about 50 B.C. Later brooches, in Yorkshire as in regions to the south, are either of safety-pin type with spring-fastenings, but often of two-piece construction, or of penannular form. They are of plain but well-made character, evidently introduced from centres of mass production to the south and on the Continent.

The most extensive collections of La Tène III brooches from our area come from South Ferriby (Hawkes, S.C., 1963) and Dragonby (May, 1970, 243). Those from the former site have been salvaged over a period of time from the Humber shore in an area of active cliff-erosion, and those from Dragonby, over 100 in number, have turned up during surface collection and during excavation. From both sites there are examples of the Deal type, rare in the Midlands and the north, with openwork catch-plate, internal chord, and

vestigial moulding near the top of the slender bow. (For locations and references of these and other brooches mentioned below, see Notes on Figures, 79.) Another Deal type brooch, a fine example with decoratively-pierced catch-plate, came from the later Iron Age site at Ancaster. Examples from Swarling, Graves 4 and 13, have been dated by Birchall (1965, 243) to around 50 B.C. That the South Ferriby example may be slightly later is suggested by its small and probably degenerate form. These are, however, the earliest in Lincolnshire, and their presence within the area for which early Belgic influence is argued on grounds of coinage and pottery is significant. Others from South Ferriby (Hawkes, S.C., 1963, fig. 1, 2-3) and Dragonby, with long straight bow and long pierced catch-plate, may also be related to Deal examples and date within the first century B.C.

The distinctively insular "Colchester" La Tène III brooch is much more common in the East Midlands. There are eight examples from South Ferriby, and at Dragonby they are also numerous, of characteristic form with curving bow and pierced catch-plate. Others are from Ratae Coritanorum, from Gringley-on-the-Hill and Scratta Wood (Fig. 16, 6), both Nottinghamshire, and from Broughton Common, Ancaster, and Winteringham, all Lincolnshire. The latter example (EMAB, VIII, fig. 3, 3) is particularly interesting, having a repaired pin forming a simple hinge rather than the normal spring, and a decorated catch-plate with rolled-graver perimeter in addition to angular piercings. North of the Humber, Colchester brooches are known from Rudston, Watton Priory, Garton Slack (late Iron Age ditches), Hessle, and North Ferriby. The latter (Stead, 1971, fig. 8, 1) is unusual, having a knobbed termination to the catch-plate which is unperforated and has scrolled and hatched curvilinear engraving in La Tène style. Amongst all these there is a considerable range in size, that from Ratae and two from South Ferriby being particularly large and heavy, and those from Garton Slack

and Rudston quite small. The dating range is uncertain, but that it extends towards the end of the first century A.D. is suggested by the possible association of the two large ones mentioned with a Romano-British trumpet brooch. Taken as a whole, the Colchester brooch type has been accepted as a representative of Belgic culture (Hodson, 1964b, fig. 1; Hawkes, S.C., 1963, 28). The extension of its distribution to the East Riding is thus significant, and may be seen as a result of Belgic trading in the first century A.D.

Of other safety-pin type brooches dating roughly to the mid-first century A.D. the Hod Hill type is quite common at Dragonby (May, 1970, 243) and present at Rudston (two; Stead, 1971, 40) and Brough-on-Humber (Wacher, 1969, fig. 39, 32). Aucissa type brooches are more numerous, again from Dragonby and Rudston, and from Thornton Dale, Aldborough, North Ferriby, and Demons' Dale, Derbyshire. Others from Dragonby include Fantail and Langton Down types (one of the latter from Ancaster; Barley, et al., 1968). P-shaped brooches of Collingwood's Group T have come from Ousethorpe, near Pocklington (Fig. 32, 1), and from Stanistan Hill, near Otley (Ant. J., VIII, 526-7).

The last-named two brooches are virtually identical and are of considerable importance. They are plain and simple, having a collar on the bow which is of diamond section towards the foot and circular section towards the head. The separate-piece pin has an eight-coil spring, its chord gripped by a flattened extension to the head. The side-wings and tapering catch-plate are plain. These brooches are a well-known German version of the La Tène III fibula, a type best-known from the earlier levels of the fort at Hofheim (Ritterling, 1913, Pl. VII, 8-18). Developing from it is the "eye brooch", found at Hemel Hempstead (Ant. J., XXXI, 194-5), Lincoln, Old Sleaford, and South Shields. At Hofheim the plain type is certainly Claudian, and probably pre-Claudian in origin at least. In Britain it should therefore be pre-Flavian, and probably pre-A.D. 50, thus ante-dating the military annexation

of Yorkshire. The Ousethorpe brooch is of importance for our late Iron Age pottery studies, as it was found with sherds (Fig. 32, 2-7) in a small pit sealed beneath the bank of a Medieval earthwork site (Figs. 63-64) during excavations by W. J. Varley.

Amongst Fowler's complicated classification of penannular brooches, one type stands out as distinctively Belgic: her type C (Fowler, 1960, 165), in which the terminals are spirally coiled at right-angles to the plane of the ring. Examples in pre-Claudian levels at Prae Wood and Camulodunum were cited, and the type was shown to be confined exclusively to Belgic areas or sites with Belgic influence. The distribution within our area is thus important: there are three from South Ferriby, numerous examples from Dragonby, one each from Thealby, Hungerton (Fig. 15, 8), Couthorpe, and Casthorpe Hills, all Lincolnshire, one from Hayton, Nottinghamshire, and only one north of the Humber from Rudston. The latter example was found with an inhumation in a grave cut into a ditch. Its humped bow compares with those from South Ferriby and Dragonby, although in other examples the pin, where it survives, is flat. Fowler's types A1, A2, A3, A4, B, and D1 are all represented in the Trent-Tyne area, and have been listed (*op. cit.*, 171, ff.). In addition should be noted one of type D1 from the Garton Slack late Iron Age ditches (Fig. 30, 8), and one of type B from Dragonby. Most of these, particularly type A2 with milled knobs, (the Thornton Dale penannular, Fig. 48, 1, is one of these) are of little use for dating, being common in the Romano-British period in the north of England although evidently current from the first century A.D.

Of much greater splendour in personal adornment and display, and also of evident ritual significance both for the living and the dead, is the torc, a characteristically Celtic ornament. There are four electrum torcs from the margins of our area to be considered, all of closely similar character. Two survive from a mid-nineteenth century discovery of three

torcs, a portion of a bracelet, and the remains of horse trappings, at Ulceby, north Lincolnshire (Leeds, 1933, Pl. LXXX). Of these, the smaller, about 5.6 inches in diameter, is of two stout strands, twisted in rope-like fashion, with simple double-loop terminals. The larger, about 6.8 inches in diameter, is of four plaited strands with larger quadruple-loop terminals. Two others, more ornately finished, come from Staffordshire. That from Glascote, near Tamworth, found about 1943 (Painter, 1971, Pl. I), is about 7 inches in diameter, of twelve strands twisted into six pairs which are themselves twisted about a central hollow core. Onto the ends are cast two loop-shaped terminals, each divided into three segments by two punched, wavy lines around the circumference. That from Needwood Forest, found in 1848 (op. cit., Pl. II; Fox, 1958, Pl. 25), about 7.3 inches in diameter, is of 18 strands, tightly twisted into six rope-like units, these being loosely twisted and cast onto loop-shaped terminals. These terminals have more profuse decoration, each with two punched wavy lines, similar to those on the Glascote terminals, and also rows of circular punch-marks flanked by grooves and a marginal row of upstanding knobs, stated by Painter (op. cit., 3) to have been modelled in the mould and finished by tooling.

As for the date of these torcs, Hawkes (1936) assigned the Needwood Forest specimen to the latter half of the second century B.C. on the basis of the simple decoration. However, the Ulceby examples were almost certainly in association with the three horse-bits of iron cased in bronze, one rein-ring of which survives and has been discussed by Fox (1958, 35-6, Pl. 24). This seems likely to have been part of a bit of the type seen at King's Barrow, Arras (Stead, 1965, fig. 18, 1), having a portion of a side-link of similar shape and stop-knobs. The decoration is of great significance: the frilled seam to the edges of the bronze casing of the rein-ring is of a double wavy line motif very similar to that seen in single line on the Staffordshire torc-terminals. The relief-ornament on the side-link knob is of curvilinear



lobes and lines enclosing voids, of a style directly comparable to that on the Llyn Cerrig plaque (Fox, 1958, fig. 18). Fox dated the Ulceby bit to the mid-first century B.C. The decorative division of the loop terminals of the Staffordshire torcs is clearly a representation of the Ulceby separate-loop terminals joined by frilled seams. The former are thus later typologically, although not necessarily significantly so chronologically. As for other torcs in south-eastern England, the most striking dating evidence is provided by the finding of a quarter stater of the Gaulish Atrebates inside a terminal of the great torc from Hoard E, Snettisham (Fox, 1958, figs. 33-4), the varied decoration of which includes the punched wavy ridges already discussed. On the basis of these points, a date in the mid-first century B.C. seems likely for our four torcs. Painter (1971, 2-3) has pointed out that the failure in the casting of one of the wires onto a terminal of the Glascote torc, and its fragility resulting from an unsatisfactory composition of the alloy, indicate that the ornament was unlikely to meet the requirements of a customer, and thus that it must have been lost in the area of manufacture, implying a tribal workshop in the region of the upper Trent. The Ulceby pieces may indicate a further workshop in north Lincolnshire during the first century B.C.

There are two other reported finds of torcs from our area to be noted. There is record of a bronze example from Arras Grave 8, eastern Yorkshire, but there is a possibility that it may have been of Bronze Age date (Stead, 1965, 59-60). It is lost and has never been illustrated. Also lost is a collar or neck-ring of Wraxall class, said to have been found in the Huddersfield area (record in RCHM York office, on the authority of G. F. Willmot, formerly Keeper of the Yorkshire Museum). Of cast bronze, in two pieces with a hinge and pin at the rear, it is said to have had swollen terminals at the front very similar to those on the Portland torc (Megaw, 1971, fig. 1), except that there were triangular insets for enamel. Decoration in relief

included scrolls and lobes. Megaw has recently dated the rings of Wraxall class to the middle or later first century A. D. (op. cit., 153). The presence of such a distinctively native collar near the presumed heart of Brigantian territory (Wheeler, 1954, 23) in a period of political upheaval (op. cit., 17-23) is an attractive possibility. However, there is a marked similarity between the collar as just described and one now in the British Museum and considered by Megaw to have come from Dorset (1971, 147, fig. 2). At best, therefore, a Huddersfield example of the type some 200 miles north of its normal distribution is to be regarded as unsubstantiated.

As for the large quantities of metalwork of the period from about the mid-first century A.D. onwards, such as beaded torcs (considered in detail by Simpson, 1966), articles with champlevé enamelling (discussed by Corder and Hawkes, 1940; and Simpson, 1968), and the hoards of harness from Fremington Hagg (Webster, 1971) and Stanwick (MacGregor, 1962), no general survey will be attempted here. Such is a specialist's prerogative, recently fulfilled by Simpson (1966) and Stevenson (1966). Just one more piece will be briefly commented upon, as it has been taken to suggest Belgic influence.

Dredged from the river Witham at Tattershall Ferry in 1768 was a fragmentary war-trumpet, or carnyx. Re-published by Phillips (C.W., 1934, Pl. XXI), it has again been discussed in relation to the Deskford head by Piggott, who has convincingly reconstructed it with animal-head and oblique mouth-piece (Piggott, S., 1959, fig. 1A). Three details of the surviving pieces are significant. Running down the back of the curving neck is the lower part of the mane which would have stemmed from the back of the animal-head. Below the termination of the mane above one of the joints in the pipe-sections, of which there were probably four, is a simple bird-head representation with upturned bill. Above this is a band of decoration, comprising a chain-motif within double-beaded borders. Piggott has suggested an early first century A.D. date for the piece (op. cit., 24) which, together with the electrum torcs from our area, reminds us of the Celtic heritage of

society, religion, and warfare in northern England in the pre-Conquest period.

## ii. Pottery

Our discussion of the pottery of the middle La Tène period ended with a consideration of the Phase I wares from J. May's site at Dragonby. To break up a treatment of Dragonby material between chapters is unfortunate, since the structural features of the site indicate an essential continuity reflected in many aspects of the pottery, including the general character of the ware. However, May has found it possible to suggest a Phase II on the basis of harder, brown, wheel made fabrics, still heavily gritted, decorated with much less imaginative square-toothed rouletting and some geometric grooved and burnished patterns, and including a range of new profiles comparable with Aylesford-Swarling forms. Particularly important are the wide-mouthed pedestal urns with girth-grooves of Birchall's Class Ia (Birchall, 1965, 243), small S-shaped bowls, more or less angular with cordons, grooves, and burnished decoration of Birchall's Class IVa, and tall, conical jars, often with slightly constricted neck, cordons, and grooves of Birchall's Class IX. Various small cups and bowls are also common. (For examples of these, see May, 1970, fig. 8, 18-26.) In addition, there are examples of Birchall's Class Va: jars with corrugated neck and combed or scored body (Dragonby, Ditch 3, Dr 64 DG, DR 64 F1, Scunthorpe Museum). On Kent analogies in the Early and Middle phases of the Aylesford-Swarling culture, a date in the middle to later first century B.C. is likely. The presence of angular pedestal urns of a type not found in the south-east, which recall Gaulish La Tène II types, as already mentioned, and the lack of comparable pre-20 B.C. settlements in the south (Birchall, 1965, 287-8) complicate the picture, but there certainly seems to have been a considerable infusion at Dragonby at this stage.

There are three small groups of pottery from elsewhere in Lincolnshire which can be compared with Dragonby Phase II: from Salmonby (LHA, I, 1968, fig. 11), Horncastle (LHA, I, 1969, Fig. 1), and Ingoldmells (Baker, 1959, figs. 3-4). From Salmonby we have a Class IVa bowl with burnished decoration very similar to one from Dragonby (May, 1970, fig. 8, 20), and part of a wheel made jar with corrugated neck, probably a pedestal urn with angular shoulder. The assemblage from Horncastle is probably slightly later, including finely-burnished fabrics, grooved lattice decoration, and a pedestal base with cordon above. The better-known Ingoldmells collection includes an omphalos bowl with burnished line and incised chevron decoration, and an S-shaped jar with double cordon at the shoulder. Each of the three sites has produced rounded jars with beaded rims, not unlike one from Dragonby which has been assigned to Phase I (op. cit. fig. 7, 9). The implication is that there is accumulating evidence for a quite widespread occupation with pottery of Belgic type in the county before the end of the first century B.C. Much of the grooved, cordoned, bead-rimmed, and rouletted pottery from the earlier phases of the sites at Ancaster (later Iron Age site), Colsterworth, and Old Sleaford (publication awaited in all cases) may date to this period.

Perhaps the best-defined horizon in the Dragonby series is Phase III (op. cit., 235, fig. 9), which is marked by small quantities of Gallo-Belgic imports such as flagons and amphorae, butt beakers, plates, and other forms in cream, white, terra nigra, and terra rubra, together with native copies. A pre-Claudian date is probable for most of the material, although an extension into the Roman occupation is possible. A starting date is also uncertain, but is probably around A.D.1. Locally-made vessels in hard, fine, wheel made wares, including necked bowls, globular jars, and flasks, often with beaded rims but only rarely decorated with cordons, grooves,

burnished lines, and rough butt-beaker type rouletting, complete the range of forms.

Sites from which comparable imported pottery has been recovered are more numerous than those which can be compared with Dragonby Phase II, and occur both south and north of the Humber. In the north, there is a fragmentary Gallo-Belgic beaker in thin, fine cream ware, and a small wall-sherd possibly with square-toothed rouletted decoration of probably earlier date (Fig. 44, 5), from the complicated boulder-clay site at Catcote, Co. Durham. Corder and Pryce (1938, 271) made note of an early two-handled jug, of what type not stated, found near Whitby. The material from the Stanwick fortifications, dramatically interpreted by Wheeler, includes Terra Sigillata, butt beaker, and jug fragments (Wheeler, 1954, 31-8), mostly of Claudio-Neronian type. Further south, there is some evidence for pre-Flavian occupation at York, which will be reviewed at the end of this section. From the East Riding, chips of Terra Sigillata from excavations at Rudston in 1933 may be of pre-Flavian date (Steer, 1937, 328), and from Garton Slack a well-made carinated bowl in fine orange/grey ware (Fig. 31, 4) certainly seems to be comparable with forms on Belgic sites of the south-east (Hawkes and Hull, 1947, Pls. LXXIV - LXXV, 209 and 216). The most extensive collection of terra nigra and butt beakers, also including early Terra Sigillata and Arrentine ware, north of the Humber is from North Ferriby (Corder and Pryce, 1938; 1939), for most of which a pre-Claudian date has been demonstrated on the basis of typology. Apart from this Humber-cliff site, the Stanwick material for which an immediately pre-Conquest date has been suggested, and the York material which may be connected with Roman military operations, we have pottery of Belgic type in small fragments from three sites and a more substantial vessel from only one. This indeed suggests severely-limited contacts in Yorkshire and the north in the late Iron Age period.

South of Dragonby, first century A.D. Belgic types are more common. Sherds of a butt-beaker of Camulodunum type 113 (Hawkes and Hull, 1947, Pl. LVII) have been found at Bracebridge Heath, near Lincoln (LHA, I, 1968, 19). Excavations at the Roman site of Ad Pontem (Thorpe) revealed two phases of pre-fort occupation, and with Phase Ib was associated Belgic vessels including a fine globular jar with cordons and grooves, light linear tooling, and a foot-ring base (similar to one from Dragonby, Ditch I, DR 65 UJ; Scunthorpe Museum), cordoned, carinated bowls, and bead-rimmed vessels (EMAB, VI, 16). Similar Belgic forms probably dating to the mid-first century A.D. have been recovered from a settlement site at Rampton to the north (EMAB, IX, 41-3). To the east, the later Iron Age site at Ancaster produced imported butt-beaker, jar, bowl, and dish forms, decorated with grooves and cordons (Barley, et al., 1967, 1). At Old Sleaford, from occupation contemporary with the Coritanian mint (Allen, 1963, 19), there are sherds of terra nigra, terra rubra, butt-beakers, girth-beakers, carinated cups, cordoned jars, and platters, together with native imitations (EMAB, VI, 5-6). The carinated cups from rescue diggings at Denton and Loughborough are well-known (Kenyon, 1950, fig. 16, 4; fig. 14, 7; cf. Hawkes and Hull, 1947, Pl. LXXV, 212A, 216-7), and to these may be added examples from excavations in the interior of the hill-fort at Burrough Hill (unpublished; Leicester University). Much of the Burrough Hill material seems to be comparable with the only large collection of Belgic material to be fully published, from the Jewry Wall site, Leicester (Kenyon, 1948, 124-132), dated to A.D. 35-50.

Much commoner than the imported wares at these sites within Coritanian territory is pottery of local manufacture. This often imitates Belgic forms and seems to replace scored types (although there are a number of finds of scored pottery from the Leicester area: see Notes on Figures, 76). The large proportion of material of earlier first century A.D. Belgic character

from sites such as the later Dragonby, Old Sleaford, and Leicester certainly indicates a strong cultural infusion on major settlements. In advance of full publication of the evidence from Old Sleaford, Dragonby, Ancaster, and Burrough Hill it is perhaps unwise to press conclusions any further.

Meanwhile, in areas to the west and north of the main distribution of Belgic-type pottery, native manufacture continued, although deeply affected by new styles. Particularly outstanding groups of material come from Scratta Wood, Nottinghamshire (Fig. 16, 4-18), from South Cave (Fig. 32, 1-7; Fig. 33), Faxfleet "A" (Fig. 36; Fig. 37, 1-7), and Emmotland (Brewster, 1963, figs. 85-88), south-east Yorkshire, and from Catcote (Fig. 44), Normanby (Fig. 45), Levisham Moor (Figs. 46-47), and Stanwick (Wheeler, 1954, figs. 12-13) in the north-east. It can be seen that the wares within each group are of distinctive character, and that each exhibits its own range of forms. The standard of potting is often quite high, indicating advances in technique. Most of the vessels are of rounded shape and undecorated, in continuation of earlier tradition, but new rim forms are evident. There are some common factors between various groups which make it possible to define certain forms as distinctive of areas, such as south-east Yorkshire or north-east England. Although a regional approach to a discussion of the coarse pottery is hampered by the few large groups at our disposal and by considerable overlaps, such will be adopted here.

The only excavated site of late Iron Age date west of the Trent Valley to have produced a broad range of material is Scratta Wood (Fig. 70), a stone-walled enclosure with internal huts and partitions. Archaeological evidence was bravely rescued by the Worksop Archaeological Research Society after the site had been revealed and very badly damaged by scrubland bulldozing in 1959. It is thought that the main period of occupation was during the late Iron Age: the La Tène III brooch (Fig. 16, 6) was found in

the south-eastern hut, and a contemporary bronze copy of a Gallo-Belgic E coin, probably originally gold-plated (obv. plain, rev. concave, disjointed horse; G. F. White information), was found on the surface to the south of the site. Some Roman material, including flanged dishes and head-stud brooches (Collingwood Group Q), indicates re-occupation or squatting. Finds included a small bronze disc or stud (Fig. 16, 4), a penannular bronze article said to be a bag-handle (Fig. 16, 5; note two very similar in gold from Barnard Castle, of twisted multi-strip construction and with round, expanded terminals with conical bevelled points: BM. 73. 12-18. 1-2), pottery spindle whorls (Fig. 16, 7), and beehive querns.

Amongst the pottery, a number of forms are important. The almost complete profile of a rounded jar with everted rim, foot-ring base, and horizontal groove along the shoulder (Fig. 16, 17) recalls coarser pots with similar groove such as that from Burrough Hill (Fig. 11, 4). It is very similar in appearance to the small rounded vessel with beaded rim also from Scratta Wood (Fig. 16, 16) which has a close parallel at Dragonby (Fig. 17, 7). Undecorated bead-rim jars of various types are from South Cave (Fig. 33, 5), Faxfleet "A" (Fig. 37, 1), Catcote (Fig. 44, 17), North Ferriby (Corder and Pryce, 1937, fig. 3, 29-30), and Dragonby again (Fig. 17, 5). The pronounced bead-rim seems thus to be a common native late Iron Age form in the north of England, but it probably extends into the Roman period to be seen on examples from Roe Wood (Fig. 7, 11) and Saltshouse School (Fig. 38, 4). Other types at Scratta Wood include scored decoration (Fig. 16, 15) and the rounded, everted rim (Fig. 16, 11-12; cf. Thornton Dale, Fig. 48, 10). Perhaps the most unusual are the sherds with vertically combed decoration (Fig. 16, 9 and 12) and the sharply-angled rim (Fig. 16, 13). Dating evidence for both these types is offered by the occurrence of strikingly similar sherds on the nailed timber-laced fortified settlement at Engelhalbinsel, near Bern (Müller-Beck and Ettlinger, 1964, Abb. 12, 4 and 8), which produced fibulae immediately antecedent to the Nauheim type,



dating the site to before 50 B.C. Such a parallel to domestic material on a characteristically native midlands site may seem too remote. A similarly-combed sherd comes from gravel workings at Attenborough. Certainly however, the Scratta Wood sherds indicate some form of foreign influence, probably connected with Belgic movements, in the later first century B.C.

One of the most outstandingly homogeneous groups of late Iron Age pottery from south-east Yorkshire was found in 1970 on a building site at South Cave (Fig. 32, 8-9; Fig. 33). A ten-foot length of ditch was cleared. The pottery came mostly from the intermediate fill, but was identical with sherds in the lower fill. A small Romano-British sherd from the top level was not associated. A quantity of animal bones included those of cattle, pig, sheep, and horse (Hull Museum information). All the sherds are of round-shouldered jars with constricted neck and moulded rim. The most characteristic type has a squat, upright neck with a broadly-grooved, bulbous rim (Fig. 33, 1; variations Fig. 32, 8 and 9). Sherds from Dragonby (Fig. 17, 3) and Garton Slack (Fig. 30, 1) are similar. The form may be in some way related to Camulodunum 250 (Hawkes and Hull, 1947, Pl. LXXXI; fig. 55, 4-7), thought to date to Period I on that site, that is down to A. D. 42. Of great significance is a further vessel from South Cave (Fig. 33, 3), certainly of the same form, which has its rim boldly indented by tooled, U-shaped hollows along the outer edge, appearing broadly similar to some finger-tipped plastic decoration of the earlier Iron Age. The implication of the presence of a specifically late Iron Age horizon of plastic decoration is evident, and is reinforced by other sherds of the same profile: two decorated rims found in the same pit as the P-brooch at Ousethorpe (Fig. 32, 5 and 6), and one from Garton Slack (Fig. 30, 4) said to have been in association with a black burnished wheel made globular vessel with lugs and lattice decoration of later first century A.D. date (cf. Rutter and Duke, 1958, fig. 10, 8). Rubbish survival may complicate the picture at both Ousethorpe and Garton Slack, but such

plastic decoration on pre-Conquest pottery seems certain. Confirmation is afforded by the occurrence of the same profile, rim-slashing, and Trent valley type deep-scoring on one and the same vessel from Melton Mowbray (Fig. 15, 2).

Plastic decoration on late Iron Age pottery is in fact widespread north of the Humber. It creates an added problem in that the accurate dating of odd sherds to a phase within the Iron Age is made more difficult, but main characteristics of the later material are the decoration of a bold type on rims often heavily expanded with a distinct outward flange, and the slack, rounded body-shapes. Other sherds from Garton Slack are finger-tipped rather than slashed (Fig. 30, 5 and 6), and these with the sherd already mentioned form a neat typological succession (Fig. 30, 6, 5, and 4, in that order). Cabling of the top of rims is seen on other eastern Yorkshire vessels from Hasholme Hall (Fig. 34, 2), Faxfleet "A" (Fig. 37, 3), and Salts-house School (Fig. 38, 5 and 11). Finger-tipping on the edge of rims is seen at Flixton (Fig. 35, 11), Staxton (Fig. 35, 12), and Faxfleet "A" (Fig. 36, 4). Slashing is seen on the expanded rim of a bucket-shaped vessel from Emmotland (Brewster, 1963, fig. 87, 1). A specific type of finger-impressed rim occurs in assemblages north of Pickering, as at Percy Rigg (Fig. 43, 5) and Levisham Moor A (Fig. 46, 4). Other northern decorated sherds include those from Pale End (Fig. 43, 3), Catcote (Fig. 44, 2-4), Thornton Dale (Fig. 48, 9), and Costa Beck (Fig. 48, 11). The occurrence of this plastic decoration on profiles seen in the same late assemblages in undecorated form (note particularly the Catcote expanded rims; Fig. 44, 9 and 12; and sherds from Ousethorpe; Fig. 32, 2 and 7) emphasises the overall chronological unity. A sherd from Bleasby, Nottinghamshire (Fig. 15, 4), with cabled rim and finger-tipping, thought by J. May (in conversation) to date well within the Roman period, may be in place here.

The broad grooving of the South Cave rims may be related in some way to that on a sherd from Breedon-on-the-Hill (Fig. 12, 9), which seems to be

of a vessel of similar shape. Other grooved rims of different character occur at Garton Slack (Fig. 30, 3 and 7). The similarity of these to sherds from Welsh Marches sites from 300 B.C. has already been noted. The slight exterior grooving of a rim from Percy Rigg (Fig. 43, 7), again of a rounded vessel, probably indicates a northward extension of the trait. It is unfortunate that no satisfactory details of the ditches and gullies at Garton Slack cleared by Messrs. C. and E. Grantham are available. More recent systematic excavation on what remained of this valley-floor gravel site has been undertaken ~~on~~ behalf of the Department of the Environment by T. C. M. Brewster. The results of this work are likely ~~to be~~ crucial, since the Grantham<sup>us</sup> collection includes good examples of three of the major rim-forms of late Iron Age Yorkshire.

The first is the S-shaped vessel, usually in very coarse ware, either large and almost globular or medium-sized and straighter, with everted rim. To the Garton Slack example (Fig. 31, 9) may be added those from South Cave (Fig. 33, 4 and 7), Hasholme Hall (Fig. 34, 2), Driffeld Aerodrome (Fig. 35, 1; and Philips, 1960, fig. 6, 30), Gransmoor (Fig. 35, 8), Faxfleet "A" (Fig. 36, 1-2; Fig. 37, 2), Saltshouse School (Fig. 38, 3 and 7), North Ferriby (Corder and Pryce, 1937, fig. 3, 27-8 and 31), Brough-on-Humber (Wacher, 1969, fig. 53, 1), and Newham's Pit, Staxton (Brewster, 1953, fig. 12, 2 and 6). Related forms occur to the south, as at Melton Mowbray (Kenyon, 1950, fig. 13, 1; a scored vessel), and to the north, as at Catcote (Fig. 44, 14), Levisham Moor B (Fig. 47, 4, 6 and 8), and Normanby (Fig. 45, 7 and 11).

The second type is closely related to the first, but has a sharply-everted rim, as seen at Garton Slack (Fig. 30, 10; Fig. 31, 2). This form is particularly numerous at Faxfleet "A" (Fig. 37, 4-7) and Emmotland (Brewster, 1963, figs. 85, 6 and 10; 86, 5-6; 87, 9 and 11), and also present at Elmswell (Fig. 34, 3) and Rudston (Fig. 34, 4). To the north it is common

at Catcote (Fig. 44, 11, 13, and 15), Pale End (Fig. 43, 1 and 4), Levisham Moor (Fig. 47, 3, 5, and 11), and Stanwick (Wheeler, 1954, fig. 12, 15 and 23). There are also examples at Dragonby (Fig. 17, 2 and 6).

In the third type, the rim is not so flared but is markedly thickened and heavy. Possible precursors exist in the rims of large scored jars from Harston and Melton Mowbray to the south (Kenyon, 1950, fig. 9, 1; fig. 13, 3). Good examples from Garton Slack (Fig. 31, 1, 7-9) are typical of this, perhaps the commonest of Yorkshire late Iron Age forms. It is present in variety at South Cave (Fig. 33, 6), West Furze (Fig. 35, 4), Driffield (Philips, 1960, fig. 3, 1), Emmotland (Brewster, 1963, fig. 87, 2 and 8), Thornham Hill upper layer (op. cit., fig. 90, 9; fig. 91, 12-16), Saltshouse School (Fig. 38, 2), Levisham Moor B (Fig. 47, 1 and 9), Thornton Dale (Fig. 48, 3 and 6), Costa Beck (Fig. 48, 7; Fig. 49, 5-7), and Stanwick (Wheeler, 1954, fig. 12, 17). Related is the upright rim, also thickened, seen at Garton Slack (Fig. 30, 2 and 9), West Furze (Fig. 35, 5), and Levisham Moor A (Fig. 46, 1 and 3).

All these rim forms are to some extent similar and overlapping. Being simple and very common it is not surprising to find them continuing beyond the Conquest. In particular, the third type becomes the "Langton cookpot", seen in early Roman contexts at Knapton (Corder and Kirk, 1932, fig. 30, 1-8), Langton (op. cit., fig. 7, 22-44), and Crossgates (Rutter and Duke, 1958, fig. 10, 2/1 - 2/10). Much of the material from Faxfleet "A" and Saltshouse School is likely to be later first century A.D. in date. A pre-Roman origin for the forms is quite clearly demonstrated, however, by the range represented in the stratified associations from Ousethorpe, South Cave, and Emmotland, each undisturbed by Roman material.

A number of other typical late Iron Age forms are evident from the groups from eastern Yorkshire. Several more will be briefly noted. An upright rim above a round-bodied jar is seen at Faxfleet "A" (Fig. 36, 7)

and Stanwick (Wheeler, 1954, fig. 12, 13). Some rims are flattened and expanded, particularly outwards, and have a slight bevel: those from Ousethorpe (Fig. 32, 4) and Saltshouse School (Fig. 38, 1) are outstanding and others are from Emmotland (Brewster, 1963, fig. 85, 2), Driffild (Philips, 1960, fig. 5, 17), Normanby (Fig. 45, 5), and Stanwick (Wheeler, 1954, fig. 12, 19). Some globular vessels have rims which are beaded but flattened and slightly everted, as at Saltshouse School (Fig. 38, 8) and Dragonby (Fig. 17, 4). More upright, beaded and slightly everted rims are present on taller, rounded jars at Saltshouse School (Fig. 38, 10), Levisham Moor B (Fig. 47, 5), and Stanwick (Wheeler, 1954, fig. 12, 5-6). As for handles, countersunk examples occur at Emmotland (Brewster, 1963, fig. 85, 1) and Thornton Dale (Fig. 48, 1), whilst cruder types, simply moulded into the vessel wall, are known from Rillington (Fig. 34, 5) and Levisham Moor A (Fig. 46, 5) in "hooked" form, and from Flixton and Freshfields (Brewster, 1963, fig. 91, 3 and 11 respectively) in plain, rounded form.

Of most eastern Yorkshire late pottery forms, England north of Pickering affords examples, as we have noted. The northern groups of Stanwick, Percy Rigg, Pale End, Catcote, Normanby, and to some extent also Levisham Moor, are distinctive, however. Apart from unusual vessels, such as that from Normanby (Fig. 45, 8), possibly a crude native imitation of a butt-beaker, the finger-tipped sherd from Catcote (Fig. 44, 4), which must be related to similar flanged rims with plastic decoration further south, and the complete profile from Stanwick (Wheeler, 1954, fig. 12, 1; also fig. 12, 2; and cf. Longdendale, Fig. 7, 10), for which earlier origins have already been suggested, there is a remarkable degree of unity between the collections, considering their small size. The association with imported wares at Stanwick provides rough dating evidence.

Particularly characteristic of the north-east is the simple barrel jar, **seen** at Catcote (Fig. 44, 16, 18-19), Normanby (Fig. 45, 6 and 12), and Stanwick

(Wheeler, 1954, fig. 12, 29-30). A continuation into the Romano-British period for the shape is shown by its occurrence on stone-walled settlements in Northumberland (Fig. 50, 8-9), but a place for it in the late Iron Age is shown by examples from eastern Yorkshire, at Driffeld (Philips, 1960, fig. 4, 6), West Furze (Fig. 35, 6), and Flixton (Brewster, 1963, fig. 91, 3). The earlier contexts for barrel jar shapes mentioned in previous chapters make the dating of such simple shapes north of the Tyne, such as those shown on Fig. 50, particularly hazardous, should there be an absence of more substantial dating evidence from their sites.

Various types of everted rim are common in the north. Those of a bowl form link Catcote (Fig. 44,8), Stanwick (Wheeler, 1954, fig. 12,31), and Huckhoe (Jobey, 1959,fig. 13,5). Some <sup>on</sup>jars are so marked as to provide possible seating for a lid, as at Catcote (Fig. 44,11), Normanby (Fig.45,10), Levisham Moor B (Fig. 47,3), Stanwick (Wheeler, 1954,fig.12,8 and 18), and Gubeon Cottage (Jobey, 1957, fig. 6,10). Other possible lid-seatings, strangely-modelled rims, rather more upright, are from Percy Rigg (Fig. 43,6), Catcote (Fig.44,9), Normanby (Fig. 49,2 and 9), and Stanwick (Wheeler, 1954, Fig. 12,9 and 20). Various types of expanded rim (Fig. 44,4,9-10, 12; Fig.45,5) and a particular form of finger-tipped rim (Fig. 43,5; Fig.46,4) also afford common ground.

The question of whence came the pottery forms which can be identified in eastern Yorkshire and the north-east in the late Iron Age is difficult to answer. There is a vague similarity in rounded profiles with vessels from Belgic sites to the south such as Camulodunum and Bagendon, particularly with those described as "native" (Clifford, 1961, 250, form 179; Hawkes and Hull, 1947, 266, form 250). A most outstanding similarity of profile between two vessels from South Cave (Fig. 33, 5-6) and two of Périchon's Group F painted pottery from Loire Province, east central France (Périchon, 1964, fig. 16, 1, Oppidum de Joeuvre; fig. 16, 2, Comelle), said to date from A.D. 100, cannot pass without comment. Although thus to some extent in step with pottery trends elsewhere, particularly in Belgic southern England, the distinctive local forms and the lack of associated imports on most sites,

together with the continuation of crude barrel shapes and other rounded profiles of the earlier period, clearly indicate that there was no large-scale influx of culture or population north and west of the Humber and Trent in the late Iron Age.

As for areas to the west of those for which evidence has now been considered, there is almost no pottery. Sherds from west Yorkshire sites for which an Iron Age date has been proposed (Fig. 8, 4 and 5) appear to belong to the type of cooking-pot with characteristic clubbed rim recognised in northern England by Jope (1963, 334) and dated to the twelfth century A.D. Sherds from Stanistan Hill, near Otley (Fig. 8, 13-15), were probably picked up over the same area as the P-brooch discussed in the previous section, but there is no evidence of association.

It remains to consider the evidence for a pre-Flavian occupation of York, recently discussed by Wenham (1971, 48-53). Excavations by G. F. Willmot beneath St. Mary's Abbey in 1952-3 produced a sherd of butt-beaker, the fragments of three terra nigra vessels, and sherds of St. Rémy-en-Rollat ware, in association with a timber hut. Excavations by L. P. Wenham near St. William's College produced two sherds of Firnisware, "varnished ware", of Claudian date. Another sherd of Firnisware was amongst an unstratified collection found in 1968 just north of the latter excavation. Firnisware is of German origin, apparently being manufactured in the Rhineland around A.D. 40 - 50. The most important collection comes from Hofheim (Ritterling, 1913). Wenham concludes that there is a strong case for pre-Flavian occupation by the Railway Station, a site beyond contemporary flooding levels which has produced the well-known enamelled belt-plate (Simpson, 1968, fig. 63, 0). Whatever the outcome of future research, Roman activity in Brigantia three or four times during Cartimandua's reign is indicated by literary evidence. It may be that the York occupation and the appearance of the P-brooches from Ousethorpe and Stanistan Hill, each with Hofheim

connections, should be linked with these operations.

In summary, there is very little material from the Brigantian territories of the Pennines and the north-east which can be ascribed to the period before the first century A.D. There is no evidence for Belgic settlement: the two hoards of uninscribed coins from the Calder valley discussed by Allen (1963, 21-2) may reflect unsuccessful attempts at penetration. The only substantial collections of pre-Conquest pottery, from Stanwick and York, are likely to reflect political and military movements.

As for south-eastern Yorkshire, the area of the Parisi, a little intrusion of pottery, brooches, and coinage can be seen (Fig. 79), but nothing on any scale which would interrupt native development (Fig. 80), particularly of pottery. These developments were so strong that several important pre-Roman pottery forms continued in use in the early Roman period with renewed vigour, as at Langton, Malton, and Crossgates. There is no settlement evidence to support the theory of Belgic immigration into coastal East Riding from the first half of the first century B.C., proposed by Allen (1963, 37) on the numismatic evidence. However, there was estuarine and coastal trading in the first century A.D., and that Belgic manufacturing techniques did penetrate Parisian territory in the immediately pre-Conquest decades is shown by outstanding metalwork pieces such as the Elmswell panel (Corder and Hawkes, 1940).

No reappraisal of the coinage of the Coritani is to be attempted here, since Allen's classic study is exhaustive and not invalidated by the few more recent finds. It seems possible, however, to broadly correlate his British K, or South Ferriby type, approximately dated to the period 30 B.C. to A.D. 10 (Allen, 1962 Table II), with the pottery of Dragonby Phase II and also with the brooches of Deal type, and to correlate his series of inscribed coins, dated down to the late forties A.D., with Dragonby Phase III



and with the more extensive later Belgic pottery and metalwork finds and settlements in the East Midlands. There seems to be a substantial injection of Belgic traits within Coritanian territory (Fig. 80), such as can be interpreted as some population intrusion and the imposition of a dynasty. Extensions of the coinage distribution to the north and west (op. cit., Map 6) should be seen as trading contacts and deposition early in the Roman period.

PART III

SETTLEMENTS AND STRUCTURES

## CHAPTER 1

### HILL-FORTIFICATIONS

Defended hill-top sites in the Trent-Tyne area probably approach 150 in number (Figs. 83-87). Many are known only from field-work and air photography. Regional surveys of such evidence (Forde-Johnston, 1962; Jobey, 1965; Preston, 1947, 1954) make detailed accounts here unnecessary. About 30 of the sites have been excavated, but although definitive reports are available for some, publication is incomplete or has not yet been attempted for over half of them. This discussion therefore relies to a considerable extent on unpublished information generously made available by excavators (in particular by F. A. Aberg, D. Coombs, and G. T. Emery). For several sites, however, little information has been supplied.

The importance of hill-top settlements and refuges with complex defensive structures, from the beginning of the first millennium B.C. in the central and western Continent, has recently been re-emphasised by Piggott (1965, 202), Hawkes (1971, 8-11), and Savory (1971, 259-60). An outstanding achievement of research in Britain within the last decade has been the demonstration that here too some such sites must date to a period technologically Late Bronze Age (Cotton and Frere, 1968; MacKie, 1969). The contribution of radiocarbon dating has been impressive. The question to what extent defended hill-top sites may be countenanced even earlier in the Bronze Age is high-lighted by the enclosures at Ram's Hill, Uffington (Piggott and Piggott, 1940; ditch averaging 3 feet deep and 10 feet wide, containing sherds of Primary Series Collared Urn; Longworth, 1961, 296; rubbish survival?), and Norton Fitzwarren, Somerset (CA, 28, 116-20; hoard of bronzes of "Ornament Horizon" type in outer ditch of banked and ditched defences). That the reasons for hill-fortification in earlier periods were largely economic and socio-religious rather than the need for concerted action in defence against invaders has been discussed by Cunliffe (1971).

The place of northern English sites in the European scene, as summarized by Hawkes (1971, 12), is vital, and demands re-examination.

Under prehistoric tribal conditions, the construction of defensive systems would have demanded communal effort (Shaw, 1970) of a more or less impulsive nature. One should not expect, therefore, complete comparability of structure between different sites, or, indeed, between opposite sides of the same defensive circuit. However, since by far the largest effort of hill-fort excavation in the north has been devoted to rampart structure rather than to the interior features of sites, a division of our treatment on a structural basis is desirable. Hawkes' own classification (1971) is unimpeachable: from fence, to wall, to dump. Following this tripartite treatment comes a consideration of the excavations at Castle Hill, Almondbury, and of unexcavated sites in the region.

#### i. Fences

The fence is the simplest and quickest method of settlement or area protection, and must have been a widespread feature from the beginnings of non-migratory occupation. Stout fencing around the sites of so-called Deverel-Rimbury occupation in southern Britain is well-known, as at Shearplace Hill (timbers set in a continuous trench: Rahtz and ApSimon, 1962, 299-301) and Itford Hill (timbers in chalk-cut post-holes: Burstow and Holleyman, 1957, 188). Because of the ubiquity of the fence as a structure, however, a direct origin in these second millennium enclosures for the stockaded and palisaded sites of the north would seem to be unreasonable: both are evidence of developing permanent settlement. Similarly, where fence structures are clearly of late Iron Age date, as at Granger's Pit, Staxton (Brewster, 1963, 145), no specific conclusions of continuity should be invoked. The treatment of all fenced settlements as a single category is thus unsatisfactory. Clearly distinct from the fenced

domestic settlements of the Middle Bronze Age, and also from the palisaded homesteads in hill-slope and valley situations such as West Brandon (Jobey, 1962) and Catterick (D. of the E., 1970, 14; 1971, 15), is the hill-top stockaded camp, such as is frequently recognised beneath later ramparted fortifications. Following Harding (1972, 17), the term "stockaded camp" has been afforded a defensive connotation, whereas the term "boundary fence" has a domestic one. "Palisade" is a structural description applicable to either and also to hill-slope and valley sites.

The distribution of stockaded camps is shown on Fig. 83. There are seven instances in our area of stockaded defences on the sites of later ramparted hill-forts. Excavations by F. A. Aberg (1967-8; this account is based on his information) at the promontory site of Eston Nab, overlooking Teesside from the south, located a palisade trench, about 150 feet within the rampart, following a slight scarp around the centre of the site. This is clearly the same feature as was excavated by Elgee (1930, 153-4), who cleared a length of over 100 feet but interpreted it as a series of hearths. The trench was about 1 foot deep and wide, of uneven section, cut into natural rubbly clay and packed with large gritstones up to three feet high. The recognition of post-locations within the trench proved difficult, but uprights may have been set at intervals of 8 feet. Sherds of pottery found in and around the palisade (Fig. 42, 1-4, 6-8, by Aberg; 9 by Elgee) may be dated to the seventh or sixth century B.C. on local analogies, and are clearly of Late Bronze Age rather than early Iron Age type (see Part II Chapter 2, iii).

West of the Pennines at Skelmore Heads, near Ulverston, Powell (1963), in his excavations of a hill-fort on a flat, subrectangular summit, located a palisade trench at various points on the perimeter. The best evidence came from Site D, where the trench was 8 inches deep and 15 inches wide, of rectangular section, on an alignment 4 feet beyond the outer face of the bank,

and from Site E, where it was similar but slightly wider, on one of the three sides seemingly unprotected by the bank and ditch. From evidence at other points it was concluded that the palisade was the earliest of the defensive phases, and that, although a continuous line was not located, a complete circuit forming a stockaded enclosure was intended. No dating evidence was recovered, but there was slight evidence that the later bank was of timber-framed box construction, at least in part.

There are three examples of probable stockaded camps on the southwestern margins of our area. In his excavations at Castle Hill, Eddisbury, Varley (1951, 34) found a palisade trench in Area 4 which underlay the front revetment of his inner rampart of the first major defensive phase. This he took to be evidence for a stockaded camp. An entrance structure in Area 3, approached by a hollow-way and comprising a narrow passageway defined by seven pairs of post-holes with a rectilinear timber guard-room to the south, may have been contemporary (op. cit., 29-33). It was reconstructed in stone. No material remains associated with the Eddisbury stockaded camp have been available for examination, but the inner rampart of the fort which succeeded the camp was of earth with front and rear dry-stone revetments and with, at certain points, quantities of timber thrown into the core (op. cit., 34-40). Another hill-fort excavated by Varley and underlain by a stockaded camp is Old Oswestry, Shropshire (Varley, 1948, 56). Unfortunately the publication of this site is incomplete, but pottery from huts behind the first ramparted defences is of probably sixth century B.C. date (see Part II, Chapter 3, ii). Further south, work by C.R. Musson (1970a; 1970b) at the Breiddin has added vital evidence to that recovered by O'Neil in the early 1930's. In 1969, a timber defence was discovered on a gently-curving course, in parts beneath and elsewhere outside the line of the later stone rampart. Upright timbers in separate holes about a yard

apart were associated with a few small pottery sherds. It is tempting to link the bronze nail-headed pins from the site (op. cit., figured), of eighth or seventh century date, with this stockaded camp.

There is also evidence of a stockaded camp at Mam Tor, the site already seen to produce pottery of early type (Part II, Chapter 2, iii). In a rampart section cut on the north-east side of the site in 1966, a rock-cut post-hole was found, over a foot beyond the line of the outer stone rampart revetment but clearly stratigraphically earlier. The layer through which the post-hole was cut underlay the revetment, and could be seen in a similar position in the 1965 cutting, so it is suggested that this layer may represent the accumulation of material against a stockade defence. That only a single post-hole was discovered within two cuttings of a width of six feet or less each is not surprising. A major pre-rampart defensive phase may be envisaged.

The last site to be considered where there is evidence for a free-standing stockade is Breedon-on-the-Hill. Excavation on this site has been sporadic since 1946 in advance of quarrying. The most recent report (Norwood, 1967) refers to a palisade within the line of the later rampart to the north-west of the site. Otherwise, the structures were considered very similar to those seen by Wachter (1964) in the eastern defences in his 1957 excavations. Wachter also found a row of posts, set in individual holes 2 feet apart, behind his rampart, but interpreted it as a contemporary tail revetment since the packing of the holes was heavily compacted. Such a tail revetment seems unlikely: none would be needed given the slope of the hill and the shape of the rampart as reconstructed (op. cit., fig. 2), and no inner post row was found by Kenyon in 1946, suggesting that, if present, its alignment was different from that of the rampart. A stockaded camp at Breedon-on-the-Hill should thus be considered likely.

Some of the pottery from the site could well date to the fifth century B.C. or even earlier (see Part II, Chapter 4, i).

As for the first proper rampart at Breedon-on-the-Hill, the evidence recovered by Kenyon, Wachter, and Norwood is to some extent complementary. The major component was a row of posts set 1 foot apart in a continuous rock-cut trench. Behind this was piled a layer of rubble and large boulders, thicker at the front, overlaid by a thick capping of earth, providing a roughly level platform. Upon this the main rampart core of limestone rubble was added, highest against the timber fence and sloping dump-wise behind. The height of the fence was estimated by Wachter (op. cit., 127) as 10 feet, and, since the posts were set less than 2 feet into the ground, some kind of horizontal timber-lacing from the posts backwards into the rampart core has been envisaged. In all these major features, the structure seems to be well paralleled at the Lausitz culture fort at Sörnewitz, Middle Germany (Hawkes, 1971, fig. 1, a), probably earlier than 800 B.C. (op. cit., 9). Although basically still a fence structure, added strength is imparted by a stone, rubble, and earth backing.

Where dating evidence is available, therefore, it seems that the stockaded camp is a pre-fifth century type and precedes more substantial rampart structures which are to be seen as a more permanent improvement. A specifically Late Bronze Age date may be offered for Eston Nab, Mam Tor, and the Breiddin. Outside our area, at Fenton Hill, Northumberland, a stockaded camp was found to underlie the two phases of timber-revetted ramparts of the 1 acre hill-fort (Burgess, 1972). Further west, the twin rows of closely-set post-holes beneath the rampart of the 17 acre fort at Birrenswark, Dumfriesshire, are interpreted as a stockaded camp, radiocarbon dated to  $500 \pm 100$  B.C. (GaK - 2203b; Jobey, 1971). To the north, the stockaded enclosure beneath the vitrified timber-laced fort at Cragmarloch Wood, Renfrewshire, has been dated to  $590 \pm 40$  B.C. (GaK - 995; MacKie, 1969, 18-9). A sixth or fifth century date has been suggested for stockaded camps



in southern England, particularly Blewburton Hill (Harding, 1972, 46), and it may be that the Breedon-on-the-Hill sequence, probably the latest of our group, begins here.

It does not seem justifiable to divorce a consideration of those other palisaded hill-top structures known in north-east England and the Border counties from those beneath hill-forts, since the general appearance must have been very similar (Feachem, 1966, fig. 1). Some of the distinctive features of the former sites, such as contemporary wide-spaced circuits, are also found on ramparted sites to the south, in this case as at Danebury and Old Oswestry (Cunliffe, 1971, 62). The sites of the Border counties, extensively discussed by Jobey (see bibliography), are beyond the scope of this survey, but those of the East Riding, of which Staple Howe is the prime but by no means the unique example, are not.

The defences at Staple Howe, according to Brewster's interpretation (1963, 9-15), were of three main phases. In each there was a single line of edge-set timbers, set in a continuous trench, running around the steep-sided hill roughly following the contours. Initially, the area enclosed was oval, 200 by 90 feet. Severe erosion of the sloping surfaces has obscured some of the details, but it is clear that the second palisade was more substantial than the first and was set on an alignment some 5 feet in vertical height down-slope. The third phase involved complete replacement and some realignment of the second. There was some evidence, not altogether conclusive, for the bracing of the main timbers by horizontal ties to smaller wooden pegs in post-holes behind (op. cit., fig. 7). The palisade trenches were of variable depth and shape, and densely packed. The most distinctive entrance structure ~~was~~ the three post-holes, spanning the 9 foot north-eastern gap in the first phase. The material remains suggest occupation from the early sixth century until the late fifth (see Part II, Chapter

3, i and ii). The fact that most of the pottery from the trenches was in filling rather than in packing suggests that the bipartite bowl with groove below the rim (op. cit., fig. 33, 1) need not indicate a late fifth century date for the first palisade and thus extensive pre-defence occupation. With the probability of the replacement of timbers in the trenches of any phase without recutting and thus without leaving obvious traces for the excavator, a period of 150 years or so is not unreasonable for the life of the settlement.

Brewster has suggested (in conversation) that there are over 100 such stockaded enclosures known in eastern Yorkshire. Examples are probably represented by the evidence from Grafton Hills (Waterman, et al., 1955) and Thornham Hill (see Part II, Chapter 4, i), but it will be some considerable time before his allegation is fully substantiated. It seems that although these examples known are in defensive situations, many others such as that at Catterick (noted later) are low-lying and thus to be considered as domestic enclosures rather than hill-fortifications. Meanwhile, a further hill-top site has been excavated by Brewster (on whose verbal account this description is based) at Devil's Hill, Heslerton. It was discovered when seeking a field system which might have been related to the Staple Howe settlement, 1.5 miles east of that site. Slightly larger, it was 270 feet across, describing a rough egg-shape governed by the configuration of a low hill-top. It was defined by a single continuous palisade trench with its entrance to the south (as at Staple Howe), a simple large gap, presumably closed by shifting hurdles as no post-holes were present. Inside there was a four-post structure and several hut-circles. The pottery was exactly comparable with that of the later phases of Staple Howe; indeed, laboratory examination concluded that some of the finger-tipped decoration had been made by the same hand (T.C.M. Brewster information; sherds not available for study).

If these two East Riding examples are typical, it should be stressed that a major factor differentiating them from most of those stockaded camps beneath hill-forts is size. Whereas the former are less than half an acre, the latter are about two acres at smallest (Eston Nab), increasing to 3.5 acres at Skelmore Heads, to over 15 acres at Mam Tor, Breedon-on-the-Hill, and Old Oswestry, and probably to 65 acres at the Breiddin. The former are homesteads rather than settlements, and if so numerous as Brewster supposes are examples of a common local type of defended settlement with those best-known occurring on hill-tops. One is reminded of the phenomenal development of the Maori pa in prehistoric New Zealand: basically a stockaded enclosure, the type occurs in a wide variety of locations (over 4,000 in number) with considerable diversity of palisade structure (Bellwood, 1971). Perhaps the abundance of the type may to some extent explain the paucity of true hill-forts in the East Riding.

## ii. Walls

Following the stockades on most of the sites just considered are various types of walled defence. These are more substantial constructions using earth, stone, and often timber, still retaining the idea of a vertically-faced barrier. For convenience, those ramparts incorporating timber will be considered first (Fig. 84). Although superceding the stockades at Eddisbury and possibly also at Skelmore Heads, the timbered box rampart is not always chronologically later. A most useful sequence of structures and associated radiocarbon dates has been obtained from the formidable Dinorben (Savory, 1971, fig. 1). The Period I rampart, 13 feet wide, was built of clay and rubble with a front revetment of upright timbers in a continuous palisade trench, a back revetment of widely-spaced uprights in individual post-holes, and internal horizontal cross-timbers. Radiocarbon dates from charcoal of this rampart were  $895 \pm 95$  and  $765 \pm 85$  B.C. (V-122

and V-125; op. cit., 254). The Period II rampart, built on the remains of Period I, was 10 feet wide and also timber-laced, but there was no sign of upright timbers. Instead, the vertical revetments were of stone. Radiocarbon dates from charcoal were  $535 \pm 85$  and  $420 \pm 70$  B.C. (V - 124 and V - 176; *ibid*). We thus have a timber-framed box rampart probably of the ninth century followed by a stone-revetted timber-laced rampart of the sixth or fifth century. Both ramparts had been burnt.

There are three definite and two possible examples of timber-framed box ramparts from our area. The best-known is Grimthorpe, an 8 acre site on the western edge of the Yorkshire Wolds (Stead, 1968, 152-5). The rampart had been completely levelled by ploughing, but survived as a double row of post-holes, spaced at varying intervals of 6 to 10 feet, providing a somewhat meandering framework for a rampart 6 feet wide. That a rampart was present rather than a double-palisade is indicated by the filling of loosely packed chalk, tipped from the interior, in the outer ditch which was 6 to 7 feet deep and 10 to 15 feet wide. The berm was 12 to 15 feet wide. An entrance causeway between broadened ditch-terminals was not matched by a break in the post-hole sequence, but it seems that a gateway could have been accommodated between the regular spacings of the posts. The radiocarbon dates from the site (see Part II, Chapter 2, iii) indicate the likelihood of a ninth century date, and such is possible on the Dinorben analogy. However, the evidence of the material remains demands an extension into the later seventh at earliest, to which date the strikingly similar structures at Ivinghoe Beacon (Cotton and Frere, 1968, fig. 3) may be ascribed, also on the basis of pottery. There is thus a discrepancy of some 200 years between the dates indicated. Perhaps there may have been a multi-period occupation of the site: the pottery in the ditch fillings was stratified above the rubble of the collapsed rampart.

The closest parallel to Grimthorpe is to be found in the central of the three ramparts enclosing the small oval site at Castercliff, Lancashire, excavated in 1970-1 by D. Coombs (on whose information this account is based). This rampart was defined by continuous bedding trenches front and rear 6 feet apart in which were set chocked post-holes up to 3 feet deep and about 6 feet apart. The rubble core survives up to 5 feet in height, and the bowed outline of the revetting, curving from pressure within, was visible in the excavated sections. Beyond the rampart was a rock-cut ditch, 5 feet deep and 6 feet wide at the mouth, with a probable counterscarp bank. There is evidence that this defence was abandoned before completion: of three areas excavated, in one between two rampart sectors the ground had not been disturbed, in another at the end of a rampart sector the bedding trenches were seen to terminate, and in the third the bedding trenches and the ditch all ended on one line, presumably defining an entrance. The inner rampart at Castercliff was much denuded owing to removal in the nineteenth century (documentary evidence offered by D. Coombs). It consisted of low rubble and timber deposit, very heavily vitrified (laboratory examination by R. F. Tylecote), probably of a stone-revetted, timber-laced rampart. There was no associated ditch. Either the outer defences represent an unfinished addition, or the inner defences were built after the outer had during construction been considered unsatisfactory. No result has been obtained from excavation in the interior, and there is no stratigraphical relationship between the two main ramparts. Samples for radiocarbon assay have been collected but not yet examined.

Excavations of the earthwork enclosing the 50 acre promontory site at Sutton Bank, east of Thirsk, by A. L. Pacitto in 1969-70 produced evidence of a timber-framed box rampart. One account (D. of the E., 1970, 14) refers to evidence for front timbers rising vertically from the bottom of a flat-bottomed ditch, but another (D. of the E., 1971, 15) reports that

the ditch, 6 to 7 metres wide and 2 metres deep, again flat-bottomed, was separated from the bank by a berm 2 to 3 metres wide. The bank was said to have a row of vertical timbers 2 to 2.5 metres apart near its front, with a similarly-spaced row 2 metres behind, and 1.5 to 2 metres behind that a parallel trench which might have anchored diagonal bracing timbers. Unfortunately no further information on this site has been available.

There are two possible examples of timber-framed box ramparts to consider. At Skelmore Heads (Powell, 1963), hollows in natural rock at various points may have been post-holes. Those on Site D seemed to define the front and rear of the bank, and those on Site A formed a regular pattern defining the limits of an entrance. However, the conclusion of the excavators was that the bank of earth and stones was of simple dump construction, some attempt at stabilisation being represented by larger boulders at front and rear. The excavations at Portfield Camp, Lancashire, are still continuing, but evidence already recovered (Beswick, 1970) suggests that the inner rampart with a ~~stone~~ and clay core had been revetted at the front by a double row of large upright slabs set in a gully, behind which a single post-hole seems to indicate a timber framing. No evidence of the rear revetment is yet available. Some form of timber revetment strengthened at the base by upright slabs is possible.

Although the site is to the south of the area with which this study is primarily concerned, mention must be made of the rampart structures at Hunsbury, Northamptonshire, excavated in 1952 by R.J.C. Atkinson (information from lecture notes lent by D. W. Harding). The first of the two main phases discovered concerns us here. A cutting at the north-east of the 4 acre site showed that the earliest rampart was defined by timber revetments front and rear, set in individual post-holes. There is evidence for a third row of uprights along the centre of the rampart, which had a core of ironstone rubble and clay in which could be seen the voids left by the decomposed vertical

timbers. Horizontal layers of burning in the rubble indicated cross-beams. Particularly in evidence along the back revetment (the front area was badly eroded) was a supporting structure of limestone blocks, giving extra strength to the posts below and above ground level. The ditch was large, originally with a flat bottom and vertical sides. A further cutting to the south, north of the entrance, revealed a similar ditch, and a rampart of the same general nature except that the rear timbers were set in a continuous trench. Again, limestone blocks supported the timber framing, probably because of the great lateral pressures of a clay core. It is significant that limestone does not occur naturally in the vicinity. A similar structure with timber framing and lacing, a rubble core, and supporting masonry blocks in the revetment at the Schafberg, Löbau, Middle Germany, has recently been re-illustrated by Hawkes (1971, fig. 1, d). The material remains at Hunsbury suggest an initial occupation from the fifth century B.C. (see Part II, Chapter 4, i).

Of the type of rampart identified in Period II at Dinorben, the stone-revetted timber-laced construction, there are seven examples from our area. One, of which little is known because of its destruction in the last century, has already been noted at Castercliff. Of the others, the three excavated by W. J. Varley are the best known: Eddisbury and Bickerton, Cheshire, and Castle Hill, Almondbury. Since a considerable amount of evidence from the Cheshire sites has been published (Varley, 1935; 1936; 1948; 1951; re-considered by Cotton, 1954, and Forde-Johnston, 1965), only brief summaries will be offered here.

At Maiden Castle, Bickerton, a small promontory site, the inner of the two ramparts was composed of a core of sand and timbers in layers, resting on a levelled floor of natural glacial drift. The timbers were in layers 6 inches to 1 foot apart, and were laid lengthways, crossways, and diagonally. They ranged in size from large trunks to small twigs. This was revetted at

the front, rear, and above by dry-stone walling and capping, forming a consolidated structure up to 8 feet high and up to 17 feet wide. Originally it may have stood at over 12 feet. The timber was carbonised, and although it might have been burnt there is no comment on the state of the surrounding sand to indicate whether it had been affected by heat. A sherd of a coarse, plain, high-shouldered vessel was found in an occupation layer contemporary with the use of the inner rampart (Varley, 1964, fig. 38, 4; 1936, 105-6). It may date to the fifth or sixth century. The outer rampart at Bickerton was a sand tip against an outer stone revetment which seems to have been subsequently strengthened. There is no evidence of the date of this structure.

At Castle Ditch, Eddisbury, Varley (1951) considered that the first ramparted defence formed a univallate enclosure around the eastern half of the hill. In Area 4, this rampart was found to consist of an earthen core, revetted front and back by stone walling, and with branches of trees incorporated in the core at intervals. The ditch was narrow and deeply V-shaped. The entrance structure in Area 3, with timber revetment and timber guardroom, may belong to this defensive phase. Subsequently the hill-fort was extended to enclose the whole hill. The evidence of later phases is not clear, but it seems that a univallate extension with dump ramparts may have been succeeded by a bivallate defence with stone revetments. This latter phase was probably connected with the rebuilding of the entrance in Area 3 in stone and the completion of a second rectangular stone guard-room, and with the construction at the north-western end of the camp of an inturned entrance. This latter entrance was of complicated construction. The inturned ramparts had stone revetments front and back, and a clay core with horizontal timber-lacing, heavily fired. Behind the outer revetment, rows of supporting posts were found, extending back from a double gate with central stop. Behind the southern inturn, the revetment base was laid on



a clay floor on which were found sherds of plain, high-shouldered vessels and also jars with finger-tipping on rim and shoulder. These sherds could be of sixth or fifth century date.

The sequence of structures at Castle Hill, Almondbury (Varley, 1948, figs. 2 and 5; for detailed discussion see section iv of this chapter), as interpreted by Varley, is somewhat similar to that at Eddisbury. The first defence was supposed to consist of a small enclosure with rampart and outer rock-cut ditch to the south-west of the hill-top. In period II the fort was extended to enclose the whole summit, with a rampart of shaley clay on a basal raft of horizontal timber planks ~~with~~ large upright flagstone revetments. The whole circuit seems to have been reconstructed in period III with a rampart core of shaley clay, stone, and timbers, laid down above the remains of the earlier rampart and revetted with dry-stone walling. This rampart was heavily burnt (Plate I). Its timbers were arranged lengthways, crossways, and upright, and were laid between the stones of the revetments (Plate II). The timbers produced a radiocarbon date of  $555 \pm 100$  B.C. (I - 4542; sample from 1969 excavations). In both periods II and III there was a ditch, recut and broadened in the latter phase, and a counterscarp bank. Multivallations were added on the more gently-sloping eastern side. Outworks of dumped shale were also constructed at some stage, forming an outer enclosed area interpreted by Cunliffe (1971, 62) as the provision of pasture. These double shale tips had an intervening ditch in which were set obliquely-angled pointed stakes sticking upwards. Perhaps these are a further example of concealed chevaux-de-frise, which Harbison (1971, 220) suggested could have been introduced into Britain together with the use of timber-laced ramparts. It is possible, therefore, that the prehistoric fortification sequence at Almondbury could have run its full course by the fifth century B.C.

Three other examples of timber-laced ramparts lie between Cheshire

and Almondbury. At Berth Hill, Staffordshire (Fig. 51), the first phase of fortification as seen on Site B (Fig. 55) seems to consist of a core of silt below and clayey earth above, set on a levelled platform cut into natural sandstone, and revetted at the front and at the top of the quarried back-wall by sandstone boulders. There was some charcoal in the clayey earth, which is a deposit comparable with that incorporating timber beams found on Site C (Fig. 56). From the somewhat unsatisfactory record of Site C it seems that the rampart was laid on a naturally level sandstone surface, and was again revetted at front and rear with boulders. There is no dating evidence from this first defence, which is overlaid by a sand dump rampart. A pottery rim-sherd (Fig. 3, 14) was found upon Layer 6 below Layer 3 on Site B, and so is not demonstrably contemporary with either the dump or the box rampart. There is evidence from other excavated cuttings, particularly below Site C, that beyond a ditch a second rampart consisting of a simple sandstone boulder wall, laid upon a levelled platform, had also been overlaid by a sand dump rampart (G. T. Emery information). The multivallate construction and complicated entrance to this site indicate its archaeological potential. The fact that the whole of the interior of Berth Hill has been deep-ploughed and planted with trees during the past five years represents a savage violation of British archaeology.

Further east, at Bunbury Hill, Alton Towers, the massive surviving rampart of a presumed fort, reported in 1686 (Plot, R., Nat. Hist. Staffs., 410) to have had double and treble ramparts enclosing 100 acres, was excavated in 1961 by Miss M.-J. Mountain (on whose information this account is based). A single narrow cutting revealed that the rampart, set above steep natural slopes, was about 20 feet wide and revetted front and rear with rough sandstone walls. The core was of earth and sandstone rubble, and incorporated in it was a large quantity of timber, laid in haphazard manner, mainly lengthways and crossways, sloping downwards from front

to back. Ranging in size from large boughs to small twigs, all was burnt. No dating evidence was recovered.

The oval 2.5 acre fort at Wincobank, north of Sheffield, almost certainly provides an example of timber-laced rampart construction. Excavations in 1899 (Howarth, 1899) indicated that the internal rampart, surviving to a height of about 3 feet, was 18 feet wide, and had well-built stone revetments. The core was of sandstone rubble, badly burnt and in parts fused, with variable quantities of charcoal and burnt timber. There was an outer earthen rampart with a little burnt wood and burnt stones, and a ditch between the two ramparts. No material remains were found.

Excluding Dinorben, therefore, we have at least three sites with timber-framed box ramparts and seven with stone-revetted timber-laced ramparts in the Trent-Tyne area. The Dinorben evidence suggests that the former type is earlier than the latter. Grimthorpe is of ninth or seventh-sixth century date, and Almondbury III, Bickerton, and Eddisbury are of sixth-fifth century date, on the radiocarbon and flimsy pottery evidence which we have. This supports the Dinorben sequence, but at Castercliff we have an ~~inner~~ vitrified timber-laced rampart and an outer incomplete timber-framed box rampart, possibly suggesting the opposite. The timber-framed box ramparts of Hunsbury, Maiden Castle, Dorset (Wheeler, 1943, Pl. II), and Blewburton Hill, Berkshire (Harding, 1972, 47-50), probably date to the fifth or earlier fourth century B.C., whereas the vitrified timber-laced forts in Scotland at Finavon, Angus, and Dun Lagaidh, Wester Ross, have been dated to  $590 \pm 90$  and  $490 \pm 80$  B.C. respectively (GaK - 1224, and GX - 1121; MacKie, 1969, 18). One should beware, therefore, of arriving at over-simplified conclusions. The significant fact is that no timber-laced or timber-framed rampart in England north of the Midlands can at present be proved later than the mid-fifth century B.C.

It will have been noted during this discussion that all examples of

stone-revetted timber-laced structures in our area, except perhaps Bickerton and Berth Hill, have been heavily burnt, leading to vitrification or at least considerable reduction and some slumping. The period III rampart at Almondbury is an outstanding example of this phenomenon (Plate I). Bearing in mind the buckling and slumping which would result from the intense heat of rampart combustion, vitrification can hardly be interpreted as a deliberate attempt on the part of the builders to achieve a solid structure. Even allowing for the large amounts of green timbers incorporated, spontaneous combustion of complete defensive circuits seems highly improbable. Accidental or hostile ignition, leading to intense burning made possible by the large amounts of air inevitably retained around the haphazardly-placed timbers, is the more likely interpretation.

Some vertically-faced ramparts of hill-fortifications incorporated no timber but were entirely of earth, rubble, and stone (Fig. 85). Perhaps the best example of a stone-revetted box rampart is Mam Tor. Here, two sections were cut through the defences on the north-east side of the fort. That of 1965 (EMAB, VIII, 2) indicated a rampart 18 feet wide resting on an artificial rock-cut platform. Alternating layers of clay, stone, rubble, and thin turf survived to a height of 10 feet, representing stages in erection rather than different periods. There was evidence of dry-stone wall revetments at the front and rear, that at the front having mainly fallen into the ditch. The rock-cut ditch was of variable shape, generally square-profiled and 8 feet deep. The material from its cutting had been tipped outwards to form a low counterscarp bank. There was distinct evidence that in the construction of the main rampart an earlier, smaller rampart had been cut away leaving a thickness of up to 5 feet at the rear. The section of the main rampart excavated in 1966 showed it to be several feet narrower, again composed of successive layers, with the front and back stone revetments

surviving more completely. Accepting the evidence of the post-hole beyond the front revetment in the 1966 section as indicating a stockaded camp, three phases of the defences at Mam Tor can be seen. No datable material has been found associated, but that from the enclosed settlement suggests a date for the stone box rampart before the sixth century B.C.

Stone-revetted box ramparts of probably early date may be recognised at Ball Cross, Bakewell, and Portfield Camp, Lancashire. Others are the Allen Knott Earthwork, Helsby Hill, and Woodhouse Hill. (For locations and references, see Notes on Figures 85.) Stone revetments may also be recognised at Old Oswestry, the Wrekin, and the Breiddin. It is not possible, however, to interpret stone-revetted ramparts as always of Late Bronze Age or very early Iron Age date. The stone ramparts of Periods III and IV at Dinorben were associated with paired rectangular guard-chambers at the south-east entrance (Savory, 1971, 256); paired guard-chambers at Croft Ambrey and Midsummer Hill Camp in Herefordshire have been dated to the fourth and third centuries B.C. (Stanford, 1971, fig. 10). There is some evidence from our study, however, that as at Rainsborough (Avery, et al., 1967, fig. 4) and Maiden Castle, Dorset (Wheeler, 1943, Pl. II), and in the Welsh Marches (Stanford, 1971, 50), ramparts of box or wall construction were succeeded by those of dump construction to a considerable extent from the third and fourth centuries B.C.

The construction of the ramparts of the small fort at Boltby Scar, east of Thirsk (plan: Elgee, 1930, fig. 54), is not certain. G. F. Willmot, who excavated the site in the late 1930's, considered (in correspondence) that the rampart, 3 feet high, was formed of a simple rubble upcast from its outer ditch. The pair of gold basket-shaped ear-pendants found on the turf line beneath the rampart he considered to be a votive offering placed when the structure was erected. The ramparts enclose the sites of

at least two barrows. After a large part of the fort was wantonly bulldozed by the farmer in 1961, a great deal of Neolithic pottery was collected from the surface by Mr. T. Lord of Settle. However, fragments of a coarse, bucket-shaped pot (Fig. 42, 13) recovered by Willmot recall a vessel from Mam Tor (Fig. 1, 3), and the situation and character of the promontory fort suggest an early first millennium date. The remains of the levelled rampart are still impressively visible in plough-soil (Plates III-IV), describing a gentle curve. The site of an entrance (not marked on Elgee's plan) with some external structure is well-defined. Considering the evidence that dump ramparts are generally later than walls it seems likely that some variety of the latter structure was present at Boltby Scar.

Before turning to dump structures, an enigmatic site at Carl Wark near Hathersage should be noted. This site occupies a two-acre rectangular promontory, surrounded by steep scarps on three sides. These natural defences are strengthened by walling of large gritstone boulders. The narrow neck of the promontory, some 150 feet across, is defended by a massive wall face of large gritstone blocks, 8 feet high, backed by and bonded into a strong turf ramp on the inner side (cutting excavated in 1950; Piggott, C.M., 1951). To the south of the western end of the turf stone-faced wall, an inturned entrance about 18 feet long is further defended by massive gritstone walling (plans and photographs in Challis, 1969, figs. 7-8, Pls. 8-12). A rampart of turf with outer stone facing forms the inner defence of the fort at South Barrule, Isle of Man, carbon from one of the huts in the interior of which produced a date of  $523 \pm 84$  B.C. (Birm - 119; Harbison, 1971, 206-8). The outer rampart at Maiden Castle, Bickerton (Varley, 1934, 100-3; 1935, 103-5), seems to have been of similar character in both its phases, having a strong outer stone wall

facing backed by a broad ramp of sand and, later, rubble. It may be that in the mid-first millennium B.C. when a vertical inner face to a rampart was not necessary a stone wall backed by a ramp of some locally-occurring commodity was used instead.

### iii. Dumps

There are four examples to be considered of hill-forts with dump ramparts demonstrably secondary to wall ramparts. The first is Eston Nab, a 3.2 acre promontory site overlooking Teesside, previously discussed because of the palisaded enclosure in its interior. The site (plan in Elgee, 1930, fig. 53) was re-excavated in 1968-9 by F. A. Aberg (on whose description this account is based). The ramparted defences made use of a break of slope of about 4 feet in the boulder clay moorland surface. Two cuttings revealed a dry-stone wall, 14 feet thick, surviving in places up to 4 feet high, revetted at the back with larger blocks. This wall is visible on the surface around the whole perimeter of the site, and seems to be of uniform width. Immediately abutting the outer face of the stone wall was a simple dump bank of clay material taken from the ditch beyond. This bank was 16 feet wide and up to 6 feet high, and was seen to consist of layers 3 inches thick spread flat (this only evident in the cutting where ditch-quarrying had produced rubble with the clay). There was no berm behind the ditch, which was 6 feet deep and a simple V-shape, cut through boulder clay. In one cutting where ditch-quarrying had reached rock, the bottom was deliberately shaped into a squared slot. The counter-scarp bank consisted of a simple clay tip, 6 feet wide and 2 feet high. A thick turf line and iron pan underlay the defences, the latter thicker beneath the stone wall. Few material remains were found associated: a pottery sherd from beneath the stone wall (Fig. 42, 5) is of similar character to those found in and around the palisade. Aberg reports that,

despite efforts to prove the contrary, there was no unequivocal evidence of the priority of the stone wall over the clay dump, ditch, and counter-scarp bank. However, it seems unlikely that the clay dump could have been constructed with a vertical back-wall without the retaining effect of the stone wall already in position. The clay dump is generally higher than the stone wall, and can be seen to extend over it (partly a result of collapse). A ten-foot width of defence was sectioned, but no post-holes or other revetment evidence could be found. The sequence would thus seem to be a wall formed of stones collected from the surrounding moorland surface, followed by a ditch and internal dump rampart constructed immediately beyond it.

In passing, two parallels to the Eston Nab ditch form should be noted. The unpublished excavation of cuttings across the defences of the small hill-fort sites of Burton Lodge and Combs Farm Camp, Nottinghamshire, revealed steep, V-shaped ditches with squared slotted channels in their bottoms (May, 1966, 188).

The timber-laced stone-revetted defences at Berth Hill, Staffordshire, can be seen to be directly overlaid by dump ramparts of sand. The evidence is clearest on Sites B and C (Figs. 55-56). In the former, a fairly small dump of red sand was added to the still considerable height of the stone-revetted rampart, and in the latter the red sand tip was rather wider (but note the difference in scale on the drawings) and may have been retained at its base by sandstone blocks. On Site A (Figs. 52-54) the evidence is incomplete because of a failure to excavate to the base of the rampart deposit, but again it seems likely that there were base-revetments of stone to retain the loose dump. The dump excavated in Box 1 (Fig. 54) seems to consist of successive tips of sand, but it is not known to what extent any reconstructions may be represented. G. T. Emery (who kindly lent excavation notes) is quite emphatic that the laid stones above Layer 6 in Box 1 represent



a deliberate contemporary capping, presumably to prevent erosion of the dump surface. If so, the original rampart profile, probably approaching 20 feet in depth, must remain. Surface examination of the ramparts on the east side of the site below the pond (Fig. 51), where the cutting and infilling of a drainage trench had evidently taken place unsupervised, indicated that a second rampart downslope was composed of clean red sand, at least in its upper parts. This supports the evidence of excavation below Site C, which indicated that an earlier outer rampart of sandstone boulders had been overlaid by a sand dump. The cutting of a forestry track into the interior from the north-east to the central break in the inner rampart during recent operations has revealed a revetment to the dump rampart terminals of carefully-laid dry-stone walling with a slight batter, still visible up to six courses high. No dating evidence was provided by the Keele Extra-Mural Archaeology Group excavations. Further large-scale rescue activity on this valuable site is urgently necessary.

Excavations by R. J. C. Atkinson at Hunsbury revealed a second main phase of rampart construction overlying the timber-framed defence. The evidence was particularly clear in the southern of the two sections, just north of the entrance. The ditch had been recut, and the charred ruins of the old rampart were enlarged by piling up the ditch material in a dump, mainly of blue, mottled, and brown clay which underlies the ironstone deposit on the site. No revetments were found. There was a continuous slope from the bottom of the ditch to the rampart top, which still survives up to 8 feet above the ground surface. The occupation of Hunsbury seems to have ceased before the local arrival of Belgic influence, so although no dating evidence from the reconstruction was apparent, a date in the third or second century B.C. would seem reasonable. The site at Rainsborough, 20 miles to the south-west, was rebuilt with banks of dump construction at a suggested date in the late second century (Avery, et al., 1967, 211).

Maiden Castle, Dorset, exhibits the same structural sequence as Hunsbury: the westward extension of that site was executed in dump construction, probably around 300 B.C. (Wheeler, 1943, 36-7).

The fourth site to indicate the chronological priority of walls before dumps is Old Oswestry, Shropshire. Excavations by W. J. Varley (unpublished, but notes in Varley, 1948, 49) revealed that the first bivallate hill-fort and its reconstruction with additional bank and ditch on the weaker side were executed with stone box ramparts. Subsequent circumvallations, multivallations, and complex entrance structures were of massive dump construction. The only evidence of date is the haematite-coated furrowed bowl found in circular stone-kerbed huts behind the original defences (Varley, 1964, 90). It is not known how much later the dump reconstructions took place. However, Stanford (1971, 50), summarizing the evidence of hill-forts in the Welsh Marches, indicates an important horizon in the early fourth century marked by the use of large dump ramparts.

The most outstanding defences in dump construction in the north of England were excavated by Wheeler at Stanwick, south of the Tees, in 1951-2. On the basis of surface examination of these massive fortifications, a three-fold structural sequence was proposed (Wheeler, 1954, 3-6). The first was a 17 acre enclosure occupying a low hillock known as "The Tofts". Although not naturally strongly defensive, its situation within a broad flat area allows the use of the term 'hill-fort'. The second was an enclosure of 130 acres, cutting across the defences of phase I at their northern edge, including a large area of rising ground but excluding the defensible Henah Hill. The third was an obvious extension to the south of phase II, enclosing a further 600 acres. Excavation indicated that the phase I defence was a dump bank of unrevetted earth (but note stonework on the inner side of Site E and of the trench to the south-east; *op. cit.*, Pl.

VII), 25 feet wide and surviving up to 8 feet high, with an outer ditch conceived as a broad V-shape up to 20 feet deep immediately beyond, and with a slight outer bank where the ditch depth was restricted by the high water-table. The phase II defence was more massive, with a rampart 40 feet wide surviving to 10 feet in height, revetted at the front, probably nearly vertically, with a dry-stone wall. The outer ditch was up to 15 feet deep, the lower part on Site A being rock-cut with a broad flat bottom. The defences of phase III seem to have been essentially similar to those of phase II.

Wheeler's strongly-argued dating evidence for the phases II and III fortifications is fairly convincing. The quantity and the nature of the material from the ditches of phase II on Sites A and B, and the position of Roman pottery and a coin in the ditches of phase III on Sites D and H, indicate the likelihood of a first century A.D. date. The chronological priority of phase II before phase III seems reasonable, although it was not placed beyond doubt by excavations at points of junction. The sequence of structures at Stanwick may indeed have been most complicated, but Wheeler's conclusions should not be refuted before further work is carried out. However, the suggested dating of the phase I defence, given as subsequent to the compact with Ostorius (A.D. 47-8; *op. cit.*, 18), is much less satisfactory. The evidence is taken from the interior area-excavation on Site F, the imported pottery from which indicates an initial date around AD. 50 and is directly comparable with that from the phase II defences. Although Site F is within the phase I defence, it is not stratigraphically related to it. Proximity is not evidence of contemporaneity. Site F lies within the phase III defence, and, although it lies outside the phase II extension, only that part of the phase I rampart included within the phase II circuit seems to have been destroyed (Site G; *op. cit.*, Pl. VII).

Moreover, it would seem unreasonable for the phase II defence to cut across phase I if the whole were conceived as a coherent extension. The cascade of stones in the ditch filling of phase I on Site E (op. cit., Pl. VII), interpreted as a destruction of the stone lining of the nearby entrance (op. cit., 6), begins above a depth of silting of almost 5 feet. The entrance destruction probably took place during the construction of the defences of phase II, which pass some 30 feet to the north. The phase I defence is significantly different in structural detail from subsequent constructions. Although the coarse pottery from Stanwick is of late Iron Age date (considered in Part II, Chapter 6, ii) and comparable with that in other late assemblages nearby and further south, none was found associated with the phase I defence, which produced no material apart from animal bones despite the proximity of Site E to the entrance of that phase.

It is suggested, therefore, that the phase I defence at Stanwick was built some considerable time before the erection of phase II, during which interval five feet of silt accumulated in parts of its ditch. The simple dump construction and V-shaped ditch of "The Tofts" contrasts directly with later structures. The dwelling sites and material remains of the phase I occupation have yet to be recovered. The gullies on Site F (op. cit., fig. 3) do indicate at least three superimpositions.

Apart from the Stanwick fortifications, there is no evidence of the existence of the late Iron Age earthwork defences of settlement areas such as might compare with Dyke Hills, Dorchester, and the Grim's Ditch network of the Upper Thames (Harding, 1972, 54-60), or the oppidum defences of Continental late La Tène settlements. There are eight possible examples, but in each case recent work has indicated the likelihood of a later date. The Aberford Dykes system north-east of Leeds (Alcock, 1954; Brooks, 1967) consists of lengths of dump rampart, surmounted by a timber palisade and

with a sloping face stone-covered in places, with outer U-shaped ditch and some outworks. H. G. Ramm (lecture to East Riding Archaeological Society; 7. 4. 1971) considers it to be the bridge-head of the English fighting against Elmet. Further west, the similar earthwork at Bank Slack in the Washburn valley (Cowling, 1946, 148, fig. 68) is also south-facing above a deep valley, again relinquishing the most obvious defensive line in its sinuous course. At Kettlewell in Wharfedale, the strong linear feature of Tor Dyke, abutted by enclosures and pens which seem to be contemporary, has been accepted by Raistrick (1968, 63-4) as a Brigantian defence, but work by H. G. Ramm (unpublished information kindly offered) indicates that it may be part of the boundary of the Medieval park granted to the Nevilles in the early fifteenth century. To the north, Scots Dyke, a linear earthwork running from south of the Swale to pass the Stanwick fortifications to their east, has been considered, along with the Reeth and Fremington Dykes in Swaledale, to form a Dark Ages defence against Anglian entry and spread westwards from the mouth of the Tees (H. G. Ramm information). Similarly, the Roman Rig in the Don Valley (Preston, 1950) has been seen by Myres (Collingwood and Myres, 1937, 417) as evidence of prolonged resistance to Anglian invasion, and Grey Ditch, 12 miles to the south-west in Bradwell Dale (O'Neil, 1945), which cuts the line of a Roman road, may be interpreted likewise. Although a pre-Roman date cannot be completely ruled out for some of these earthworks (particularly Roman Rig: rim fragment of mortar-ium of third century A.D. type found associated with charcoal at the level of secondary silting in the ditch of the earthwork south-east of Hill Top, Kimberworth, in May, 1947), at present it seems unlikely.

The latest phase of fortifications at Castle Hill, Almondbury, consists of the capping of the earlier defences by a shale dump rampart (Figs. 57-60). Could this be a late Iron Age earthwork? Plentiful finds of

Medieval pottery from various points on, in, and under the shale dumps have enabled Dr. Varley to confidently assign them to the twelfth century A.D. (Varley, 1969, 11). Wheeler (1954, 23) and Richmond (1954, 44) chose this hill-fort site as the Camulodunum of the Brigantes, which experienced the sequence of events complementary to that interpreted for Stanwick in the first century A.D. Is there any archaeological evidence for this?

#### iv. Castle Hill, Almondbury, near Huddersfield

This 8 acre hill-fort site occupies one of the most imposing landmarks of the eastern Pennine foothills. Refortification in the later twelfth century A.D. as a motte and bailey involved the capping of the ruined pre-historic earthwork by a shale tip about 1.5 metres deep. This covering is partly responsible for the preservation of a depth of up to two metres in the deposits below. Unfortunately, however, Medieval and later occupation seems largely to have destroyed pre-existing structures over much of the interior.

Almondbury was excavated by W. J. Varley between 1936 and 1939, during which time a large number of sections were cut through the defences (site plan and layout of sections, Varley, 1969, fig. 3). A little excavation in the interior has been attempted: this has shown extensive Medieval occupation and some evidence of pre-Medieval post-hole structures of uncertain nature. Varley's main reports of his excavations are given in his 1948 and 1969 publications. The latter is a definitive pamphlet largely based on the activity of the pre-war years. There is a summary in his Cheshire before the Romans of 1964 (96-7). Cotton in 1954 (86-7) re-stated much of the published evidence then available. Further excavations took place in 1969 and 1970 with the objects of clarifying some of the problems outstanding and of obtaining material for radiocarbon dating of the prehistoric structures. Before independent dating evidence became

available, the major hill-fort at Almondbury was interpreted as a defence of the first centuries B.C. and A.D., destroyed by the Romans.

The evidence for pre-Roman structural sequences at Castle Hill is rather complicated. Since stereotyped reconstruction sketches of the suggested phases have been published (Varley, 1948, fig. 5; 1969, fig. 1) in place of the individual rampart sections as excavated, it is not easy to reinterpret the evidence of the earlier excavations in the light of the recent ones. However, some of the unpublished drawings have generously been made available by Dr. Varley.

The period I defence was described by Varley in 1948 (46) as a simple univallate earthwork occupying only the southern half of the steeply-sided plateau. From the evidence of the defences which cut across the plateau, the rampart was said to be box-shaped and stone-revetted with an earthen core, separated from a rock-cut ditch by a berm. Excavation of the entrance (Site 9), centrally-placed in this cross-rampart, revealed a rectangular guard-room to the south side, about 8 feet wide, defined by walls of the same nature as the rampart. The section drawing of the period I defence given in 1948 (fig. 5, 1) showed a rampart 12 feet wide, defined by a kerb of double edge-set stones, and with a core of false clay laid above a base of puddled clay. Timber beams were shown running horizontally lengthways at the base of the back revetment. The section drawing of the same period I defence given in 1969 (fig. 1, 1) showed dry-stone revetment walls and a core of clay, a deep V-shaped ditch, and a small counterscarp bank. The only dating evidence came from the rectangular guard-room. In 1969(10) it was stated that Roman pottery was found in it, interpreted as Roman destruction after abandonment.

In Varley's period II defence, the original camp was extended to enclose the whole of the summit. Excavations at the northern end of the period I

cross-defence (Site 6) indicated that the earlier ditch was blocked with quarried stones and that the new rampart was extended across it. However, excavations at the southern end (Site 2) showed that the period I rampart had been erected over the line of a shallow ditch which enclosed the whole hill (W. J. Varley information in conversation). The extension defences were stated in 1948 to consist of an inner rampart of the same structure as period I, an outer ditch, and a counterscarp bank. The section drawing given in 1948 (fig. 5, 2) showed a rampart 24 feet wide with upright post revetments front and back and a core of clay over a base of cobbles, a broad V-shaped rock-cut ditch, and a counterscarp bank with edge-set double stone revetments, upright post within the back revetment, and a clay core. The section of the period II defences given in 1969 (fig. 1, 2) showed a rampart 15 feet wide with stout revetments of dry-stone walling, a clay core, and a single horizontal timber brace from front to back, a free-standing timber post behind the rampart presumably associated with occupation floors, a narrow, flat-bottomed ditch, and a simply-tipped counterscarp bank. However, section drawings from Sites 11 and 12 at the northern end of the extension either side the simple entrance (unpublished) indicate an inner rampart something less than 20 feet wide, defined by edge-set double stone rows front and back and with a clay core, a broad U-shaped ditch, and a clay-cored, edge-set stone revetted counterscarp bank as shown in 1948.

The period III defence was said to consist of a complete rebuilding of the inner rampart of the extended fort. The new rampart core of earth was laced with timber laid horizontally, lengthways, and crossways, and these timbers penetrated between the stones of the stout dry-stone walling revetment at the rear but not at the front. This structure was 17 feet wide (1948, fig. 5, 3), and seems to have been vitrified throughout almost all its length. The ditch was recut, broadened, and given a flat bottom. The counterscarp bank was also reconstructed with dry-stone wall revetments



and a timber core, and had been vitrified (seen particularly in unpublished drawings of Site 14). At some stage either before or after this rebuilding, multivallations and a defended annexe were added on the north-east, using ramparts with earthen cores and dry-stone wall revetments. In 1964 (97) Varley stated that the reconstruction of period III was in *Murus Gallicus* style with beam-holes and nails, and that it was the Romans who fired the ramparts. There is no evidence known to the present writer of the use of nails in the rampart construction.

A final circumvallation at Almondbury is known as period IV (1948, fig. 5, 4), or as the "ultimate hill-fort" (1969, 9). There is evidence on the ground of a double scarp running around the whole site between 100 and 250 feet downslope of the other defences. Excavations at the south-western end (Site 8) showed these to be double ramparts of shale, of dump construction, the outer with a capping of clay, with an intervening ditch. The illustration in 1948 shows a third shale tip immediately downslope. An important feature is the presence of a row of pointed stakes, inclined outwards, set in the natural rock of the ditch-bottom.

The results of the excavations of 1969 and 1970 have necessitated a radical reappraisal of the chronology of Castle Hill. Carbon samples from the timbers incorporated in the period III rampart have been dated to  $555 \pm 100$  B.C. (I - 4542). Provisional results of thermoluminescence analysis of the period III rampart indicate 500 B.C. as the approximate date of the burning (University of Oxford laboratories). "Such early dates do not fit our facts" (Varley, 1969, 9).

A fragment of Arretine ware was found in 1939 on Site 3, not associated with the prehistoric defences. There is no other satisfactory material evidence from Castle Hill apart from the Roman pottery (which the writer has not examined) from the guard room of the period I entrance. This now calls

in question the whole concept of an earlier camp covering half the plateau area. With a total of only 8 acres, it seems unreasonable that the first rampart structure should not occupy the whole, considering the acreages enclosed by early fortifications at the Breiddin and Mam Tor, and the denial of defensive advantage by placing the entrance in the centre of an area of flat ground from which large tracts of land approaching to within 50 yards could not be observed. Truly, there is the stated evidence of ditch-blocking from Site 6, but the unpublished section drawing of Site 7, excavated in 1939, indicates pre-Medieval rubble deposits extending across the lips of the great shaft in the southern corner of the site, which the 1970 excavations proved conclusively to be a well of the Medieval period. The small period I camp must be seen as unproven. The chronological priority of the analagous original fort over the extended fort at Eddisbury, Cheshire, also excavated by Varley, seems open to doubt. Although the excavations at the junction of the two phases in Area 2 (Varley, 1950, fig. 8) indicate a complete change in rampart structure, the ditch of the presumed period I does not sweep round to cross the central area as does the rampart, nor are the extension ramparts at this point comparable with those in Area 1. The evidence is *unsatisfactory* and inconclusive.

Consideration must now be made of the structures recovered in the 1970 excavations at Castle Hill. Two sections were cut across the inner rampart of the extension camp in the north-eastern sector, 200 feet south of the northern entrance. That at Site 31 was 6 metres wide, and that at Site 31A, 6 metres to the north, was 1 metre wide. One section was cut through the inner ditch at the southern extremity of the fort, immediately below the site of the great shaft. This trench, Site 33, was 3 metres wide. The rampart sections (Figs. 57-60) clearly show the Norman shale tip (Layers 2 and 3) above the prehistoric rampart. The ditch section (Fig. 61) is less informative, but shows a layer of consolidated earth (4) between loose

rubble filling with Norman debris (3) and fine silty infilling with some burnt rampart material (6). The beginning of Norman deposits is thus clearly marked in each case.

In the rampart sections, the beginning of natural deposits is in most cases beyond doubt. On Site 31A (Figs. 57-58), natural Elland Shale beds (Layer 33) are overlaid by a naturally-occurring thick yellow-brown shaley clay (Layer 22). This latter deposit can be seen underlying the rampart on Site 31 (Figs. 59-60); the existence of natural rock about 1 foot beneath was confirmed by trial-trenching. The only problem relates to Layer 21 (Fig. 59), in front of the rampart revetment on Site 31. This is interpreted by Dr. Varley as a compacted filling to a shallow ditch which would thus be the earliest structure on the Site. It would appear, however, to be a berm area forming support to the edge-set slab foundations of the front revetment.

Two different revetment techniques can be seen to operate in the rampart. The lower, and thus the earliest, seems to be rows of edge-set slabs, up to 3 feet in height, set 3 metres apart. Those at the front are seen collapsed in all sections (Figs. 57-9), whilst those at the back are often steeply-inclined outwards (Fig. 59) under the weight of overlying deposits. The wide-spaced double row which appears at the back on Site 31 (Fig. 59) is not found elsewhere. The rearmost slab is set at a higher level and is related to a post-hole, the packing-stones of which it abuts. It is thus to be seen as a separate structure, perhaps associated with a charcoal-rich layer (18). The inner slab forms the revetment. Both slabs cut into a charcoal deposit (Layer 19) which may represent pre-rampart occupation as found by Dr. Varley in other sections. Extending between the slab revetments of the rampart is a basal layer of grey-brown flecking upon which are laid planks, crossways and lengthways (Figs. 59-60; Plate I). This clay, or turf with planks, is to be seen as a raft deposit upon which

is laid a shaley clay core (Layer 16; Figs. 57-60), layered between rafts of turf (Fig. 60).

The second revetment method is of dry-stone walling using shale blocks. The front revetment has collapsed forwards (seen in Layer 14; Figs. 57-58), but the back revetment survives, inclined inwards on the collapse of the rampart within and under the weight of deposits above (Figs. 57-59). This back revetment is clearly seen to be inter-laced with rows of horizontal timbers protruding to the revetment edge (Fig. 59; Plate II), and possibly also linked with vertical timbers within. There is no such evidence from the front revetment because of its collapse. The revetment is thus an integral part of the rampart core, which consists of Layers 6-13 and 15, all of which, except the latter, are affected by burning. From the less-intensely burnt parts of the core it can be seen that the quantity of timber in the rampart varies considerably. Most is laid horizontally, in layers crossways and lengthways (Fig. 57 in particular). There is also a considerable quantity of stone in some parts, whereas others are of comparatively 'clean' shaley clay with probable turf layers (Figs. 59-60, Plate I).

It is suggested, therefore, that these two superimposed rampart structures may be equated with Varley's periods II and III. The division between the two in the core is seen to be the upper surfaces of Layers 16 and 20. Layer 16 differs significantly from Layer 15 in being more compact and having a lesser shale content. The lower extent of the burning cannot be taken as the division between the two periods, as its depth depends on the intensity of the conflagration at any point. Neither, therefore, can the gracefully-curving layers seen on Plate I be considered to fill a "hole" in the earlier rampart: they are the result of the slumping of the rampart material on reduction, and their vertical extent marks the limits of the burning.

The burning has been fiercest in central and upper areas of the rampart (Figs. 57-58, Layer 9; Figs. 59-60, Layer 7). It seems to have been less intense on the periphery, and also less intense in those areas of the rampart with least timber content. It has been indicated by laboratory experiment (arranged by Dr. Varley) that the temperature required to reduce the shaley clay and stone to a fused clinker mass (Layer 9) is c.  $1200^{\circ}\text{C}$ , whereas the deeper orange/red colours are produced at c.  $600^{\circ}\text{C}$ . Spontaneous combustion of large stretches of rampart is considered unlikely by N.C.B. combustion experts. The evident contraction and buckling caused by the burning is hardly likely to have been the intention of the builders. Experiment (Childe and Thorneycroft, 1938, 44-9) has shown that, once ablaze, the interior of a timber-laced rampart generates terrific heat just such as would produce the firing zones at Castle Hill. Presumably the tie-beams which penetrated the stone revetments were set alight in a deliberate attempt at destruction.

The date of this destruction has been provisionally estimated as 500 B.C., and timbers from the upper rampart have been radiocarbon dated to around the sixth century. Our evidence suggests, therefore, a dry-stone revetted rampart with a timber-laced core, part of a bivallate defence around the whole plateau, Varley's period III, also seen in other rampart sections, particularly Site 14. The date of this structure is likely to be sixth century B.C. It was preceded by an edge-set slab revetted rampart with a clay core laid between timber and turf rafts, also part of a bivallate defence enclosing the whole plateau, Varley's period II, seen also particularly on Sites 11 and 12, possibly dating to the seventh century B.C. or earlier. There is a possibility of an even earlier defensive phase enclosing only half the hill-top. The ditch section (Fig. 61) indicates two pre-Norman ditch phases, the lower presumably but not demonstrably a deeper re-cutting of the upper. What relation the multi-

vallations to the north-east and the outer circumvallations have to these early defences is not known, but if the destruction of the main defensive system took place at c. 500 B.C., it is reasonable to expect them to have been in place before this time.

The rafted construction of the earliest rampart seen on Site 31 seems to be closely paralleled by structures described by Savory (1971, 253) in the core of his Period I rampart at Dinorben. This was of red clay, with alternating layers of grey clay, the latter being replaced by timbers in places. The interpretation of transverse beams, flattened by the pressure of the overlying material, laid in rafts within the clay bank, is very similar to that suggested at Castle Hill. The horizontal bands of grey-brown clay are shown on Fig. 60 as turf lines, the lower of which is replaced by timber beams in places. The edge-set slab revetment is paralleled by the inner rampart of Portfield Camp, Lancashire (Beswick, 1970; Tyson and Bu'Lock, 1958), interpreted as the earliest rampart on the site, replaced by a clay cored, stone-revetted rampart with berm, ditch, counterscarp bank, and outer ditch. The coarse biconical pottery from Portfield indicates a late Bronze Age date. On the Continent, the horizontal raft arrangement seems to have been used in the first phase of construction at the Wittnauer Horn in Switzerland (Bersu, 1945, pl. XVIII). The structural parallels to Varley's period II are thus early, covering the ninth and eighth centuries.

Can the outer circumvallations at Almondbury be wrested from the closing decades of the Iron Age on the basis of structural parallel? From Varley's descriptions it seems that, at least in the area excavated around the south-western entrance, the structures were double shale dumps with intervening ditch in which was set a single row of pointed stakes inclined outwards. These stakes may be interpreted as chevaux-de-frise, a defensive technique designed to hinder the progress of an approaching enemy, recently discussed by Harbison (1971). In Britain, chevaux-de-frise are usually of stone

and are arranged over broad areas. The best parallel for Castle Hill seems to be the only site with wooden stakes: South Barrule, Isle of Man (op. cit., 206-8), excavated by P.S. Gelling. This most exposed hill-fort site was enclosed by two ramparts. The inner was of turf with outer stone facing and had a ditch immediately to the outside, on the outer lip of which were arranged five rows of posts, mostly inclined outwards. Outside this was a larger rampart. A sample taken from a hut within the fort has produced the radiocarbon date of  $523 \pm 84$  B.C. (Birm - 119). The excavator considers that, although there is no stratigraphical relationship between the hut and the defence, the whole is to be regarded as a coherent settlement. The date is thus important. Overseas, a useful parallel is to be found at Koberstadt, Hessen (op. cit., 215-6). Within the ditches of the fort were found traces of wooden stakes arranged unevenly. The evidence of material remains suggests that this fortification existed by the seventh century B.C. Harbison concludes (op. cit., 220) that chevaux-de-frise were of wooden stakes in their earliest form, and began as early as Hallstatt C in Central Europe. The concept could have been brought to Britain together with that of timber-laced fortifications (ibid). The setting of stakes in a ditch at Castle Hill, presumably in concealment, is a feature which **may** be present at South Barrule. On this evidence, therefore, there is no reason to suppose that the outer circumvallations at Castle Hill are of any later date than the defences of Varley's period III. They are essentially of defensive rather than of pastoral significance.

There can no longer be doubt that, with the possible exception of the cross-ramparts and rectangular guard-room, the prehistoric defences at Castle Hill, Almondbury had lived and been destroyed by the fifth century B.C. The headquarters of Cartimandua, the pro-Roman queen of Brigantia in the mid-first century A.D., must be sought elsewhere.

### v. Unexcavated Sites

The distribution maps of hill-fortifications with stockades and box ramparts (Figs. 83-85) show a thin but fairly even spread, which correlates well with the distribution of Late Bronze Age pottery (Fig. 71). The distributions of material remains of the Iron Age periods (Figs. 72-75) are more predominantly southern and eastern, a situation not reflected by the few dump ramparted fortifications (Fig. 86) or by the distribution of unexcavated sites (Fig. 87; many unproven examples included). Stanford (1971, 51) has commented that the success of Iron Age hill-fort communities in the Welsh Border stands in contrast to the poverty of the hill-fort experiment in eastern England. That this is a fair generalisation in our area is clear: most excavated hill-forts are of a period earlier than the mature Iron Age. Evidently the role of the hill-fort was not dominant in the social and economic life of the Iron Age, particularly in the East Riding and over much of the East Midlands.

The contrast between the scarcity of hill-forts and the concentration of other material is most pronounced in the East Riding. Apart from Grimthorpe, an early site with probably sparse interior occupation, only one may be identified with certainty. Recently discovered by air photography is an irregular 8.5 acre fort at Green Land, near Rudston (Plate V). It is situated north of the valley of the Gypsey Race, above steep slopes to the west and south and a marked natural depression (band of darker soil with square-ditched barrows on Plate V) to the east. Almost completely ploughed out, the defences survive as a scarp about 1 foot high (RCHM field information). The crop-marks show a ditch about 15 feet wide, and possibly a narrower inner trench. There is an inturned entrance to the east and possibly an overlapping entrance to the south. There are only slight traces (on other photographs) of internal circular features, suggesting a



small scale of interior occupation comparable with that at Grimthorpe. A third hill-fort may be represented by a promontory site at Acklam Wold, cut off by a triple dyke (RCHM information). The dyke may be related to a complicated system of linear earthworks in the vicinity rather than conceived in isolation as a defence, however. No other examples are known from the East Riding despite exhaustive air photography and reconnaissance. The hill-fort cannot have dominated the population distribution for long, if at all. Other forms of settlement must have been important. It is likely that the settlement pattern was one of small scattered farms, often in non-defensive situations, enclosed by palisades earlier in the Iron Age (if T. C. M. Brewster's opinions on numbers are reliable) and by linear earthworks later.

In north-west England, possible hill-forts seem more numerous. We have already noted Skelmore Heads and the Allen Knott Earthwork. Air photography has located other likely sites at Swarthy Hill and Barrock Fell (see Notes on Figures, 87). Perhaps the only other strong contender is Carrock Fell (Collingwood, R.G., 1938; Plate VI), a 5 acre mountain-top site with extensive views to the north and east. Its shape is irregular, and there are no internal surface features apart from two cairns and traces of quarrying; its prehistoric testimony is not unequivocal. Other possible sites are not convincing. Castlesteads, Yanwath (RCHM, 1936, 253), termed by Jobey a 'multivallate fort' (1966b, 11), is oppressively overlooked and covers less than 0.25 acres. Castle Crag, Borrowdale, although possessing low peripheral walls of prehistoric character, has produced material of later date. The site at ~~Dacres~~ is more a defended farmstead than a hill-fort, and dating evidence is completely lacking. The contexts of Caermote Battery, Castle Crag, Shoulthwaite, and Dunmallard Hill are likewise obscure, and may be post-Roman. Other types of enclosed domestic settlement may be recognised in pre-Roman Cumbria: It may be that a low population

density and a lack of dynamic social organisation failed to produce the conditions necessary for the foundation of hill-fort communities.

In the north-east, the relatively high density of hill-fort sites north of the Tyne (Jobey, 1966a, fig. 1) is not continued southwards. In Co. Durham, the main defensive phase at Maiden Castle is likely to date to the Middle Ages, and the site at Shackleton Beacon is not beyond doubt, being damaged by quarrying and forestry. South of the Tees, the stone-walled promontory site at Castle Steads, Dalton, is an impressive stronghold, but no dating evidence is available. In north-east Yorkshire, Eston Nab, Boltby Scar, and Sutton Bank may all be seen in a pre-500 B.C. context. In these areas, various types of enclosed domestic homestead, to be noted in the next chapter, form the characteristic settlement type in the Iron Age.

In the central Pennines, the only site to offer convincing evidence of use as a prehistoric hill-fortification is Ingleborough, a 16 acre plateau site at 2373 ft. O.D. The precipitous edges are surmounted by a gritstone rampart which, particularly on the north and east sides, can be seen to be faced with upright stones and coursed walling. The rubble core seems to be compartmented within vertically-placed lateral stone rows set at intervals of 7 feet, a structure which A. King (addressing conference at Middlesbrough; 2.11.1969) has suggested implies the application in stone-work of timber-lacing techniques. In the interior, the foundations of at least 19 stone hut-circles can be recognised, and there are reports of the possible sites of timber huts underlying the stone ones (OS information). A piece of Castor Ware has been found on the summit by H. G. Ramm (YAJ Arch. Reg., 1967, 4), and A. Raistrick has recovered coarse sherds of Romano-British type (Elgee and Elgee, 1933, 120). These fragments may relate to the stone-built huts. The construction of such a formidable fortification within the Roman period is most unlikely. Given the evidence for timber huts, Ingleborough is one

of the few sites in and around the central Pennine limestone area of more than likely first millennium B.C. date. The dating evidence from the similarly bleak and mountainous sites of South Barrule and Mam Tor warns against a glib Iron Age designation.

In the peripheral Pennines, hill-fort sites other than those excavated are not numerous. Most are small, and are not readily distinguishable from other defended enclosures in hill-slope situations (some on Figs. 89-90). There is a notable concentration in the foothills south of Skipton and Harrogate. Barwick in Elmet, at 15 acres, is a more substantial site which demands excavation. To the west, Warton Crag is one of the most impressive sites in Lancashire, with three widely-separated ramparts running from cliff to cliff across a promontory, enclosing a total of 15 acres. In the Derbyshire Peak, a small group of hill-forts, including Combs Moss and Fin Cop, is significant; interpretation in terms of overall tribal frontiers is inadvisable, however, in view of the early dates indicated by excavations at Mam Tor and Ball Cross.

To the south, groups of hill-forts are of a character more akin to that of well-known sites beyond. To the south-west, the Cheshire and Staffordshire groups are important, with sites such as Castle Ring, Cannock, and Berry Ring, in addition to Old Oswestry and Berth Hill, suggesting occupation in the mature Iron Age period and thus an affinity with hill-fort communities in the Welsh Marches. To the south-east, a group of small forts in Nottinghamshire west of the Trent is notable. A few small sites of uncertain age are known in Lincolnshire, at Ingoldsby, Honington Hill, and Careby. Occupation of the middle and later Iron Age at Breedon-on-the-Hill, Burrough Hill, and Hunsbury again links the southern margins of our area with settlement patterns to the south.

The evidence of hill-fortifications in the Trent-Tyne area is to be seen in a predominantly 1000 - 500 B.C. context. Fenced and walled defences are

evenly spread, and there is evidence of internal occupation within many where it has been sought. Dump defences are not common, outstanding examples occurring mainly in the south (apart from Stanwick). The dump rampart, essentially different from the fence or wall in appearance and conception, would seem to mark a diminished concern for the neat appearance of the defence, and thus possibly a shift in emphasis of social priorities in the later period. Apart from those at Stanwick, no great late Iron Age defences can be identified, although such probably existed around Belgic settlements such as Old Sleaford and *Ratae Coritanorum*. Particularly during the Iron Age, types of domestic settlement other than the hill-fort appear to have been of paramount importance in the settlement pattern. These are to be considered in the next chapter.

## CHAPTER 2

### TYPES OF DOMESTIC SETTLEMENT

#### i. Middle and Late Bronze Age

The identification of Middle and Late Bronze Age domestic settlement sites in northern England has proved difficult because of the lack of characteristic field monuments and the paucity of material remains, other than metalwork and, now, hill-forts. However, an important class of field monument which can be broadly attributed to the Middle Bronze Age is the cairnfield, or extensive settlement (Fig. 81). The severely limited geographical distribution of this type, on heather moorlands often of gritstone, sandstone, or limestone hills, seems to reflect not merely the lack of subsequent disturbance of these areas, allowing preservation and present-day field survey. The marginal nature of these uplands for agricultural settlement and the ecological havoc wrought by the occupation which the cairnfields testify are characteristic features, themselves contributing directly to unsuitability for later settlement.

Cairnfields usually occur within 400 feet above or below 1000 ft. O.D., depending on local topography. They consist of groups of small stony cairns, numbering up to several hundred in individual clusters. The cairns, usually from 6 to 10 feet in diameter, appear as shapeless heaps of stone, or are occasionally more regular with rudimentary stone perimeters. Often they are associated with lengths of rough walling which run between the cairns on irregular alignments, and sometimes form small enclosed areas. There are three main concentrations in the distribution: central Blackamore of the North York Moors, the gritstone moors of the southern Pennines, and the peripheral fells of the Lake District. The function of the cairns has been considered entirely funerary (Elgee, 1930, 100), but the association with walling and the evidence of excavation (to be noted below) suggests that field clearance was

an important, and probably the primary, object. In considering Scottish cairnfields, Graham (1957, 21-3) has suggested that the functions of burial and land clearance need not be considered mutually exclusive.

The evidence from north-east Yorkshire has recently been reconsidered by Fleming (1971) and Hayes (in McDonnell, 1963, 37-42). There are three aspects to be noted here: the economy which the cairnfields represent, their date, and the settlement units of which they are a part. Fleming (op. cit.) has made out a strong case that the clearance was not for pastoral use. Forest browsing would have produced adequate nutrition if properly controlled. Rather, clearance for agriculture is suggested, by small groups of shifting cultivators and most likely by a population of between 250 and 500 over a period of 200 to 400 years. Two types of evidence are central to this interpretation. First, excavation of the cairns has produced little evidence for burial. Cremation pits with mainly Collared Urn pottery have been found under a few of the larger cairns, but signs of fire, charcoal, flint chippings, and sometimes burnt bones (not demonstrably a burial) are typical beneath the majority. This suggests scrub-clearance by fire prior to removal of surface stone and cultivation. Second, the evidence of pollen analysis (Simmons, 1969; Cundill, 1971) indicates a major clearance phase in the Middle Bronze Age constituting the first major impact of occupation in the area. Extensive zones of thin alder and hazel scrub were cleared on an unprecedented scale, leading to erosion of the land surface and destruction of the soil profile. This land exhaustion allowed only a marginal regrowth of forest: there is little significant evidence for subsequent populations in the central moors until the Medieval period. Finds of charcoal at clearance levels in the cores, and the presence of a few grains of cereal pollen in some profiles, indicate burning of the woodland and arable operations. These operations, again judging by the pollen diagrams, were relatively short-lived.

The date of the cairnfields and of this activity is uncertain on archaeological evidence. Elgee (1930, 99-100) was convinced that the cairns must be assigned to the Collared Urn period. Fleming (1971, 21-2) points to the association with ring-cairns at Great Ayton Moor and Danby Rigg. Ring-cairns are associated with a typologically late group of Collared Urns, the north-western style of Longworth's Secondary Series (Longworth, 1964, 195-6). However, at Alnham in Northumberland, one of 22 stone cairns produced a late Iron Age ring-headed pin in a spread of burnt bone beneath the mound (Jobey and Tait, 1966, fig. 11). Although some northern cairnfields may be late in date, carbon from the level of the clearance phase in a pollen core taken from Wheeldale Gill, north-east Yorkshire (NZ760997), has been dated to  $1260 \pm 90$  B.C. (GaK - 2712; Cundill, 1971, 256). This result, together with the broad comparability of pollen diagrams from the North York Moors, firmly indicates a Middle Bronze Age date for the cairnfields there.

Although some of the north-eastern cairnfields are small, others are very large and form impressive settlement areas. Perhaps the most outstanding is at Danby Rigg (Elgee, 1930, 134-7, fig. 44). On a slightly sloping broad plateau area around 1000 ft. O.D. are over 800 cairns. Within the group is the site of a stone circle which produced two Collared Urns inverted over burnt bones and charcoal. The cairn-filled plateau is cut off at its base by a slight bank 400 yards long. Beyond it is an area in which a few cairns and a number of irregular lines of dry-stone walling are evident (after surface fires, spring 1972). This indicates stone clearance of characteristic type. Most of the occupation area is enclosed within a cross-dyke of double ramparts and ditches to the east and treble to the west. Elgee considered that the purpose of these works was to enclose and defend the settled area. Such defences have been seen by Hayes (in McDonnell, 1963, 38-9) as indicating that the life of Middle Bronze Age people was less nomadic than has sometimes been supposed. There are a number of

other examples of linear earthworks adjacent to cairnfields. One, at Horn Nab, Farndale, a cross-ridge bank and ditch 300 yards long, was sectioned in 1959-60 (op. cit., 40). The rampart was of rubble and earth faced with stone, 24 feet wide and 8 to 9 feet high. The ditch was V-shaped, of variable depth, and not rock-cut. Inside the defended area was a single cairn, and beyond it an extensive cairnfield. No absolute proof of contemporaneity can be offered, but the presence of defended areas, some with settlement and burials within them and others as simple refuges, in the Middle Bronze Age is very likely. It should be remembered that promontory settlements with cross-ridge defences are well-known elsewhere in pre-first millennium B.C. Europe (Piggott, 1965, fig. 22).

Other areas of cairnfields and thus of likely extensive settlement and similar economy are known, and of these the southern gritstone Pennines are most important. A considerable quantity of field-work evidence has been recorded by the Ordnance Survey. Perhaps the clearest is at Birchen Edge, north-east of Chatsworth. On a gently-sloping south-east facing moorland between 1000 and 900 feet O.D. is an extensive area of cairns and irregular walling, including some lengths of well-built stone walling and completely stone-free areas. Particularly important is a system of four or five cleared fields, each about 50 by 70 yards and defined by lynchet banks. As for dating evidence, clearance heaps and cairnfields are associated with ring-banks at Ramsley Moor (Barbrook II) and Topley Moor (Brown Edge), Collared Urns from which have been dated by associated charcoal to the late Early or early Middle Bronze Age (see discussion in Part II, Chapter 2, ii). Pollen analysis on the gritstone uplands has demonstrated an important clearance phase dated by a sample from Leash Fen (SK295738) to 1500  $\pm$  100 B.C. (GaK-2287: Phillips, S.P., 1969). Phillips has suggested on stratigraphical evidence that the activity of the Collared Urn population lasted only 180 to 120 years. There are arable indications including a variety of weed species



in the pollen diagrams from the north Derbyshire gritstone. It seems that Fleming's hypotheses of shifting agriculture, land exhaustion, and population numbers are also applicable here.

Further north in the Pennine eastern foothills, but still on Millstone Grit, are a number of similar extensive remains, particularly on parts of Rombalds Moor. At Green Crag Slack (Cowling, 1946, 131) an area 1.5 miles long and 400 yards wide is said to have been covered with old walls, cairns, and hut sites. Remains can still be seen to cover an extensive area, and in particular, groups of cairns are visible. At Snowden Moor (op. cit., 135) one cairn of a group of 30 was sectioned in 1926. A small amount of charcoal was found on the old land surface beneath, but there was no indication of a burial. This recalls the evidence for burning beneath cairns on the North York Moors. The most impressive evidence comes from Baildon Common to the south. Remains not now visible (stone apparently removed for road-building) were first described by Collis (1846, Pl. VIII). Numerous traces of slight earthworks were seen to run nearly parallel, between 50 and 80 yards apart, and to be intersected by others at right angles. These formed a field system, about 300 yards across, of rectangular plots. Dotted within and around the plots were stone cairns about 8 feet across. Two associated features of especial importance were circular earthworks 93 and 80 feet in diameter, formed by earth banks 8 feet wide and 2.5 feet high. It seems reasonable to interpret these earthworks as ring-banks of normal Early to Middle Bronze Age funerary type, and to date the cairns and rectangular fields accordingly.

In Cumbria a number of sites of similar character have been reported. At Barnscar (Dymond, 1893; Walker, 1965) an extensive settlement, including about 400 cairns, some arranged in lines, and banks and walls suggesting a cultivation system, has been reported. Excavation of 14 of the cairns in

1890 recovered two Collared Urns. Other similar areas of cairns are known, particularly at Heathwaite Fell (Cowper, 1893, Pl. XXVIII), Moor Divock (Spence, 1934), and in the vicinity of Carrock Fell (Barker, 1934).

Pennington (1970), synthesising the evidence for the vegetational history of north-west England, considered that the most striking change which could be attributed to Bronze Age times was a permanent reduction in upland oak forest, which activity seems to have been limited to those areas where cairns abound, and in particular to the uplands of Cumberland between 700 and 900 ft. O.D. and other marginal zones. A significant fall in the organic content of Devoke Water sediment is interpreted as evidence for increased erosion of mineral soils following forest destruction. At Seathwaite in the south-western Fells this clearance phase is dated by radiocarbon to  $1080 \pm 140$  B.C. (op. cit., 72). Evidence from Ehenside Tarn, in the Cumberland lowland south of St. Bees, indicated an increased frequency of cereal pollen and a much increased rate of clearance from about 1600 B.C. (Walker, 1966, 199-200). This, together with abundant charcoal in the deposits from which the pollen cores have been obtained, indicates renewed settlement and clearance for arable activity. It is during this period that serious irreversible changes in the vegetational balance began.

Childe's early statement that Cinerary Urn peoples spread onto less-attractive lands too marshy or barren to have been colonized previously (1940, 156) is thus credible. This spread may be linked with the practice of shifting agriculture, which quickly led to land exhaustion on these areas of poor soils. Evidence of clearance heaps, irregular walling, cairns, small barrows, and ring-banks is to be seen as a type of extensive settlement typical of the Middle Bronze Age, probably beginning earlier in some areas and surviving beyond 1,000 B.C. in others.

A different type of settlement, perhaps characteristic of the Bronze Age but less well-defined chronologically and structurally as a group, is

the isolated hut site, presumably unenclosed (Fig. 82). A typical example has been excavated by Hodgson (1940) at Woodhead, Cumberland. Cut back into the hill-slope, the circular hut was 26 feet across with a stone rubble wall 2.5 feet thick and an entrance to the east. The floor was a layer of clay with flattish stones. Two post-holes 1 foot in diameter were placed just within the entrance, not centrally. Finds included a V-perforated conical button and a ring with three oval perforations, both jet objects known from the earliest Bronze Age in Britain. To the south, in the Pilling district of Lancashire, circular stone pavements have been found associated with stone rubbers, and possibly with a decorated bronze flat axe and a bronze spearhead (Thornber, 1952; Sobee, 1953, 16). Raistrick has described a hut at Comb Scar, Malham, typical of those in Pennine limestone areas considered by him to be of Bronze Age date (Raistrick and Holmes, 1962, 8, fig. 2). Roughly circular, about 18 feet across, the hut had a stone rubble-filled wall 5 to 6 feet thick and 3 feet high. A paved passage-entrance 12 feet long was situated between the hut wall and a row of large rocks at the foot of a natural scree slope. At the centre of the hut, a post-hole 15 inches deep may have provided support for a roof, the timbers of which may have been anchored in the top of the stone wall-foundations. Finds from the hut floor included flint fragments, two of them worked, and small pieces of dark brown coarse pottery. At West Brandon, Co. Durham, the post-hole circle of a small round-house 21 feet across underlying the enclosures in Area 5 of the excavations (Jobey, 1962, fig. 8) is typologically earlier than the larger concentric-ring houses on that site. With its central post support it is comparable with the hut at Comb Scar and with others in southern Britain (as at Itford Hill, House Type A with inner post supports: Burstow and Holleyman, 1957, 190). The West Brandon excavations were not extended to search for other features which might have been contemporary with the Area 5 hut, and it

may be that it marks early Iron Age occupation immediately prior to the building of the enclosure. However, the stratigraphical relationship is significant, and the hut may well represent isolated unenclosed settlement. Other round huts of possible Bronze Age date, as at Burton Fleming, are noted elsewhere (Notes on Figures, 82). The few known may reflect the relatively flimsy construction, the small area disturbed, and thus the difficulty of surface identification of the type.

Mention must be made of a third type of Bronze Age settlement, this time in a fenland situation, best represented by the remains recovered by Varley (1968) at Barmston, East Riding. Here, timber structures, hearths, and cobbled floors were found beneath a layer of peat in deposits indicating a periodically-flooded woodland environment. On Site B, structural timbers were recovered in measurable condition because of continuous subsequent waterlogging. They included alder rafters, beams, and uprights, and planks of various lengths, which could be reconstructed, thanks to the survival of a complete collapsed gable end, into a rectangular frame structure 18 feet long, 12 feet wide, and 8 feet high, with a conventional pitched roof. The gable end fits exactly into a double post-hole setting which was located. It is suggested that alder planking and the large sheets of triple-layered birch bark with intervening birch twigs in two inner layers formed the wall covering, and that masses of oak and beech leaves formed the roofing material (op. cit., 18-20). The floor was of cobbles, and there may have been an internal hearth. The date is suggested by radio-carbon determinations from structural timbers on Site A of  $1010 \pm 150$  and  $950 \pm 150$  B.C. (BM - 122 and BM - 123). Varley considers that the settlement at Barmston consisted of a hamlet of several rectangular structures in the fen hollow, of which his excavations disturbed only a part. The settlement of timber houses about 25 by 30 feet at Perleberg, East Germany, dated to the early first millennium B.C. (Piggott, 1965, fig. 84), was cited as a

parallel.

Barmston is not likely to have been unique in the East Riding. The remains recorded at West Furze (Smith, R.A. 1911) seem to be very similar. A rectangular platform 50 by 72 feet was found at a depth of 3 feet beneath peat. Large trunks of oak, willow, birch, ash, hazel, and alder, upright piles, twigs, and bark were found. The fact that the timbers were in a haphazard arrangement suggests that they represent a collapsed structure. The references to twigs and bark indicate details similar to those at Barmston. The presence of a small bronze pegged spearhead with leaf-shaped blade indicates the possibility of occupation in the tenth century B.C. (the type had a long life thereafter). Late Iron Age pottery from West Furze (Fig. 35, 4-6) may, together with other material noted by Smith (op. cit., 602), indicate a reoccupation just before the Roman occupation.

Our evidence for Bronze Age settlement types thus seems to be predominantly of the Middle Bronze Age for extensive shifting agricultural settlement, of the early first millennium B.C. for fenland settlement with rectangular houses, and of a broad dating range, probably continuing through the Late Bronze Age, for the isolated hut. Much of the evidence for hill-fortifications of fence and wall type relates to the first half of the first millennium, and it seems that hill-top sites such as Mam Tor, the Breiddin, Eston Nab, and Grimthorpe are to be seen as a dominant type in a succeeding settlement phase of distinctive character. Late Bronze Age pottery, although evenly spread (Fig. 71), is not found in zones of Middle Bronze Age shifting cultivation (Fig. 81). This provides further indication of the exhaustion of the latter areas. (Middle Bronze Age occupation was not confined to them; neither is it likely that it was predominantly arable in character elsewhere. The evidence of what may have been more settled communities in higher quality farming areas, such as the Wolds, has been largely eradicated by later land use.) The foundation of defended settlements and the decline in

for extensive evidence) cultivation and open settlement mark the commencement of a new pattern.

## ii. Iron Age Enclosures

As in other parts of Britain, excavations on Iron Age sites in the Trent-Tyne area usually reveal lengths of ditch, gully, palisade trench, and bank in addition to pits and post-holes. Iron Age sites on air photographs are seen as typically ditched enclosures of rectilinear, curvilinear, or irregular shape. On the ground, unploughed sites generally exhibit banks in addition to the quarried features. Enclosures are a ubiquitous Iron Age trait. However, it is rarely possible in our area to demonstrate a relationship of contemporaneity between enclosures. Only where there are linking features such as droveways can the attempt be made to reconstruct a total rural settlement structure of an area. Such linking features are usually found only from the first century A.D. with the laying out of connections to Roman roads, as at Tallington in the Welland Valley (Simpson, 1966, figs. 1 and 5). It seems that in the pre-Roman period the settlement pattern was of scattered single units, although there would presumably have been concentrations in the environs of trackways.

A consideration of types of domestic settlement enclosure has to proceed on the basis of shape, therefore. This is not altogether satisfactory. The notion that rectilinear enclosures, as they suggest a more orderly conception of layout, are necessarily later than curvilinear ones is not acceptable, particularly since excavations at Catterick have indicated the priority of a smaller rectangular palisaded enclosure over a larger irregularly circular one (D. of the E., 1971, Pl. I). Shape alone cannot be taken as distinctive of a specific limited period or of a culture over wide areas. Neither can it be seen as indicative of function, since only from the interior can evidence of domestic habitation, ritual

function, or use as a simple stock enclosure be drawn. With these limitations in mind, the discussion will proceed from rectilinear to curvilinear.

Small sub-rectangular enclosures are well-known in southern Britain. A group of five in north Wiltshire, each with enclosing bank and outer ditch, usually less than 1 acre in extent, is associated with Deverel-Rimbury pottery (Piggott, C.M. 1942). These are interpreted as cattle enclosures, as is the sub-rectangular earthwork about 200 feet across at Harrow Hill, Sussex (Holleyman, 1937). At this latter site a primary palisade underlay the bank of the univallate earthwork. Such may well be the function of D-shaped and square earthworks in north-east Yorkshire, such as Pinnican Hill and Girrick Moor (for references and locations of these, many subsequently-mentioned sites, and other examples, see Notes on Figures, 89), and some in south-west Yorkshire such as Threshfield, Meg Dyke, and Kirklees. One at Leaverling Wold, east Yorkshire, 150 by 120 feet, is attached by one side to Leaverling Wold linear dyke, which, with others, forms two large enclosures up to 500 yards across. Two square-ditched barrows seem to be deliberately aligned against the dykes, so it is likely that the whole complex dates to the La Tène period. The enclosures could be for stock-control.

To the north, D-shaped and squarish enclosures often contain domestic settlement. The best-known example at West Brandon, with double-palisaded enclosure replaced by ditch and upcast bank, is typical of many which have been recognised by air photography in Co. Durham in recent years. Particularly good examples are at Whickham (Plate VIII), Larberry Pastures, and Broomside. Often there is some indication of an internal centrally-placed circular hut. That at West Brandon was in two main phases, the first with four concentric rings of post-holes and the second similar but with a continuous rock-cut trench (ring-groove) for the main timber wall. Examples north of the Tyne, of which that at Burradon (Jobey, 1970a) is outstanding, indicate the continuation of the distribution across the boulder clay areas

of south-east Northumberland and beyond (recent map: Jobey, 1970b, fig. 1), and the possible extensive use of squarish domestic enclosures in the north-east in the pre-Roman period. The evidence from West Brandon suggests that the palisade was used as an enclosure structure on this type of site earlier rather than later in its currency.

In Cumbria, small rectilinear enclosures identified by air photography are as likely to be of Romano-British date than any earlier. Notable are the examples at Old Carlisle, attached to a common droveway, reminiscent of those at Tallington. The well-known site at Hugill, Westmorland, with D-shaped stone wall enclosure of over an acre, and internal huts arranged on levelled terraces (Dymond, 1893a), recalls the stone-walled settlements in Northumberland of Romano-British date (Jobey, 1966a, fig. 11). The method of classifying and provisionally dating enclosed sites in the north and west from field evidence on the basis of excavated examples is a necessary and acceptable theoretical step, although the extent to which evidence from different regions can be compared in this way is questionable. Cumbrian sites which seem to be of pre-Roman date are curvilinear, and will be noted shortly.

The strength of the structures of some rectilinear enclosures is sometimes such that it warrants the title "defensive site" rather than "enclosed homestead". One such case is the hill-slope site at Oldfield Hill, near Huddersfield (Toomey, 1960b, et seq., and further information), where in the main defensive phase the 1 acre D-shaped enclosure had a rampart of rubble and earth 7 feet wide faced with dry-stone walling of a presumed original height of over 10 feet, a V-shaped rock-cut ditch 5.5 feet deep and 6 feet wide, and a counterscarp bank similar to the inner rampart with dry-stone revetment surviving to four courses. Earlier excavations by Richmond (1924) showed that the north-eastern entrance through the rampart had a double timber gateway. A pre-rampart palisade trench has been identified



on two sides of the enclosure, in which vertical posts had been set about 2 feet apart. Finds included two stone discs, a rough-out beehive quern, iron slag, and very small fragments of possible pottery. An Iron Age date is suggested by the lack of specifically Roman material. The site at Levisham Moor A seems to be comparable, and of late Iron Age date (pottery: Fig. 46).

In the East Riding, the only rectilinear enclosures to have been extensively excavated are those on the valley-floor gravel site at Garton Slack (T.C.M. Brewster information). One, in Area V, was 120 by 60 feet. Its ditches contained carved chalk blocks and figurines associated with late Iron Age pottery. Another, in the 1971 area of excavation, was about 150 feet square. Its V-shaped ditch was 10 feet wide and 5 feet deep and also contained carved chalk blocks. Within it were two hut circles about 30 feet across associated with late Iron Age pottery, and to the north of the huts a series of over 30 infant burials, several lamb burials, and an ox burial. The enclosure ditch had been recut in the early Roman period on a slightly different alignment, and a further smaller rectangular enclosure, with few internal features, added to the north. The burials and ritual deposits will be reviewed later (Part III, Chapter 5, i). Since no features of domestic economic significance were associated with the enclosures, it is evident that they served a specialised ritual function.

Also excavated by T.C.M. Brewster is the settlement site on a gravel terrace at Catterick, north Riding. Here, the earliest feature may be the single post-hole ring of a timber hut about 20 feet across. This was overlaid by the continuous stockade trench of a rectangular enclosure about 100 feet long, which had an entrance across one corner defined by stout post-holes in the trench terminations. Within the enclosure was a series of three circular hut-gullies, probably forming a single hut with two extensions. This occupation was overlaid by a larger irregularly circular enclosure

defined by a wider and deeper trench. Within were a hut site, oval in plan with a circular extension at one end, a smaller circular slot-system, and, in the centre, a four-post structure about 8 feet across. Pottery comparable with some at Staple Howe, including jars with finger tipping on the edge of the rim and the shoulder, indicates the likelihood of a date from the sixth or fifth century onwards. The importance of the Catterick site lies in the position of the rectangular enclosure in the sequence of occupation, the use of a palisade, the presence of a four-post structure, and its situation well north-west of comparable East Riding sites. The full excavation report is forthcoming.

Excavations by the Keele Extra-Mural Archaeology Group at a sub-rectangular enclosure at Maerfield Gate, Staffordshire, revealed perplexing evidence (G.T. Emery information). The site was discovered by air photography, and was proved to be connected with Berth Hill to the north by an unmetalled trackway 8 feet wide with shallow ditches at each side. The enclosure was about 230 feet across, and was marked by a V-shaped ditch, 7 feet wide and up to 3 feet deep, with an internal sand tip. A roadway found to run from east to west across the site was laid on a sand embankment 10 feet wide, battened with timber and surfaced with clay and wattle. Entrances through the enclosure ditch were guarded, that on the east by a timber gateway. No dating evidence was recovered apart from a fragment of Roman glass at a high level in the ditch. The trackway up to Berth Hill implies contemporaneity with either the timber-laced or the dump rampart phases of the hill-fort site. It is suggested that Maerfield Gate was a farmstead (Emery and Mills, 1966).

Other rectangular enclosures are known from air photography particularly on the Trent and Welland gravels (see Notes on Figures, 89; RCHM, 1960). One excavated at Twyford, Derbyshire, was surrounded by a stockade and

external ditch and had two entrances (Hughes, 1961). It seems to be comparable with a rectilinear enclosure at Spithooks, Rudston, eastern Yorkshire, excavated by Stead, which was defined by a ditch 9 to 10.5 feet deep and an internal stockade. These two sites are likely to be settlement enclosures of the late Iron Age period. The palisade is not a prerogative of the earlier centuries of the first millennium B.C.

One particular type of small squarish enclosure remains to be discussed: that defined by inner ditch and outer bank. Such an arrangement is not uncommon, being found at thirteen sites in the Pennines and the north-east (Fig. 88), nine of which are D-shaped, angular, or rectilinear. Two have been excavated. That at Great Ayton Moor has produced the most satisfactory evidence (Figs. 66-68). The section cut through the defences (Fig. 68) showed a dump bank of successive layers of material quarried from the ditch, with layers of sandy earth (4 and 5) beneath rock and rubble (2 and 3). A sloping stone capping seems to have been laid on the inner face to prevent silting. The ditch was rock-cut and surprisingly deep. A slight internal bank (layers 6-8) overlying an occupation layer (10) probably indicates periodic cleaning out of the ditch silting. Internal occupation (Fig. 67) consisted of a hut site cut into the slight slope, with a foundation wall of stones, and an internal roughly paved area (the rest robbed?). A hearth, a clay-lined, flagstone-rimmed pit, and several post-holes were found in the interior. A drainage channel and further paved areas were cleared on the exterior. A complex of post-holes was found, but excavation was left incomplete. The possibility of a post-hole structure at the entrance to the hut, or of an earlier phase entirely of timber construction, cannot be discounted. Pottery from the site (Fig. 43, 8-13) may indicate a date in the third to first century B.C. prior to the development of distinctive late Iron Age forms as seen at Stanwick and elsewhere (see Part II, Chapters 5, ii, and 6, ii). One stone in the floor-paving was marked with a regular cup-and-ring design.

The second excavated site is at Royd Edge, near Huddersfield, a sub-rectangular 1 acre enclosure discovered by air photography in 1960. It was excavated by J. P. Toomey (on whose information this account is based), and was found to be surrounded by a stone-revetted rubble rampart and inner rock-cut ditch, of dimensions similar to those at Oldfield Hill. Entrances exist on the eastern and western sides: the eastern had a rampart gap of 22 feet and a ditch causeway of 12 feet, the latter spanned by a double timber gate with central stop. Deliberately broken stone was thrown down to consolidate the entrance-way, and amongst it a fragment of beehive quern upper-stone was found. Earlier occupation was indicated by an inner palisaded enclosure on a rather different alignment which crossed and partly destroyed an earlier circular hut. Later occupation was also shown by a length of palisade trench running at an angle across the filled-in ditch. The finds, including flint chips, clinker and baked clay scraps, and a lead spindle whorl, indicate the likelihood of a date in the late pre-Roman Iron Age period.

Other small enclosures with ditch and outer bank are grouped in north-eastern and western Yorkshire. Those at Snowden Carr and Studfold Ring are particularly notable (for locations and references of these and others, see Notes on Figures, 88). Two are known in Westmorland. Castle Hill, Dufton, is a D-shaped 1 acre site with possibly two entrances and internal foundations for seven circular stone huts with internal diameters of 11 to 20 feet. A roughly square foundation 40 feet across indicates possible reoccupation. A beehive quern has been reported from the site, which is included by Ritchie (1969) in her category of "earthwork enclosed settlements". The oval 1.5 acre site at Croglin Castle nearby is broadly comparable. In addition to other examples which appear to be settlements, those at Steerling Hill and Park Hill, Airton, west Yorkshire, are thought to be pastoral enclosures. All available evidence in our area from this enclosure type indicates a later Iron Age date. (Note the circular enclosure 90 feet across

with ditch and outer bank, probably contemporary with a ring-groove timber hut in the interior, at West Plean, Stirlingshire: Steer, 1956 .)

The distribution map of small rectilinear and D-shaped enclosures (Fig. 89) is far from complete: the evidence of many available air photographs of the southern and eastern regions has not been fully studied, so the concentration in the north-east may be over-exaggerated. The distribution map of curvilinear enclosures (Fig. 90) indicates a fairly even spread over upland peripheries in the north, the west, and the southern Pennines. Likewise, however, the few examples in the lowlands of the south and east partly reflect the fact that the evidence derived from surface field-work has been examined more exhaustively than that from air photography. Many of the sites of the Wolds and East Midlands, where limited excavation has revealed ditches and gullies, are included on Fig. 91, as the shapes of the enclosures so formed are not definable.

A variety of curvilinear enclosure types may be identified. One of the most common is the simple roughly circular or egg-shaped homestead enclosure. A well-known Cumbrian example is Wolsty Hall 'oval' (for this reference and others, see Notes on Figures, 90). This enclosure, 270 feet long, was defined by a timber stockade, set in deep stone-packed holes every 3 to 4 feet, and an external ditch. There was a single simple entrance. The internal hut consisted of a ring-groove 43 to 45 feet in diameter with two opposing entrances, an internal wall or ramp of turf, a circular floor of cobbles within the turf circle, and four deep post-holes for roof supports marking an 11 foot square in the centre. No direct evidence of date was produced, but Hadrianic pottery was found in the upper levels of the ditch, suggesting occupation in the pre-Roman period. Other enclosures comparable with Wolsty Hall 'oval' have been identified by air photography at Low Hesketh, Long Meg, and Penwith.

Similar simple enclosures are known elsewhere. To the east,

excavations at Corbridge revealed a palisade trench enclosing an area 60 feet across in which was part of a post-hole circle about 22 feet in diameter. A pre-Roman date is presumed. In north-east Yorkshire, research by D. A. Spratt has located curvilinear enclosures in peripheral hill-slope positions on the moors. One in particular, at Harrison's Plantation, is a small circular site defined by a possible palisade trench 10 inches deep and 20 inches wide, with a central hut. Field-walking has produced rubbing-stones and flints. There are over a dozen enclosures of about an acre each in the south-western Pennine foothills between Holmfirth and Skipton, known from extant earthworks or air photography. Together with the small rectilinear and D-shaped enclosures in the same area they mark a significant concentration. In the East Riding, a few circular or oval enclosures are known from plough-marks or crop-marks, of which a good example is Maiden's Grave Slack, Reighton (Plate VIII). Air photographs show an oval enclosure about 200 feet across with an entrance to the south-east, situated on the summit of a slight ridge. It seems likely that a settlement was enclosed. (Are there traces of internal features?) The third phase of occupation at Catterick, just described, enclosed by a palisade, is of similar character. The oval enclosure with timber structures thus seems to be a widely-distributed pre-Roman type.

The stone-walled circular or oval enclosed homestead, usually with internal stone-built huts, is a type well-known in the Tyne-Forth province in the Romano-British period (Jobey, 1966a, fig. 11, 1). How far stone-built settlements must always be post-Pax Romana in Cumbria is uncertain, however, particularly in view of the presence of stone huts in the enclosure of Iron Age type at Castle Hill, Dufton. In the absence of excavation the possibility of multi-phase occupation of that site must be considered likely. Many stone-walled settlements are likely to be Romano-British by north-eastern analogy: Kentmere, Bolton Wood, and Urswick Stone Walls, for example. A Romano-British date also seems possible for the stone-walled enclosures

with internal stone hut-circles in Forest and Frith parish, Teesdale.

Two excavated examples of stone-walled enclosures from further south do appear to be pre-Roman: at Horse Close Farm, Skipton, and at Scratta Wood, near Worksop. Horse Close Farm has been excavated by F. A. Aberg (on whose information this account is based). This roughly circular enclosure, about 240 feet across, is situated on a prominent but non-defensive low rounded spur. The enclosure wall consists of a double row of edge-set stones up to 3 feet high tightly packed with rubble and boulders forming a wall 4 to 6 feet wide. The only possible entrance is to the north, where there is some evidence of a stone-built gate-house. Excavation of Site 1 on the south side revealed a possible arc of a hut-circumference defined by four post-holes, and indicated two occupation levels running up to and under the enclosure wall. Site 4 in the northern part of the interior revealed two hut sites. The first was circular, defined by a rock-cut gully 1 foot wide and 9 inches deep in which were packed stones to retain close-set posts 6 inches in diameter, forming a continuous paling wall 27 feet in diameter. Five internal post-holes provided a ring of roof-supports. A central slab 2 feet square marked the site of an oven. There was evidence from much mutilated structures that this circular hut had replaced an earlier oval one, 35 by 27 feet, of the same construction. The second hut site was sub-rectangular, 8 by 13 feet, defined by a deeper and wider rock-cut gully for close-set posts 9 inches in diameter. The roof may have been completed in a single span, but one internal post-hole 15 inches deep marked a possible support. The doorway was paved, and part of this paving was seen to continue beneath the enclosure wall. It seems, therefore, that Horse Close Farm was at least a two-phase site, with the oval and sub-rectangular huts predating the circular hut and the enclosure wall. The material remains from the site, including a bronze toggle (which lay on the rock outcrop within the circular hut), a small blue glass bead, stone rubbers, pounders and hones, flint and

chert chips, and a few small wall-sherds of hard, sandy, uneven pottery, suggest a date in the closing centuries of the Iron Age.

Scratta Wood has been excavated by the Worksoop Archaeological Research Society directed by G. F. White (on whose information this account is based). The material remains from Scratta have already been considered (Part II, Chapter 6, ii; Fig. 16, 4-18). The site (Fig. 70), which was badly damaged before excavation by woodland bulldozing, consisted of an oval enclosure delimited by a rubble bank of limestone revetted front and back by large standing slabs set in foundation trenches. The original entrance, which lay to the east, was marked by a timber gateway. From it to the north beyond the wall ran a ditch up to 2.5 feet deep, choked with stones except near the entrance where a guard-wall was built around it. This ditch would seem to be for drainage, and perhaps also for water supply. Interior and exterior structures have been badly damaged, and unfortunately the plan (Fig. 70) is not complete. A series of limestone walls in the interior defined huts and divisions. A possible post-hole structure was found which may pre-date the stone enclosure wall. Rock-cut storage pits were revealed, mainly in north-western parts of the enclosure. Some were bell-shaped, up to 4.5 feet deep and 4 feet across, lined with coursed stone, and capped with clay, the remaining edges of which were clearly visible. Others were larger, up to 10 feet across and 6 feet deep. All were rubbish-filled. There was evidence for re-cutting, new pits encroaching on the rubbish fillings of old ones. Finds included iron slag, wattle and daub, and beehive querns. The pottery indicates a date from the mid-first century B.C. onwards. Second and third century A.D. material suggests later squatting: flanged dish fragments were found in the rubble collapse of the perimeter wall, and all other Roman material was either unstratified or from beyond the enclosed area.



The evidence from these sites is important, as it indicates that stone-walled enclosures in the Pennine foothills had a pre-Roman origin. Some comparable sites known from field-work are likely to be of similar date. At Whitwell, near Scratta, an oval enclosure with the remains of six hut circles has been reported. The oval enclosure at Horsborough, Demon's Dale, 240 feet across, defined by a rubble wall between edge-set stones in a double row 3.5 feet apart, and with the site of a probable hut in one corner, is not unlike Horse Close Farm in outline and structure, though not in situation. The Aucissa-type brooch known to Sheffield Museum (Notes on Figures, 79) was found nearby. The presence of stone-walled enclosures in the Romano-British period in these areas should not be underemphasised, however. In particular, the round stone-walled enclosure 200 feet across at Crosley Wood, Bingley (SE119386), dated by pottery to around A.D. 300, should be noted (YAJ, XLII, 19).

Curvilinear enclosures with multiple ditches are generally thought of as defensive sites. Those on hill-tops recorded by air photography are included in the list of unexcavated hill-forts (Notes on Figures, 87). Several in low-lying or flat land situations deserve special mention, however. Perhaps the best-defined is at Appleby Magna, Leicestershire (Plate IX). An oval area is enclosed by three close-set concentric ditches with a possible entrance and a circular feature to the east. Trial trenches (records in Leicester Museum) confirmed the presence of ditches, wall-scrapes of pottery from which may be of Iron Age date. Air photographs show a fragment of a similar triple-ditched enclosure at Tuft Hill Farm, Kilham, near the Iron Age site revealed by the Granthams at Manor Farm. It may be that the triple-ditched enclosure is a specifically Iron Age settlement form, although the same type in the York and Tadcaster areas has been attributed to the Medieval period (H.G. Ramm information).

Mention should also be made of a type of small enclosure (normally less than 1.5 acres) with long entrance-way which in the majority of cases is funnel-shaped: the banjo enclosure (Perry, 1966). The distribution seems to be confined mainly to Hampshire, Dorset, and Wiltshire, where the date on available evidence seems to cover the middle and later Iron Age. Two examples are known from the north of England. One at Risehow, near Maryport, Cumberland (Blake, 1959, 11-2, fig. 2), was dated by finds from an interior building to the later fourth century A.D. The corridor extending from the enclosure led to a drinking-place still used by cattle. The other, at Maiden Castle in Swaledale (centred SE 022981), is situated on a hill-side terrace. An area 320 by 240 feet is defined by massive earthworks, including a ditch up to 9 feet deep and an internal rampart of rubble with coursed dry-stone facing. The shape is angularly oval, with two rounded corners at the broader western end, and an entrance at the eastern, narrower, end defined by well-constructed wall terminations 15 feet apart. Extending from the entrance is a walled corridor 390 feet long and 17 feet wide. There is no dating evidence for Maiden Castle; it may be post-Roman and related to the nearby Reeth and Fremington dykes. However, its hill-slope situation precludes a military function. It is suggested that both these northern banjo enclosures served as cattle enclosures and defended homesteads.

There are other larger enclosures in our area for which a pastoral function may be assumed. Perhaps the best example is that known from air photographs in Boynton parish, East Riding (Plate X). About half the circumference of an oval enclosure 260 metres across is seen defined by the soil-marks of a narrow ditch. Added to the south/east is a larger sub-rectangular enclosure, 300 by 200 metres. The entrance to the larger enclosure is at the point of junction with the smaller, and the curve in the ditches to this entrance makes a funnel-shape suitable for driving cattle. (The writer is indebted to H. G. Ramm for access to RCHM records on this site.) The wider

ditch of a square-ditched barrow partly overlies the circuit of the sub-rectangular enclosure, conveniently providing relative dating evidence. Perhaps a number of other large enclosures, mainly rectangular, on the Wolds and in the East Midlands (see Notes on Figures, 93), may be of similar function. The evidence of associated linear earthworks will be examined later in relation to pastoral economy (Part III, Chapter 4, ii).

### iii. Extensive and Unenclosed Settlement

Fig. 91 shows the distribution of extensive, unenclosed, and unidentified settlements. Extensive settlement may be defined as that without distinct limits which extends over broad areas in a series of enlargements from nodes. Included on the map are those sites, mainly in the south and east, where material remains have been recovered from ditches and gullies the complete plan of which has not been obtained. Also included are extensive settlement sites known from surface field-work, mainly in the north and west, for which no dating evidence is available. Thus, on the one hand sites are included which, if more was known about them, would be entered in the lists of rectilinear or curvilinear enclosures, and on the other hand a large number of sites of probably Romano-British date are also marked.

In no area is the distortion of the distribution resulting from the latter probability more evident than in the limestone uplands of west Yorkshire. Certainly very little would be known of the archaeology of the Pennine limestone without the long term efforts of surveying and excavation undertaken by Dr. Arthur Raistrick. Virtually all published work is by him. Copies of his surveyed plans have been deposited with the Archaeology Division of the Ordnance Survey. It is unfortunate, therefore, that at first sight the work of Raistrick is often misleading, in general because of the use of the term Iron Age to cover a whole millennium from 500 B.C., and in detail because his site plans often show individual structures out of context

with their neighbours, and because little attempt is made to indicate the irregular expansion of settlement units over time which evidently occurred.

Typical early settlement on the Pennine limestone is of an irregular and extensive nature. Many separate and isolated huts and fields remain as rubble foundations scattered between natural outcrop. In some areas immediately north of the Mid-Craven Fault the traces are almost continuous. Examples of layout are included in Raistrick's various publications. As for evidence of date, there is no unequivocal pre-Roman material. Rather, a representative series of pottery types spanning the whole Romano-British period has been recovered from open sites and caves. As for the open sites, second century evidence has come from sites at Malham and Ingleton (SD741760; SD 894652; SD901643), second and third century from Troughate, Settle, Helwith Bridge, Conistone, and Kettlewell (SD898647; SD845641; SD816694; SD991691; SD977708), third century from Malham and Grassington (SD881672; SD996663), and fourth century from Attermire (SD846641).

It has not been found possible to undertake extensive field examinations of sites in Yorkshire west of Skipton to recover evidence of successive phases of settlement development. Such a programme is envisaged for the near future by the RCHM. However, a hasty inspection has shown that, if the well-known settlement at Grassington and others at Kettlewell and Langcliffe are typical, some huts and enclosures pre-dating known Romano-British features can be isolated. Meanwhile, the only evidence for pre-Roman Iron Age occupation which can be offered comes from an extensive settlement with hut-circles and enclosures at Gauber Limekiln Pasture, Ingleton (SD761788), where excavation revealed no Romano-British material (YAJ Arch. Reg., 1966, 558, fig. 1; CBA Group 4 Annual Newsheet, 1965). Of the six hut-circles, the middle hut of a group of three was found to be 20 feet in diameter with its circular limestone floor levelled out of natural rock. The wall foundations were a low rubble limestone bank up to 9 inches

high. Another hut, the largest in the group, was 27 feet in diameter, with a rubble wall foundation 4 feet thick faced both sides with sandstone boulders and wedged limestone. There was no sign of a doorway or post-holes in either hut, but deep grykes in the limestone floors could have accommodated posts. The floor levels had been chipped down to 12 to 15 inches below those of the wall foundations. Finds included flint flakes, half a sandstone rubber, and a horse bone, so there was no direct dating evidence. It is suggested that the site is likely to be pre-Roman, and that the huts are comparable with those visible as stone foundations in the Ingleborough fort. It may be that a proportion of the west Yorkshire settlements mapped are of Iron Age date.

Comparable settlement forms are known in Cumbria, as at Scraw Moss, Coniston (Cowper, 1893, fig. 5), in the Crosby Ravensworth area (Collingwood, R.G., 1933b), at Askham (Spence, 1935), and elsewhere. Jobey (1966b, 12) has well-summarized the situation by stating that whereas a case has been advanced for the settlement at Ewe Close to pre-date the Roman road (Collingwood, R.G. 1933b), the material remains from this and similar sites range from the second to the fourth centuries A.D. Elsewhere there are similar domestic settlements with circular and rectangular buildings with small enclosures: for example, near High Force, Teesdale (OS information: NY865284 and NY880290), near Rudston, East Riding (crop-mark site, TA097680; fourth century A.D. pottery; RCHM information), near Wortley, north of Sheffield (SK299987 area; second century A.D. pottery; OS information), and at Chee Tor, Blackwell, on the Derbyshire limestone (SK126733; one example of many discovered in field-work by L. H. Butcher and reported in issues of EMAB). We are seeing, therefore, a type of extensive domestic settlement which was widespread particularly in Pennine and north-western England in the Romano-British period, and which may have been present also in the late Iron Age.

A similar form of undefended settlement in north-east Yorkshire is represented by the hut-cluster excavated by R. S. Close at Percy Rigg, Kildale (Fig. 69; Close, 1971). The foundations and drainage ditches of five circular huts have been uncovered, and are still open to public view. The small settlement lies in one corner of a large rectilinear enclosure defined by a slight ditch, probably a farm boundary (visible on air photographs; D. A. Spratt information). Several phases are represented. Huts D and E, the smallest, which have hearths and some paving slabs, were succeeded by Hut B, the drainage gully of which cuts into the area of E and drains across D. Huts A and C are probably later still. They are defined by penannular wall foundations and paved floors. The hearth of A was unused, and the ditches of C were not finished, so a short period of occupation is likely. No post-holes were found, but the paved floors have not been raised to seek them. It has been suggested that timber structures were erected on the stone foundations and held upright by bracing (op. cit., 6). The pottery from the site (Fig. 43, 5-7) indicates a late Iron Age date. Other finds included 9 saddle querns, a broken beehive quern lower-stone, a jet fragment, and flints. Research by D. A. Spratt has indicated that Percy Rigg is not unique in the peripheral hills of north-east Yorkshire. Particularly notable examples of the sites of huts with surrounding ditches have been located near Guisborough (NZ597171; D. A. Spratt site 26) and on Upsall Bank (NZ557163; D. A. Spratt site 8).

A new type of extensive settlement has recently been identified in the East Riding from the study of air photographs (H. G. Ramm and RCHM information). It has been termed the 'linear settlement'. A good example is known at Burton Fleming (TA10857185 - TA10727097). A series of rectilinear enclosures is seen strung out on either side of a double-ditched trackway 30 metres wide. The enclosures vary in length from 80 to 100 metres, and are clearly later than barrows of La Tène type. At Speeton, a series of rectangular enclosures is built up against a linear dyke. One of the enclosures

contains round huts. A linear settlement at Boythorpe (centred TA000722) seems to be late Iron Age or very early Romano-British. A double-ditched curving trackway is enclosed at either side by a further ditch forming two linear strips varying between 30 and 140 feet wide. These strips are subdivided into enclosures by lateral ditches and possibly also banks. Three small ring-ditches indicate huts. One end of the trackway as visible on air photographs is blocked by a square-ditched La Tène barrow. The other end is not visible, but a known Romano-British settlement lies in its path. It is suggested that the linear settlement is not therefore likely to have been contemporary with either the barrow or the settlement, and that it is thus intermediate between them in date. The excavation of a linear settlement is of high priority for future research. So many seem to overlies linear earthworks (as at Blealand's Nook, near Sledmere; H. G. Ramm information) that final proof of their date would be of great value.

Iron Age settlement sites in southern and eastern parts of our area when excavated or otherwise disturbed always produce evidence of ditches and gullies. Without the aid of informative air photographs it is seldom possible to interpret these features as part of an overall settlement pattern. A good example of the problem is afforded by excavations at Dragonby (May, 1970). Cuttings in two areas indicated that a complicated series of overlapping ditches may have been dug for drainage purposes, since the channels became deeper and wider towards the east. The general impression gained was of rectilinear enclosures, but many details were obscured by recutting. Similarly, work at Ancaster revealed ditches and gullies, but it was not possible to be certain that the largest ditch, 4.5 feet deep and 5 feet wide, traceable for 140 feet, formed a boundary to the settlement (Barley, et al., 1966). Excavations at Saltshouse School, near Hull (J. Bartlett information), were more successful in defining overall alignments. A large area had been stripped of topsoil and levelled for a playing field. The truncated profiles of ditches, gullies, and hut-circle drainage

trenches were revealed (Fig. 65) and could be planned. Pottery from these features (Fig. 38) indicates a first century A.D. date. However, although two small ditched enclosures were defined, a number of linear ditches could not be followed beyond the stippled area. The overall form of the settlement, and the sequence of the various phases which must be represented, remain unknown. The important groups of material remains from Faxfleet "A", Hasholme Hall, South Cave, Drifffield Aerodrome, and Loughborough were all recovered from ditches. Further north, excavations at Catcote (Long, 1964) revealed numerous ditches, some straight, some curvilinear, and many multiple. Perhaps the recognition of a separate category of "complex ditched settlements" might be justified.

The distribution maps of domestic enclosures and settlements, Figs. 89-91, when taken together may be expected to give a representation of population density in the Iron Age period, subject to two major qualifications: first that the limestone Pennine areas and the north-west may be over-represented because of the inclusion of sites of Romano-British date, and second that the southern and eastern lowland areas may be under-represented because of an incomplete compilation from air photograph evidence. Even so, the weight of the distribution in parts of the north and west shows a very different pattern from the maps of Iron Age material remains, Figs. 73-80, which carry the greatest densities in the south and east. This dichotomy of emphasis results in part from two additional factors: first the relative lack of surface field-work evidence from the south and east as a result of subsequent land use, and second an increasing material poverty towards the north and west.

What relative weights should one allocate to the material remains and to the field-work evidence in an attempt to determine population densities? If one accepts Hogg's map of population density in A.D. 1100 (Hogg, 1971, fig. 27) as representing relative densities in the Iron Age period, the conclusion



must be that the material remains should be accorded the greater weight. The map shows that the average population density in the Trent valley and Lincolnshire would be at least six times that of Lancashire, the north-west, the central and northern Pennines, and north-east England, and two or three times that of the Derbyshire Peak and the East Riding.

Is there an economic explanation of both the suggested density figures and the increasing material poverty towards the north and west? The figures which Hogg accepts are much more likely to be comparable with the situation in the later first millennium B.C. than with that in the earlier. Figs. 71-72 and 82-85 show much more even densities, probably as a result of an inability to wrest economic advantage from heavier soils. Later, Figs. 75-77 indicate growing populations in the East Riding and the East Midlands, and later still Figs. 79-80 again show the relative wealth of the south and east and a thin scatter beyond. The obvious answer is that climatic and topographical factors limit the capacity of areas to support populations. Further conclusions must await a detailed discussion of the evidence for food-producing economy, which is so certainly of relevance. Meanwhile, we turn to the evidence of dwelling structures.

### CHAPTER 3

#### DWELLING STRUCTURES

In the last chapter, a number of dwelling structures have already been considered in detail, notably small circular huts of Bronze Age type and the rectangular house at Barmston with reference to the settlement types which they represent, the huts at Horse Close Farm in relation to the stone-walled enclosure on that site, and the huts at Gauber Limekiln Pasture as possible precursors of a Romano-British type of settlement. This has been useful to preserve the continuity of the discussion. A more systematic examination of house types must now be made. The evidence consists of excavation plans of post-holes, gullies, platforms, pavements, and stone foundations. Circular structures predominate, occurring about five times more frequently than rectangular ones. Examples of both categories are known throughout the first millennium B.C., but it is convenient to discuss them separately.

##### i. Circular Types

The simple post-hole circle with central post-hole and off-centre hearth marking the site of a hut 21 feet in diameter, earlier than either of the enclosed structural phases, at West Brandon, Co. Durham, has already been noted. Although it may represent an isolated unenclosed settlement, there is the possibility that it was one of a number or that it was enclosed in some way. A remarkably similar structure, again a simple ring of post-holes 23 feet in diameter with a central support, marks the first central house at West Plean, Stirlingshire (Steer, 1956, fig. 3), which is likely to have been contemporary with a surrounding palisaded enclosure 95 feet in diameter. At Corbridge, six post-holes forming an arc of a hut 22 feet in diameter were located beneath Roman occupation (Richmond and Gillam, 1955, fig. 1). Since the original floor surface of the hut had been shaved off it is not possible to be certain that there was no central post-hole. The hut was

within a palisaded enclosure, roughly circular, and up to 60 feet across. Further south, at Catterick the first phase of occupation, to be followed by palisaded enclosures, was marked by a hut about 20 feet in diameter consisting of a single ring of post-holes without evidence of central support. These four huts are of very similar size. Two are within small palisaded enclosures and two pre-date larger palisaded enclosures. The absence of central hollows, outer grooves, and entrance structures makes direct comparison with southern British huts at Shearplace Hill and Itford Hill impossible, but a case may be made out for a Late Bronze Age, or at least an earliest Iron Age, date for the four northern examples. New traditions may be represented by larger multi-ring structures of the Iron Age. However, simplicity and small size need not be decisive chronological or cultural characteristics. There is no clear evidence of absolute chronology from any of the northern sites at present. The single-ring post-hole structure may well have continued in use during the Iron Age whenever a small hut was required, even if it did not constitute the main type of dwelling structure.

A particular type of multi-ring construction has certainly been found in Late Bronze Age contexts in the north: an outer wall of numerous small stake-holes, and inner post-holes for roof support. Two good examples are Huts 2 and 3 at Mam Tor, recently published by Coombs (1971, 101 fig. ). These were on levelled platforms cut into the hill-side. No complete structure has been excavated, but the outer wall of each hut seems to have consisted of small stake-holes less than 2 feet apart, in a line set right up to the quarry-edge, and a penannular gully on almost the same line. These stake-holes may form a double row, may be within or outside the gully in places, or the various features may represent two or three structural phases. Within the outer wall there was evidence of at least one ring of post-holes for roof support. The huts were about 30 feet in diameter. All the structural features present at Mam Tor are represented at Green Knowe, Peeblesshire

(Feachem, 1961, fig. 3). There, on a levelled hill-side platform, a hut about 30 feet in diameter was marked by a double row of close-set stake-holes 2.5 feet apart, with an inner ring of weight-supporting post-holes, other smaller internal post-holes, possibly rafter supports, and an entrance way. At both Mam Tor and Green Knowe there were internal hearths. The Mam Tor huts were cut into an earlier charcoal layer which gave radiocarbon dates of the twelfth century B.C. Pottery evidence indicates continued occupation down to the seventh century (see Part II, Chapter 2, iii). From Green Knowe, the simple barrel-shaped pot with internally-bevelled rim may also be of Late Bronze Age date. It is significant that part of the plan of a strikingly similar hut, about 25 feet in diameter, has been excavated by C. R. Musson at the Breiddin (1970a, fig. 69, 3; 1970b, 218, fig. ). Again on a levelled platform cut into the slope, the exterior walls of as many as five superimposed structures were located, each defined at the periphery by narrow gullies, or individual stake-holes about 1 foot apart. The plan revealed is very similar to that of Mam Tor Hut 2. Insufficient of the interior of the hut at the Breiddin has been cleared to confirm or deny the presence of internal postholes, but such may be expected. A bronze nail-headed pin (the larger from the site) was recovered from an upper layer in the hut; a Late Bronze Age date is indicated. Several small pottery sherds stratified on the hut floor were coarse and undecorated; their fabric alone provides insufficient ground for dating the structure.

Almost all other timber-built huts of the first millennium B.C. in northern England are either of ring-groove or ring-ditch type. These terms are commonly used (Jobey, 1966a, 94; RCAHMS, 1967, 21-2) north of the Tyne to describe in the first case houses where one of the circular timber arrangements, often the outer wall, is set in a continuous bedding-trench, and in the second case houses of a variety of types but including those surrounded by ditches for drainage purposes. There are, however, certain important

exceptions amongst multi-ring constructions, which have neither ring-ditch nor ring-groove. The best is House A at West Brandon, the earlier of the two within the enclosed homestead (Jobey, 1962, fig. 5). It had four concentric rings of post-holes, two within the line of the suggested outer wall and one, the eaves support, outside. A wall-to-wall diameter of 50 feet is indicated. This hut, which did give some evidence of post-replacement, would seem to be contemporary with the double-palisaded structural phase of the surrounding enclosure.

Three more examples of multi-ring constructions without grooves or ditches are to be found in the stockaded homestead at Staple Howe (Brewster, 1963). Unfortunately, complete plans of these huts could not be recovered because of energetic natural erosion and evident irregularities in the original constructions. Perhaps the simplest to interpret is Hut III (op. cit., fig. 25). Severe erosion has eliminated the evidence except in the south-western part of the circuit. Four major structural elements may be identified: an outer ring of post-holes (2, 3, 4, P1, P4, P5, P9, P10, 7), an inner ring (CIII, 6, 5, P6, P8, 8), a likely entrance (P2, P3), and two centrally-placed post-holes 8 feet apart (9 and 10). The overall diameter of the hut, that of the outer ring, would thus have been 38 feet. The only restraint on such an interpretation is the limited width available on the eastern side of the Howe. It is considered, however, that with the evidence of two such regular concentric arcs of holes, a slight platform extension, at least to the north, may be allowed for.

The evidence of Hut II (op. cit., fig. 17) is less satisfactory. Brewster's interpretation that the gully to the north-east was formed by water dripping from the roof is not acceptable, since its produced circumference is considerably within the line of the outer wall of the hut. This wall would have been carried above the southern lip of the quarried platform for reasons of drainage. Ledges of domestic function were found in the

quarried face. The five post-holes (P15-P19) beyond the face, considered to be unrelated to the house structure, would seem to be eaves supports, as at West Brandon A and B, aligned with the entrance. The "water collectors" hypothesis is ingenious but not convincing: Plates 27-34 show quite acceptable post-holes, which were evidently completely devoid of any lining which would allow water storage. That drinking water should have been stored at floor level directly beside the main entrance to the hut would seem unreasonable. In addition to the external post-holes, therefore, one might consider that a roughly oval series of features (water collector 1, P7, P8, parts of water collector 2, P1, A, and the 'drip gully') constitutes an internal ring of roof supports, with some internal partitions. Other post-holes (P5, P6, P9, P13, P23, P3) may represent irregular roof-props or other structures. The proximity of some posts to the oven structure poses an objection to this scheme. There may have been considerable erosion of features to the north. However, the interpretation of a hut with overall dimensions of 38 by 35 feet and at least two rings of supports seems reasonable.

Brewster interpreted Hut I as a simple structure with a central post and a single wall-ring of post-holes 30 feet in diameter. The single outer ring of holes which he defined (op. cit., fig. 13, holes 1-2, 5-17) is certainly credible, as is the entrance structure (holes 3-4) very like that of Hut III. The loom site (holes A-F), the hearth, and the oven are also well-defined features. It is not easy to see any order in the remaining holes, but nine can be identified on an approximately circular alignment about four feet within the outer ring. Several of those nearer the centre may represent props and partitions. One might expect that a structure 30 feet in diameter on an exposed hill-top would demand more support than would be available from the outer wall circuit and a single central post. Perhaps further features aligned with the post-hole to the north-west of hole 13 (op. cit., fig. 13) may have been present. It is unfortunate that the

excavated area was not extended. Of the smaller rectangular structure at Staple Howe, more will be said in the following section.

By far the commonest form of timber dwelling in the northern English Iron Age is that utilizing a form of ring-groove. West Brandon again provides an excellent example in its later House B (Jobey, 1962, fig. 5). The outer wall of edge-set split timbers was accommodated within a continuous rock-cut trench 1 foot wide and deep. Beyond it ran a circle of eaves-supporting post-holes, and within was a single complete circle and a central square of post-holes. An entrance was indicated by two additional holes and projecting trenches. The internal diameter of the house was 50 feet. It was presumably contemporary with the later enclosure structure of ditch and upcast bank. Close parallels to West Brandon House B occur further north. At Tynemouth Priory (Jobey, 1967, fig. 1), the earliest structure was a house 38 feet in diameter with a wall of close-set uprights in a continuous trench 18 inches wide and deep, with a ring of external eaves supports and possibly also an interior ring of roof supports. At West Plean, House II (Steer, 1956, fig. 3) consisted similarly of a ring-groove 38 feet in diameter for an outer wall, this time of posts set 3 feet apart, with an internal post-hole ring and projecting entrance trenches. At Scotstarvit Covert, Fife (Bersu, 1948, figs. 6-7), Houses I and II, 58 and 49 feet in diameter, had their outer walls of edge-set timbers erected in ring-grooves in the same way, but of the two inner rings of supports the outer was also set in a ring-groove. There is no secure evidence for the dating range of the ring-groove house in the north. The association of three of the four examples here quoted with earthwork enclosures rather than with palisades suggests a date later rather than earlier in the Iron Age. The date of Wolsty Hall 'oval', with ring-groove house within stockaded and ditched enclosure (see Part III, Chapter 2, ii), is not closely determinable. However, examples in Roxburghshire (RCAHMS, 1956, nos. 650 and 994) within palisaded enclosures indicate that a late Iron Age

conclusion is not necessarily valid. The shallow gullies for stakes of the outer walls of huts at Mam Tor and the Breiddin are similar in principle.

Ring-groove houses to the south do seem often to be later in date, however. Those within the late Iron Age stone-walled enclosure at Horse Close Farm have already been examined. The outer walls of sub-rectangular, oval, and circular huts were defined by gullies for close-set posts. The former may have been roofed by a single span, while the others had internal post-hole rings. Two circular ditches excavated at Catcote (Long, 1964, 2) appear to have been hut foundation trenches, since no roof-supporting features were found in the enclosed areas, which were covered by thicker and darker occupation layers. One hut, 33 feet in diameter, had internal partition walls and an iron-smelting furnace. The other was only partly excavated, but seemed to be earlier. Material remains from Catcote include late Iron Age pottery (Fig. 44). The dwelling structures at Catterick (D. of the E., 1971, Pl. 1) were supported only by their walls, which were set in continuous foundation trenches evidently broad and deep. (No further information on the Catterick site, which may date from the fifth century B.C. onwards, is yet available.)

Four ring-groove structures are known from the East Midlands. Hut 4 at Willington (CBATVARC, 1970, 10, fig. 2) consisted of a penannular ring-groove about 22 feet in diameter with expanded terminals marking an entrance 7 feet wide to the east. A channel, presumably for drainage, passed through this entrance. Inside the hut were a central hearth and three small clay-lined pits. Outside was a semi-circular drainage gully, about 8 feet beyond the ring-groove, which may have been contemporary. A large pit to the south had been several times recut. Pottery from the pit and the ring-groove (Fig. 14, 1-10) indicates a date in the second century B.C. (Part II, Chapter 5, ii). The site at Willington had been badly damaged by ploughing and any post-holes within the hut had been removed. At Rampton, Nottinghamshire (EMAB, IX, 41-2, fig. 9), a similar hut associated with hand made and wheel



made pottery of Belgic type was excavated beneath Roman occupation. The hut was defined by a penannular ring-groove about 1 foot deep and 18 inches wide, in which had been set an irregular series of post-holes about 6 inches apart. The area enclosed by this wall was about 17 feet in diameter. Within the hut were two off-centre post-holes, presumably for roof support, evidence for a radial screen, and a small bronze-smelting hearth. Further east, at Tallington Site 35 (Simpson, 1966, fig. 2) an Iron Age hut 20 feet in diameter was excavated in one corner of an unusually large rectangular enclosure 480 by 320 feet. The hut walls were of withies woven between upright stakes set irregularly in a shallow circular ring-groove over 2 feet wide. There were no internal features. Simpson refers (*op. cit.*, 15) to a similar hut, 43 feet in diameter, found near King Street nearby, which was of late Iron Age or early Roman date. We thus have four examples of ring-groove houses in the East Midlands, each of late date. However, to conclude that the type is only characteristic of that period would be unwise, since no dwelling structures of pre-third century B.C. date are yet known from the area.

Ring-ditch timber round-houses, with circular ditches for drainage immediately surrounding the hut platform, are rather less common in the Trent-Tyne area. Perhaps the best example is to be found at Stanwick (Wheeler, 1954, fig. 3), on Site F. A gully with a gap 11.5 feet wide enclosed a circular area 28 feet across. The gully seems to have been about 2 feet wide and at least 1 foot deep, and was chocked with stones in parts. It was thought that a timber hut stood within the area, although only 10 irregularly-spaced post-holes were found. Pottery indicates the likelihood of occupation in the mid-first century A.D. Other huts with surrounding drainage ditches are known at Ancaster (gully 41 feet in diameter: Barley, *et al.*, 1965), Dragonby (gully 28 feet in diameter: May, 1970, 227), and Colsterworth (many, up to 50 feet in diameter: Grimes, 1958, 23-4), all in

Lincolnshire. Excavations at the Roman Villa site at Rudston, East Riding, revealed underlying features, many of which are likely to have been late Iron Age. Recent work has identified at least six hut sites (Stead, 1971, fig. 3), bordered by penannular drainage ditches about 2 feet wide cut through the surface boulder clay to the underlying chalk. The enclosed circular areas were 16 to 26 feet in diameter, and many gave evidence of internal timber structures. Unfortunately it was not possible to distinguish a single complete pattern because of the density of overlapping structures.

There seem to be no chronological or cultural conclusions to be drawn from the relative presence or absence of ring-ditch or ring-groove structures in areas, since the occurrence of a drainage ditch would so obviously reflect the needs of the individual site. Timber houses can be seen continuing into the Romano-British period. The fourth century Roman villa at Denton, near Grantham, was underlain at its eastern end by a ring-groove for a timber hut, and timber structures also underlay the villa at Mansfield Woodhouse. These are Roman houses, not Iron Age ones (M. Todd information). To the north, at West Hill, East Riding (TA 168668; TSDAS, I, 1, 31), round timber huts have been assigned to the fourth century A.D. Generally, however, dwellings of the Romano-British period were of stone.

In a recent summary, Jobey (1966b, 1-8) has clearly stated the evidence that in the Tyne-Forth province distinctive round stone-built huts are Romano-British in date. Enclosed, non-defensive settlements containing them can be seen to overlie the abandoned hill-forts, palisaded enclosures, and timber-built huts of the pre-Roman period. Where datable, round stone-built huts may be ascribed to the second to fourth centuries A.D. They average 20 feet in diameter. Some have internal partitions. Where rectangular huts occur, they are clearly later.

This situation is to some extent reflected further south. In the north-west of England, stone-built huts have been recognised in a directly comparable

archaeological context. The round huts, from 50 to 20 feet in diameter, at Ewe Close, Crosby Ravensworth (Collingwood, W.G., 1908; 1909), were associated with Romano-British material. In north-east Yorkshire, excavations at Pale End, Kildale (TSIDAS, II, 13, 55), revealed three circular paved floors, with fourth century Romano-British pottery in contrast to the late Iron Age material discovered in 1958 nearby (Fig. 43, 1-4). In western Yorkshire, work by Raistrick already outlined has produced recurrent evidence for the Romano-British (generally second to fourth centuries) dating of round stone-built huts. Published plans of huts at Middle House Pasture and at Troughtate (Raistrick and Holmes, 1962, figs. 6 and 10) show circular huts with internal diameters of 10 to 20 feet and walls of boulders with a clear inner face. There is evidence that stake-holes in the rubble walls, about 3 feet apart, held supports for the upper walls and the roof structures.

However, there is now some evidence of the use of stone in the construction of circular huts in the late Iron Age period. Much of it has already been noted in the previous chapter. Excavations of rubble hut foundations at Gauber Limekiln Pasture, Ingleton, failed to provide proof of a Romano-British date. Further east, the pottery from the stone-built hut-cluster at Percy Rigg, Kildale, clearly indicates a date prior to Roman influence, albeit probably in the first century A.D. The enclosed homestead at Great Ayton Moor produced pottery of earlier type. Its hut (Fig. 67) had a foundation wall of stones and a paved floor, but unfortunately there was no evidence to indicate how it was roofed. The huts in the stone-walled settlement at Scratta Wood (Fig. 70) had rock-cut levelled floors, stone wall-footings, and stone pivot-holes for main doors. Again, a late Iron Age date is indicated. Excavations by W. J. Varley at Old Oswestry revealed a stone-kerbed hut, probably of a much earlier date as it was structurally integrated with the rear revetment of the northern inturn of the western entrance to the earliest stone-revetted rampart fortification

(Varley, 1948, 56). From this hut came a fragment of carinated furrowed bowl (mentioned in Part II, Chapter 3, ii). In the absence of definitive publication, however, the possibility of a comparison with a hut at the north entrance of the hill-fort at Castle Ditch, Eddisbury, must be mentioned. There, after the prehistoric defences had fallen into ruin, the debris to the east of the entrance had been cleared, and a small D-shaped stone-walled hut with a stone pavement had been erected (PPS, 1936, 219-20 ; Varley, 1964, Pl. 7). This hut may be of Romano-British or even post-Roman date.

Whereas ring-ditch and ring-groove timber round-houses do seem to continue into the Romano-British period in some areas, stone huts of a character usually thought to be post-conquest may be recognised at three sites, and possibly also at two others, in the Iron Age, therefore. Earlier, small single-ring post-hole huts seem to pre-date more complex structures, although the presence of multi-ring stake-walled huts of rather larger size at Mam Tor and the Breiddin suggests that Late Bronze Age circular dwellings were not always unpretentious.

#### ii. Rectangular Types

The aspect of the site at Staple Howe to have received the most discussion in recent years is the centrally-placed square structure (Brewster, 1963, fig. 28). Four post-holes, originally probably 3.5 feet deep, to take timbers 14 inches in diameter, were arranged in a square forming a structure of maximum external width of 10 feet. A fifth hole in line on the east side may have been part of the same building. A number of surrounding smaller post-holes may have been for shorter timber props. Brewster interprets this structure as a granary, on the grounds that the outer sides of the post-hole packings had evidently been subjected to great side thrust as a result of the building carrying a heavy weight on a raised floor. Had the weight within the building been laid at ground level, the heavy timbers would have been unnecessary. The alternative explanation of a high tower was not

considered plausible. However, there was no grain deposit found in the post-holes or in the immediate vicinity such as would have rendered the granary interpretation conclusive.

Recent excavations by Brewster at two other palisaded sites have likewise given evidence of centrally-placed square structures. One was in the hill-top site at Devil's Hill, Heslerton, 1.5 miles to the east of Staple Howe (T.C.M. Brewster information). The other was centred in the curvilinear palisaded enclosure at Catterick (D. of the E., 1971, Pl. I). Both these were simple four-post square plans with particularly large holes. At both sites, as at Staple Howe, the main dwelling-structure seems to have been a type of circular timber hut. The presence of stout square structures in the centre of each of the three palisaded sites in Yorkshire to have been extensively excavated suggests that they had a specific specialised function. It has recently been argued that the idea of a central high platform or watch-tower, to guard herds and flocks and to warn of attack, is in fact a likely explanation (Ellison and Drewett, 1971, 186). Alternatively, could they have been houses of some kind?

Excavations by Stanford in the Welsh Marches hill-forts of Credenhill Camp, Croft Ambrey, and Midsummer Hill Camp have shown that dwelling huts stratified with early phases of the defences ~~were~~ usually small rectangular buildings no larger than about 10 by 12 feet (Stanford, 1971, 47). It is considered not unreasonable that a family of four or five should be housed within a ground floor area of 100 square feet or so (Stanford, 1970, 112). It has been shown that each of these three sites is packed to the rampart with rectangular structures in something approaching a grid-iron pattern (Stanford, 1971, 47-8). One of the Credenhill huts showed six phases of reconstruction, indicating that the forts were permanently occupied. Further south, excavations by Cunliffe at Danebury, Hampshire, have revealed similar houses, 9 by 11 feet, this time six-post structures, aligned in close-set

rows along parallel streets. The occupation of the rectangular layout began around 400 B.C., and continued with much rebuilding (CA, 30, 177-183). In each case, the post-holes of the structures were substantial.

Excavations at Grimthorpe (Stead, 1968, fig. 4, 155) revealed eight groups of four post-holes, defining squares from 5 by 5 feet to 10 by 8 feet, all within 40 feet of the surrounding hill-fort rampart. In particular, two pairs seem to be aligned symmetrically each side the entrance, less than 15 feet from the rampart. Stead has interpreted these as granaries, although the post-holes were not massive (10 to 13 inches across, 6 to 18 inches deep). It has recently been suggested that at least four were fighting platforms (Ellison and Drewett, 1971, 186). Although such an explanation is not altogether satisfactory for the structures further away from the rampart, the presence of guard-structures near the entrance (and note that these would include the smallest squares) is not unlikely. The possibility that at least the larger squares (Stead, 1968, fig. 4, 1, 2, and 3) were dwellings cannot be ruled out, however.

Stanford (1971, 47) has concluded that the Grimthorpe structures were houses, paralleled by the more-or-less square structures at the fort at Ivinghoe Beacon (Cotton and Frere, 1968, figs. 7-8), which had a timber-framed box rampart closely comparable with that at Grimthorpe. He has also pointed to comparable square or rectangular buildings at Maiden Castle, Dorset (Wheeler, 1943, Pls. VII and XX), at Rainsborough (Avery, et al., 1967, fig. 7), and at Balksbury, Hampshire (Wainwright, 1969, 32). The less closely-built site plans at Grimthorpe, Ivinghoe, and Balksbury are seen to reflect a significant difference from the Welsh Marches sites in both intensity of occupation and date. In view of Stanford's arguments, there seems little alternative but to consider it likely that at least some of the Grimthorpe four-post structures were dwellings. What, therefore, of Catterick, Devil's Hill, and Staple Howe? The presence of substantial circular dwellings, the

size of the post-holes, and the central situation in each case suggest that the watch-tower hypothesis is more convincing.

The above-ground granary theory is of course not completely discredited in every case. Finds of grain in the post-holes of such structures at Rotherly Group III (Pitt-Rivers, 1888, 55) and at Tollard Royal A and B (Wainwright, 1968, 112) enable these to be regarded with fair certainty as granaries. Both sites are of late Iron Age date. There is one other four-post structure on the margins of our area to be considered: that situated in the north-east corner of the rectangular farm enclosure at Tallington Site 37 (Simpson, 1966, 19). The rather irregular shape of the structure and its peripheral situation invite direct comparison with Tollard Royal A (Wainwright, 1968, fig. 3). Perhaps it was a granary. Tallington 37 is closely datable to within the period A.D. 50 to 90.

Thus, of the rectangular or square structures so far considered, only some at Grimthorpe may be regarded as dwellings. There are three other examples of rectangular houses to be mentioned, each of the late Iron Age period. The sub-rectangular house 8 by 13 feet at Horse Close Farm has already been described. Of similar construction may have been the building defined by a rectangular slot system 10 by 20 feet at Garton Slack IX, unfortunately not associated with material remains (D. of the E., 1971, 14). The construction details of the rectangular hut associated with pre-Conquest wheel made pottery at Ad Pontem, Nottinghamshire (EMAB, VI, 16), are not yet available. In addition to these there are three further sites where possible examples of rectangular houses have been discovered. Excavations in 1952 at the oval earthwork at Newton, west Yorkshire (see Notes on Figures, 90), uncovered two artificial floors of chert and gravel about 40 feet square (OS information). A possible turf wall foundation-strip for a rectangular structure has been identified at Catcote, Co. Durham (Long, 1964, 2-3). Beyond the limits of our area to the south, at Glen Parva, Leicestershire

(SP577981), excavations by K. C. Clarke since 1963 have recovered evidence of an Iron Age building with cobbled area, post-holes, and a gully. Although no coherent plan is recoverable, the post-holes are in rectilinear alignment, possibly for a structure 25 feet long. Thermoluminescent dating of pottery from the site gave results of 390 B.C., 300 B.C., and 80 B.C.,  $\pm 15\%$  (one SD of true archaeological age - note low level of accuracy: Zimmerman and Huxtable, 1969).

This limited evidence for rectangular dwellings contrasts sharply with the well-represented tradition of circular timber houses in later prehistory in the Trent-Tyne area. That this fact does not reflect a technological inability to build to a linear plan is evident from the fine rectangular house reconstructed by Varley (1968; see Part III, Chapter 2, i) from his excavations at Barmston and dated to around 1,000 B.C., and also from the likely square houses at Grimthorpe and the buildings with alternative function on palisaded sites. Had all square four-post structures in our area been interpreted traditionally as granaries, we would by now have trespassed in large measure upon our next chapter, which examines food-producing economy.



## CHAPTER 4

### FOOD-PRODUCING ECONOMY

In his well-known study of Iron Age farming economy in Britain, Piggott (1961) concluded that relatively intense grain-growing was characteristic only of areas to the south and east of the Jurassic Ridge. The distributions of field systems, storage pits, beehive querns, and finds of carbonised grain he saw concentrated in south-eastern England. North of the heavily-wooded Midland plain, the lack of such evidence was seen to indicate an economy based on pastoralism with an element of limited nomadism. Literary evidence was quoted in substantiation. Thus was propounded the theory of the Stanwick Type of economy, geographically separate from the Woodbury Type. Wheeler, in his report on the Stanwick excavations (1954, 27-9), had already noted the apparent lack of pits, fields, and beehive querns in northern England, and had interpreted the fortifications as the defence of a pastoral community, designed to include within its circuit water and pasture for protected herds.

How far is this generalisation acceptable? It is evident that even on the basis of information available in the 1950's the summaries of Wheeler and Piggott represent overstatements. Beehive querns were known in large numbers, particularly in north-east Yorkshire. On flat plateau and gravel areas where ploughing would not create lynchets, surviving linear earthworks might well be interpreted as crop-protection rather than solely as animal enclosures. A detailed consideration of the evidence now available suggests that, whereas for large areas of the north and west the statements of Piggott are valid, for the middle and later Iron Age of the East Riding and the East Midlands the food-producing economy was much less specialised than has previously been supposed. The following discussion is broadly divided between the arable and the pastoral evidence. However, the themes will often overlap, since environmental factors affect both, and since in a mixed economy the two are

inextricably linked.

### i. Arable Evidence

The extensive shifting agricultural economy which operated in the later second millennium B.C. over certain upland areas, such as the North York Moors, the southern gritstone Pennines, and parts of Cumbria, has already been examined (Part III, Chapter 2, i). This section is to deal with the evidence of arable economy in the first millennium B.C.

Carbonised grain is known from four sites in the Trent-Tyne area. Samples from Staple Howe were identified as Club/Wheat (Triticum compactum) with no mixed barley or weeds (Brewster, 1963, 139). Storage pits at Garton Slack (D. of the E., 1971, 14) contained wheat and barley (no detailed analysis yet available). Excavations at Dragonby have produced grains of barley, and several types of wheat, principally Spelt and Emmer (G.C. Knowles information). The only sample west of the Wolds is the wheat recovered from a trench through the rampart of one of the enigmatic enclosures on Sutton Common, near Askern (Whiting, 1938, Camp B). Helbæk (1952, 208) demonstrated that the introduction of Spelt, allowing a significant intensification of agricultural methods and so an increase in production, was a principal innovation of the southern British Iron Age. Its appearance at Dragonby is thus significant. Barley was considered (op. cit. fig. 6) to be marginally dominant over wheat in the economy. The examination of the large number of samples recovered in recent years from Garton Slack may be expected to produce significant evidence of the relative proportions of different grains grown. The implications of the Club Wheat at Staple Howe are not clear. Like Spelt, this subspecies is a hexaploid wheat, but it does not seem to have been common in any period of British prehistory. Although the Staple Howe samples are large (8,000 grains from the Quarried Hollow), it must be remembered that animal bones sufficient to fill 14 packing cases were

recovered during the excavations (Brewster, 1963, 136).

The accurate dating of fields is not possible without excavation or unequivocal association with known settlements. The presence of rectilinear systems of small field plots in later second millennium B.C. contexts has already been mentioned. Examples probably belonging to a later period are known in many parts of the north of England, but most are likely to be Romano-British or post-Roman in date. In the north-west, fieldwork in the Lune valley has identified typical fields, farmsteads, and enclosures over 150 acres at Eller Beck (Lowndes, 1963), all apparently contemporary. Excavation produced pottery of the second to the fourth centuries. Work by E. J. W. Hildyard in Co. Durham (1948, 8-9) located a number of early field systems in Weardale, from none of which is there any archaeological evidence. Surveys by Raistrick in west Yorkshire have defined large areas of enclosures including lyncheted rectangular fields, but a pre-Roman date for any is not yet demonstrable. Further south, excellent examples of Celtic fields are known at Blackwell (Thomas, F., 1961, fig. 16) and Cromford (Posnansky, 1956) in Derbyshire. Moving east, others have been noted north of Doncaster and north-west of Bawtry (RCHM information). In north-east Yorkshire at Cold Cam, a fine series of fields was damaged by bulldozing in 1952; the remains of a Romano-British kiln and late third to mid-fourth century A.D. pottery were recovered (McDonnell, 1963, 407). Those noted by Elgee (1930, 218) in Crag Bank Wood, Kildale, may be related to a small early Romano-British settlement nearby (excavations by R. Close, taking place 1971). Of the ancient fields in Yorkshire known to the writer, those most likely to be of first millennium B.C. date are to be found on the slopes behind Eston Nab (NZ570180 to NZ572176). Celtic fields are virtually unknown in Lancashire and Cheshire, the only possible examples so far reported being at Kelsall, Cheshire (Bu'lock, 1955). From this summary of rather inadequate evidence it may be concluded that no extensive areas of likely Iron Age fields are known in the north and west of our area, although there may be examples

in north-east Yorkshire, the southern Pennines, and parts of lowland Cumberland.

As for the Trent Valley and other areas of river gravels to the south and east, no Celtic fields are known. It has been pointed out, however (RCHM, 1960, 13), that this is not altogether surprising, since lynchets would not be created on flat ground, and therefore that long linear earthworks forming linear enclosures may have fenced off blocks of fields. Such might be the function of the large rectilinear enclosures at Weston upon Trent and Saxilby (Notes on Figures, 93).

Much more satisfactory evidence has been recovered by air photography in the East Riding. Photographs of a site at Grindale (Plate XI) indicate a large round barrow and a cemetery of smaller round-ditch and square-ditch barrows in the area of a field system. A track between ditches is seen approaching an area enclosed by an irregular ditch. Within this enclosure, a series of rectangular fields 110 to 200 feet by 550 to 750 feet is defined by cross-ditches. The fact that the ditches of the small barrows within the fields are less clear than those outside might suggest that the field-system post-dates the barrows, but it is the opinion of RCHM investigators (the writer is indebted to H. G. Ramm for access to this material) that the opposite is the case. Confirmation by excavation is required. Near Rudston (TA115687), a round-hutted settlement near a trackway leading from the Green Land hill-fort is seen to be associated with a system of rectangular fields. Parts of the nearby Rudston square-ditch and round-ditch barrow cemetery (TA1168 area) clearly pre-date a field system, the ditches of which deviate to avoid the barrows. At Springdale (TA081683), a large number of rectangular ditched enclosures post-date at least part of a La Tène cemetery. The evidence from the East Riding, albeit unsupported by excavation, does indicate the presence of cultivated field systems in the later phases of the Iron Age and probably earlier.

Evidence for the technique of cross-ploughing has come from one site

within our area. Excavation of a Roman site in Frodsham Street, Chester, in 1966 uncovered a turf layer beneath the surfacing of a legionary parade-ground. This layer, up to 9 inches thick, covered an area of 0.8 acres. Removal of the turf revealed a clean clay subsoil which was marked by a cross-hatched pattern of grooves, filled with rich earthy material. This evidence pre-dates the foundation of the fortress wall in the Trajanic period (CBA Group 5 Annual Newsletter, 9, 1967). Pollen analysis indicated a pre-clearance phase, a complete woodland clearance and cultivation, and a final re-establishment of grassland and mixed deciduous woodland. The clearance phase would therefore seem to considerably pre-date the foundation of the legionary fortress, but no exact chronology is yet available. In a similar stratigraphical situation were the crossed plough-marks in the boulder clay beneath a Roman road at Stott's House, Walker, Northumberland (Jobey, 1965b, 85). Clearly predating the construction of the Military Way (c. A.D. 140), the plough-marks are possibly pre-Roman. At both Chester and Walker there was no unequivocal denial of the possibility of ploughing in different directions on two separate occasions, but cross-ploughing is more likely if the evidence from Gwithian, Cornwall (Megaw, et al., 1961), is to be considered representative of traditional practice.

There is little evidence from our area of the ploughs themselves. For the cultivation of heavy soils, as on the clays of Walker and Chester, a strong and heavy ard, presumably using iron share-points of the type found at Hunsbury (Fell, 1937, 66), should be envisaged in widespread use from the mid-Iron Age. The type of modified ard represented in the Piercebridge plough group bronze model of the second or third century A.D. (Manning, 1971, fig. 2,b) could turn a furrow if tilted under heavy pressure. From earlier in the first millennium B.C. perhaps the form of ard known from Donneruplund, Denmark (Aberg and Bowen, 1960), and capable only of rather lighter work, should be envisaged. The studding of the heels of early mould-board ploughs

is known in early Iron Age Jutland (Clark, 1938). It is possible, though not likely, that striated quartzite pebbles known from eastern Yorkshire and northern Lincolnshire (Phillips, C.W., 1938) represent the presence of similar ploughs in pre-Roman Britain.

No balanced sickles of the type known at Hunsbury (Fell, 1937, 66) and Llyn Cerrig Bach (Fox, 1946, Pl. XXXVIII) have been found in northern England. The single example of a curved reaping-hook comes from Brackenhall Green, Shipley, near Bradford (SE129392), and is thought by W. H. Manning (BAGB, 10, 12, 1965) to be Iron Age. It is of iron, badly corroded, and in two fragments. The slightly curving blade seems to have been about 0.75 inches wide and 8.5 inches long, with a short narrow tang set at right-angles. There seems to be little reason why this long narrow blade need necessarily be of Iron Age date.

The item of equipment connected with arable practice which is most numerous in northern England is the quern. The saddle quern and the manufacture of the beehive quern have already been considered (Part II, Chapter 1, v). The distribution of beehive querns is shown on Fig. 95. To the south of our area, at Maiden Castle, Dorset, Wheeler (1943, 322) found beehive querns of Curwen's Wessex type in association with his Iron Age B pottery but not with Iron Age A. This suggests that beehive querns may have begun their currency there in the earlier second century B.C. or perhaps before. To the north, Jobey (1959, 269-72) has shown that conical beehive types are current with lower bun-shaped beehives in the first and second centuries A.D. in the Tyne-Forth province, and that although they may begin earlier, their main currency is in the earlier Roman period. It thus seems that many of the entries on Fig. 95, particularly towards the north, may represent Romano-British activity. What of the evidence from within our area?

In the north-east, Percy Rigg (Close, 1971) has nine saddle querns and only one beehive quern, suggesting the latter's introduction late in the

site's life. Beehive querns are present at Catcote, Normanby, Stanwick, and Levisham Moor, sites with late Iron Age coarse pottery of the first century A.D. However, their presence at Crag Bank, Kildale, with Romano-British material (R. Close information) and at Old Pasture, Spaunton, with pottery of the third and fourth centuries A.D. (YAJ Arch. Reg., 1964, 174) indicates that although their currency included the first century A.D., their distribution reflects a cultivation of southern and peripheral northern hills more likely to be Romano-British in pattern than Iron Age. In the Pennines, the association with second to fourth century A.D. pottery at the previously-mentioned manufacturing site at Helwith Bridge, and their occurrence at Buxton and Melandra Castle in the first century A.D. or later (Curwen, 1941, figs. 8-10), indicate a similar situation. In the eastern foothills, at Milner Wood, Scarcroft, an upper stone was recovered from a field with part of an inscribed Roman altar and a sherd of a second century bowl (SE388418 : YAJ Arch. Reg., 1965, 329). There are relatively few known finds of beehive querns in the East Riding. Their association with pottery solely of later Iron Age type (Fig. 37, 8-13) at Littlethorpe, near Rudston (J. Bartlett information), and with more characteristic late Iron Age pottery at Driffield aerodrome (one fragmentary example: Philips, 1960, no. 42), indicates a pre-Roman currency, probably from the earlier first century B.C. However, their occurrence with Romano-British pottery on a settlement cut by pipeline excavations at Thwing (CBA Group 4 Annual Newsletter, 1970, 10) indicates that they continued in use at least down to the third century A.D. when flat rotary types became dominant (as suggested by an association at Rudston: *ibid.*). As for the East Midlands, second century beginnings for beehive querns are indicated by their presence on several sites, pottery from which is here illustrated, such as Ancaster (early Iron Age site), Breedon-on-the-Hill, Loughborough, and Willington. Late Iron Age use is seen at Scratta Wood, Denton, and Rampton. An upper chronological limit in the area is not apparent.

It thus appears that although there may have been a second century B.C. introduction of the beehive quern to areas north and west of the East Midlands and the East Riding, the major weight of the distribution of the type (Fig. 95) in the eastern Pennines and the North York Moors must be ascribed largely to Romano-British activity. The absence of the beehive quern in demonstrably pre-first century A.D. contexts might be seen to demand the explanation of an absence of settled agricultural communities in these areas in the pre-Roman period, a conclusion which might well be reflected by the apparent material poverty of the north and west in the Iron Age generally.

The storage pit is one of the most recurrent structures on southern British Iron Age sites, and is characteristic of the Woodbury Type of economy. The distribution of pits within our area is given on Fig. 94. (The presence of some pits on the map which are undoubtedly for purposes other than storage results from the inevitable inclusion of examples where proof of use is lacking.) Details and references of each are given in Notes on Figures, 94. North of Pickering, the best example is at Great Ayton Moor (Figs. 66-67): it had a lining of yellow clay and a capping of flat stones. In the East Riding, an outstanding series has recently been excavated by T.C.M. Brewster at Garton Slack: a complex of 80, ranging in size from 4 to 6 feet deep and 8 to 3 feet across, usually vertical-sided, and sometimes with a 5 to 6 inch layer of carbonised grain in the bottom. Excavations at Mam Tor, Derbyshire, cleared several large pits, including one of bell-shape lined with wicker-work. Storage pits at Scratta Wood were up to 4 feet deep, some bell-shaped, all rock-cut, lined with stones, and with clay cappings. The distribution map shows important concentrations of pits in the East Midlands and the East Riding.

It is evident, however, that some pits were not used for storage. The pits on Castle Hill, Scarborough, do seem to be deep enough: half are over



20 inches deep. However, on the basis of the rapid waterlogging (cut into boulder clay) and their often shallow nature, Rutter (1959) has interpreted them as hearths or for water storage. Pits at Stretton and Willington in the Trent Valley were shown to contain hearths. Excavations at Breedon-on-the-Hill in 1952 by J. W. Burford (unpublished) cleared at least nine pits, typically about 5 feet or more across and about 2 feet deep, containing burnt and cracked stones near their bottoms. It seems that these were hearths or cooking-pits. The pits at Atwick and Rolston excavated by Morfitt in the early years of this century were usually about 5 feet deep, but up to 40 feet long and 9 to 10 feet wide with sloping sides. There was often evidence of fire in the bottoms (Greenwell and Gatty, 1910, fig. 1). These were probably not for storage.

Despite the presence of pits with other functions, the distribution on Fig. 94 does indicate an evident trend in pit storage. Later Iron Age examples in the East Riding at Garton Slack, Drifffield, and Rudston, and in the East Midlands at Scratta Wood, Colsterworth, Ancaster, and Tallington, may be seen as evidence for increased grain-growing. Outliers to the north (Great Ayton Moor and Catcote) are also late. The west Yorkshire outlier at Halton Gill is almost certainly Romano-British. The Mam Tor pits, presumably contemporary with the other occupation on that site, are outstanding but not related to the later pattern.

Only in the Pennines and the north-west does there seem to be an absence of archaeological evidence for grain-growing in the first millennium B.C., therefore. There are sound environmental reasons for this reflected in the present day land use pattern. Arable fields are spread over the eastern foothills below about 400 feet, but even the floors of the Pennine dales are beyond the practical limits of crop-growing (Boer, 1967, 378). The inhibiting factors are the late start to the growing season, the dryness of the early summer, the wet period of July and August, and thus the likelihood

of the crops remaining unripe at the onset of winter conditions in November. Much of the highland plateau area exceeds the limit of human habitability. West of the Pennines, beyond the peat areas and the stony Carboniferous slopes, the large areas of Pennine Drift and Northern Drift deposits inhibited early agriculture because of the surface wetness and the high clay content requiring autumn ploughing (Hall and Folland, 1970). Even on the lighter, better-drained soils north of Liverpool and around Clitheroe, and on the lowlands of Cumberland, the high incidence of wet and overcast days must have inhibited land use.

Thus even today in the rural areas of northern and western England, an annual rhythm of stock movement between higher and lower pasturage takes place. Hay production is vital. The absence of a Woodbury Type of economy in the north and west in the Iron Age would seem to be dictated by climate and topography. Population densities would thus be limited by the environmental constraints on food-producing capacity. However, to the south and east, carbonised grain, storage pits, and field systems indicate the presence of arable farming. Climate and soils permitted settled communities to intensify agricultural practice, and thus allowed population increase. Such would be particularly possible, and indeed likely, from the mid-Iron Age, when the use of stronger and heavier ards enabled cultivation of heavier soils. We now turn to the evidence usually thought to indicate a pastoral economy, a consideration of which will reveal more of the importance of the arable sector.

## ii. Pastoral Evidence

The Stanwick Type of economy has been described as a semi-nomadic pastoral occupation based on cattle (Piggott, 1961, 14-6). The animal bones from Stanwick itself (Wheeler, 1954, 57) were of large quantity but very fragmentary. Relative proportions were approximately 40% cattle, 23% sheep,

16% pig, and 13% horse, indicating the firm predominance of beef in the diet. An analysis of the bones from Catcote, about 25 miles to the north-east, showed a similar pattern (Hodgson, 1968). The minimum numbers of animals represented were 8 cattle, 6 sheep, 3 pigs, and 2 horses. Assuming that all domestic animals were eaten, 78.6% of the meat would have been beef. The cattle were evidently of the Celtic Shorthorn variety, Bos taurus longifrons. There are no other statistical analyses of animal bones from the north and west, so for the present this evidence must be provisionally accepted as representative of these areas in the absence of indications of an otherwise mixed economy.

Two large collections of animal bones from pre-La Tène East Riding are available: from Staple Howe (Brewster, 1963, 136-7) and from Grimthorpe (Jarman, et al., 1968). The fourteen packing cases of material from Staple Howe have not been adequately analysed, and apparently the majority has now been destroyed (I. H. Longworth information). Cattle, sheep, and pigs were said to be most abundant. Of the bones and fragments identified from Grimthorpe, 54.9% were cattle, 25.0% sheep or goats, 7.8% pigs, and 7.3% horses. The quantities of bones recovered were large considering the extent of the excavations. No analyses of animal bones are available for later sites in the East Riding. From the ditches of the late Iron Age site at Driffeld aerodrome came bones of cattle, sheep, goats, pigs, horses, and dogs (Philips, 1960, 191). The La Tène peoples of Yorkshire have been seen by Fox (1958, 19) as pony, pig, and probably cattle breeders, on the evidence from the burials. The very common occurrence of pig skeletons and bones in graves, and the presence of some remains of horses with cart-burials and of ritual ox and lamb burials at Garton Slack (D. of the E. 1971, 12-4), certainly show the presence and ritual significance of these animals, particularly of the pig. No indication is given, however, of their relative importance in the food-producing economy.

In the East Midlands, the animal bones from Wacher's excavations at Breedon-on-the-Hill (Higgs, 1964) indicate the following minimum totals: 28 cattle, 20 sheep or goats, 5 pigs, and 1 horse. There were very few bones at Scratta Wood, suggesting that although the usual domestic animals were present the economy was based on arable farming, reflected in the storage pits of the site. The very abundant animal bones from Dragonby have yet to be published in detail, but preliminary indications are that the farming economy was mixed, with cattle, goats, pigs and particularly horses being kept, and wheat and barley grown (G. C. Knowles information). The bones from Old Sleaford have been examined, however (Higgs and White, 1963). Those assignable to the late Iron Age indicate a high incidence of sheep, at least 27 animals being represented alongside 14 pigs, 7 cattle, and 2 horses. These proportions represent a significant divergence from all other published analyses in our area. Clark (1947, 128-32) has shown that a widespread relative emergence of sheep in the Late Bronze Age and early Iron Age in southern Britain was a result of an increase in forest clearance and in pressure of population, leading to more intensive arable farming. Sheep would be favoured under such conditions since, unlike cattle and pigs, they could feed on fallow ground, and since they could be wintered in the open whilst providing manure for soil maintenance.

The evidence of the animal bones therefore suggests that cattle-rearing was the predominant occupation in the north and west in the pre-Roman period, and also to a considerable extent in the East Riding and the East Midlands in the pre-La Tène period and the earlier periods of the Iron Age respectively. Evidence for later periods is limited at present to that from Old Sleaford, which indicates a settled farming economy in which sheep were important and in which arable farming, by implication, was dominant. The distribution of storage pits suggests that a mixed farming economy was present in the East Midlands and the East Riding in the later Iron Age.

A major factor which Piggott saw contributing to the theory of the Stanwick Type of economy was the presence of linear dyke systems on the Yorkshire Wolds (1961, 14-5), which he considered to be related to the ranching of cattle and probably also of horses. It is useful, therefore, to examine the evidence of linear and boundary earthworks in more detail. (The writer is indebted to H. G. Ramm for discussion and access to material .)

The wealth of extant earthworks in the East Riding known in the nineteenth century and mapped by Mortimer (1905, end map) has now been almost totally obliterated by deep-ploughing, and some examples are no longer visible even by air photography under ideal conditions. The earthworks are generally linear, of ditches and banks, single or multiple, and if seen as a single network they define a whole series of enclosures. However, the recent work of the RCHM (publication envisaged in the near future) has indicated that they represent a variety of functions and construction over a long period. There seems little reason to doubt the prehistoric origin of many, particularly in view of the relationships to other structures which some of them are seen by air photography to exhibit.

Three main functions of the dykes may be defined; some examples may perform all, but others only one. The first is as a roadway. The oblique angles of dyke junctions in some areas are typical of a road system, the broad ditches functioning as hollow-ways. The system near Speeton (TA1574 area) is one such, seen to be later than Bronze Age barrows and earlier than the Medieval settlement pattern, and thus probably Iron Age or Romano-British. Excavation of a double dyke at Riplingham (TA958322; Wachter, 1965, 608-12) corroborated the roadway theory: the inner eastern ditch, a wide, regular V-shaped profile, had its bottom worn smooth and nearly rectangular in section by traffic. Beneath the bank of the Riplingham dyke were found a few scraps of pottery, too small to be assigned to any specific period, but probably of the first millennium B.C. The fact that the inner ditch was used

as a trackway rather than the outer indicates a second function of the dyke as a semi-defensive boundary. A similar duality of function is shown by one of the most complicated of dyke sites, at Huggate, where six parallel dykes occupy the narrow saddle of land between two systems of dry valleys which provide one of the narrowest crossing-points of the Wolds. Field-work by the RCHM has identified five phases of construction, of which the earliest is a hollow-way running up the valley side. A double dyke thought to be later has been excavated by W. J. Varley (Fig. 62). It was found to consist of a chalk rubble bank with a coursed face to the south and a U-profiled ditch to the north. A sherd of pottery with finger-tipped decoration of early Iron Age type was found in the primary silt of the ditch and is thought by Varley to date the earthwork, but air photographs show an irregular ditched enclosure crossed by two of the later dyke systems, so it may be that the sherd relates to the occupation of this enclosure. A date in the Iron Age or slightly later is likely for at least part of the Huggate system, however. Since the bank excavated by Varley is to the outer side of its ditch a primarily defensive function is ruled out. The multiplication of the dykes thus has to be explained in terms of a boundary function. Some of the additional works are likely to be post-Roman.

The third function of some of the dykes is that of land division for pastoral or farming purposes. Some dykes have in fact been re-dug within living memory to divide pasture from arable land. This aspect is the most relevant here. Two groups of dykes in particular may be briefly mentioned. On Leaving Wold (SE8062 area) a series of linear earthworks, usually of a single ditch with at least one bank, form a number of enclosures, including one 400 by 500 metres and another 170 by 130 metres. It is significant that at one point (SE80056302) the ditch of a dyke is deliberately aligned between two adjacent square-ditched barrows, and that at two others (SE79856302 and SE80236301) square-ditched barrows are seen to abut the dyke, implying its

co-existence. A further rectangular enclosure 40 by 50 metres abuts the larger system. The whole enclosure network would seem to be of La Tène date. A similar but less regular series of dykes forming small enclosures is to be seen south of Birdsall (SE 8263 area). A number of additions to a smaller system of farm enclosures can be distinguished. H. G. Ramm considers a late Iron Age or Romano-British date likely. Confirmation of date by excavation is required.

Thus, at least some of the East Riding dykes are to be seen as land divisions. The enclosure by dykes of arable fields already in existence, as at Grindale (Plate XI), indicates that although many of the boundaries may have defined stock enclosures others surrounded cultivated areas. It is significant that most of the areas of arable so far discovered from the air and provisionally assigned to the Iron Age period occupy sloping areas around 250 ft. O.D., whereas the Leaving Wold and the larger of the Birdsall enclosures, among others, divide the higher Wolds plateaux. Publication of the RCHM work still in progress will present more detailed conclusions. For the present, the importance of the arable sector should not be over-emphasised, but the indications from the presence of land divisions in the East Riding, usually contemporary with or later than La Tène burial enclosures, are of a settled community engaged in mixed agriculture.

Land divisions in two more areas must now be considered: in the East Midlands and north-east Yorkshire. In the East Midlands, farm boundaries generally rectilinear in plan seem to have been marked in part by ditches, in the same way as in the East Riding, but in addition one of the most distinctive types of boundary work is the pit alignment (Fig. 92: note that the distribution probably reflects in considerable measure selective air photography, although the river gravels would have been particularly attractive to settlement). Some pit alignments in the Upper Thames region have been seen to be Belgic in date (Harding, 1972, 55), and in particular it has been

suggested that one at Northfield Farm, Long Wittenham, defines an area of cultivated land alongside the river Thames. In the Welland valley, farm properties seem similarly to have been defined, and it has been shown by excavation that the pit alignment boundaries were introduced in the Iron Age (Simpson, 1966, 18-21, fig. 5). Excavations at Tallington 38 (Fennell, 1961) indicated an alignment of pits 8 feet across and 4 feet deep. From one pit several sherds of a globular vessel with some kind of incised decoration were recovered. This alignment is part of a system of three, running parallel, associated with small sub-rectangular ditched enclosures. A landscape of scattered farms with linear boundaries should be envisaged. The situation in the Trent valley seems to have been somewhat similar. A pit alignment at Weston upon Trent (EMAB, VII, 4) is clearly an addition to a rectangular enclosure 360 by 170 feet. The enclosure ditch, 15 feet wide and 5 feet deep, contained several Iron Age sherds. Further west, an alignment at Shenstone may be of late first or second century A.D. date (Simpson, 1966, 18). It seems that in some areas towards the end of the Iron Age a complete system of land division was developed from earlier less extensive enclosures. On the basis of the structures at Tallington 37 and the animal bones at Old Sleaford, a mixed farming economy may be envisaged. Roman roads and land divisions were thus not constructed through an open countryside (St. Joseph, 1958, Pl. XVI).

Structures related to the Midlands pit alignments have long been known in north-east Yorkshire. Elgee (1930, 151, fig. 51) described a double row of circular pits lying across the spur of Easington High Moor at about 750 ft. O.D. between narrow valleys. Excavation had shown the pits to be 4 to 5 feet deep and 10 to 12 feet across. On the outer side of each row ran a parallel bank of stones. A similar boundary was reported at two locations to the east. Mortimer (1895, 267-8) referred to two parallel lines of pits on Allerston Moor overlooking the Vale of Pickering, set 2 to 3 feet



apart and consisting of pits 5 to 6 feet across and 3.5 feet deep, and a similar double line on Ebberston Moor. Since in the latter case the pits became elongated, and finally merged into a continuous ditch, his conclusion was that the pits represented unfinished dykes. Although this may be so, there is an evident comparability with the East Midlands pit alignments, and with other examples further north at Inveresk, Midlothian, and at Linton, Roxburghshire (RCHM, 1960, 30-1). Despite the major distinctive factor of a double row of pits, the inference seems to be that in some lower and more peripheral areas of the North York Moors there was some development of land division in the late Iron Age and Romano-British periods. Perhaps it is related to the beehive querns found in the area (Fig. 95), and thus indicative of a mixed farming economy.

Few other north-east Yorkshire linear earthworks are included on Fig. 93. Those at Percy Rigg and Levisham Moor seem to be farm boundaries associated with settlements (see Notes on Figures, 93), but there seems little positive indication of an Iron Age date in the many other cases. Some earthworks seem to be in association with small cairn groups and irregular walling, and may be Bronze Age (see Part III, Chapter 2,i). Many are not defensive in the hill-fortification sense, as they have their main banks downslope of their ditches (as on Castleton Rigg, north dyke: Elgee, 1930, 139). A number may be post-Roman. Similarly, only well-substantiated examples from the East Riding are marked on Fig. 93. It may be that one of the most significant advances in Iron Age studies in the near future will be the identification of extensive systems of linear earthworks attributable to the period.

It has been suggested (Bradley, 1971, 77) that an increase in population beyond the capacity of available non-marginal land to accommodate it leads to a more acute concept of territoriality. This is represented archaeologically by the building of land boundaries. It is useful to note that most linear

and cross-dykes in the southern English chalk downland lack any entrances which could be used as through routes from one area to another (ibid ). Precisely the same fact is evident from the dykes in eastern Yorkshire, where not a single entrance in boundary works is known (H. G. Ramm information). It is thus tempting to see the development of land boundaries in the East Riding and the East Midlands as a response to a population increase (which may be shown on the basis of burial numbers: see next chapter) and the scarcity of land.

Bradley has also argued, on the basis of the changing character of hill-fort occupation in southern England during the first millennium B.C., that an intensification of arable farming occurred during the Iron Age (op. cit., 77). We have seen that early economy at Grimthorpe was largely cattle-based, while that rather later at Staple Howe may be interpreted as to some degree mixed, although still predominantly pastoral. Pastoralism employs only a limited labour force utilised over a wide acreage, and provides little work or surplus capacity for an increased population (op. cit., 79). On the other hand, arable intensification offers an increase in food production involving a more than proportionate work input (op. cit., 80). It may be argued that more intensive arable farming need only occur under population pressure, hinted at by the presence of boundary ditches. In this context we may see the introduction of Spelt as permitting increased production. Such changes are only likely to come about under central direction (ibid): perhaps we have evidence of this in the cart-burials of the Yorkshire Wolds amidst the myriads of poor and unaccompanied graves in cemeteries excavated and seen by air photography.

It is suggested, therefore, that the linear earthworks are not to be interpreted solely as part of a pastoral ranching economy, but rather as the land divisions of settled communities engaged in mixed farming. A cattle-based economy over the north and west of our area right down to the Roman

period is likely because of environmental constraints. However, although the same may be recognised at Grimthorpe, and to some degree also at Staple Howe and Breedon-on-the-Hill in the earlier Iron Age on the basis of animal bones, the Iron Age in the East Riding and the East Midlands saw increasingly settled communities and diversified agriculture. Storage pits at Cowlam, Manor Farm, Kilham, and Great Kendale suggest that increased arable farming came with the La Tène period. The pits at Garton Slack indicate storage of grain in the late Iron Age on a very large scale. Although animals probably continued to be a measure of social wealth (see comments in next chapter), with pastoralism thus remaining important, the proportion of arable crops in the diet evidently increased. Animal bones at Old Sleaford show a changed balance in favour of sheep. Land boundaries indicate divisions between population units and between types of land use. In conclusion, although the concept of the Stanwick Type of economy may be readily applied to areas of the Pennines, the west, and the north in the pre-Roman period, elsewhere farming became increasingly mixed and intensive, ecological conditions and agricultural techniques so allowing.

As for the details of the organisation of the pastoral economy, little can be gleaned, particularly since Higgs and White (1963) showed that any evidence for autumn killing based on an analysis of the age of specimens determined by the eruption and wear of teeth is likely to be illusory. It is thus not possible to assume that an abnormally high proportion of the livestock was killed in the autumn because of a shortage of winter fodder. Analysis of the Grimthorpe material (Jarman, et al., 1968, 188) showed that not only the breeding herds but the majority of the animals were over-wintered. This evidence suggests that there was no problem of winter fodder resources, and that there may well have been no human population pressure. 75% of the cattle and 63% of the sheep were slaughtered between the ages of 12 and 30 months; that is when moderate weight would have been achieved. The evidence

from Breedon-on-the-Hill is in accordance with these conclusions (Higgs, 1964, 140): the majority of the cattle were over-wintered at least once. At Catcote also there seems to have been a considerable capacity to over-winter livestock (Hodgson, 1968, 130).

Connected with the themes of pastoralism, population increase, surplus production, and trade is the salt industry. Salt production sites in Hallstatt and La Tène times have been mapped by Piggott (1965, figs. 94 and 140) on the basis of work by Nenquin (1961). Romano-British saltings are extensive on the Lincolnshire, the Fenland, and the East Anglian coasts (Hallam, 1960; 1970, 67-70). There is evidence for salt-making in the later Iron Age from a number of Lincolnshire sites, notably Ingoldmells (Baker, 1959, 31-4), South Ferriby (HMP, 214, 1963, 23, 33), Addlethorpe and Wrangle (LAASRP, IX, 1961, 13), and Helpringham Fen (TF153407; J. May information). A reconstruction of the processes of salt-boiling has been outlined by Riehm (1961). There seems to be little direct evidence of the association of earlier pottery from Ingoldmells (Baker, 1959, 29-31) with salt manufacture, however. Such activity on an industrial scale in Midland and northern England in the early Iron Age has yet to be proved. The presence of marine mollusca on several early sites including Staple Howe (Brewster, 1963, 138) and Harborough Rocks (Ward, 1890) strongly suggests sea-shore contacts even from central inland sites, probably primarily for brine-collection.

During excavation of the lower layer of occupation material revealed in sand quarrying at Thornham Hill, East Riding, in 1950-51 (for description of site, see Part II, Chapter 4, i), Messrs C. and E. Grantham recovered a large pottery vessel, almost complete, full of seeds mixed with dark friable sandy earth. Unfortunately the vessel collapsed on exposure to air and sunlight, and no sherds are now available for study. Other pottery from the lower occupation layer suggests a date in the fifth century B.C. Through the kind offices of Dr. Judith Turner of the Department of Botany in the University of Durham, a sample of the seeds was identified. They were elder seeds, without

the surrounding black berry. The elder is common as a coloniser of land where cultivation or grazing pressure is relaxed, and of the margins of forests after extensive clearance has taken place (Pennington, 1969, 106). There would seem to be no reason, however, why elder should be deliberately planted. The obvious and most attractive conclusion is that the deposit represents elder-berries collected for the production of wine. Strabo (Geography, IV, 5, 5) refers to the production of drink from grain and honey. The elder-berries from Thornham Hill are a remarkable substantiation of the assumption that inexpensive fermented drink was consumed by the common people in Iron Age society.

## CHAPTER 5

### RELIGIOUS AND BURIAL SITES

The rarity of burial sites in British later prehistory stands in contrast with their abundance in the Neolithic and Early Bronze Age periods. Apart from the distinctive groups of La Tène burials in eastern Yorkshire and of cremation cemeteries of the Belgic period in south-east England, the infrequency of burial remains is sufficiently pronounced to provide a "negative type-fossil" for Hodson's Woodbury Culture (1964b, 105), a term which is applied to the rest of the British Iron Age. As for the Bronze Age, we have already seen (in Part II, Chapter 2, ii) that Burgess has claimed a complete absence of burials over wide areas of Britain in the Middle and Late periods. In our area, we have seen (*ibid*) that in the Late Bronze Age in certain areas cemeteries with bucket and barrel urns may continue. Several other burials may be assigned to the period. The Trent-Tyne area provides no completely unequivocal evidence of any pre-Roman Iron Age formal burials, apart from the well-known eastern Yorkshire series. Before embarking on a critical examination of the evidence for the disposal of the dead in dimly-lit later prehistory in general, a consideration must be offered of recent research on the religion and burial of La Tène eastern Yorkshire.

#### i. The La Tène Burials of Eastern Yorkshire

It is not proposed to reconsider in complete and systematic detail all the evidence of this complicated but well-defined archaeological subject, the Arras Culture. A definitive commentary already exists (Stead, 1965), to which Stead himself has added by the publication (1971) of some subsequent research. However, some other recent work has been undertaken: particularly important are the air photography and field-work of the RCHM (England), and the excavations carried out by the Department of the Environment at Garton

Slack. (The writer is indebted to H. G. Ramm and T. C. M. Brewster for access to material and for discussion .) There is thus a need to point out certain additions in detail and also shifts of emphasis to complement Stead's work.

The remarkable burial at Aldro has already been described (Part II, Chapter 3, i). A cremation deposited in a pit beneath a round-ditched barrow was accompanied by a quantity of objects, mainly of bronze, now lost or mislaid. Most important was the presence of a disc-headed socketed mounting of a type interpreted elsewhere as a top-piece mounting at each of the four corners of the coachwork of a Hallstatt four-wheeled waggon. The closest parallel is from the sixth century Tumulus d'Ohnenheim in Alsace, an extended inhumation with a waggon beneath a round-ditched barrow. The Aldro cremation marks the first unambiguous Continental influence on Iron Age burial in the East Riding. However, the d'Ohnenheim burial and almost all those of eastern Yorkshire La Tène are inhumations. Cremation would have been the Late Bronze Age indigenous rite, as known with bucket and barrel urns at Catfoss near Hornsea, and Flaxby near Harrogate, and beneath small ring-ditched barrows radiocarbon dated to the sixth century on Ampleforth Moor, west of Pickering (all noted in Part II, Chapter 2). Perhaps at Aldro we have the earliest evidence of the movement from north-eastern France, or its environs, which led to the creation of the La Tène cultural group with unusual burial rites in the East Riding.

Cremation is otherwise unknown amongst all excavated burials, apart from two small groups of enigmatic character. The two pottery vessels from Riggs Farm Barrow 33, Group IX (Fig. 28, 10-11), are similar to but not directly comparable in every respect with others from known La Tène burials. They accompanied cremations in a pit and a hollow in the surface beneath the barrow mound (Mortimer, 1905, 175). Riggs Farm might be early in the La Tène series. At Skipwith Common and Thorganby Common in the Vale of York (Stead, 1965, 22-3),

the evidence suggests cemeteries of square-ditched barrows, a conclusion supported by the identification by air photography of a square-ditched barrow at Riccall, nearby (Riley, 1971, 7). Excavation reports of the Skipwith and Thorganby burials indicate cremations in most cases, with two crouched inhumations in the largest barrow at the former. Iron objects with the cremations, and Romano-British pottery in the ditch fillings, indicate the likelihood of an Iron Age date. In view of the predominant cremation rite, one might suggest that these western outliers to the main distribution (Fig. 97) represent early exploration rather than later expansion.

Stead has noted that several of the excavated barrows in the East Riding have round ditches rather than square ditches, particularly those at Eastburn (Sheppard, 1938) and Rudston (J. Bartlett excavations, 1960). In some cases round ditches as well as square ditches survive on cemetery sites in the Marne region (Stead, 1965, 86). The fact that in east Yorkshire round-ditch barrows are common and occur alongside square-ditch barrows in the same cemeteries deserves more attention than it has received, however. It is particularly evident from air photographs of the Rudston, Burton Fleming, Boythorpe, and Grindale cemeteries (see Notes on Figures, 97, for locations and references; and Plate XI). The most recent excavations in Area 4 of the Burton Fleming cemetery located two inhumations in shallow graves beneath mounds (mounds presumed, since the area has been extensively ploughed) surrounded by circular ditches (I. M. Stead information). In addition, there seems to have been some variation in the structure of the square-ditch barrows themselves, since one excavated at Garton Slack in 1965 had an entrance causeway 4 feet wide across one of the sides (D. of the E., 1966, 8).

One of the most outstanding results of air photography in the East Riding has been to show that cemeteries are often deliberately aligned along or placed within other ditched enclosures. For example, the Boythorpe cemetery lies alongside a double-ditched trackway on the floor of a tributary valley to the Gypsy Race. About thirty square-ditch barrows and three ring-ditch



barrows, with central burial pits, are laid out in rough lines in a zone 100 feet wide (RCHM information). The square-ditch barrows at Burton Fleming Area 1 are closely packed, arranged roughly in four lines, within a boundary ditch 4 feet deep and 8 feet wide (Stead, 1971, fig. 1). At Garton Slack Site VII, four square-ditch barrows, one containing an adult female crouched burial accompanied by the iron mirror with bronze mountings (see Part II, Chapter 5, i), and three probable circular shrines or ritual houses, all lay within a ditched enclosure 120 by 60 feet which presumably formed a religious sanctuary (D. of the E., 1971, 13; T.C.M. Brewster information). The fact that three square-ditch barrows are seen deliberately aligned against parts of the Leaverling Wold dyke system (noted in Part III, Chapter 4, ii) is hardly likely to be accidental. The inference is that the burials formed an integral part of an enclosed landscape, and that the larger cemeteries were divided from areas of other land use by trackway ditches and boundaries.

Stead has remarked that there is as yet insufficient material to construct a relative chronological framework for the different cemeteries of the La Tène period (1971, 28). However, the extensive excavations at Burton Fleming may make it possible to suggest some horizontal stratigraphy, since it appears that there were some variations in burial rite in addition to those already mentioned. There seems to have been a tendency to reduce the size of the barrow platform with the passage of time, since those at Cowlam, 32 to 46 feet across, and Arras, 35 to 41 feet across, are considerably larger than those recently excavated at Burton Fleming, which range from 11 to 28 feet across. Generally the inhumations are contracted and orientated from north to south. However, in Area 3 at Burton Fleming a series of 13 extended inhumations orientated from east to west were excavated. They were set in smaller grave pits within smaller enclosure ditches fitted into a pre-existing pattern of barrows. The grave goods were completely different,

including iron knives, a spearhead, and a hammer-head, and excluding pottery, pig bones, and brooches. In Area 4, only one burial was extended and orientated from east to west: this had a short iron sword placed diagonally beneath the body (I. M. Stead information). Extended inhumations at Garton Slack seem also to have been orientated from east to west (D. of the E., 1971, 13). Often, as at Burton Fleming but also at Boythorpe and Grindale, round-ditch barrows seem to have been fitted into a pre-existing pattern of square ditch barrows. The ring-ditch barrows at Eastburn are a late group. Thus it seems that extended east-west orientated inhumations, and round-ditch and smaller-ditch barrows tend to be later rather than earlier. But how far does such a conclusion reflect the fact that all the cemeteries excavated under modern conditions appear to be fairly late, that is mostly after 200 B.C., dated on the basis of involuted and flattened bow brooch forms and other Middle La Tène characteristics?

Two other features of the Garton Slack and Burton Fleming cemeteries are notable: secondary burials and isolated burial pits. In Area 1 at Burton Fleming there were four isolated pits, presumably flat graves, inserted within the barrow pattern (Stead, 1971, fig. 1). In two the burials were orientated from east to west, and in one case the grave cut into another. Isolated pit burials were also excavated at Garton Slack in 1965, 1969 and 1970. As for secondary burials, in Area 4 at Burton Fleming three square-ditch barrows had six secondary burials, five in the ditches, and one on a barrow berm. In three of the barrow ditches at Garton Slack Site VII there were secondary inhumations (D. of the E., 1971, 13). It is not known to what extent the isolated and secondary burials are later rather than earlier in the La Tène period, but the evidence at present suggests that they were late and that their sites were often unmarked.

An important fact about some of the isolated and secondary burials is that they contained infant skeletons. One such was recovered at Garton Slack

in 1965, three in two pits in a barrow ditch in 1969, and five in the ditch at Barrow 3 of Site VII in 1970. Outside our area, two child burials were discovered within the area of a circle enclosed by stake-holes beneath the Romano-Celtic temple on Site A at Frilford (Harding, 1972, 64). A separate pit within the circle provided pottery and a sword chape fragment indicating a date in the first century B.C. Child sacrifice in the Celtic world is recorded in Irish and Classical literature (noted, *ibid*). The presence of infant burials with square-ditch barrows at Garton Slack provides a useful local precedent for later examples to be mentioned presently.

A significant result of the Garton Slack excavations has been the identification of circular ritual structures associated with the burials. To the north-west of the now famous cart-burial excavated in 1971 (Brewster 1971, 290) was a ditch, evidently discontinuous and uneven in depth, enclosing an area about 30 feet across in which was a number of pits defining arcs of an internal circle (*op. cit.*, Pl. XLIV). The publication is incomplete, but evidently these pits contained deposits: one a sheep burial, another an inverted human skull, and another a pig's skull, two bone weaving combs, and two bone sliders. Brewster considers that the structure was a roofed circular ritual house (*op. cit.*, 291). Similar houses have been found associated with other groups of square-ditch barrows. On Site VII, Barrows 1 and 3 were found to overlies semi-circular slot-systems about 25 feet in diameter with post-hole or pit terminals. Within these enclosures were shallow pits, often containing chalk blocks. One had a skull and the articulated limb bones of an ox. Excavations on Site V recovered an ox burial, cut across by a Romano-British ditch, and also a sheep burial, surrounded by a ring of narrow-diameter deep pits. In 1965 and 1969 similar ritual pit groups and post-hole structures had been found in association with square-ditch barrows. A prominent triangular enclosure with sides 100 feet long set against the trackway beyond the barrows of the Boythorpe cemetery (RCHM information)

may define a comparable ritual structure or shrine.

The occurrence of ritual ox and sheep burials in the same network of religious structures at Garton Slack as the well-known burial types indicates a practice not uncommon in the British Iron Age. The presence of just the skull and limb bones of an ox in a pit on Site VII provides a direct link with the major long-bones and skull of a horse buried in a pit behind the entrance passage at Blewburton Hill, Berkshire, and those of a horse and an ox buried adjacent to the southern gateway of the Iron Age camp at Pimperne, Dorset (Harding, 1972, 70). Harding has recalled that it was these same bones which played a key role in the practice of animal burial at La Tène itself. The presence with poorer eastern Yorkshire La Tène burials of a pig humerus is a common occurrence, and complete skeletons of horses, pigs, and goats are reported with burials at Arras and Danes Graves. The provision of food or earthly flocks in the after-life is a reasonable explanation since meat, and particularly pork, was a traditional favourite food of the Celts (Jackson, 1964, 37-8). The discovery of the separate ritual burial of the animals themselves adds a new dimension to our insight into religious practices. Can one envisage an important place for arable farming in the economy of groups which held animals in such reverence? The presence of storage pits, carbonised grain, boundary earthworks, and field systems dictates that we must, even though cattle, pigs, and possibly also sheep no doubt formed the basis of social wealth.

Three interesting points arising from the Burton Fleming cemetery excavations may be briefly noted. The crouched skeletons often seem to be so tightly contracted that it is clear that the corpses must have been bound. At least three inhumations in Area 1 and at least five in Area 2 had been buried in some kind of wooden coffin, up to 2 feet wide and 3 to 5 feet long, seen as a dark stain in the grave filling (Stead, 1971, 26-7). Only in one case were two skeletons present in a single grave: in Area 3, crouched and

extended inhumations have been proved to be sisters, having the same congenital deformity of the spine (I. M. Stead information).

Stead sees the Danes Graves and Eastburn cemeteries continuing in use almost up to the beginning of the Romano-British period (1965, fig. 37). However, it is not possible to prove that typical burial in square-ditch and round-ditch barrows continued beyond the mid-first century B.C. There is no indication of a date much beyond 100 B.C. from the pottery, involuted brooches, and bracelets from Danes Graves. The only possibly late item is the "harp-shaped fibula of iron" from Grave 12, now lost (op. cit., 109). The brooches, pottery, and bronze spine-covers from a shield among the grave goods from Eastburn do not demand a date later than that indicated by the toggle and strip-bracelet, probably in the mid-first century. Similarly there is no unequivocally later dating evidence for the types of burial at Burton Fleming and Garton Slack already discussed. Brooches and pottery of Belgic type have not been found with Arras Culture burials (apart from possibly the fibula from Danes Graves 12 just mentioned). What, therefore, was the nature of religious and burial sites in the immediately pre-Roman period? Certain changes of emphasis and different types of deposit can be distinguished.

There are very few burials that may with certainty be ascribed to the late first century B.C. and the pre-Flavian period. However, the evidence of excavations of layers and structures beneath the Roman villa at Rudston (Stead, 1971, 30-2) indicates that formal burials in domestic ditches took place rather than burial in barrow cemeteries. A number of large ditches at Rudston cleared in the 1930's and more recently are likely to be pre-Roman. In the filling of one, graves had been excavated for three inhumations, one with an early Roman brooch and another with a bronze type C penannular brooch of Belgic type (op. cit., fig. 7, 4). In another, a pit had been excavated in the upper edge of the original ditch profile, in which had been

deposited an infant burial (Steer, 1937, fig. II). It is important to note that a similar practice has been found elsewhere, at Dragonby (May, 1970, 227). In Area 1 of the excavations, six inhumations were found, mainly in the upper fillings of ditches. Grave goods were absent, but a pit dug through the middle of a burial deposit contained a few sherds of Iron Age pottery, suggesting that this burial at least was probably of Iron Age date.

The practice of infant burial, and so perhaps also infant sacrifice, seems to have increased in prominence in the late Iron Age and continued into the Roman period. During excavations in 1971 at Garton Slack, the interior of a roughly square ditched enclosure 150 feet across was cleared. Two hut circles of ring-ditch type were found, to the north of which was a series of over 30 burials of infants less than six weeks old, thrown haphazardly into small pits of oval shape up to 1 foot deep. The only associated remains were burnt sheep bones. An ox burial and several lamb burials were found nearby (T.C.M. Brewster information). The enclosure ditch was constructed in the late Iron Age but recut in the early Roman period with an extension to the north. The date of the infant burials is not completely certain, but Brewster assigns them to the early Roman period. In the vicinity of the curved ring-ditches of pre-Roman hut sites at Rudston, recent excavations uncovered five burials of new-born infants and six pits with the articulated skeletons and cremated remains of young animals. These may be contemporary with the huts (Stead, 1971, 30-2). Another infant burial is known from beneath the rampart of a boundary earthwork at Garton-on-the-Wolds (Grantham and Grantham, 1965, 356). The earlier examples of infant and ritual animal burial associated with Garton Slack square-ditch barrows, and the parallels in the Upper Thames region and elsewhere in the Celtic world, indicate the breadth of the Iron Age background of these practices, which seem to have become particularly prominent in eastern Yorkshire in the first century A.D. Continuation is shown by the discovery at the Roman fort at Malton of 28 infants buried under the floors of a fourth century building (Gray, 1930, 94). There

are other Roman contexts for infant burial in southern England (op. cit., 93-4).

A third type of ritual deposit particularly common in the East Riding late Iron Age is the votive offering of carved chalk figures and shields, or more commonly of blocks and discs. Mr. Brewster reports that over 100 have now been recovered at Garton Slack. They nearly all came from the fillings of enclosure ditches, particularly those of the square enclosure noted in the previous paragraph, and those of a rectangular enclosure, 120 by 60 feet, on Site V. All are from beyond the limits of any Roman recutting. The only figure in a Romano-British context is one badly burnt from a hearth deposit and thus probably a rubbish-survival. Several fine examples recovered from Garton Slack ditches by C. and E. Grantham have been published by Stead (1971, fig. 4, Pl. 4; CA, 17, 170). The figures are wedge-shaped, with flaring skirts, belts, and sometimes swords. All but one were decapitated. The surviving sizes range from 3 to 6.5 inches. A chalk shield model is of oval form with central circular carving. Other figures are known, from a ditch at Blealands Nook with Romano-British pottery (Mortimer, 1905, 198, fig. 492), and from the site of the Harpham Roman villa (DPM). Similar votive deposits occur further south: a miniature sword and shield from the Romano-British shrine at Frilford Site C (Harding, 1972, 62), and three miniature bronze shields, two fragmentary, from pre-Roman levels beneath the Romano-British temple at Worth (Klein, 1928, 79-80, fig. 11). The chalk figures and shields from Garton Slack thus convincingly demonstrate a ritual function for the ditched enclosures. Some continuity from earlier ritual activity is indicated by the presence of roughly-squared chalk slabs with the female inhumation in Barrow 2 and in the shallow pits within the circular ritual house structures on Site VII (D. of the E., 1971, 13-4).

The distribution of square-ditch and round-ditch barrows and cemeteries excavated and identified by air photography and of <sup>other</sup> La Tène burials in eastern

Yorkshire is shown on Fig. 97 against the surface geological outcrops of chalk and Corallian beds. It will be seen that a considerable numerical increase on those known to Stead in 1965 (fig. 1) may now be presented. Several features of the distribution should be noted. The most outstanding concentration is in the north-eastern Wolds in and around the valley of the Gypsy Race, which is significantly the only valley through which a surface stream penetrates the chalklands. One might infer from this that the supply of water from the stream, being of considerable economic importance, might also have had a ritual significance. An important fact is that many of the largest cemeteries, such as those at Garton Slack, Scarborough Park, Burton Fleming, Kilham, Danes Graves, Cans Dale, and Boythorpe, are in valley-floor or valley-side situations, and often on gravel deposits rather than solid chalk. Only a few, such as Arras and Cowlam, probably fairly early in the series, are on top of the Wolds. There are notable outlying groups. To the north of Pickering there are several examples on the Corallian. Air photography has located barrows to the north-west of the Wolds, again on and around Corallian deposits which provide well-drained plateau areas. Examples to the east are often on gravel and rarely on boulder clay. Plateau-top chalk situations are not the most common.

Now that air photography has identified La Tène burials in such numbers in eastern Yorkshire the question arises whether they may be found elsewhere in northern and central England. Since round-ditch barrows as well as square-ditch barrows may be seen to be characteristic, it may be that more are present on existing air photographs than have been recognised. Several likely sites in the Trent valley are known. A group of five square-ditch barrows at Aston upon Trent were recognised by St. Joseph (1966, Pl. XVI), and one was excavated in 1967 by J. May (who has kindly offered information in advance of publication). The enclosure ditch was located, and the central platform 27 feet across was examined. No certain trace of a burial was found, but at the precise centre was a small oval patch of fine reddish loam. To the north-west



of the area was an oval pit 18 inches deep with no archaeological finds. Very small sherds of coarse, gritty pottery, and an abraded piece of jar in Derbyshire Ware were recovered from the upper filling of the enclosure ditch. May considers that the coarse sherds should be ascribed to the fifth to third centuries B.C. The absence of evidence for a burial suggests that one was placed on the old ground surface in the centre of the area and has been removed by ploughing. The only other examples in the Midlands to be excavated are a row of three square-ditch enclosures, each about 24 feet across, at Bardyke Field, Maxey (C.B.A. Welland Valley Res. Com. Rept., 1962-3, 7). Again there were no central pits or traces of burials, but the enclosures underlay a large rectangular enclosure which yielded mid-first century A.D. pottery from the ditch filling. Other possible La Tène burials have been located from the air at Barrow upon Trent and Barton-under-Needwood (see Notes on Figures, 96). A group of over 100 ring-ditches from 12 to 50 feet in diameter was located at Parwich, Derbyshire, in 1957, but excavations were abortive. However, the indications are that La Tène burials as identified in the East Riding were more widespread in central and eastern England than has hitherto been supposed. The Harborough Cave disc-footed brooch indicates an important link. The Red Hill bird-brooch is from a Trent Valley site which has produced evidence of a temple or shrine of Romano-Celtic type of the third and fourth centuries A.D. (EMAB, VII, 26). In view of the evidence for the superimposition of Romano-British religious sites on Iron Age ones in the south of England, might an Iron Age religious centre at Red Hill be sought? It remains to recover evidence of burial from a Midlands ditched enclosure of the known type, and so to clinch the interpretation as Iron Age barrows.

The numbers of square-ditch and round-ditch barrows now known in eastern Yorkshire are very large. Enquiry suggests 2,500 as a conservative estimate, and if the discoveries and numerical totals intimated by T.C.M. Brewster (in conversation) are proved correct this number may certainly be doubled. When

the air photograph evidence held by the RCHM is fully analysed and the numbers in different areas roughly known, it may be possible to calculate a theoretical population density on the basis of suggested prehistoric death-rates (such as 40 per 1000 per annum as suggested by Atkinson, 1968, 87). The picture may well be complicated by the possibility that large cemeteries such as those in the Gypsey Race area may have had broad population catchment areas. Whatever the result of future research, however, it seems that a considerably increased population in the Middle La Tène period in the East Riding must be envisaged on the basis of burial numbers, particularly since most of the largest cemeteries, such as Burton Fleming, Garton Slack, and Danes Graves, seem to relate to the period after the mid-third century. It is suggested that this evident increase in population in large measure accounts for a change in economic emphasis towards arable farming during the Iron Age, particularly in the middle and late phases of the La Tène period, which was argued in the last chapter on the basis of boundary earth-works, field systems, and storage pits.

#### ii. Other Burial Evidence

We have seen (in Part II, Chapter 2, ii) that a continuation of Collared Urn burials into the Middle Bronze Age need not be completely ruled out over parts of the Trent-Tyne area, and that in particular such types may still have been current on the North York Moors in the twelfth century B.C. We have also seen that although the main impact of the Deverel-Rimbury culture was expended by the beginning of the first millennium B.C., cremations in flat cemeteries with bucket and barrel urns may have continued in vogue in certain areas such as the central Welsh Marches down to the eighth century. There are a few other examples of cremation burials which may be ascribed to the period leading down to Iron Age beginnings.

A group of nine round-ditched bowl barrows on Ampleforth Moor, north-west

of Pickering, was excavated in 1966 (Wainwright and Longworth, 1969). The mounds were 24 to 32 feet in diameter, and composed of brown clayey soil resting on a well-preserved old land surface. No burials were found under any barrow, since each had been previously robbed, but small quantities of flints and pottery, a faience bead, and a scrap of bronze were found on the old land surface, pre-dating the mounds' erection. Some sherds appear to be Neolithic, and the presence of the bead suggests an earlier Bronze Age date for a few of the remainder. However, some sherds (considered in Part II, Chapter 2, iii) appear to be Late Bronze Age, and are comparable with a group found by G. F. Willmot in 1937 in pyre material on the old land surface beneath his Barrow 2 nearby (Fig. 42, 10-12; Clark, 1937, 443). Charcoal from the surface beneath Barrows 7 and 3 gave radiocarbon dates of  $537 \pm 90$  and  $582 \pm 90$  B.C. (BM-368, BM-369). The implication is that ditched bowl barrows covering cremations were still being constructed at the end of the Late Bronze Age. No urn or container seems to have been used, to judge by Willmot's findings.

Other known cremation burials of the period are isolated occurrences. Further north, in the Cleveland Hills, a barrow named Nanny Howe on Coate Moor, with a primary Beaker burial, had a secondary cremation inserted in the south-east side. With the cremated bones a large sherd of very coarse dark pottery was found (Hayes, 1966, fig. 3, 1), of undistinguished, gently-curving form, which may be of Late Bronze Age type. In western Yorkshire at Coney Garth near Rathmell, nineteenth century examination of a barrow produced a fragment of charcoal, flint clips, and small sherds of a pottery vessel (Fig. 8, 12) with rim and decoration of Late Bronze Age type (see Part II, Chapter 2, iii). In Grantham Museum is a complete vessel from Sudbrook which is thought to have accompanied a cremation burial. The pot (Fig. 9, 1), of rounded form with neatly finger-tipped rim, is not unlike the "Schrägrandurnen" found particularly in the Campine group of burials of the Urnfield period

(dated Hallstatt C/D) in the Low Countries (see Part II, Chapter 3, ii). There is some small evidence therefore, of the continuation of cremation burial, often in barrows, right through to the beginning of the Iron Age.

Hardly so numerous as to denote a separate tradition, and never yet excavated under conditions which render the accounts completely reliable, are four well-scattered examples of burial with Late Bronze Age metalwork. The best-known is at Butts Beck, Dalton-in-Furness (Fell and Coles, 1965, 49-50), where a stone cist was discovered by workmen removing topsoil in 1873. A large quantity of human and animal bones was present within the enclosed space, at one end of which was a sword of Ewart Park type, and at the other a leaf-shaped spearhead with peg-hole and socket-rib. Nineteenth century records state that in a barrow at Alexander's Hill, Follifoot, near Ilkley, several large stones, probably forming a cist, were found with urn fragments, bones, and bronze implements including some spearheads and a palstave (OS information). Also before the turn of the century, excavations for a new road at Spring Gardens, Buxton, uncovered a quantity of bones, which appeared to include the long-bones of a human skeleton, two socketed axes of slender funnel-mouthed form, a broken leaf-shaped spearhead, and a pottery vessel with projecting knobs below the rim (Salt, 1900). At Shenstone, Staffordshire, a rock-cut grave was discovered in 1824 during sand-removal. Fragments of human bones and a piece of decayed wood were found, and, a few inches away, a hoard of bronze implements. The hoard is lost, but included a leaf-shaped sword, three leaf-shaped spearheads, a socketed gouge, two socketed axes, two looped palstaves, several ferrules, three metal rings, and other objects (TNSFC, IV, 1964, 11). Each one of these four burials seems from the reports to have been an inhumation. With cremation the dominant rite in Britain from at latest the mid-second millennium B.C., the status of these inhumations is obscure.

The only other evidence of burial and religion in the Late Bronze Age

of our area relates to the fact that almost all examples of fine later prehistoric martial metalwork have been recovered from situations which imply deposition in wetness: that is, they have been found during drain construction, peat cutting, river dredging, or the working of alluvial deposits. This has already been remarked upon in the cases of the fine antenna-hilted sword from the river Witham, and Late Bronze Age shields from our area (Part II, Chapter 2, ii). In later periods, all known Hallstatt swords (apart from the Ebberston examples) seem to have been similarly deposited. The river Witham has consistently supplied the most outstanding equipment in the Midlands and the north of the later Iron Age period: in particular the magnificent Witham shield and the various swords. We are undoubtedly, therefore, faced with evidence of a tradition of committal of swords and shields to the waters which spans the whole of the first millennium B.C. In view of the votive figurine and miniature shield deposits of the East Riding and elsewhere, considered in the previous section, there can be no doubt that deposition in wetness constituted a ritual act. We may ask with Jope (1971, 65) whether insular aristocratic funerary rites involved freeing the spirit from the flesh in a sinking boat. Perhaps we have part of the answer here to the question why rich pre-Belgic burials are so rare outside the East Riding.

Our interpretations are dramatically substantiated by the well-known pinewood figures and boat from Roos Carr, near Withernsea, Holderness (Lingvist, 1942). These were found in 1836 at a depth of 6 feet in blue clay when recutting a drain. This situation indicates that they may have been deposited when the area was under shallow water. Five figures survive, together with a base which seems to be carved as a boat. The boat takes four figures, and as eight were originally found it seems that two crews were represented. Many more figures were seen at the time of discovery, but were too decayed for removal from the clay. The figures are 14 to 17 inches high,

and are roughly carved as naked warriors, each originally armed with a club in the right hand and a round shield in the left. Shields, clubs, arms, and penes were separate carvings, mostly lost. The eyes were inlaid with quartzite pebbles. The shields were round rather than oval, a fact which has led to their date being suggested as sixth or seventh century B.C. (Piggott, 1970, 17). Lindqvist (1942, 238-41) suggested an early first millennium B.C. date on the basis of north European parallels. However, the shields are not unlike the roughly-carved chalk discs from Garton Slack in their featureless crudity, and the figures are startlingly similar to those from Dagenham, Essex (Piggott, 1970, 16, Pl. 81), and Ballachulish, Inverness (*op. cit.*, 17), for which Piggott has suggested dates in the first century B.C. or possibly earlier. A late Iron Age date must therefore not be ruled out for the Roos Carr figures. Whatever date in the first millennium B.C. is suggested, the implications are clear: that ritual activity in boats by warriors with weapons and shields was an integral part of later prehistoric religion, that model shields and model warriors were common ritual objects, and that full-size swords and shields found deposited in wetness are to be interpreted in such a context. The concentration of burials round the Gypsey Race stream and the numerous chalk blocks, discs, and figures from Garton Slack are thus to be seen as expressions of the same overall religious traditions involving warriors and wetness.

The Ebberston Hallstatt swords (considered in Part II, Chapter 3, i) are unique in Britain, since they are the only known examples for which a case may be advanced for burial rather than deposition in wetness. The reference to a quantity of bones implies inhumation burial, the rite connected with Hallstatt swords in north-eastern France and in the Koberstadt culture of the Middle Rhine, unlike the cremation associated with Hallstatt warriors in Belgium (De Laet, 1962, 137-8). Other burials of Hallstatt date are very rare in Britain. An example is known from Barrow 2, King's Weston Hill,

Bristol, from which an iron bridle cheek-piece with knobbed terminals of typical Hallstatt type and an open shouldered bowl which could also be of Hallstatt date (cf. Mariën, 1964, figs. 9-10) were recovered (Tratman, 1925). The burial rite there seems to have been cremation, which with the artifacts is more amenable to a Low Countries origin. Since the evidence does not suggest a unitary tradition, we may interpret it as small-scale immigration of peoples exhibiting somewhat divergent characteristics.

Apart from those now considered, the only other burial in the Trent-Tyne area which might be anything other than late Iron Age in date is that on Roomer Common, west of the Vale of York (Waterman, et al., 1955, 395). A small cairn 15 feet in diameter was separated by a berm from a round ditch, 3.5 feet deep and 7 feet wide. Towards the east side of the cairn, a stone-lined cist sunk into the ground was discovered. Fragments of iron were found wedged between the stones of the collapsed cist in such a way as to suggest that they had been laid above it. There was also evidence of wood. No human remains were found, apparently because of the acidity of the soil, but the presence of a cist suggests the rite of inhumation. The only dating evidence is the quantity of small pottery sherds from the ditch filling, from the earthy cairn-covering, and from the original turf line (Fig. 8, 7-11). Although some (7, 9, 10, 11) are acceptable as Late Bronze Age, one small sherd (8) is problematical. Hawkes (quoted, *op. cit.*) suggested that if interpreted as either a pedestal base or a rim it could be characteristic of La Tène cultures of the third century B.C. It is too small and damaged for conclusive identification.

All other burial evidence from our area to be considered might relate to the Late Iron Age period. Much of it is likely to be Romano-British. At Crosby Garrett, Westmorland, three contracted inhumation burials were discovered in 1873 (for this and other references, see Notes on Figures, 96). On the right arm of one was a bronze armlet

(Fig. 8, 17) with overlapping ends. Its worn condition and oval shape suggest that the terminals may originally have met neatly, but the overlapping ends recall the snake-bracelets of Scotland (Stevenson, 1966, 32) and so indicate the likelihood of an early Romano-British date. In Co. Durham, two extended skeletons in very shallow graves at the late Iron Age and Romano-British site at Catcote might, with the open cemetery of inhumations at High Coniscliffe, indicate a trend towards formal burial in the first century A.D. The presence of the bones of horses and a bullock with the skeletons at the latter site link it with points of religious significance already noted. The evidence from Bishop Middleham and Lancaster is inconclusive. Several burials reported by Bateman in the Peak District may be pre-Roman. At Winster, two contracted inhumations were accompanied by two iron spearheads, the lower and upper stones of a beehive quern, a bone ring, and a fragmentary pottery vessel (Fig. 6, 12). A date in the first century B.C. seems likely.

The presence of pre-Roman inhumations with iron spearheads at Winster, and with iron knives, a spearhead, and a hammer-head in Area 3 at Burton Fleming, East Riding, provides a background against which to consider a relatively large number of burials in the West Riding (see Fig. 96) which have been ascribed to the Iron Age. The burials are inhumations, often multiple, and usually with iron knives (such as Fig. 8, 3). There are three types of situation in which the burials are found: in limestone clints under lengths of stone wall, under cairns or barrows often within cists, or as secondary burials in earlier barrows. Multiple burials in caves are also usually assigned to the Iron Age. (Summaries of evidence are given by Raistrick in his 1937 and 1939 publications.) It is important to note that the barrows for which construction in the Iron Age is suggested are generally of large size, up to 90 feet in diameter, and in some cases surrounded by a bank and ditch. This evidence seems



contrary to the East Riding experience, where Iron Age round-ditch barrows are small, generally from 15 to 40 feet across. Any relationship between burials in the two areas thus seems unlikely. In fact, the evidence suggests that the West Riding examples are Romano-British in date. It has already been seen that extensive open settlements in the area have yielded pottery of the second to the fourth centuries A.D. but no unequivocal pre-Roman material. The same situation applies to the burials. In only one case is datable pottery associated: a tumulus at Grassington (SE 003650) excavated in 1922 by J. Crowther contained fragments of Samian and other Roman pottery (OS information).

The evidence from one West Riding burial site, the barrow on Seaty Hill, Malham Moor (Raistrick, et al., 1952), is of more than usual interest. Although it has provided no satisfactory dating evidence it is worth noting in fuller detail. A primary burial of Early Bronze Age type lay beneath a barrow 66 feet in diameter. In the surface of the barrow thirteen secondary burials had been inserted. In each case the burials consisted not of complete skeletons but of certain bones, usually limbs, jaw, and skull, broken or cut but evidently carefully placed. With four, fragments of iron had been deposited, two of which were recognisable as knives of the type common in similar burials. With three others there were single beads, one of white glass with a band of blue inlay. With the burial centrally placed in the top of the barrow was a bone pipe (op. cit., fig. 1), 4.75 inches long, made from a portion of the right tibia of a sheep. The three holes and mouthpiece were skilfully made and accurately placed to give four notes in the Dorian mode with the range extremely close to a perfect fourth. The pipe has been described by Megaw (1960, 10-2), who considers that for the notes to be made purposefully one must credit the Malham pipe-maker with literally unbelievable skill. However incredible the implications might seem, the series of

notes could hardly have been obtained accidentally. The presence of the pipe with a burial probably early in the Romano-British period indicates the importance of primitive music and dance in ritual activity.

The significance of the cult of the severed human head and the representation of tribal gods in Celtic religion has recently been emphasised by Ross (1970, 154-67), who in an earlier publication (1961) examined the evidence for the horned god of the Brigantes, particularly as seen in the carved stone heads and stone panels found in the vicinity of Hadrian's Wall. It is not necessary to reconsider this material, but it is useful to note that stone heads, many probably of Celtic type and some pre-Roman, are common in other parts of northern England. As a result of surveys begun by S. Jackson of Cartwright Hall Museum, Bradford, over 400 examples of carved stone heads, mainly three-dimensional and free-standing but some on panel-carvings, have been recorded. Janiform and tricephalic examples are known, and also a quadricephalic carving from Nidderdale. The distribution is centred on the Bradford area and the Aire gap, perhaps because of recent publicity, but examples are known from Lancashire and Cheshire. It seems likely that the heads were used in shrines to Celtic gods in the Pennine areas in the Iron Age and Romano-British periods. (The writer is indebted to Sheffield Museum for some of this information.) The heads provide evidence of religious practice in an area where it is otherwise scarce.

In comparison with the La Tène cultures of eastern Yorkshire, there is thus little evidence at present for formal burial elsewhere in the Iron Age. Human bones often occur on settlement sites. At Staple Howe (Brewster, 1963, 137-8) several human bones were recovered. Most of a cranial vault, probably of a young adult male, was found together with fragments of another and ox and red deer bones in the packing of the

first palisade trench (op. cit., Pl.8). Could this be a foundation deposit indicating ritual decapitation? At Breedon-on-the-Hill, excavations in 1966 (D. of the E., 1967, 6) recovered the disarticulated and scattered remains of two human skeletons on the old ground surface beneath the counterscarp bank of the defences. Might this occurrence be interpreted similarly? Presence in rubbish and silting deposits is much more common than cases where ritual activity might be inferred, however. One example is the presence of part of a human femur in the filling of a ditch at Elsham, Lincolnshire (LHA, I, 2, 31). At Castle Hill, Scarborough, fragmentary human bones were incorporated in at least 8 of the 46 pits (Rutter, 1959). Presence in rubbish deposits even on a settlement in La Tène eastern Yorkshire must be recorded: a fragment of a human lower jaw came from Pit 3 at Manor Farm, Kilham (C. and E. Grantham information). There is thus evidence that in some cases at least the proper burial of human remains was not considered to be of importance.

How should the relative absence of burial remains in much of the northern English Iron Age be explained? Cremation and scattering whereby the remains have not survived may have occurred. Certainly to infer that religion and magic were unimportant would be inadvisable in view of the numbers of Celtic stone heads in the Brigantian area and the quantity of martial equipment committed to the waters. It does seem very likely that barrow burial of eastern Yorkshire type in the La Tène period may prove to be more widespread particularly in the Midlands than is at present apparent. However, the funerary rites over broad areas and periods in later prehistory remain spectral and illusive.

PART IV

REGIONAL SUMMARIES AND CONCLUSIONS

Many of the important conclusions of this thesis and some of the problems which it has raised have already briefly been set out in paragraphs at the ends of the various chapters and sections. In other chapters, conclusions have been stated at regular intervals throughout. It is hoped that, as a result of a careful division of subject matter between the sections, these conclusions are readily accessible despite the length of the whole. Consequently there is no need to repeat them in series here. What is required are attempted interpretations of the whole range of evidence as it applies to the various parts of our area, and suggested explanations of apparent differences in cultural wealth, economy, and environment. It is neither necessary nor desirable in a concluding chapter to present a complete and detailed account. Rather, in the sections which follow will be given a view of the state of archaeological knowledge, of the environmental evidence, and of the particular problems for present and future research which seem to be central to the character of each area.

#### i. Cumbria.

Since R.G. Collingwood's classic regional study (1933), it has been the prevailing view that Cumbria in the first millennium B.C. provides a prime example of economic retardation and cultural stagnation. Barnes (1968, 7-12) has strongly re-stated this opinion with reference to Furness. He sees substantial Bronze Age survivals in a heavily-wooded area through to the Roman period, the population being made up of refugees pushed north by the activity of successive civilisations to the south. R. Hogg (TCWAAS, forthcoming) accepts the idea of retardation in the Lake Counties, and suggests that unique factors of difficult terrain and isolated situation dictated the condition of "negative influences" in the first millennium B.C.

To approach a study of later prehistoric Cumbria overshadowed by the seeming necessity of such conclusions would be unwise, however. Excavations

of geographically contiguous sites at South Barrule, Isle of Man, and Birrenswark, Dumfriesshire, have shown that there is no prima facie case for chronological retardation in the north-west; hill-fort communities began early here too. In Cumbria itself, a great variety of altitude, parent rock, and drift deposits provides a wide diversity of habitats. This diversity has led to especial interest and investigation by pollen analysts, who have shown that the impact of later prehistoric man on the vegetation was considerable. In a recent survey, Pennington (1970) has shown that a most striking vegetational change occurred in Bronze Age times, dated by radiocarbon in the south-west Fells to around the eleventh century B.C.: the permanent clearance of upland oak forest and the expansion of grassland. There is evidence for continued arable farming in the Cumberland lowlands throughout the first millennium B.C. Elsewhere, apart from on moorland and blanket peat areas, there is evidence of some clearance for pastoral and arable use. However, it does seem likely that a recession in agriculture and a little regeneration of forest took place in the immediately pre-Roman period. Particularly important is the detailed work of Walker (1966) in Cumberland and Oldfield (1963) in the south-east Lake District. Such analyses deserve close attention from local archaeologists.

What of the archaeological evidence for later prehistory? The work of the RCHM in Westmorland (1936) and of the Collingwoods (see Bibliography) still remains a basic source to which little has been added apart from the excavations at Wolsty Hall 'oval', the detailed examination of Late Bronze Age metalwork, and the results of air photography. In the Late Bronze Age the continuation of earlier shifting agriculture and pastoral farming is likely on palynological and cairnfield evidence. Metalwork is quite abundant in the area as a whole but is surprisingly absent from west Cumberland (Clough, 1969, fig. 7). Wolsty Hall 'oval' shows that in the

Iron Age settled communities using types of hut and enclosure structures known elsewhere in northern Britain were present. The number of other enclosed settlements known from air photography and surface field-work (several previously noted in Part III, Chapter 2, ii, of Iron Age type) suggests that a further systematic excavation campaign would not progress unrewarded. Little more can be said in the almost complete absence of well-authenticated Iron Age material remains. For the present, no satisfactory summary comparable with that available for the Romano-British period (Jobey, 1966 b, 111-12) may be offered.

Barnes (1968, 11) has claimed that the inhabitants of Lonsdale and Furness constituted the tribe of the Setantii, subject to the Brigantian confederacy. It is unlikely that the population density of Cumbria was high or even enough to allow the development of tribal unity in the late pre-Roman period. The pattern seems to have been one of scattered farms and settlements, without major defensive structures. The environmental impact of communities in the Romano-British period was profound (Pennington, 1970, fig. 17); Iron Age anthropogenic effects were mild by comparison.

#### ii. Lancastria.

The archaeological evidence from this compact physical unit on the western shores of the Irish Sea, from the estuary of the Lune to the Dee, consists virtually of one aspect only: hill-forts. Late Bronze Age metalwork is scarce (Burgess, 1968a, fig. 23), with notable finds only in the Fylde and along the Ribble. A glance through the distribution maps shows how poorly-represented the area is, apart from by isolated finds of late Iron Age metalwork and pottery.

Among the hill-forts, Portfield, Whalley, has produced evidence of a timber-revetted rampart and pottery of Late Bronze Age type. Castercliff has an inner vitrified rampart and an outer incomplete timber-framed box

rampart. Maiden Castle, Bickerton, and Castle Ditch, Eddisbury, have likewise given evidence of the use of timber in rampart construction, and Dr. Varley reports associated early Iron Age pottery. In the prevailing climate of opinion regarding hill-fortifications, these sites may all be considered to be pre-fifth century. Their locations are important, since they show that, despite its remoteness from the southern and eastern inflow of much prehistoric cultural influence, Lancastria was in step with current trends in the western European world at least once during the first millennium B.C. The presence of pottery at Portfield, Bickerton, and Eddisbury is likewise significant.

Why, therefore, is there so little other evidence from the area? Its uplands, the Pennine fringes, Bowland, and Rossendale, consist of moorlands and stony slopes. The lowlands carry a thick mantle of glacial drift left by Quaternary ice. The extension of the distribution of early settlement types onto the boulder days of Durham and south-east Northumberland revealed by air photography shows that the assumption that lowland Lancastria was relatively empty during the first millennium B.C. is not necessarily valid. However, the addition of climatic factors such as higher rainfall makes it more plausible. Speculate as one might, the dense industrial settlement of upland valleys in the nineteenth century, highly intensive arable farming on the better-drained soils as in south-west Lancashire, and sprawling city developments must have largely destroyed the archaeological potential of later prehistory apart from on hill-top sites.

### iii. Co. Durham.

In 1930, M. R. Hull (in Kitson Clark, 1930, 168) could maintain that throughout Northumberland and Durham not a single find of the pre-Roman Iron Age had been discovered. Since that time, field-work, air reconnaissance, and excavation in Northumberland (particularly by Jobey:



see Bibliography) have resulted in the accumulation of the most complete record and provisional understanding of the first millennium B.C. and the Roman period in the whole of northern England. Excavated palisaded enclosures, earthwork enclosures, hill-forts, and timber-built huts, and a pattern of scattered farming settlement are the rewards of a systematic long-term enquiry. The identification of native settlements in south-east Northumberland is a recent achievement of continuing research. Material remains are few and poor. Sherds from Burradon show that plastic ornament on rims and shoulders occurs on pottery in the area, but the predominantly slack profiles are largely uninformative: bucket, barrel, and "pear" shapes have been shown to be identifiable in the Trent-Tyne area throughout the first millennium B.C.

In Co. Durham, Late Bronze Age metalwork is not rare, but the outstandingly rich deposit from Heathery Burn Cave, and the hoard reported to have been found at Haggate nearby in 1812, are important assemblages in a record otherwise consisting mainly of unassociated finds. As yet there is no unequivocal evidence of the nature of Late Bronze Age domestic settlement, but the pottery at Heathery Burn implies its presence. The only excavated site of the Iron Age with recognisable structures is West Brandon, an enclosed homestead with central multi-ring timber hut, which has received attention several times in earlier chapters of this thesis. Recent programmes of air photography have located over a dozen comparable enclosures, mainly in drift-covered central Durham, indicating a pattern of scattered homestead settlement. The apparent absence of hill-forts is a feature not unique in the mature Iron Age of the Trent-Tyne area. Systematic excavation of several more homesteads would doubtless add substance to the notion of a scattered but settled pre-Roman population.

Excavations at Catcote, near Hartlepool, in 1963 and 1964 have taught significant lessons about the later prehistory of the north-east. The full report by C.D. Long is forthcoming, but meanwhile three points may be made. First, it is hazardous to apply to the north theories of pottery

classification and typology developed from known series in southern Britain. That some of the Catcote forms could pass in east coastal sixth-fifth century contexts and in southern third-second century contexts is not questioned, but that these same vessels are related to others known closer at hand and are firmly late Iron Age in date is quite clear. Second, one should not consider Co. Durham to be beyond the range of late pre-Roman influence and trading contacts. The possible sherd of rouletted pottery (Fig. 44, 5) and the fragment of Gallo-Belgic beaker in fine cream ware are most significant. Third, the presence of complex ditched settlements so far north in the late Iron Age must not be discounted. The evidence from the Catcote ditches is not clear; there was considerable quantity of Romano-British material. However, the presence of a major pre-Roman settlement is likely. The excavations at Catcote were small in scale. It is to be hoped that further work will be possible.

The apparent absence of Iron Age material remains elsewhere in the county severely limits the extent to which conclusions may at present be drawn. However, the recovery of pottery comparable with that at Staple Howe from the palisaded site at Catterick, less than ten miles south of the Tees, indicates that in future work we may expect to find pottery types in Co. Durham earlier than the distinctive late wares of Catcote and Stanwick. The excavation of homesteads threatened by arable operations is a valuable research opportunity.

#### iv. North-East Yorkshire.

Frank Elgee's Early Man (1930), an astonishingly accurate, complete, and intelligible account, remains the most important source of reference for the archaeology of north-east Yorkshire. Since Elgee's day, the greatest contributions to later prehistory have been made by palynologists, in particular by Simmons (1969) and Cundill (1971). Although he had no

independent dating evidence, Simmons considered that at Egton High Moor his first important clearance phase should be ascribed to the Middle Bronze Age, and that Late Bronze Age and Iron Age occupation seemed to be lacking. Cundill, with the help of radiocarbon dates, showed that on the central watershed of Blackamore a major clearance phase was indeed of Middle Bronze Age date. The occupation was short-lived, but permanent inroads were made into the woodlands resulting in a breakdown of the natural soil profiles. Subsequent populations up to the Medieval period left little mark on the pollen record, and Cundill concluded that Iron Age occupation was mainly peripheral to the moorland areas, with an economy of a fairly intensive, mixed nature.

The evidence of archaeology supports these conclusions. The character of the Middle Bronze Age occupation has already been discussed in some detail (Part III, Chapter 2,i). Hill-fort sites (Eston Nab, Boltby Scar, and Sutton Bank) are notably peripheral, as are the sixth century Ampleforth Moor burials and the evidence of Hallstatt colonisation. La Tène occupation of the well-drained southern Corallian hills is seen in burial evidence. Middle and late Iron Age sites, such as Percy Rigg, Great Ayton Moor, and Levisham Moor, are quite high in altitude but are not near the central watershed. Small enclosures such as Pinnican Hill are in valley side situations. There is little direct evidence for the economy of the Iron Age groups. Beehive querns, some field systems, and a few boundary earthworks, particularly on the southern plateaux and slopes, probably relate to a Romano-British pattern.

The North York Moors and their peripheries provide evidence of distinctive character throughout later prehistory. Of the known pottery, both Late Bronze Age and late Iron Age forms are well-defined despite the small size of the collections. Could it be that the area provided the homeland of a definable tribal group? Stead's interpretation (1965, 79-80) of Ptolemy's Geographia information is not unimpeachable.

"Gabrantuicorum portuosus sinus" could well be sufficiently far north of Flamborough Head for the inhabitants of the area immediately north of Pickering at least to be ascribed the name "Gabrantuici", or "the horse-riding fighters". That a sub-tribe of the Brigantes ranged from the Tees to Scarborough is indeed envisaged by local archaeologists.

#### v. The Askrigg Pennines.

Between Stainmore to the north and the Aire Gap to the south, stretching east from the Dent Fault, lies a large portion of the central Pennines and their foothills named after the dominant geological structure, the Askrigg Block. Composed mainly of Great Scar Limestone, Yoredale Beds, and Millstone Grit, the area has a distinctive archaeological character. Many features have been noted earlier in the thesis: the poverty of the material remains, the lack of Late Bronze Age evidence apart from metal-work, and the predominantly Romano-British dating of extensive settlements and inhumation burials some of which might be Iron Age. The contribution of individual field-workers, particularly of Dr. A. Raistrick, is impressive.

The present state of archaeology in the limestone areas is desperate. There is no individual site report yet available despite numerous small excavations. Publications are of a generalised and imaginative nature. The surviving traces of ancient settlement are rapidly being destroyed by the removal of surface stone and by quarrying. However, the OS has undertaken a detailed field survey in the area, and the RCHM intends to embark on a new programme. In the eastern foothills, at Grafton and Horse Close Farm, and beyond at Catterick, excavation has been successful in recovering structures and material remains. Could not a systematic excavation campaign in the central Pennines achieve comparable results?

For two inter-related reasons it is thought unlikely that our concept of the paucity of material remains of the pre-Roman period in the central Block will be significantly altered by future research. The first

is that bare rock is conspicuous over hundreds of acres, and soil over archaeological sites is seldom more than a few inches thick. Friable coarse pottery would not survive under such conditions. The second is that for environmental reasons, mentioned in the discussion of economy, the capacity of the Pennine dales to support population was severely limited. Semi-nomadic pastoralism was the only practicable way of life. Analysis of the vegetational history (Pigott and Pigott, 1963) has indicated that much of the bare pavement surface has existed since the last glaciation. A great rise in herb pollen and the appearance of arable indicators in the analysis has been ascribed to the Iron Age period, but there is no independent chronology to correlate with the pollen diagrams. It is likely that, as is the case with much other evidence, this clearance should be assigned to the Romano-British period.

On the eastern foothills, however, where lower land for farming was close at hand and the climate was less inhibiting, settled communities on eminences took root. There are several important hill-forts, in particular Barwick in Elmet. It is likely that in the peripheral rather than the central Pennines the population and tribal development took place which led to the creation of a Brigantian heartland. The extent of recent excavation in these areas is relatively slight. Systematic enquiry on the gravels of the western fringes of the Vale of York might provide vital clues.

#### vi. The Southern Pennines.

The Pennines south of the Aire gap can broadly be divided into the central massif of the High Peak, the surrounding shales and grits of the east, and the limestone of the south. Palynological research in the central blanket peat areas (Tallis, 1964, 329) indicates that human occupation on a large scale was not apparent until the Romano-British period. In the peripheries, however, an important succession of land use can be distinguished.

Work on the gritstone uplands to the east of the Derbyshire Derwent (Phillips, S.P., 1969) has shown that extensive clearance took place around 1500 B.C. This evidence has already been discussed, and it has been suggested that it represents the activity of Bronze Age shifting cultivators whose clearance heaps, fields, and ring-banks may be identified throughout the gritstone eastern peripheries. For the Late Bronze Age, the pollen record suggests abandonment in some areas and relaxed pastoralism in others. Recent excavations at Mam Tor have shown that hill-top occupation was important in the early first millennium B.C. The defences at Almondbury, Wincobank, and Ball Cross are also early. Far from being a late introduction (c. 250 B.C. as suggested by Bartlett and Preston, 1956), evidence now available indicates that the hill-fort was probably characteristic of a Late Bronze Age farming occupation in which pastoralism was dominant (pollen evidence) and cultivation present (Mam Tor storage pits).

The pottery from Harborough Rocks, Derbyshire, some strikingly similar to that from Scarborough, indicates the depth of the Hallstatt penetration. There is evidence of La Tène culture from Harborough Cave (iron bronze-coated bit-ring and disc-footed brooch) and in possible burial sites. It could be assumed that in particular the smooth pasturage of the Peakland limestone attracted these influences, but pollen analysis of samples from the gritstone hills indicates that they too saw significant occupation. The archaeological evidence is sparse, but Phillips (op. cit.) has shown that wholesale forest clearance for cultivation and pastoralism took place in the Iron Age. From differences between the various pollen cores, it is suggested that the population was localised on hill-side flanks and that cultivation took place at lower levels. Radiocarbon dates of  $340 \pm 100$  and  $140 \pm 100$  B.C. (GaK - 2288 and GaK - 2289) were obtained from samples from

Leash Fen (SK 295738), the former just after the beginning of major forest decline and the latter at the point of cessation of active clearance. After a reduction in the size of the cleared areas and a lessening of occupation indicators, a new phase of land use began and ended with the Romano-British period (A.D. 40<sup>+</sup> 100 and A.D. 420<sup>+</sup> 90; GaK - 2291 and GaK - 2292; for the beginning and end of this clearance phase). In it, the cultivation of cereals and root crops became important.

The emphatic nature of the pollen evidence suggests that the peripheral southern Pennines supported a considerable population in the Iron Age. It is unfortunate that material remains in the Peak District are so rare. The numbers of small earthwork enclosures in the hills north of Sheffield indicate the likelihood of a pattern of scattered small homesteads. Although the hill-forts may no longer be regarded as late Iron Age defences, it seems likely that in the southern Pennines dwelt a sizeable fraction of the tribe described by Tacitus as the most numerous in the whole province (Agricola, 17).

#### vii. The East Riding.

Turner has suggested (1970, 99-100) that, as were the chalklands of south-eastern Britain, the Yorkshire chalk wolds were largely disforested by the mid-second millennium B.C. As did the south-east, the East Riding saw a succession of Late Bronze Age and Iron Age culture, an increasing population, and a gradual intensification of food-producing economy through the period. The activities of archaeologists have been continuous for well over a century. At the present, programmes of work by the Department of the Environment, the RCHM, T.C.M. Brewster, and others are rapidly adding to our knowledge which is certainly voluminous by comparison with that available for areas further west. However, interpretation is hampered by the inadequate record of early work and the loss of material finds. The recent rapid development and use of deep-ploughing techniques, and the extension of industrial and

construction activities present a grave threat to prehistoric sites, many of which have already been destroyed.

The evidence of later Bronze Age settlement is slight, partly because of the long period of intensive land use which has followed. Domestic settlement sites have been discovered in unforeseen circumstances, at Barmston by W.J. Varley, during the Burton Fleming cemetery excavations by I.M. Stead, and after area-clearance prior to oil-drilling at Octon Cross Roads (material salvaged by C. and E. Grantham). Hill-forts in the area are very few. Grimthorpe is at latest sixth century in date, and on radiocarbon evidence may be earlier. Animal bones from Grimthorpe suggest a pastoral ranching economy in an open environment without population pressure.

There is important evidence for Hallstatt cultural influence at the Staple Howe stockaded site. It is suggested that in the early Iron Age the palisaded enclosure was a characteristic form of settlement in a pattern of scattered homesteads. Farming was probably to some extent mixed. Continuing Continental influence if not immigration is implied by the Aldro cremation burial.

From the mid-fifth century striking cultural changes took place. A characteristic form of La Tène burial, inhumation under a barrow surrounded by a square or sometimes round enclosure ditch, was introduced. Cart-burial may have been known even earlier. From settlement sites have come distinctive "angular" pottery, a swan's neck ring-headed pin, and a penannular brooch. The Bracëy Bridge anthropoid dagger is an antiquity of outstanding importance. Pits at Manor Farm, Kilham, suggest that the economy was mixed. During the following centuries, internal cultural development took place. Vast numbers of burials indicate an increased population. A completely enclosed landscape seems to have been developed, with areas of different land use, pasture, arable, and cemetery, divided by continuous earthwork boundaries. Domestic habitations



may be seen on air photographs within enclosed areas. The evidence of burial and religion is of preponderant importance in the current archaeological record. Cart-burial, warrior traditions, and the ritual significance of animals and water are vital elements. Some La Tène II intrusion is shown by the North Grimston burial with imported weapons.

In the late pre-Roman period, certain changes in religious practice may be tentatively identified. A pattern of more nucleated settlement may have been heralded, to judge by the evidence from Rudston and also from Welton Wold (currently under excavation by R.W. MacKey). The development of new pottery forms many of which continued into the Romano-British period, and the continuity of settlement from late Iron Age to Romano-British at the two afore-mentioned sites amongst others, suggest that domestic and farming life continued unaffected in at least some respects under the new régime. The magnificent storage pits at Garton Slack show that arable farming was established on a major scale. The identification of the population of the East Riding with the tribe of the Parisi has been accepted and discussed by Stead (1965, 78-81). Apart from the products of trade, little Belgic influence may be distinguished.

A task of primary research importance in the future archaeology of the East Riding is the excavation of an early La Tène settlement before deep-ploughing finally removes the opportunity. Such settlements are known from the investigations of C. and E. Grantham and provisionally from air photographs. What type of dwelling structures might we expect?

#### viii. The South-West

Evidence of later prehistoric settlement in the West Midlands is notoriously scanty. There is very little published archaeological information from Staffordshire, northern Shropshire, or southern Cheshire. Full reports of a Middle Bronze Age cremation cemetery at Sharpstones Hill, near Shrewsbury, and a valley-floor palisaded

enclosure at Minsterley are awaited. Meanwhile, our evidence is of several types.

The excavation of hill-forts, particularly Berth Hill, Bunbury Camp, Old Oswestry, and the Wrekin, has provided almost no dating evidence, but the indications are that box ramparts preceded dump ramparts in a chronological framework similar to that propounded by Stanford for the Welsh Marches. There is no northward extension beyond the Breiddin of the stamped and grooved pottery typical of the southern Marches from the fourth century B.C., but since both Berth Hill and Old Oswestry were rebuilt with massive dump ramparts it may seem reasonable to expect to find such wares should any programme of interior excavation be mounted. The results of the forthcoming excavation at Castle Ring, Cannock, an imposing site with massive multivallations, are awaited with interest. To some extent, therefore, the contacts of this part of our area may be seen to be south-western in character. However, excavations of domestic sites around the river Trent, at Willington and Stretton, have yielded pottery and structures of types paralleled in the East Midlands. Further work on the Trent gravels may substantiate this connection. Frontiers of influence did not necessarily remain static. Chance finds of fine electrum torcs at Needwood Forest and Glascote, Staffordshire, and the unsatisfactory finish of the latter specimen, have led Painter (1971, 5-6) to suggest that in the Tamworth area existed a minor Iron Age tribe which possessed a distinct identity retained throughout the Roman period. To emphasise such an interpretation is perhaps unwise in view of the lack of other material remains from the area.

The apparent absence of later prehistoric domestic settlements in northern Shropshire and adjacent areas, thought to be the central territory of the tribe of the Cornovii, is difficult to explain. That

it is probably illusory is shown by palynological evidence. Work by Dr. Judith Turner at Whixall Moss raised bog indicated a sustained agricultural activity for some 500 years ending around the eighth century B.C. ( $760^{+} 90$  B.C., Q - 466; Godwin, Willis, and Switzer, 1965, 208-9), and a rather less intensive occupation for around 250 years ending in the first century B.C. The plough-marks at Frodsham Street, Chester, to the north show that pre-Roman arable farming of clay soils in heavily-wooded areas must not be ruled out. The progress of the palynologist stands as a challenge to the archaeologist.

#### ix. The East Midlands.

The term 'East Midlands' generally refers to an economic region which centres on Nottingham, Leicester, and Derby, and extends towards Lincoln, Grantham, Chesterfield, and Burton on Trent. In this thesis it has been used loosely to cover the Trent valley downstream from Burton as far north as the Humber, and adjacent areas. This region has often been thought of as one of dense woodland, with clays too heavy to attract settlement in later prehistory. The earliest recognisable distinctive culture has been thought to be that characterised by scored pottery, dated from the first century B.C. Our enquiry has shown that, on the contrary, an almost complete succession of later prehistoric cultures may be recognised.

Many parts of the East Midlands may have consisted largely of forest until the mid-Iron Age. Even so, work by Turner (1962) at Thorne Waste raised bog, south of the Humber, has shown some newly-created clearance around the thirteenth century B.C., followed by continued small scale land use. The first evidence of destruction of extensive tracts of woodland is assigned to the Iron Age period, however ( $368^{+} 110$  B.C.; op. cit., 339). Other parts such as the Trent river gravel Upper Terraces and the Lincolnshire Oolitic

Limestone would have been more positively attractive. Pollen analysis at Swarkeston, South Derbyshire, indicated that in the Bronze Age the vegetation of the gravel terraces consisted of a mixed oak woodland with large open grassy areas and some cultivation (Posnansky, 1956a, 25). Evidence for cremation cemeteries with bucket and barrel urns at Hoveringham, Frieston, Belton, and elsewhere, and an abundance of metalwork finds including foreign types, suggest the presence of active communities.

Pottery from Brigg Brickyard, Red Hill, and Epperstone shows the extension of diffuse Hallstatt traits. The structures at Breedon-on-the-Hill imply at least a fifth century beginning for the hill-top defended settlement, possibly connected with the arrival of scored pottery. Why scored decoration on pottery achieved such prominence in the Trent valley and Leicester areas is not clear, but the answer must lie in the nature of an early intrusive population. Its continued development through the mid-Iron Age, probably down to the first century B.C., is very likely. The presence of La Tène burials comparable with those in the East Riding cannot be ruled out. Curvilinear decoration on pottery and the use of the beehive quern are significant assimilations. Here was one of the nodes from which grew the tribe of the Coritani.

Meanwhile, east of the Trent an important series of new influences may be distinguished. Early La Tène swords from the river Witham are unique in Britain, further emphasising the significance of that river and of ritual activity in the Iron Age. Scored pottery was in use probably down to the mid-second century, but from that date a most important influx of Gaulish La Tène II pottery types may be recognised, associated with stamped, rouletted, and grooved decoration of the type known elsewhere in Britain in "south-eastern third B". First century B.C. pottery similar to Aylesford-Swarling types followed, and the use

of coinage was assimilated. We may envisage a blossoming cultural development based on successful mixed agriculture and possibly also mineral wealth. Major settlements may be seen at Old Sleaford, Ancaster, Dragonby, and South Ferriby.

Probably early in the first century A.D. a fresh influence at these sites brought quantities of imported pottery of Gallo-Belgic type. A series of related local forms was developed. First century A.D. metalwork and pottery of Belgic type is in fact widespread in the East Midlands. From the two nodes of the Trent valley/Leicester area where scored pottery is so distinctive, and Lincolnshire east of the Trent, arose the tribal unit of the Coritani, truly para-Belgic in material remains, in the use of coinage, and in major nucleated settlements. Few rural settlement sites are known, apart from those in the Trent and Welland valleys where recent air photography and rescue excavation have identified a pattern of isolated farms and homesteads in an enclosed landscape in the pre-Roman period.

Many questions of East Midlands archaeology remain unanswered. The origins of scored pottery require clarification. No major settlement of the early phases of the Iron Age has yet been systematically excavated. Rapid progress is being made, however, particularly by the Trent Valley Archaeological Research Committee and by the staff of Nottingham University, whose methods of work should serve as an example to those in other areas south of the Tyne.

An outstanding result of the research of which this is the report is the demonstration of the quantity of material already recovered, the number of sites attributable to later prehistory, and the variety of evidence available for interpretation. The pace of present research

and the extent of unpublished material are considerably greater than was expected when the project was begun.

Certainly realised at the outset and not annulled subsequently has been the fact of a regional imbalance in knowledge and material evidence. Briefly stated, the paucity of material remains in the north and west stands in contrast to a relative abundance in the south and east. In part this reflects the degree of local interest and serious gaps in research effort. Excavations at Catcote, Catterick, and Horse Close Farm have shown what can be achieved in locations peripheral to the main upland zones. In part also, however, the imbalance reflects a real difference in environment and type of occupation, particularly in the Iron Age. Whereas in the Middle Bronze Age occupation seems to have been often of a transitory nature, from the beginning of the first millennium B.C. or even slightly earlier trends towards the enclosure of permanent settlement can be seen. With increases in population in hospitable areas, intensification of land use could occur. Large areas of the north and west were to some degree inhospitable. In them the occupation continued to be less settled, and it is very likely that the inhabitants remained relatively poor. The evidence for the archaeologist is thus less tangible.

In each part of our area specific tasks for future research may be suggested. In particular, the excavation of known settlement sites in Co. Durham and in the East Riding, the identification of sites in the East Midlands and the south-west, and the isolation of pre-Roman remains in the north and west are needed. Always the demand is for settlement excavation. Only if long-term research projects are launched, fully utilizing air photograph evidence, can later prehistoric studies expect to advance significantly. This survey is not intended to be a complete achievement; indeed it cannot be so.

Further re-interpretations must follow, probably with greater regional subdivision as the detail of our knowledge intensifies.

The work of Richmond and Wheeler, in analysing the historical references to the pre-Roman north of England and interpreting the last decades of native tribal history, has not been repeated here. Historical interpretations often achieve over-simplification and a misleading impression of actuality. Rather, an attempt has been made to examine the effects of the pulse of foreign influence and internal development in areas, the variations in settlement and economy, and the different nodes from which tribal identity could have spread. If only a basically six-fold division has been demonstrated - Cumbria with its diverse habitats but archaeological impoverishment, the central Pennines with a harsh environment, north-eastern, eastern, and south-central upland peripheries where often little is known but the potential great, eastern Yorkshire where Continental contacts were dynamic and land use increasingly intense, the East Midlands with its scored pottery, increasing wealth, and nodal development, and the south-west with its roots through the Welsh Marches - then perhaps little more has been achieved than must have already been in Hawkes' mind when he drew up the Provinces and Regions of his British Iron Age in 1959 (Ant., XXXIII, 170-82). Further research and increasing knowledge have upholstered a geographical and archaeological interpretation sound in principle.

BIBLIOGRAPHY

- ABERG, F.A., and BOWEN, H.C., 1960: 'Ploughing experiments with a reconstructed Donneruplund ard', Ant., XXXIV, 144-7.
- ADDYMAN, P.V., COLES, J.M., and HARTLEY, C.E., 1964: 'A Late Bronze Age Vessel from Flaxby', YAJ, XLI, 184-90.
- ALCOCK, L., 1954: 'Aberford Dykes : the first defence of the Brigantes ?', Ant., XXVIII, 147-54.
- ALLEN, D.F., 1962: 'Celtic Coins', in Ordnance Survey, 1962, 1-32.
- ALLEN, D.F., 1963: Sylloge of Coins of the British Isles, 3: The Coins of the Coritani.
- ALLEN, D.F., 1967: 'Iron Currency Bars in Britain', PPS, XXXIII, 307-35.
- ANNABLE, F.K., and SIMPSON, D.D.A., 1964: Guide Catalogue of the Neolithic and Bronze Age Collections in Devizes Museum.
- ARMSTRONG, A.L., 1933: 'A Living Site of La Tène age in North Lincolnshire', Ant.J., XIII, 55-7.
- ARMSTRONG, A.L., and JACKSON, J.W., 1923: 'Exploration of Harborough Cave, Brassington', JRAI, LIII, 402-16.
- ATKINSON, R.J.C., 1968: 'Old mortality : some aspects of burial and population in neolithic England', in Coles and Simpson (Eds.), 1968, 83-93.
- AUDOUZE, F., and COURTOIS, J. - C., 1970: Les Épingles du Sud - Est de La France (Prähistorische Bronzefunde, Abteilung XIII, Band 1).
- AVERY, M., SUTTON, J.E.G., and BANKS, J.W., 1967: 'Rainsborough, Northants., England: Excavations, 1961-5', PPS, XXXIII, 207-306.
- BAGGALEY, J.W., 1950: 'Bronze Sheild, from the River Trent, Nottinghamshire', Ant. J., XXX, 195.
- BAKER, F.T., 1959: 'The Iron Age Salt Industry in Lincolnshire', LAASRP, VIII, 26-34.
- BARKER, M.M., 1934: 'Turauli near Carrock Fell', TCWAAS, N.S., XXXIV, 107-12.
- BARLEY, M.W., BEEBY, B., MAY, J., TODD, M., and WILSON, D.R., 1968: Ancaster 1968. Interim Report on Excavations. Unpublished typescript.
- BARLEY, M.W., BROTHWELL, D.R., MAY, J., and WILSON, D.R., 1966: Ancaster 1965. The second Preliminary Report on Excavations at the Iron Age and Romano - British Sites. Unpublished typescript.
- BARLEY, M.W., MAY, J., and WILSON, D.R., 1965: Ancaster 1963-4. A Preliminary Report on Excavations at the Iron Age and Romano - British Sites. Unpublished typescript.



- BARNES, F., 1955: 'Pottery from prehistoric sites, North End, Walney Island', TCWAAS, N.S., LV, 1-16.
- BARNES, F., 1968: Barrow and District.
- BARTLETT, J.E., and PRESTON, F.L., 1956: 'The Iron Age and Roman Period', in Linton, D.C. (Ed.), Sheffield and its Region, 111-20.
- BATEMAN, T., 1861: Ten Years Diggings in Celtic and Saxon Grave Hills in the Counties of Derby, Stafford, and York, from 1848 to 1858.
- BELLWOOD, P.S., 1971: 'Fortifications and Economy in Prehistoric New Zealand', PPS, XXXVII, 56-95.
- BENTON, S., 1931: 'Excavation of the Sculptor's Cave, Covesea, Morayshire', PSAS, LXV, 177-216.
- BERSU, G., 1945: Das Wittnauer Horn.
- BERSU, G., 1948: 'Fort' at Scotstarvit Covert, Fife', PSAS, LXXXII, 241-63.
- BESWICK, P., 1970: Portfield Excavations, 1970, Site 5. Interim Report. Unpublished typescript.
- BIRCHALL, A., 1965: 'The Aylesford-Swarling Culture : the Problem of the Belgae reconsidered', PPS, XXXI, 241-367.
- BLAKE, B., 1959: 'Excavations of Native (Iron Age) Sites in Cumberland, 1956-58', TCWAAS, N.S., LIX, 1-14.
- BLANK, E., 1970: A Guide to Leicestershire Archaeology.
- BOARDMAN, J., BROWN, M.A., and POWELL, T.G.E. (Eds.), 1971: The European Community in Later Prehistory. Studies in Honour of C.F.C. Hawkes.
- BOER, G. de., 1967: 'Rural Yorkshire', in Mitchell (Ed.), 1971, 373-95.
- BONNAMOUR, L., 1964: 'Un habitat protohistorique à Ouroux - sur - Saône', RAECE, XV, 143-50.
- BRADLEY, R., 1971: 'Economic Change in the Growth of Early Hill-Forts', in Hill and Jesson (Eds.), 1971, 71-83.
- BRAILSFORD, J.W., 1958: 'Problems of Iron Age Pottery', in Frere (Ed.), 1958, 93-6.
- BRAMWELL, D., 1964: 'The Excavation at Elder Bush Cave, Wetton, Staffs.', NSJPS, IV, 46-59.
- BREWSTER, T.C.M., 1957: 'Excavations at Newsham's Pit, Staxton, 1947-48', YAJ, XXXIX, 193-223.
- BREWSTER, T.C.M., 1963: The Excavation of Staple Howe.
- BREWSTER, T.C.M., 1971: 'The Garton Slack chariot burial, East Yorkshire', Ant., XLV, 289-92.

- BRITISH MUSEUM, 1905: A Guide to the Antiquities of the Early Iron Age.
- BRITTON, D., 1963: 'Traditions of Metal-working in the Later Neolithic and Early Bronze Age of Britain, Part I', PPS, XXIX, 258-325.
- BRITTON, D., 1968: Late Bronze Age Finds in the Heathery Burn Cave, Co. Durham (Inventaria Archaeologica, Great Britain, 9th Set : GB55).
- BROOKS, R.T., 1967: 'Becca Banks, near Aberford', YAJ, XLII, 12-4.
- BROWN, E., 1865: 'Exploration of Thor's Cave', Transactions of the Midland Scientific Association, 1864-5, 1, ff.
- BROWN, M.A., and BLIN-STOYLE, A.E., 1959: 'A sample analysis of British Middle and Late Bronze Age materials using optical spectrometry', PPS, XXV, 188-208.
- BU' LOCK, J.D., 1955: 'Possible remains of Celtic Fields at Kelsall in Cheshire', TLCAS, LXIV, 24.
- BU' LOCK, J.D., 1956: 'The Hill-Fort at Helsby, Cheshire', TLCAS, LXV, 107-10.
- BU' LOCK, J.D., 1968: 'Some Notes on the Planeswood Hoard of Gold and Bronze objects of the Late Bronze Age', TLCAS, LXXV, 218-21.
- BURGESS, C.B., 1968a: Bronze Age Metalwork in Northern England, c. 1000-700 B.C.
- BURGESS, C.B., 1968b: 'The Later Bronze Age in the British Isles and North-Western France', Arch. J., CXXV, 1-45.
- BURGESS, C.B., 1969a: 'Chronology and Terminology in the British Bronze Age', Ant. J., XLIX, 22-9.
- BURGESS, C.B., 1969b: 'Some Decorated Socketed Axes in Canon Greenwell's Collection', YAJ, XLVI, 267-71.
- BURGESS, C.B., 1970: 'The Bronze Age', CA, 19, 208-15.
- BURGESS, C.B., 1972: 'Fenton Hill Camp, Northumberland', ANNCW, 13, 4-5.
- BURSTOW, G.P., and HOLLEYMAN, G.A., 1957: 'Late Bronze Age Settlement on Itford Hill, Sussex', PPS, XXIII, 167-212.
- BUTCHER, L.H., 1970: 'Wharnccliffe', in Butterworth, A., Prehistoric Society Archaeological Field Guide, Sheffield 1970, 36-42.
- BUTLER, J.J., and SMITH, I.F., 1956: 'Razors, Urns, and the British Middle Bronze Age', University of London Institute of Archaeology Reports, XII, 20-52.

- BUTLER, R.M. (Ed.), 1971: Soldier and Civilian in Roman Yorkshire.
- CHALLIS, A.J., 1969: The Hill-Forts of the Derbyshire Peak, Unpublished B.A. Dissertation, University of Durham.
- CHILDE, V.G., 1940: Prehistoric Communities of the British Isles.
- CHILDE, V.G., and THORNEY-CROFT, W., 1938: 'The Experimental Production of the Phenomena Distinctive of Vitrified Forts', PSAS, LXXII, 44-55.
- CHURCHILL, D.M., 1970: 'Post Neolithic to Romano-British Sedimentation in the Southern Fenlands of Cambridgeshire and Norfolk', in Phillips, C.W. (Ed.), 1970, 132-146.
- CLARK, G., 1947: 'Sheep and Swine in the Husbandry of Prehistoric Europe', Ant., XXI, 122-36.
- CLARK, J.G.D., 1936: 'Report on a Late Bronze Age Site in Mildenhall Fen, West Suffolk', Ant. J., XVI, 29-50.
- CLARK, J.G.D., 1937: 'Notes on excavations in England, the Irish Free State, Northern Ireland, Scotland and Wales, during 1937', PPS, III, 437-59.
- CLARK, J.G.D., 1938: 'Some Early Mould - Board Ploughs from Jutland', PPS, IV, 230.
- CLARK, J.G.D., and FELL, C.I., 1953: 'The Early Iron Age Site at Micklemoor Hill, West Harling, Norfolk, and its pottery', PPS, XIX, 1-40.
- CLARKE, R.R., 1939: 'The Iron Age in Norfolk and Suffolk', Arch. J., XCVI, 1-113.
- CLARKE, R.R., and HAWKES, C.F.C., 1955: 'An Iron Anthropoid Sword from Shouldham, Norfolk, with Related Continental and British Weapons', PPS, XXI, 198-227.
- CLAY, R.C.C., 1925: 'An Inhabited Site of La Tène I date on Swallowcliffe Down', WAM, XLIII, 59-93.
- CLIFFORD, E.M., 1961: Bagendon : A Belgic Oppidum.
- CLOSE, R.S., 1971: Excavation of Iron Age Hut Circles at Percy Rigg, Kildale, Unpublished typescript.
- CLOUGH, T.H. McK., 1969: 'Bronze Age Metalwork from Cumbria', TCWAAS, N.S., LXIX, 1-39.
- COLES, J.M., 1960: 'Scottish Late Bronze Age Metalwork, Typology, Distributions and Chronology', PSAS, XCIII, 16-134.
- COLES, J.M. 1962a: 'European Bronze Age Shields', PPS, XXVIII, 156-90.
- COLES, J.M. 1962b: 'The Pottery' in Stewart, M.E.C., 'The Excavation of two Circular Enclosures at Dalnaglar, Perthshire', 153-5, PSAS, XCV, 134-58.

- COLES, J.M., and SIMPSON,  
D.D.A. (Eds.), 1968:
- COLLINGWOOD, R.G., 1924:
- COLLINGWOOD, R.G., 1933a:
- COLLINGWOOD, R.G., 1933b:
- COLLINGWOOD, R.G., 1938:
- COLLINGWOOD, R.G., and  
MYRES, J.N.L., 1937:
- COLLINGWOOD, W.G., 1903:
- COLLINGWOOD, W.G., 1908:
- COLLINGWOOD, W.G., 1909:
- COLLINGWOOD, W.G., 1923:
- COLLINGWOOD, W.G., 1926:
- COLLIS, J.M.N., 1846:
- COOMBS, D., 1967:
- COOMBS, D., 1971:
- COPLEY, H., 1950:
- CORDER, P., and HAWKES,  
C.F.C., 1940:
- CORDER, P., and KIRK, J.L.,  
1932:
- CORDER, P., and PRYCE, T.D.,  
1938:
- CORDER, P., and PRYCE, T.D.,  
1939:
- COTTON, M.A., 1954:
- Studies in Ancient Europe. Essays Presented  
to Stuart Piggott.
- 'Castle Howe, Peel Wyke', TCWAAS, N.S.,  
XXIV, 78-87.
- 'An Introduction to the Prehistory of  
Cumberland, Westmorland, and Lancashire north  
of the sands', TCWAAS, N.S., XXXIII, 163-200.
- 'Prehistoric Settlements near Crosby Ravensworth',  
TCWAAS, N.S., XXXIII, 201-26.
- 'The Hill-Fort on Carrock Fell', TCWAAS, N.S.,  
XXXVII, 32-41.
- Roman Britain and the English Settlements.
- 'Two Bronze Armlets from Thirlmere', PSAL,  
Ser. 2., XIX, 212-3.
- 'Report on an Exploration of the Romano-British  
Settlement at Ewe Close, Crosby Ravensworth',  
TCWAAS, N.S., VIII, 355-68.
- 'Report on a further Exploration of the Romano-  
British Settlement at Ewe Close, Crosby  
Ravensworth', TCWAAS, N.S., IX, 295-309.
- 'An Inventory of the Ancient Monuments of  
Cumberland', TCWAAS, N.S., XXIII, 206-76.
- 'An Inventory of the Ancient Monuments of  
Westmorland and Lancashire - North of-the-Sands',  
TCWAAS, N.S., XXVI, 1-62.
- 'Letter upon some early remains discovered in  
Yorkshire', Arch., XXXI, 299-307.
- 'Mam Tor', DAJ, LXXXVII, 158-9.
- 'Mam Tor. A Bronze Age Hillfort?', CA,  
27, 100-2.
- 'The Earthworks in Canklow Wood, Rotherham',  
THAS, VI, 259-70.
- 'A Panel of Celtic Ornament from Elmswell,  
East Yorkshire', Ant. J., XX, 338-57.
- A Roman Villa at Langton, near Malton, East  
Yorkshire, Roman Malton and District,  
Report No. 4.
- 'Belgic and other early pottery found at North  
Ferriby, Yorkshire', Ant. J., XVIII, 262-77.
- 'An Arretine Plate from North Ferriby',  
Ant. J., XIX, 207.
- 'British Camps with Timber-laced Ramparts',  
Arch. J., CXI, 26-105.

- COTTON, M.A., and FRERE, S.S., 1968: 'Ivinghoe Beacon Excavations, 1963-65', Records of Buckinghamshire, XVIII, 187-260.
- COUNCIL FOR BRITISH ARCHAEOLOGY, 1971: Archaeological Site Index to Radiocarbon Dates for Great Britain and Ireland.
- COWEN, J.D., 1967: 'The Hallstatt Sword of Bronze : on the Continent and in Britain', PPS, XXXIII, 377-454.
- COWEN, J.D., 1971: 'A striking maritime distribution-pattern', PPS, XXXVII, 154-166.
- COWLING, E.T., 1946: Rombalds Way. A Prehistory of Mid-Wharfedale.
- COWPER, H.S., 1893: 'The Ancient Settlements, Cemeteries and Earthworks of Furness', Arch., LIII, 389-426.
- COWPER, H.S., 1905: 'A bronze armlet said to have been found in Furness, Lancashire', PSAL, XX, 335-6.
- CREE, J.E., 1924: 'Account of the Excavations at Traprain Law during the summer of 1923', PSAS, LVIII, 241-84.
- CUNDILL, P.R., 1971: Ecological History and the Development of Peat on the Central Watershed of the North Yorkshire Moors, Durham University unpublished Ph. D. Thesis.
- CUNLIFFE, B., 1966: 'Stoke Clump, Hollingbury, and the Early Pre-Roman Iron Age in Sussex', SxAC, CIV, 109-20.
- CUNLIFFE, B., 1968: 'Early Pre-Roman Iron Age Communities in Eastern England', Ant. J., XLVIII, 174-91.
- CUNLIFFE, B., 1971: 'Some Aspects of Hill-Forts and their Cultural Environments', in Hill and Jesson (Eds.), 1971, 53-69.
- CUNLIFFE, B., and PHILLIPSON, D.W., 1968: 'Excavations at Eldon's Seat, Encombe, Dorset', PPS, XXXIV, 191-237.
- CUNNINGTON, M.E., 1923: The Early Iron Age Inhabited Site at All Cannings Cross Farm, Wiltshire.
- CURLE, A.O., and CREE, J.E., 1916: 'Account of Excavations on Traprain Law in the Parish of Prestonkirk, County of Haddington, in 1915', PSAS, L, 64-144.
- CURLE, A.O., and CREE, J.E., 1921: 'Account of the Excavations on Traprain Law during the summer of 1920', PSAS, LV, 153-206.
- CURLE, J., 1911: A Roman Frontier Post and its People.
- CURWEN, E.C., 1937: 'Querns', Ant., XI, 133-51.
- CURWEN, E.C., 1941: 'More about Querns', Ant., XV, 15-32.
- CURWEN, E.C., 1948: 'A Bronze Cauldron from Sompting, Sussex', Ant. J., XXVIII, 157-63.

- DAVEY, J.P., 1971: 'The Distribution of Later Bronze Age Metalwork from Lincolnshire', PPS, XXXVII, 96-111.
- DEHN, V.W., SANGMEISTER, E., and KIMMIG, V.W., 1954: 'Die Heuneburg beim Talhof', Germania, XXXII, 22-59.
- DE LAET, S.J., 1961: 'Opgravingen en vondsten in de Limburgse Kempen', Archaeologica Belgica, LV, 137-65.
- DE LAET, S.J., 1962: The Low Countries.
- DE LAET, S.J., NENQUIN, J.A.E., and SPITAEELS, P., 1958: Contributions a L'étude de la civilisation des Champs d'Urnes en Flandre.
- D. OF THE E., 1966: Excavations Annual Report, 1965.
- D. OF THE E., 1967: Excavations Annual Report, 1966.
- D. OF THE E., 1970: Archaeological Excavations, 1969.
- D. OF THE E., 1971: Archaeological Excavations, 1970.
- DOBSON, J., 1907: 'Urswick Stone Walls', TCWAAS, N.S., VII, 72-94.
- DOBSON, J., 1912: 'Report on Settlement at Stone Close, near Stainton-in-Furness', TCWAAS, N.S., XIII, 277-84.
- DUDLEY, H.E., 1949: Early Days in North-West Lincolnshire.
- DUNNING, G.C., 1934: 'The Swan's-Neck and Ring-Headed Pins of the Early Iron Age in Britain', Arch. J., XCI, 269-95.
- DURVIN, P., 1964: 'La céramique protohistorique de Thiverny', Celticum, IX, 29-44.
- DYMOND, C.W., 1893a: 'An Ancient Village in Hugill', TCWAAS, O.S., XII, 6-14.
- DYMOND, C.W., 1893b: 'Barnscar : An Ancient Settlement in Cumberland', TCWAAS, O.S., XII, 179-87.
- ELGEE, F., 1930: Early Man in North-East Yorkshire.
- ELGEE, F., and ELGEE, H.W., 1933: The Archaeology of Yorkshire.
- ELLISON, A., and DREWETT, P., 1971: 'Pits and Post-holes in the British Early Iron Age : some alternative explanations', PPS, XXXVII, 183-94.
- EMERY, G.T., and MILLS, R., 1964: 'Maerfield Gate and Berth Hill', KAGN, 4.
- EMERY, G.T., and MILLS, R., 1965: 'Berth Hill', KAGN, 5.
- ERITH, F.H., and LONGWORTH, I.H., 1960: 'A Bronze Age Urnfield on Vincas Farm, Ardleigh, Essex', PPS, XXVI, 178-92.

- ERTLÉ, R.G., 1957: 'Deux fibules en fer de la Tène trouvées dans la région de Reims', RAECE, VIII, 170-1.
- FAVRET, P.M., 1936: 'Les Nécropoles des Jogasses à Chouilly (Marne)', Préhistoire, V, 24-119.
- FEACHEM, R.W., 1961: 'Unenclosed Platform Settlements', PSAS, XCIV, 79-85.
- FEACHEM, R.W., 1966: 'The Hill-Forts of Northern Britain', in Rivet (Ed.), 1966, 59-87.
- FELL, C.I., 1937: 'The Hunsbury Hill-Fort, Northants. A New Survey of the Material', Arch. J., XCIII, 57-100.
- FELL, C.I., 1940: 'Bronze Age connections between the Lake District and Ireland', TCWAAS, N.S., XL, 118-130.
- FELL, C., and COLES, J.M., 1965: 'Reconsideration of the Ambleside hoard and the burial at Butts Beck Quarry, Dalton-in-Furness', TCWAAS, N.S., LXV, 38-52.
- FENNELL, K.R., 1961: 'Excavations at O.S. 38, Tallington', LAASRP, IX, 26-34.
- FLEMING, A., 1971: 'Bronze Age Agriculture on the Marginal Lands of North-East Yorkshire', Agricultural History Review, XIX, 1-24.
- FORDE-JOHNSTON, J., 1962: 'The Iron Age Hillforts of Lancashire and Cheshire', TLCAS, LXXII, 9-46.
- FOSTER, I.L.L., and ALCOCK, L. (Eds.), 1963: Culture and Environment. Essays in Honour of Sir Cyril Fox.
- FOWLER, E., 1960: 'The Origins and development of the Penannular Brooch in Europe', PPS, XXVI, 149-77.
- FOX, C., 1926: 'A "Dug-Out" Canoe from South Wales', Ant. J., VI, 121-51.
- FOX, C., 1946: A Find of the Early Iron Age from Llyn Cerrig Bach, Anglesey.
- FOX, C., 1958: Pattern and Purpose : A Survey of Early Celtic Art in Britain.
- FOX, C., and HYDE, H.A., 1939: 'A Second Cauldron and an Iron Sword from the Llyn Fawr Hoard, Rhigos, Glamorganshire', Ant. J., XIX, 369-404.
- FOX, W.S., 1909: 'Harborough Cave, near Brassington', DAJ, XXXI, 89-115.
- FOX, W.S., 1911: 'Derbyshire Cave - Men of the Roman Period', DAJ, XXXIII, 115-26.
- FOX, W.S., and READ, C.H., 1910: 'Ravencliffe Cave', DAJ, XXXII, 141-57.

- FRERE, S.S. (Ed.), 1958: Problems of the Iron Age in Southern Britain, University of London Institute of Archaeology Occasional Paper No. 11.
- FROMOLS, J., 1955: 'Recensement des Tumulus et fouilles archéologiques dans la forêt des Pothées (Ardennes)', Memoires de la Société d'Agriculture, Commerce, Sciences et Arts de la Marne, 1955, 5-32.
- GODWIN, H., and WILLIS, E.H., 1960: 'Cambridge University Radiocarbon Measurements, II', Radiocarbon, II, 62-72.
- GODWIN, H., and WILLIS, E.H., 1961: 'Cambridge University Natural Radiocarbon Measurements, III', Radiocarbon, III, 60-76.
- GODWIN, H., and WILLIS, E.H., 1964: 'Cambridge University Natural Radiocarbon Measurements, VI', Radiocarbon, VI, 116-37.
- GODWIN, H., WILLIS, E.H., and SWITSUR, V.R., 1965: 'Cambridge University Natural Radiocarbon Measurements, VII', Radiocarbon, VII, 205-12.
- GRAHAM, A., 1957: 'Cairnfields in Scotland', PSAS, XC, 7-23.
- GRANTHAM, C., and GRANTHAM, E., 1965: 'An Earthwork and Anglian Cemetery at Garton-on-the-Wolds, East Riding, Yorkshire', YAJ, XLI, 355-60.
- GRAY, H.St.G., 1930: 'Excavations at Kingsdown Camp, Mells, Somerset, 1927-9', Arch., LXXX, 59-98.
- GREENWELL, W., 1877: British Barrows.
- GREENWELL, W., and GATTY, R.A., 1910: 'The Pit Dwellings at Holderness', Man, X, 86-90.
- GRIMES, W.F., 1951: 'The Jurassic Way across England', in Grimes, W.F. (Ed.), Aspects of Archaeology in Britain and Beyond. Essays presented to O.G.S. Crawford, 144-70.
- GRIMES, W.F., 1958: 'Some Smaller Settlements : A Symposium', in Frere (Ed.), 1958, 17-28.
- GUNSTONE, A.J.H., 1964: 'An Archaeological Gazetteer of Staffordshire, Part 1', NSJFS, IV, 11.
- GUNSTONE, A.J.H., 1965: 'An Archaeological Gazetteer of Staffordshire, Part 2', NSJFS, V, 20.
- GURNEY, F.G., and HAWKES, C.F.C., 1940: 'An Early Iron Age Inhumation, Burial at Egginton, Bedfordshire', Ant. J., XX, 230-44.
- HALL, B.R., and FOLLAND, C.J., 1970: Soils of Lancashire.
- HALL, D.N., and NICKERSON, N., 1969: 'Iron Age Pottery from North Bedfordshire and South Northamptonshire', Bedfordshire Archaeological Journal, IV, 1-12.
- HALLAM, S.J., 1960: 'The Romano-British salt industry in South Lincolnshire', LAASRP, VIII, 35-75.



- HALLAM, S.J., 1970: 'Settlement round the Wash', in Phillips, C.W. (Ed.), 1970, 22-88.
- HAMILTON, J.R.C., 1956: Excavations at Jarlshof, Shetland.
- HAMILTON, J.R.C., 1966: 'Forts, Brochs and Wheel-houses in Northern Scotland', in Rivet (Ed.), 1966, 111-30.
- HARBISON, P., 1971: 'Wooden and Stone Chevaux-de-Frise in Central and Western Europe', PPS, XXXVII, 195-225.
- HARBORD, N.H., and SPRATT, D.A., 1970: Petrological Examination of Iron Age Pottery from Cleveland, Unpublished typescript.
- HARDEN, D.B., 1950: 'Italic and Etruscan Finds in Britain', Atti del 1° Congresso Internazionale di Preistoria e Protostoria Mediterranea, 315-24.
- HARDING, D.W., 1970: 'The 'New' Iron Age', CA, 20, 235-40.
- HARDING, D.W., 1972: The Iron Age in the Upper Thames Basin.
- HAWKES, C.F.C., 1932: 'Bronzes of the Early Iron Age from Yorkshire', Ant. J., XII, 453-5.
- HAWKES, C.F.C., 1935: 'The Pottery from the Sites on Plumpton Plain', PPS, 1, 39-59.
- HAWKES, C.F.C., 1936: 'The Needwood Forest Torc', BMQ, XI, 3-4.
- HAWKES, C.F.C., 1939a: 'The Caburn Pottery and its Implications', SxAC, LXXX, 217-62.
- HAWKES, C.F.C., 1939b: 'The Pottery from Castle Hill, Newhaven', SxAC, LXXX, 269-92.
- HAWKES, C.F.C., 1940a: 'La Tène I brooches from Deal, Can Dover, and East Dean', Ant. J., XX, 276-9.
- HAWKES, C.F.C., 1940b: 'A Site of the Late Bronze Age - Early Iron Age Transition at Totternhoe, Beds.', Ant. J., XX, 487-91.
- HAWKES, C.F.C., 1942: 'The Deverel Urn and the Picardy Pin : A Phase of Bronze Age Settlement in Kent', PPS, VIII, 26-47.
- HAWKES, C.F.C., 1946: 'An unpublished Celtic brooch from Dane's Graves, Kilham, Yorkshire', Ant. J., XXVI, 187-91.
- HAWKES, C.F.C., 1949: 'Prehistoric Lincolnshire', Arch. J., CIII 4-15.
- HAWKES, C.F.C., 1960: A Scheme for the British Bronze Age, Duplicated summary of address to C.B.A. Bronze Age Conference, London, 1960.
- HAWKES, C.F.C., 1971: 'Fence, Wall, Dump, from Troy to Hod', in Hill and Jesson (Eds.), 1971, 5-18.

- HAWKES, C.F.C., and CLARKE,  
R.R., 1963: 'Gahlstorf and Caister-on-Sea : Two Finds of Late Bronze Age Irish Gold', in Foster and Alcock (Eds.), 1963, 193-250.
- HAWKES, C.F.C., and FELL,  
C.I., 1945: 'The Early Iron Age Settlement at Fengate, Peterborough', Arch. J., C, 188-223.
- HAWKES, C.F.C., and HULL,  
M.R., 1947: Camulodunum.
- HAWKES, C.F.C., and JACOBSTHAL,  
P., 1945: 'A Celtic bird-brooch from Red Hill, near Long Eaton, Notts.', Ant. J., XXV, 117-9.
- HAWKES, C.F.C., and SMITH,  
M.A., 1957: 'On Some buckets and cauldrons of the Bronze and Early Iron Ages .....', Ant. J., XXXVII, 131-98.
- HAWKES, S.C., 1963: 'Some Belgic Brooches from South Ferriby', HMP, 214, 23-31.
- HAYES, A.J., 1968: Interim Report of Pollen Analysis on material derived from Dragonby, season 1968, unpublished typescript.
- HAYES, R.H., 1958: 'Romano-British Dwelling Sites in North and East Yorkshire', TSDAS, 1, 26, ff.
- HAYES, R.H., 1966: 'Nanny Howe, Coate Moor, Cleveland', YAJ, XLI, 577.
- HAYES, R.H., 1968: 'A Romano-British Glass Bangle from Stony Rigg', YAJ, XLII, 125-6.
- HELBAEK, H., 1952: 'Early Crops in Southern England', PPS, XVIII, 194-233.
- HENCKEN, T.C., 1938: 'The Excavation of the Iron Age Camp on Bredon Hill, Gloucestershire, 1935-1937', Arch. J., XCV, 1-111.
- HIGGS, E.S., 1964: 'Report on Fauna', in Wachter, 1964, 138-41.
- HIGGS, E.S., and WHITE, J.P.,  
1963: 'Autumn Killing', Ant., XXXVII, 282-9.
- HILDYARD, E.J.W., 1948: Archaeology of Weardale. Fourth Annual Summary of Research.
- HILL, D., and JESSON, M.  
(Eds.), 1972: The Iron Age and Its Hill-Forts.
- HODGSON, G.W.I., 1968: 'A comparative account of the animal remains from Corstopitum and the Iron Age site of Catcote, near Hartlepoons, County Durham', AA, Ser. 4., XLVI, 127-62.
- HODGSON, K.S., 1940: 'Excavations in the Bewcastle District', TCWAAS, N.S., XL, 154-66.
- HODSON, F.R., 1962: 'Some Pottery from Eastbourne, the 'Marnians', and the Pre-Roman Iron Age in Southern Britain', PPS, XXVIII, 140-55.

- HODSON, F.R., 1964a: 'La Tène Chronology, Continental and British', Bulletin of the Institute of Archaeology, London University, 4, 123-41.
- HODSON, F.R., 1964b: 'Cultural Grouping Within the British pre-Roman Iron Age', PPS, XXX, 99-110.
- HOGG, A.H.A., 1942: 'The Native Settlement at Gunnar Peak', AA, Ser. 4, XX, 155-70.
- HOGG, A.H.A., 1971: 'Some Applications of Surface Fieldwork', in Hill and Jesson (Eds.), 1971, 105-25.
- HOLLEYMAN, G.A., 1937: 'Harrow Hill Excavations, 1936', SxAC, LXXVIII, 230-52.
- HOLLNAGEL, A., 1958: Die vor-und frühgeschichtlichen Denkmäler und Funde des Kreises Neustrelitz.
- HOPE, M.G., 1971: Iron Age Pottery in Leicestershire, Unpublished B.A. Thesis, University of Leicester.
- HOWARTH, E., 1899: Ancient Encampment at Wincobank. Excavations 1899, Unpublished notes in Sheffield Museum.
- HUGHES, R.G., 1961: 'Archaeological Sites in the Trent Valley, South Derbyshire', DAJ, LXXXI, 149-50.
- HUME, A., 1863: Ancient Meols : or some account of the Antiquities found near Dove Point, on the sea-coast of Cheshire.
- JACKSON, D.A., HARDING, D.W., and MYRES, J.N.L., 1969: 'The Iron Age and Anglo-Saxon Site at Upton, Northants', Ant. J., XLIX, 202-21.
- JACKSON, K.H., 1964: The Oldest Irish Tradition : A Window on the Iron Age.
- JARMAN, M., FAGG, A., and HIGGS, E.S., 1968: 'Animal Remains', in Stead, 1968, Appendix A, 182-9.
- JARRETT, M.G., 1958: 'Excavations at Maiden Castle, Durham, in 1956', TAASDN, XI, 124-7.
- JOBEY, G., 1957: 'Excavations at the Native Settlement, Gubeon Cottage, Northumberland', AA, Ser. 4, XXXV, 163-79.
- JOBEY, G., 1959: 'Excavations at the Native Settlement at Huckhoe, Northumberland, 1955-7', AA, Ser. 4, XXXVII, 217-78.
- JOBEY, G., 1960: 'Rectilinear Settlements of the Roman Period in Northumberland', AA, Ser. 4, XXXVIII, 1-32.
- JOBEY, G., 1962: 'An Iron Age Homestead at West Brandon, Durham', AA, Ser. 4, XL, 1-34.
- JOBEY, G., 1965a: 'Hill-forts and settlements in Northumberland', AA, Ser. 4, XLIII, 21-64.

- JOBEY, G., 1965b: 'Stotts House 'Tumulus' and the Military Way, Walker', AA, Ser. 4, XLIII, 77-86.
- JOBEY, G., 1966a: 'A Field Survey in Northumberland', in Rivet (Ed.), 1966, 89-109.
- JOBEY, G., 1966b: 'Homesteads and settlements of the frontier area', in Thomas (Ed.), 1966, 1-14.
- JOBEY, G., 1967: 'Excavations at Tynemouth Priory and Castle', AA, Ser. 4, XLV, 33-104.
- JOBEY, G., 1970a: 'An Iron Age Settlement and Homestead at Burradon, Northumberland', AA, Ser. 4, XLVIII, 51-96.
- JOBEY, G., 1970b: 'Early Settlement and Topography in the Border Counties', SAF, 1970, 73-84.
- JOBEY, G., 1971: 'Birrenswark Hill-fort, Northumberland', ANNCL, 10, 3.
- JOBEY, G., and TAIT, J., 1966: 'Excavations on palisaded settlements and cairnfields at Alnham, Northumberland', AA, Ser. 4, XLIV, 5-48.
- JOFFROY, R., 1957: 'Les sépultures à char du premier âge du fer en France', RAECE, VIII, 7-73, 193-263.
- JOPE, E.M., 1961: 'Daggers of the Early Iron Age in Britain', PPS, XXVII, 307-43.
- JOPE, E.M., 1963: 'The Regional Cultures of Medieval Britain', in Foster and Alcock (Eds.), 1963, 327-50.
- JOPE, E.M., 1971: 'The Witham Shield', BMQ, XXXIV, 61-9.
- KENYON, K.M., 1942: 'Excavations at the Wrekin, Shropshire, 1939', Arch. J., XCIV, 99-109.
- KENYON, K.M., 1948: Excavations at the Jewry Wall Site, Leicester.
- KENYON, K.M., 1950: 'Excavations at Breedon-on-the-Hill, Leicestershire', TLAHS, XXVI, 17-82.
- KENYON, K.M., 1952: 'A Survey of the Evidence concerning the Chronology and Origins of Iron Age A in Southern and Midland Britain', University of London Institute of Archaeology Reports, VIII, 27-78.
- KIMMIG, W., 1954: 'Où en est l'étude de la civilisation des Champs d'urnes en France, principalement dans l'Est?', RAECE, V, 7-28.
- KITSON CLARK, M., 1930: 'Iron Age sites in the Vale of Pickering', YAJ, XXX, 157-72.
- KITSON CLARK, M., 1935: A Gazetteer of Roman Remains in East Yorkshire, Roman Malton and District, Report No. 5.

- KLEIN, W.G., 1928: 'Roman Temple at Worth, Kent', Ant. J., VII, 76-86.
- KOSSACK, G., 1959: Südbayern Während der Hallstattzeit.
- KOSSACK, G., 1971: 'The Construction of the felloe in Iron Age spoked wheels', in Boardman, et al. (Eds.), 1971, 141-63.
- KROMER, K., 1959: Das Gräberfeld von Hallstatt.
- LANE, H., 1969: 'Markland Grips Iron Age Promontory Fort. An Interim Report', DAJ, LXXXIX, 59-67.
- LEEDS, E.T., 1933: 'Torcs of the Early Iron Age in Britain', Ant. J., XIII, 466-8.
- LEWIS, G.D., 1966: 'Some radiocarbon dates for the Peak District', DAJ, LXXXVI, 115-7.
- LINDQVIST, S., 1942: 'The Boat Models from Roos Carr', Acta Archaeologica, XIII, 235-42.
- LONG, C.D., 1964: Excavations at Catcote, West Hartlepool, Co. Durham. Preliminary Report, Unpublished typescript.
- LONGWORTH, I.H., 1961: 'The Origins and Development of the Primary Series in the Collared Urn Tradition in England and Wales', PPS, XXVII, 263-306.
- LONGWORTH, I.H., 1964: Collared Urns and Related Vessels in England and Wales, Unpublished Ph.D. Thesis, University of Cambridge.
- LONGWORTH, I.H., 1965: Yorkshire (Heinemann Regional Archaeologies).
- LOWNDES, R.A.C., 1963: 'Celtic fields, farmsteads and burial mounds in the Lune Valley', TCWAAS, N.S., LXIII, 77-95.
- LOWNDES, R.A.C., 1964: 'Allen Knott Earthwork', TCWAAS, N.S., LXIV, 94-7.
- MACCORMICK, A.G., 1968: 'Three Dug-out Canoes and a Wheel from Holme Pierrepont, Nottinghamshire', TTSN, LXXII, 14-31.
- MACGREGOR, M., 1962: 'The Early Iron Age Metalwork Hoard from Stanwick, North Riding of Yorkshire', PPS, XXVIII, 17-57.
- MACKIE, E.W., 1965: 'A Dwelling Site of the Earlier Iron Age at Balevullin, Tiree, Excavated in 1912 by A. Henderson Bishop', PSAS, XCVI, 155-83.
- MACKIE, E.W., 1969: 'Radiocarbon Dates and the Scottish Iron Age', Ant., XLIII, 15-25.
- MACLAUGHLAN, H., 1849: 'On the Roman Roads, Camps and other Earthworks between the Tees and the Swale ....', Arch. J., VI, 213-25, 335-51.

- MANBY, T.G., 1963a: 'The Clothesholme Anthropoid Sword', YAJ, XLI, 15-7.
- MANBY, T.G., 1963b: 'Early Iron Age Pottery from Melbourne, South Derbyshire', DAJ, LXXXIII, 100-1.
- MANNING, W.H., 1971: 'The Piercebridge Plough Group', BMQ, XXXV, 125-36.
- MARIËN, M. - E., 1952: Oud - België.
- MARIËN, M. - E., 1958: Trouvailles du Champ d'Urnes et des Tombelles hallstattiennes de Court-Saint-Etienne.
- MARIËN, M. - E., 1964: La Nécropole à tombelles de Saint-Vincent.
- MARIËN, M. - E., 1971: 'Tribes and archaeological groupings of the La Tène period in Belgium : some observations', in Boardman, et al. (Eds.), 1971, 211-41.
- MARTINDALE, J.A., 1901: 'An Ancient British Village in Kentmere', TCWAAS, N.S., I, 175-85.
- MARYON, H., 1939: 'The Gold Ornaments from Cooper's Hill, Alnwick', AA, Ser. 4, XVI, 101-8.
- MASON, J.R., and VALENTINE, H., 1924: 'The British Village site at Lanthwaite Green .....', TCWAAS, N.S., XXIV, 117-22.
- MAY, J., 1966: 'Prehistory', in Edwards, K.C. (Ed.), Nottingham and its Region, 117-90
- MAY, J., 1968: Dragonby 1968. The Fifth Preliminary Report ...., Unpublished typescript.
- MAY, J., 1970: 'An Interim Report on Excavations on an Iron Age and Romano-British Site near Scunthorpe, Lincolnshire, 1964-9', Ant. J., L, 222-45.
- MAY, J., 1971: An Iron Age square enclosure at Aston upon Trent, Derbys. A report of Trial Excavations in 1967, Unpublished typescript.
- MCAULAY, I.R., and WATTS, W.A., 1961: 'Dublin Radiocarbon Dates, I', Radiocarbon, III 26-38.
- MCCORD, N., 1971 (Ed.): Durham History from the Air.
- MCCORD, N., and JOBEY, G., 1971: 'Notes on Air Reconnaissance in Northumberland and Durham - II', AA, Ser. 4, XLIX, 119-30.
- MCDONNELL, J., 1963 (Ed.): A History of Helmsley, Rievaulx and District.
- MCINNES, I.J., 1968: 'The Excavation of a Bronze Age Cemetery at Catfoss, East Yorkshire', ERA, I, 1-10.
- MEGAW, J.V.S., 1960: 'Penny Whistles and Prehistory', Ant., XXXIV, 6-13.
- MEGAW, J.V.S., 1971: 'A Group of Later Iron Age Collars or Neck-rings from Western Britain', BMQ, XXXV, 145-56.

- MEGAN, J.V.S., THOMAS, A.C.,  
and WAILLES, B., 1961: 'The Bronze Age Settlement at Gwithian,  
Cornwall', Proceedings of the West Cornwall  
Field Club, II, 200-15.
- MITCHELL, J.B. (Ed.), 1967: Great Britain Geographical Essays.
- MORKILL, J.W., 1933: Kirkby Malhamdale, Yorkshire.
- MORTIMER, J.R., 1895: 'The origin of some lines of small pits on  
Allerston and Ebberston Moors, near Scamridge  
Dykes in the Neighbourhood of Scarborough',  
Arch. J., LII, 267-8.
- MORTIMER, J.R., 1905: Forty Years' Researches in British and Saxon  
Burial Mounds of East Yorkshire.
- MORTIMER, J.R., 1911: 'Danes Graves', Transactions of the East Riding  
Archaeological Society, XVIII, 30-52.
- MÜLLER-BECK, H., and  
EPTLINGER, E., 1964: 'Die Besiedlung der Engehalbinsel in Bern',  
Bericht der Römisch-Germanischen Kommission,  
XLII-XLIV, 107-53.
- MÜLLER-KARPE, H., 1959: Beiträge zur Chronologie der Urnenfelderzeit  
Nördlich und Südlich der Alpen.
- MUSSON, C.R. 1970a: Breiddin 1969, Preliminary Information,  
Unpublished typescript.
- MUSSON, C.R., 1970b: 'The Breiddin, 1969', CA, 19, 215-8.
- NENQUIN, J. 1961: Salt : A Study in economic prehistory (Diss.  
Arch. Sandensis, VI).
- NEUFFER, E., 1938: 'Siedlungskeramik der Hunsrück-Eifel-Kultur',  
Bonner Jahrbucher, CXLIII, 1-46.
- NAVARRO, J.M. de., 1959: 'Zu einigen Schwertscheiden aus La Tène',  
Bericht der Römisch-Germanischen Kommission,  
XL, 79-119.
- NAVARRO, J.M. de., 1966: 'Swords and Scabbards of the La Tène period  
with incised laddering', in Degen, R., Drack,  
W., and Wyss, R. (Eds.), Helvetia Antiqua.  
Festschrift Emil Vogt, 147-54.
- NEWBIGGIN, N., 1937: 'The Neolithic Pottery of Yorkshire', PPS,  
III, 139-216.
- NORWOOD, J.F.L., 1967: 'Breedon-on-the-Hill', TLAHS, XLII, 85.
- OLDFIELD, F., 1963: 'Pollen-Analysis and man's role in the  
ecological history of the South-East Lake  
District', Geografiska Annaler, XLV, 23-40.
- O'NEIL, B.St.J., 1945: 'Grey Ditch, Bradwell, Derbyshire', Ant.,  
XIX, 11-9.
- ORDNANCE SURVEY (1962): Map of Southern Britain in the Iron Age.
- OZANNE, A., 1962: 'The Peak Dwellers', Medieval Archaeology, VI, 15.

- PAINTER, K.S., 1971: 'An Iron Age Gold-alloy torc from Glascote, Tamworth, Staffordshire', Trans. South Staffs. Arch. Hist. Soc., 11, 1-6.
- PATCHETT, F.M., 1946: 'Cornish Bronze Age Pottery', Arch. J., CL, 17-40.
- PEACOCK, D.P.S., 1968: 'A Petrological Study of Certain Iron Age Pottery from Western England', PPS, XXXIV, 414-26.
- PECK, W., 1815: History of the Isle of Axholme.
- PENNINGTON, W., 1969: The History of British Vegetation.
- PENNINGTON, W., 1970: 'Vegetation History in the North-West of England: A Regional Synthesis', in Walker and West (Eds.), 1970, 41-79.
- PÉRICHON, R., 1964: 'La céramique peinte dans la plaine du Forez at du Roannais', Celticum, IX, 147-69.
- PERRY, B.T., 1966: 'Some Recent Discoveries in Hampshire', in Thomas (Ed.), 1966, 39-42.
- PETCH, D.F., 1957: 'Archaeological Notes for 1956', LAASRP, VII, 1-26.
- PÉTREQUIN, P., 1966: 'L'âge du Bronze final dans la région de Montbéliard', RAECE, XVII, 28-46.
- PHILIPS, J.T., 1950: 'A Survey of the Distribution of Querns of Hunsbury or Allied Types', TLAHS, XXVI, 75-82.
- PHILIPS, J.T., 1960: 'An Iron Age Site at Driffield, East Riding, Yorks', YAJ, XL, 183-91.
- PHILLIPS, C.W., 1933: 'The Present State of Archaeology in Lincolnshire, Part I', Arch. J., XC, 106-49.
- PHILLIPS, C.W., 1934: 'The Present State of Archaeology in Lincolnshire, Part II', Arch. J., XCI, 97-187.
- PHILLIPS, C.W., 1936: 'The Excavation of the Giants' Hills Long Barrow, Skendleby, Lincolnshire', Arch., LXXXV, 37-106.
- PHILLIPS, C.W., 1938: 'Pebbles from Early Ploughs in England', PPS, IV, 338-9.
- PHILLIPS, C.W., 1941: 'Some Recent Finds from the Trent near Nottingham', Ant. J., XXI, 133-43.
- PHILLIPS, C.W. (Ed.), 1970: The Fenland in Roman Times.
- PHILLIPS, S.P., 1969: The Pollen-Analytical evidence for the impact of agriculture on the vegetation of a gritstone upland in North Derbyshire, Leeds University unpublished Ph. D. Thesis.
- PIGGOTT, C.M., 1942: 'Five Late Bronze Age Enclosures in North Wiltshire', PPS, VIII, 48-61.



- PIGGOTT, C.M. 1946: 'The Late Bronze Age Razors of the British Isles', PPS, XII, 121-41.
- PIGGOTT, C.M., 1951: 'Carlwerk, a hill-fort in Derbyshire', Ant., XXV, 210-2.
- PIGGOTT, S., 1949: 'A Wheel of Iron Age Type from County Durham', PPS, XV, 191.
- PIGGOTT, S., 1950: 'Swords and Scabbards of the British Early Iron Age', PPS, XVI, 1-28.
- PIGGOTT, S., 1953: 'A Late Bronze Age Hoard from Peeblesshire', PSAS, LXXXVII, 175-86.
- PIGGOTT, S., 1959: 'The Carnyx in Early Iron Age Britain', Ant. J., XXXIX, 19-32.
- PIGGOTT, S., 1961: 'Native Economies and the Roman Occupation of North Britain', in Richmond, I.A. (Ed.), Roman and Native in North Britain, 1-20.
- PIGGOTT, S., 1965: Ancient Europe from the beginnings of Agriculture to Classical Antiquity.
- PIGGOTT, S. (The Arts Council of Great Britain), 1970: Early Celtic Art.
- PIGGOTT, S., and PIGGOTT, C.M., 1940: 'Excavations at Ram's Hill, Uffington, Berks.', Ant. J., XX, 465-80.
- PIGOTT, C.D., and PIGOTT, M.E., 1963: 'Late Glacial and Post-Glacial Deposits at Malham Tarn, Yorkshire', N. Phyt., LXII, 317-34.
- PITT-RIVERS, A., 1888: Excavations in Cranbourne Chase, Vol. II.
- POSNANSKY, M., 1955: 'The Bronze Age Round Barrow at Swarkeston, Part I', DAJ, LXXV, 123-39.
- POSNANSKY, M., 1956a: 'The Bronze Age Round Barrow at Swarkeston, Part II', DAJ, LXXVI, 10-26.
- POSNANSKY, M., 1956b: 'Note on the presence of Prehistoric field systems in Derbyshire', DAJ, LXXVI, 71.
- POWELL, T.G.E., 1948: 'A Late Bronze Age Hoard from Welby, Leicestershire', Arch. J., CV, 27-40.
- POWELL, T.G.E., 1950: 'Notes on the Bronze Age in the East Midlands', PPS, XVI, 65-80.
- POWELL, T.G.E., 1963: 'Excavations at Skelmore Heads, near Ulverston, 1957 and 1959', TCWAAS, N.S., LXIII, 1-30.
- PRESTON, F.L., 1947: 'Hill-Forts in South-West Yorkshire', THAS, VI, 85-94.
- PRESTON, F.L., 1950: 'A Field Survey of the 'Roman Rig' Dyke in South-West Yorkshire', THAS, VI, 285-309.

- PRESTON, F.L., 1954: 'The Hill-Forts of the Peak', DAJ, LXXIV, 1-31.
- RADLEY, J., 1966: 'A Bronze Age Ringwork on Totley Moor, and other Bronze Age Ringworks in the Pennines', Arch. J., CXXIII, 1-26.
- RADLEY, J., and RADFORD, F., 1969: 'Iron Age Pottery from Brassington Common', DAJ, LXXXIX, 121-2.
- RAFTERY, B., 1970: 'The Rathgall Hillfort, County Wicklow', Ant., XLIV, 51-4.
- RAHTZ, P., and APSIMON, A.M., 1962: 'Excavations at Shearplace Hill, Sydling St. Nicholas, Dorset, England', PPS, XXVIII, 289-328.
- RAISTRICK, A., 1929: 'The Bronze Age in West Yorkshire', YAJ, XXIX, 354-65.
- RAISTRICK, A., 1933: 'Excavation of a cave at Bishop Middleham, Durham', AA, Ser. 4, X, 111-22.
- RAISTRICK, A., 1934: 'Preliminary Excavation of an Earthwork at Easington, West Yorks.', YAJ, XXXI, 44-8.
- RAISTRICK, A., 1937: 'Prehistoric Cultivations at Grassington, West Yorkshire', YAJ, XXXIII, 166-74.
- RAISTRICK, A., 1939: 'Iron Age Settlements in West Yorkshire', YAJ, XXXIV, 115-50.
- RAISTRICK, A., 1947: Malham and Malham Moor.
- RAISTRICK, A., 1968: The Pennine Dales.
- RAISTRICK, A., and HOLMES, P.F., 1962: 'Archaeology of Malham Moor', Field Studies, 1, 4.
- RAISTRICK, A., SPAUL, PROF., and TODD, E., 1952: 'The Malham Iron Age pipe', Galpin Society Journal, 5, 28-38.
- RAMM, H.G., 1957: 'A Survey of the Combs Moss Hill-Fort', DAJ, LXXVII, 49-53.
- RAMM, H.G., 1965: 'The Derwent Crossing at Stamford Bridge', YAJ, XLI, 368-76.
- RAMM, H.G., 1966: 'The Green Dykes - A Forgotten York Earthwork', YAJ, XLI, 587-90.
- RCAHMS, 1956: The County of Roxburgh (Royal Commission on the Ancient and Historical Monuments of Scotland).
- RCAHMS, 1967: Peeblesshire. An Inventory of the Ancient Monuments (Royal Commission on the Ancient and Historical Monuments of Scotland).
- RCHM, 1936: An Inventory of the Historical Monuments of Westmorland (Royal Commission on the Historical Monuments (England)).

- RCHM, 1960: A Matter of Time. An archaeological survey of the river gravels of England (Royal Commission on Historical Monuments (England)).
- RENFREW, C., 1970: 'The Tree-ring Calibration of Radiocarbon : an Archaeological Evaluation', PPS, XXXVI, 280-311.
- RICHARDSON, K.M., and YOUNG, A., 1951: 'An Iron Age Site on the Chilterns', Ant. J., XXXI, 132-48.
- RICHMOND, I.A., 1924: 'Excavations at Meltham, near Huddersfield', YAJ, XXVII, 319-20.
- RICHMOND, I.A., 1954: 'Queen Cartimandua', JRS, XLIV, 43-52.
- RICHMOND, I.A., and GILLAM, J.P., 1955: 'Some Excavations at Corbridge, 1952-1954', AA, Ser. 4, XXXIII, 218-52.
- RIDGEWAY, W., and SMITH, R.A., 1907: 'Early Italian Brooches', PSAL, XXI, 97-117.
- RIEHM, K., 1961: 'Prehistoric Salt-Boiling', Ant., XXXV, 181-91.
- RILEY, D.N., 1966: 'An Early Bronze Age Cairn on Harland Edge, Beeley Moor, Derbyshire', DAJ, LXXXVI, 31-53.
- RILEY, D.N., 1971: Archaeological Flying in Yorkshire, 1971, Yorkshire Archaeological Society unpublished typescript.
- RITCHIE, A., 1969: Settlements and Economy in Britain during the First Millennium B.C., Unpublished University of Edinburgh Ph. D. thesis.
- RITCHIE, A., 1970: 'Palisaded sites in North Britain : Their Context and Affinities', SAF, 1970, 48-67.
- RITTERLING, E., 1913: 'Das frühromische Lager bei Hofheim', Ann. des Vereins für nassauische Altertumskunde, XL, 118,ff.
- RIVET, A.L.F., 1964: Town and Country in Roman Britain.
- RIVET, A.L.F. (Ed.), 1966: The Iron Age in Northern Britain.
- ROOSENS, H., and BEEEX, G., 1960: 'Onderzoek van het urnenveld op de 'Roosen' te Neerpelt in 1959', Archaeologica Belgica, XLVIII, 59-94.
- ROSS, A., 1961: 'The Horned God of the Brigantes', AA, Ser. 4, XXXIX, 63-85.
- ROSS, A., 1970: The Everyday Life of the Pagan Celts.
- ROSSER, C.R.P., 1959: 'Notes on Recent Field-Work in Lancashire and Cheshire', TLCAS, LXVIII, 139,ff.
- ROWLETT, R.M., 1966: 'Penannular Fibulae in the Marne Culture', Ant., XL, 133-6.

- ROWLETT, R.M.,  
'A rectangular Early La Tène  
Marnian house at Chassemy (Aisne)', World  
Archaeology, I, 106-35.
- ROWLETT, E.S. - J., and  
BOUREUX, M., 1969:  
'The Iron Age Pits on Castle Hill, Scarborough',  
TSDAS, I, 32-44.
- RUTTER, J.G., 1959:  
Excavations at Crossgates, near Scarborough,  
1947-56.
- RUTTER, J.G., and DUKE,  
G., 1958:  
'Air Reconnaissance in Britain, 1955-7', JRS,  
XLVIII, 86-101.
- ST. JOSEPH, J.K.S., 1958:  
'Discovery of Bronze Axes, Etc., in Buxton',  
The Reliquary, VI, 125-6.
- SALT, W.H., 1900:  
Bronze Age Cultures in France.
- SANDARS, N.K., 1957:  
'A Welsh bronze age hillfort', Ant., XLV,  
251-61.
- SAVORY, H., 1971:  
'Methods of Earthwork Building', PPS, XXXVI,  
380-1.
- SHAW, C.T., 1970:  
'Excavations at Eastburn, East Yorkshire',  
YAJ, XXXIV, 35-47.
- SHEPPARD, T., 1938:  
'The Parc-y-Meirch Hoard, St. George Parish,  
Denbighshire', Arch. Camb., XCVI, 1-10.
- SHEPPARD, T., 1941:  
'Birmingham University Radiocarbon Dates, V',  
Radiocarbon, XIII, 141-56.
- SHOTTON, F.W., and WILLIAMS,  
R.E.G., 1971:  
'Pollen Diagrams from the North York Moors',  
N. Phyt., LXVIII, 807-27.
- SIMMONS, I.G., 1969:  
Celtic Art in North Britain before 400 A.D.,  
Unpublished University of Edinburgh Ph. D.  
thesis.
- SIMPSON, M., 1966:  
'Massive armlets in the North British Iron Age',  
in Coles and Simpson (Eds.), 1968, 233-54.
- SIMPSON, M., 1968:  
'Romano-British Settlement on the Welland  
Gravels', in Thomas (Ed.), 1966, 15-25.
- SIMPSON, W.G., 1966:  
'Post-Glacial Deposits in South Yorkshire and  
North Lincolnshire', N. Phyt., LVII, 19-49.
- SMITH, A.G., 1958:  
'The Stratigraphy of the Northern Fenland', in  
Phillips, C.W. (Ed.), 1970, 147-64.
- SMITH, A.G., 1970:  
'Some Somerset Hoards and their place in the  
Bronze Age of Southern Britain', PPS, XXV,  
144-87.
- SMITH, M.A., 1959:  
'Lake Dwellings in Holderness, Yorks.,  
discovered by Thos. Boynton, Esq., F.S.A.,  
1880-1', Arch., LXI, 593-607.
- SMITH, R.A., 1911:  
'Pre-Roman Remains at Scarborough', Arch.,  
LXXVII, 179-200.
- SMITH, R.A., 1927:

- SOBEE, F.J., 1953: A History of Pilling.
- SPENCE, J.E., 1934: 'An Early Settlement on Moor Divock', TCWAAS, N.S., XXXIV, 45-9.
- SPENCE, J.E., 1935: 'An Early Settlement near Askham', TCWAAS, N.S., XXXV, 61-5.
- SPENCE, J.E., 1937: 'Bolton Wood Enclosure', TCWAAS, N.S., XXXVII, 43-8.
- STANFORD, S.C., 1970: 'Credenhill Camp - An Iron Age Hill-fort Capital', Arch. J., CXXVII, 82-129.
- STANFORD, S.C., 1971: 'Invention, Adoption and Imposition - The Evidence of the Hill-forts', in Hill and Jesson (Eds.), 1971, 41-52.
- STANFORD, S.C., 1972: 'Welsh Border Hill-Forts', in Thomas (Ed.), 1972, 25-36.
- STANLEY, J., 1954: 'An Iron Age Fort at Ball Cross Farm, Bakewell', DAJ, LXXIV, 85-99.
- STEAD, I.M., 1961: 'A Distinctive Form of La Tène Barrow in Eastern Yorkshire and on the Continent', Ant. J., XLI, 55-62.
- STEAD, I.M., 1965: The La Tène Cultures of Eastern Yorkshire.
- STEAD, I.M., 1968: 'An Iron Age Hill-Fort at Grimthorpe, Yorkshire, England', PPS, XXXIV, 148-90.
- STEAD, I.M., 1971: 'Yorkshire before the Romans : some recent discoveries', in Butler (Ed.), 1971, 21-43.
- STEER, K.A., 1937: 'The Roman Villa at Rudston (E. Yorks.). Fourth Interim Report', YAJ, XXXIII, 320-38.
- STEER, K.A., 1956: 'An Early Iron Age Homestead at West Plean, Stirlingshire', PSAS, LXXXIX, 227-51.
- STEVENSON, R.B.K., 1966: 'Metalwork and some other Objects in Scotland, and their Cultural Affinities', in Rivet (Ed.), 1966, 17-44.
- TALLIS, J.H., 1964: 'Studies on Southern Pennine Peats, I. The General Pollen Record', Journal of Ecology, LII, 323-31.
- THOMAS, C. (Ed.), 1966: Rural Settlement in Roman Britain.
- THOMAS, C. (Ed.), 1972: The Iron Age in the Irish Sea Province.
- THOMAS, F., 1961: ''Celtic Fields' at Blackwell, Taddington', DAJ, LXXXI, 147-8.
- THOMAS, N., and GUNSTONE, A.J.H., 1963: 'An Introduction to the Prehistory of Staffordshire', Arch. J., CXX, 256-62.
- THORNBER, W., 1852: 'Report of Bronze Age Habitation at Bonehill, Pilling', TLCHS, IV, 105, ff.

- TOOMEY, J.P., 1960a: 'The Earthwork at Lee Hill, Huddersfield', HDASQB, 6, 8.
- TOOMEY, J.P., 1960b: 'Excavations at Oldfield Hill, Meltham. Interim Report', HDASQB, 7, 1-3.
- TOOMEY, J.P., 1961: 'Excavations at Oldfield Hill, Meltham. Second Interim Report', HDASQB, 9, 1.
- TOOMEY, J.P., 1962: 'Excavations at Oldfield Hill, Meltham. Third Interim Report', HDASQB, 11, 1.
- TOOMEY, J.P., 1964: 'Excavations at Oldfield Hill, Meltham. Fourth Interim Report', HDASQB, 15, 1.
- TOOMEY, J.P., 1966: 'Iron Age Man in the Pennines', HDASQB, 19, 1.
- TRATMAN, E.K., 1925: 'Second Report on King's Weston Hill, Bristol', Proc. Univ. Bristol. Spel. Soc., III, 138-43.
- TURNER, J., 1962: 'The Tilia Decline : An Anthropogenic Interpretation', N. Phyt., LXI, 328-41.
- TURNER, J., 1970: 'Post-Neolithic Disturbance of British Vegetation', in Walker and West (Eds.), 1970, 97-116.
- TYLECOTE, R.F., 1968: 'Metallographic Examination of Bronze Age Artifacts from the North of England', in Burgess, 1968a, 48-55.
- TYSON, J.C., 1950: 'Preliminary Report of Excavations at the Iron Age Settlement in Canklow Wood, Rotherham', THAS, VI, 271-7.
- TYSON, N., and BU' LOCK, J.D., 1957: 'The Iron Age Fortifications at Planes Wood, Whalley', TLCAS, LXVII, 115-7.
- VARLEY, W.J., 1935: 'Maiden Castle, Bickerton. Preliminary Excavations, 1934', ULAAA, XXII, 97-110.
- VARLEY, W.J., 1936: 'Further Excavations at Maiden Castle, Bickerton, 1935', ULAAA, XXIII, 101-12.
- VARLEY, W.J., 1948: 'The Hill-Forts of the Welsh Marches', Arch. J., CV, 41-66.
- VARLEY, W.J., 1951: 'Excavations of the Castle Ditch, Eddisbury', TLCHS, CII, 1-68.
- VARLEY, W.J., 1964: Cheshire before the Romans.
- VARLEY, W.J., 1968: 'Barmston and the Holderness Crannogs', ERA, I, 12-23.
- VARLEY, W.J., 1969: Castle Hill, Almondbury (12-page pamphlet ; Huddersfield).
- WACHER, J.S., 1964: 'Excavations at Breedon-on-the-Hill, Leicestershire Ant. J.', XLIV, 122-42.
- WACHER, J.S., 1965: 'Excavations at Riplingham, East Yorkshire, 1956-7', YAJ, XLI, 608-69.

- WACHER, J.S., 1969: Excavations at Brough-on-Humber, 1958-1961.
- WAINWRIGHT, G.J., 1968: 'The Excavation of a Durotrigian Farmstead near Tollard Royal in Cranbourne Chase, Southern England', PPS, XXXIV, 102-47.
- WAINWRIGHT, G.J., 1969: 'The Excavation of Balksbury Camp, Andover, Hants.', Proceedings of the Hampshire Field Club, XXVI, 21-55.
- WAINWRIGHT, G.J., 1970: 'An Iron Age Promontory Fort at Budbury, Bradford-on-Avon, Wiltshire', WAM, LXV, 108-66.
- WAINWRIGHT, G.J., and LONGWORTH, I.H., 1969: 'The Excavation of a Group of Round Barrows on Ampleforth Moor, Yorkshire', YAJ, XLII, 283-94.
- WALKER, D., 1965: 'Excavations at Barnscar, 1957-58', TCWAAS, N.S., LXV, 53-65.
- WALKER, D., 1966: 'The Late Quaternary History of the Cumberland Lowland', Philosophical Transactions of the Royal Society of London, Series B, Biological Sciences, CCVI, 1-210.
- WALKER, D., and WEST, R.G. (Eds.), 1970: Studies in the Vegetational History of the British Isles. Essays in Honour of Harry Godwin.
- WALTON, J., 1947: Homesteads of the Yorkshire Dales.
- WARD, C.H.B., 1952: Sheffield Clarion Ramblers' Booklet, 1951-2.
- WARD, J., 1890: 'On Some Diggings near Brassington, Derbyshire', DAJ, XII, 108-38.
- WARD-PERKINS, J.B., 1938: 'An Early Iron Age Site at Crayford, Kent', PPS, IV, 151-68.
- WARREN, S.H., 1932: 'Prehistoric Timber Structures associated with a Briquetage Site in Lincolnshire', Ant. J., XII, 254-6.
- WATERBOLK, H.C., 1971: 'Working with Radiocarbon Dates', PPS, XXXVII, 15-33.
- WATERMAN, D.M., KENT, B.W.J., and STICKLAND, H.J., 1955: 'Two Inland Sites with 'Iron Age A' pottery in the West Riding of Yorkshire', YAJ, XXXVIII, 383-97.
- WATKIN, W.T., 1883: Roman Lancashire.
- WATSON, G.G., 1952: Early Man in the Halifax District.
- WATSON, W., 1947: 'Two Brooches of the Early Iron Age from Sawdon, North Riding, Yorkshire', Ant. J., XXVII, 178-82.
- WEBSTER, G.A., 1971: 'A hoard of Roman military equipment from Fremington Hagg', in Butler (Ed.), 1971, 109-25.

- WENHAM, L.P., 1960: 'Seven Archaeological Discoveries in Yorkshire', YAJ, XL, 298-327.
- WENHAM, L.P., 1971: 'The beginnings of Roman York', in Butler (Ed.), 1971, 45-53.
- WHEELER, R.E.M., 1931: 'Prehistoric Scarborough', in Rowntree, A. (Ed.), The History of Scarborough, 9-39.
- WHEELER, SIR MORTIMER, 1954: The Stanwick Fortifications.
- WHEELER, SIR MORTIMER, and RICHARDSON, K.M., 1957: Hill-Forts of Northern France.
- WHITE, G.T., 1966: Scratta Wood. Iron Age Excavations, 1959-1965. Workshop Corporation.
- WHITING, C.E., 1938: 'Excavations on Sutton Common, 1933, 1934 and 1935', YAJ, XXXIII, 57-80.
- WHITWELL, J.B., Roman Lincolnshire (Hist. of Lincs., II).
- WOOD, E.S., 1948: The Archaeology of Nidderdale, Unpublished typescript.
- WOODHEAD, A., 1966: 'A Bronze Age Urn from West Hartlepool', AA, Ser. 4, XLIV, 237-9.
- WOODS, P.J., 1969: Excavations at Hardingstone, Northants., 1967-8, A Report to Northamptonshire County Council.
- WORSFOLD, F.H., 1943: 'A Report on the Late Bronze Age Site excavated at Minnis Bay, Birchington, Kent, 1938-40', PPS, IX, 28-47.
- WRIGHT, E.V., and CHURCHILL, D.M., 1965: 'The Boats from North Ferriby, Yorkshire, with a review of the origins of the sewn boats of the Bronze Age', PPS, XXXI, 1-24.
- WRIGHT, E.V., and WRIGHT, C.W., 1947: 'Prehistoric Boats from North Ferriby, East Yorkshire', PPS, XIII, 114-38.
- ZIMMERMAN, D.W., and HUXTABLE, J., 1969: 'Recent Applications and Developments in Thermoluminescent Dating', Archaeometry, II, 105-7.



ADDENDA TO BIBLIOGRAPHY

EMERY, G.T., and MILLS, R.,  
1966:

'Berth Hill and Maerfield Gate', KAGN, 6.

HAWKES, C.F.C., 1959:

'The ABC of the British Iron Age', Ant.,  
XXXIII, 170-82.

KEMBLE, J.M., 1863:

Horae Ferales.

ST. JOSEPH, J.K.S., 1966:

'Air Reconnaissance : Recent Results, 6',  
Ant., XL, 58-9.

KITSON CLARK, M., 1956:

'Working on the Iron Age', Ant.,  
XXXII, 170-82.