

S 31

THE WILTSHIRE
ARCHAEOLOGICAL MUSEUM

- 8 APR 2004

PURCHASED



WILTSHIRE STUDIES

The Wiltshire Archaeological
and Natural History Magazine

Volume 97 2004



THE NATURAL
HISTORY MUSEUM

- 6 APR 2004

PURCHASED
GENERAL LIBRARY

**The Wiltshire Archaeological
and Natural History Magazine**
Volume 97
2004

Published by
The Wiltshire Archaeological and Natural History Society
41 Long Street,
Devizes, Wilts. SN10 1NS
Telephone 01380 727369
Fax 01380 722150
email wahs@wiltshireheritage.org.uk

Founded 1853
Company No. 3885649
Registered with Charity Commission No. 1080096
VAT No. 140 2791 91

THE WILTSHIRE ARCHAEOLOGICAL AND NATURAL HISTORY MAGAZINE
VOLUME 97 (2004)

ISSN 0262 6608

© Wiltshire Archaeological and Natural History Society and authors 2004

Hon. Editors: Andrew Reynolds, BA, PhD FSA, and John Chandler BA, PhD.

Hon. Local History Editor: James Thomas, BA, PhD, FRHistS.

Hon. Natural History Editor: Michael Darby, PhD, FRES

Hon. Reviews Editor: Michael Marshman, ALA.

Editorial Assistant: Lorna Haycock, BA, PhD, Dip.ELH, Cert Ed.

We acknowledge with thanks grants towards the cost of publishing specific papers in this volume from the following bodies: Wessex Archaeology, for 'Investigation of the Whitesheet Down Environs 1989-90: Neolithic Causewayed Enclosure and Iron Age Settlement', by Mick Rawlings; and for 'An Archaeological and Environmental Study of the Neolithic and Later Prehistoric Landscape of the Avon Valley and Durrington Walls Environs', by Rosamund M.J. Cleal; Cotswolds Aggregates, for 'Prehistoric Settlement and Medieval to Post-Medieval Field Systems at Latton Lands, by Dan Stansbie and Granville Lewis; ASI Heritage Consultants, for 'Recent work at Barton Grange Farm, Bradford-on-Avon, Wiltshire, 1998-2003, by Michael Heaton and William Moffatt; and the Bill Petch Bequest, for 'The Wiltshire Wildlife Trust's Vera Jeans Nature Reserve at Jones's Mill, Pewsey, by Beverley Heath.

The journals issued to volume 69 as parts of *The Wiltshire Archaeological and Natural History Magazine* (Part A Natural History; Part B Archaeology and Local History) were from volumes 70 to 75 published under separate titles as *The Wiltshire Natural History Magazine* and *The Wiltshire Archaeological Magazine*. With volume 76 the magazine reverted to its combined form and title. The cover title 'Wiltshire Heritage Studies' (volume 93) and 'Wiltshire Studies' (volume 94 onwards) should not be used in citations. The title of the journal, *The Wiltshire Archaeological and Natural History Magazine*, remains unchanged.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the Society and authors.

Typeset in Plantin by John Chandler
and produced for the Society by
Salisbury Printing Co. Ltd, Greencroft Street, Salisbury SP1 1JF
Printed in Great Britain

Contents

'In the Newest Manner': Social Life in Late Georgian Devizes, by <i>Lorna Haycock</i>	1
Trees of Marlborough College and Environs, by <i>Jack Oliver</i>	15
Miss Etheldred Benett (1775-1845): A Preliminary Note on her Correspondence, by <i>R. J. Cleevely</i>	25
Thomas Kytson and Wiltshire Clothmen, 1529–1539, by <i>Colin Brett</i>	35
Neolithic of the Wylve Valley 1: Millennium Re-investigation of the Corton Long Barrow, ST 9308 4034, by <i>Michael J. Allen and Julie Gardiner, with a contribution by Rob Scaife</i>	63
A Welsh Bard in Wiltshire: Iolo Morganwg, Silbury and the Sarsens, by <i>Jon Cannon and Mary-Ann Constantine</i>	78
An Early Anglo-Saxon Cross-roads Burial from Broad Town, North Wiltshire, by <i>Bob Clarke</i>	89
Arable Weed Survey of a Farm in South Wiltshire, by <i>Barbara Last</i>	95
Lodowick Muggleton – Native of Chippenham? by <i>Kay S. Taylor</i>	99
Prehistoric Settlement and Medieval to Post-Medieval Field Systems at Latton Lands, by <i>Dan Stansbie and Granville Lewis, with contributions by Alistair Barclay, Julie Hamilton, Elizabeth Huckerby, Hugo Lamdin-Whymark, Ruth Shaffrey, Elizabeth Stafford, Maisie Taylor, Jane Timby and Annsofie Witkin</i>	106
Investigation of the Whitesheet Down Environs 1989-90: Neolithic Causewayed Enclosure and Iron Age Settlement, by <i>Mick Rawlings, Michael J. Allen and Frances Healy, with contributions by Rosamund M. J. Cleal, M. Corney, Rowena Gale, Pat Hinton, D. McOmish, J. M. Malby, Elaine L. Morris and Robert G. Scaife</i>	144
A. D. Passmore and the Stone Circles of North Wiltshire, by <i>Aubrey Burl</i>	197
Recent work at Barton Grange Farm, Bradford-on-Avon, Wiltshire, 1998–2003, by <i>Michael Heaton and William Moffatt</i>	211
An Archaeological and Environmental Study of the Neolithic and Later Prehistoric Landscape of the Avon Valley and Durrington Walls Environs, by <i>Rosamund M. J. Cleal, Michael J. Allen and Caron Newman, with contributions from S. Hamilton-Dyer, Phil Harding, Lorraine Mepham, Elaine L. Morris, Robert G. Scaife and S. F. Wyles</i>	218

Wiltshire and Other Things in Common: Sir Peter Scott CH CBE DFC FRS (1909–1989) and Bernard Venables MBE (1907-2001), <i>by Brian Edwards</i>	249
The Wiltshire Wildlife Trust's Vera Jeans Nature Reserve at Jones's Mill, Pewsey, <i>by Beverley Heath with contributions by other authors</i>	255
An Investigation into the Life of A.D. Passmore, 'A Most Curious Specimen', <i>by Laura Phillips</i>	273
Notes and Shorter Contributions	293
A Medieval Pilgrim Badge from West Knoyle, <i>by Nick Griffiths</i>	293
The Arundell's London Estate, <i>by Barry Williamson</i>	294
The Minerva Plaque from Charlton Down, <i>by Paul Robinson</i>	296
The Rugged Oil Beetle (<i>Meloe rugosus</i> Marsham) discovered in Wiltshire, <i>by Michael Darby</i>	298
Excavation and Fieldwork in Wiltshire 2002	300
Index	309

The Wiltshire Archaeological and Natural History Society

The Society was founded in 1853. Its activities include the promotion of the study of archaeology (including industrial archaeology), history, natural history and architecture within the county; the issue of a Magazine, and other publications, and the maintenance of a Museum, Library, and Art Gallery. There is a programme of lectures and excursions to places of archaeological, historical and scientific interest.

The Society's Museum contains important collections relating to the history of man in Wiltshire from earliest times to the present day, as well as the geology and natural history of the county. It is particularly well known for its prehistoric collections. The Library houses a comprehensive collection of books, articles, pictures, prints, drawings and photographs relating to Wiltshire. The Society welcomes the gift of local objects, printed material, paintings and photographs to add to the collections.

The Wiltshire Archaeological and Natural History Magazine is the annual journal of the Society and is issued free to its members. For information about the availability of back numbers and other publications of the Society, enquiry should be made to the Curator.

Publication by the Wiltshire Archaeological and Natural History Society does not imply that the Society endorses the views expressed; the factual content and the opinions presented herein remain the responsibility of the authors.

Notes for Contributors

Contributions for the *Magazine* should be on subjects related to the archaeology, history or natural history of Wiltshire. While there is no fixed length, papers should ideally be under 7,000 words, though longer papers will be considered if of sufficient importance. Shorter, note length, contributions are also welcome. All contributions should be typed/ word processed, with text on one side of a page only, with good margins and double spacing. Language should be clear and comprehensible. Contributions of article length should be accompanied by a summary of about 100 words. Please submit two copies of the text (with computer disk if possible) and clear photocopies of any illustrations to the editors at the Museum, 41 Long Street, Devizes, Wiltshire, SN10 1NS. A further copy should be retained by the author. The editors will be pleased to advise and discuss with intending contributors at any stage during the preparation of their work. When submitting text or graphics on disk, Word or

Rich Text Format files are preferred for text, jpeg or tiff format for graphics. Contributors are encouraged to seek funding from grant-making bodies towards the Society's publication costs wherever possible.

Referencing: The Harvard System of referencing (author, date and page, in parentheses within the text) is preferred: e.g. '... one sheep and one dog lay close together (Clay 1925, 69)'. References in footnotes should be avoided if at all possible. Only give references which are directly applicable, repeating as little as possible. All references cited in the paper should be listed in the bibliography using the following style, with the journal name spelled in full, and the place and publisher of books/ monographs given :

For a paper:

PITTS, M. W. and WHITTLE, A. 1992. The development and date of Avebury. *Proceedings of the Prehistoric Society* 58, 203-12

(Note that in citations *Wiltshire Archaeological and Natural History Magazine* is abbreviated to WANHM)

For a book or monograph:

SMITH, I.F., 1965, *Windmill Hill and Avebury: Excavations by Alexander Keiller, 1925-39*. Oxford: Clarendon Press

For a paper in a book or monograph:

FITZPATRICK, A., 1984, 'The deposition of La Tène metalwork in watery contexts in Southern England', in B. Cunliffe and D. Miles (eds), *Aspects of the Iron Age in Central Southern Britain*, 178-90. Oxford: University Committee for Archaeology

Endnotes can be used for specific information that cannot otherwise be comfortably incorporated in the main body of the text.

Illustrations need to be clear and easily reproducible, the format and proportions following that of the *Magazine*. If possible, all original artwork should not exceed A3 before reduction. If not supplied as computer graphic files, drawings should be produced on drafting film or high quality white paper using black ink. Detail and lettering should not be so small that it will become lost in reduction. Mechanical lettering (dry transfer or computer generated) is preferred over hand lettering. Photographs should be supplied as good quality black and white prints, and transparencies and colour prints avoided wherever possible. Original illustrations and photographs should only be sent once a contribution has been accepted.

Offprints: Ten offprints of each article will be given free (to be shared between joint authors). Offprints are not given for notes and shorter contributions.

WILTSHIRE ARCHAEOLOGICAL AND NATURAL HISTORY SOCIETY

BOARD OF TRUSTEES (from AGM 22 November 2003)

Chairman

Lt. Col. C Chamberlain

Deputy Chairmen

J H Thomas BA, PhD, FRHistS

D L Roseaman BSc(Eng), CEng, MIMechE

Other Elected Trustees

Miss A Arrowsmith BSc

Ms C Conybeare MA, FMA

B K Davison OBE, BA, FSA, MIFA

Mrs W P Lansdown

W A Perry MSc (Hon Treasurer)

R M Rowland BSc

J S S Stewart BSc, MB, ChB, FRCS

M J H Stiff BA, DPhil

Mrs J Triggs

Nominated Trustees

Mrs K J Walling (Member, Devizes Town Council)

P.R. Saunders, BA, FSA, FMA, FRSA (Director, Salisbury & South Wiltshire Museum)

L H Grundy OBE (Member, Kennet District Council)

D H Lay (Member, Wiltshire County Council)

W A B Snow (Member, Wiltshire County Council)

In attendance:

T Craig BA, MA, AMA, DipMgmt (Wiltshire County Council Heritage Services Manager)

OFFICERS

Curator

Assistant Curator and Keeper of Natural Sciences

Sandell Librarian and Archivist

Outreach Officer

P H Robinson, PhD, FSA, AMA

A S Tucker, BSc, AMA

Mrs L Haycock, BA, PhD, Dip ELH, Cert.Ed.

Ms R Stalker HND, BA, MA

'In the Newest Manner': Social Life in Late Georgian Devizes

by *Lorna Haycock*

This paper examines the social networks and cosmopolitan culture of late eighteenth-century Devizes, which reflected not only the sophistication of a mature and prosperous community, but also the re-awakening of provincial life in the Georgian period.

Pleasures and business divide the life of man. The agreeableness of pleasures corrects the bitterness or refreshes and unbends us from the fatigue of business¹.

Alongside the well-known developments of the Georgian period – the industrial and agrarian changes, the transport developments and the wars and overseas trade which resulted in the acquisition of empire – other important social and economic trends can be traced. The eighteenth century saw the rise of a consumer society of social emulation and cosmopolitan fashion and the development of a distinctive Georgian ethos. The growing wealth of 'the middling sort' was channelled increasingly into leisure pursuits, voluntary associations and cultural activities, emulating the lifestyle of 'the quality' and creating a new wave of urban sociability, but also causing a polarisation between cosmopolitan and popular culture.

A remarkable feature of late eighteenth-century Devizes was the advance of professional men such as doctors and lawyers in the town's hierarchy. They played an important role in the development of a fashionable urban culture, which came to be regarded as a mark of social status, a badge of the charmed world of the gentry and bourgeoisie. The

memorial tablet of John Garth M.P. (d. 1764) in St Mary's church, states that:

to the sedentary way of living which he fell into from an early and continued love for the pleasures of literature, the illness was chiefly owing that occasioned his Death

Book collecting and reading for pleasure and instruction, long the preserve of the clergy and gentry, spread among professionals and traders in the late eighteenth century and became part of the background of polite life. Newspapers made the printed word more accessible and London books were now increasingly available in country bookshops. In the mid-eighteenth century, Dissenting minister Samuel Fancourt had established a circulating library in Salisbury, providing books within a sixty-mile radius; doubtless he had Devizes subscribers.² Publishers' advertising and the growth of adult literacy helped to stimulate the demand for a wide variety of secular literature. James Lackington wrote in 1791: 'I cannot help observe that the sale of books has increased prodigiously within the last twenty years. . . All ranks and degrees now read'.³ Devizes doctors and surgeons were among the foremost owners of books, mostly volumes on science and physic. Thomas Gisborne advised that the physician

should study surgery, chemistry, botany, natural philosophy, read medical tracts in French and German, but also peruse 'works of general information and taste'.⁴ Of Dr Spalding's 400 books, mostly medical, some were also on history.⁵ Attorneys William Salmon and Wadham Locke had large collections of law books which they insured against fire, and traders, too, were now stocking their bookshelves. Gisborne exhorted them to 'peruse eminent authors and not to be absorbed in mere worldly concerns'.⁶

Banker Charles Tylee's library of 700 volumes included plays by Ben Jonson and Beaumont and Fletcher.⁷ Bookseller Thomas Smith ordered volumes I and II of Britton's *Beauties of Wiltshire* 'for my own private library',⁸ while clothier Frederick Sandwell possessed the works of 600 'admired authors', including 21 volumes of Buffon's *Natural History* in French and 21 volumes of Hume's *History of England*.⁹ John Anstie had a 'select' library of books, including the moral and heroic *History of the Life of Gustavus Adolphus of Sweden*.¹⁰ While staying with his uncle John in Rowde in 1799, Benjamin Anstie wrote that he was reading Locke's *Essay concerning Human Understanding*.¹¹ Prison Governor William Brutton could reach for *The Memoirs of Sully*, Byron's *Don Juan* or *Life in London*.¹² Further down the social scale, salesman William Neate had 60 books, including poems and volumes of Voltaire's works, indicating an awareness of current political writing as well as the contemporary popularity of poetry, fostered by such publications as *The Gentleman's Magazine*.¹³ Thomas Lawrence (sen.), landlord of *The Bear*, kept a bookcase in every room for the use of his guests and personal friends. During one of his frequent visits, David Garrick presented his host with a folio copy of *The Spectator*, the ultimate manual of politeness and sensibility.¹⁴ Elizabeth Blackburn noted in her journal that cabinet maker Richard Knight's eldest son, John, had a 'good solid understanding cultivated by reading'. Women, too, possessed books, Miss Carpenter's library including works by Addison, Pope, Swift and Shakespeare.¹⁵ Theological works, bibles, almanacs and encyclopaedias featured in humbler homes and were prized legacies, but literacy was essentially associated with social and economic position and was seen as a way of being admitted to the town's genteel society. The book became an expression of status and fashion. As *The Book of Trades* commented in 1818 'It is by books that men generally become distinguished for their intelligence, probity and worth'.¹⁶

Culture and literacy could be proclaimed in subscription lists, which not only cut local publishers' risks but also boosted sales through a dazzling roll call of eminent patrons.¹⁷ Some residents, linked by professional or educational ties, subscribed to new books published in Devizes and Salisbury, ranging from topographical publications to works offering spiritual comfort and guidance (see Table 1 below). The Andrews and Dury map of Wiltshire of 1773 and Tunnichliff's *Topographical Survey* of 1791 allowed the subscriber's residence or coat of arms to appear as well as his name.¹⁸

Table 1. Devizes Subscribers to locally published books and maps

Title	Number of Subscribers
<i>A Treatise on Peace of Soul and Content of Mind</i> (1765)	4
Overton, T C, <i>Original Designs of Temples</i> (1766)	16
Taylor, A, <i>Treatise on the Ananas or Pineapple</i> (1769)	3
<i>Description of the Antiquities of Wilton House</i> (1769)	1
Cooke, W, <i>The Way to the Temple of True Honour and Fame</i> (1773)	64
Andrews and Dury, <i>Map of Wiltshire</i> (1773)	1
Tunnichliff, W, <i>A Topographical Survey of the Counties of Hants, Wilts, Dorset, Somerset, Devon and Cornwall</i> (1791)	14

Book clubs and circulating libraries were eighteenth-century phenomena. By 1810 a Book Society existed in Devizes. Each of the thirty subscribers could propose books on literary subjects not exceeding £1 15s. in price and after circulation to members in order of their admission to the Society, books could be bought for half the cost price. Periodicals taken included the *Edinburgh, Monthly, Quarterly and Annual Reviews*, *The Gentleman's Magazine* and *Rivington's Annual Register*. Thus leading townsmen could keep abreast of the latest published works and contemporary opinion.¹⁹

That there were serious book and antiquarian collectors in the town is illustrated by library sale catalogues. One of the largest sales ever staged in Devizes took place over nine days in 1818, when the collection of John Collins was auctioned. Descended from a seventeenth-century namesake mathematician, surgeon Collins was a man of wide-ranging taste, covering the arts, sciences, philosophy, history, botany, travel and the classics. His unique collection of 15,000 prints, engravings, oil paintings and miniatures included works by

Rembrandt, Michelangelo, Reynolds and Hogarth. Maps, books, coins, tortoiseshell cabinets, gold and diamond watches and Etruscan vases filled the sale rooms alongside the complete dress of a Highland chief and 'the cloak of a Chief of Owhyee'.²⁰ Devizes antiquary Dr James Davis's collection of one hundred books sold at Covent Garden in 1771 included Caxton's *Chronicle*, *A History of Fossils* and works on Druids, coins and medals.²¹ Fifteen years later, the extensive library of Peleg Morrison was sold over three days, ranging from Virgil and Chaucer to *Journals of the House of Commons* and Miller's *Garden Dictionary*. The library's composition is tabulated below:

Table 2. The composition of Peleg Morrison's library 1786

Greek, Latin, Hebrew, French	152
Divinity	192
History	74
Law	36
Novels, romances	90
Physic	19
Prose, verse	159
Total	722

Source: (W)iltshire (A)rchaeological and (N)atural (H)istory (S)ociety (L)ibrary: Sale Contents catalogue 1.1

Devizes M.P. Joshua Smith's library showed similar eclecticism. As magistrates, Church patrons and landowners, gentry would need books on law, the Church and local history, but Smith's collection embraced all aspects of the arts, with works in French, perhaps stimulated by foreign travel.

Table 3. Joshua Smith's Library 1820

Subject	Volumes
Books in French	146
Classics, Drama, English Literature, Poetry	305
Dictionaries, Grammars, Reviews, Rhetoric	63
Divinity and Ecclesiastical History	164
English History, Politics and Topography	345
Biography and Heraldry	175
History and Travel	295
Law	17
Natural History and Botany	53
Prints and Architecture	85
Total	1,648

Source: W.A.N.H.S.L., S.C. 30. 42, *A Catalogue of the Valuable and Extensive Library of Books, late the Property of Joshua Smith Esq.* (1820).

One book in Smith's library subscribed to by three Devizes residents was *A Treatise on the Ananas or Pineapple* by the gardener at New Park, Adam Taylor. This was published in Devizes by Thomas Burrough in 1769, ten years before the standard work on the subject by William Speechly, head gardener to the Duke of Portland.²² Taylor gave practical instructions on the culture of pineapples and melons and claimed to be 'the first who has brought it to an improved size and excellence without the assistance of Fire'. The gift of the exotic pineapple became a kind of status symbol. Baker George Sloper was delighted to receive one from Mrs Sutton in 1808,²³ and the fruit featured on the menu at Stephen Neate's Mayoral feast in 1816.²⁴

Baker Sloper took his horticultural involvement further, belonging to the Devizes Gardening Club established in 1754. The medium loam soil round Devizes was ideal for cultivating a wide variety of plants, and Edward Dore's map of 1759 shows extensive gardens behind Devizes houses. The town garden, an early eighteenth-century London innovation, spread to the provinces and gardening became an important leisure activity. A correspondent to *The Gentleman's Magazine* recommended gardening as a hobby to achieve health and pleasure.²⁵ Devizes bookseller Thomas Burrough could provide the latest gardening manuals such as *Everyman his own Gardener*, Miller's *Garden Dictionary* or *A Complete Body of Gardening*, printed in weekly numbers,²⁶ and doubtless could obtain Curtis's *Botanical Magazine* listing plants, trees and shrubs for different situations and the work to be done every month in the kitchen, fruit and pleasure gardens. Local naturalist John Legge of Market Lavington wrote *A Treatise on the Art of Grafting and Inoculation* (1780) and contributed natural history articles to *The Ladies' Magazine*.²⁷ In the eighteenth century many new plants were introduced from the East, such as the camellia, rhododendron, begonia, phlox and aster, and the cultivation of tulips, auriculas, carnations and pinks became an absorbing interest. Resulting perhaps from their introduction by immigrants from the Low Countries and northern France in the sixteenth and seventeenth centuries, florists' feasts had been held in towns and cities such as Bath, Gloucester, Newcastle and Norwich since the early eighteenth century. In Devizes, the Cucumber Feast at *The White Bear* and the Carnation Feast at *The Elm Tree*, with silver and monetary prizes, were highlights in the social calendar, accessible to all classes and thus providing

a bond between social ranks. Josiah Eyles Heathcote nurtured plants in a greenhouse and in melon frames,²⁸ and banker Charles Tylee used a 'garden engine', perhaps afterwards browsing in his *New Botanic Garden* with its 133 rich plates.²⁹ Brewer James Gent possessed a greenhouse with stove and pipes, filled with choice plants, and his library contained 15 volumes of Langley's *Botany* and Sowerby's *English Botany*,³⁰ of special interest to his wife, who was a botanist and geologist.

The Georgian period was a time of classification of the natural world and a great fact-finding stage in the development of biology. The growing number of natural history publications in the second half of the eighteenth century and the popularity of works such as Goldsmith's *History of the Earth and Animated Nature* (1774) and Gilbert White's *Natural History of Selborne* (1789) illustrate a widespread interest in the natural universe as a manifestation of God's goodness. This prompted an enthusiasm for collecting specimens such as fossils, shells, flowers and seeds and Southey noted the 'English passion for collecting rarities'.³¹ Furthermore, a large section of society could now afford to do this. Brewer James Gent's wife corresponded with the famous naturalist and artist, James Sowerby (1757-1822), sending him fossils 'of my own finding' from Fyfield near Marlborough and receiving nine specimens from his collection in return.³² Sowerby even named a fossil shell after her, *Helix genti*.³³ Mrs Gent also asked him to send models of 'your Crystallography'. She subscribed to the magazine *British Mineralogy*, which she obtained through the local bookseller. The correspondence of William Wroughton Salmon with Sowerby throws some light on his botanical interests. On 6 May 1800 he dispatched in a basket by one of the London coaches a vernal variety of *Colchicum autumnale* which he had not been able to identify 'in any British Flora'. Along with a friend 'who is in the habit of collecting indigenous plants', he had seen this *colchicum* in a pasture field near Devizes and asked Sowerby if he would show it to geologist Dr William Smith.³⁴ On 21 May 1810 he sent further variegated specimens of the plants, promising to forward some cockscomb oysters and fossils from the chalk pits, which Sowerby had requested.³⁵ Interest in palaeontology was perhaps stimulated by the discovery of spars and fossils during the canal excavations, while the proximity of pasture land and the chalk downlands provided a fertile field for botanical investigation and geological collection as well as for walking. Elizabeth

Blackburn, on her visit to Devizes in 1810, recorded expeditions to Roundway and Hartmoor and rambling in nursery gardens by the side of the canal, where they observed the construction of bridges and locks.³⁶ 'Airing' was considered healthy in the eighteenth century, and in Devizes the countryside was conveniently close.

During the later Georgian period, there was also widespread interest in agricultural improvement, reflected in the establishment of agricultural societies, of which there were 50 by 1800, and the proliferation of journals such as *The Farmer's Magazine* (1776) and *The Annals of Agriculture* (1784). Agriculture was a predictable interest for the propertied classes in the rich farming area around Devizes. James Sutton discussed farming matters with Henry Addington: 'I have much to say to you on the subject of farming when we meet and shall hope you will find yourself able to visit my new building and make the tour of my Fields'³⁷ Concern about the weather's effects on the harvest is apparent in their letters: 'I have, great and small, 114 mouths grazing before my window and only two acres cut for winter provender; of course our anxiety rises or is depressed by the appearance of every cloud'.³⁸ Professionals and traders, too, had close involvement with agriculture. Lawyer Wadham Locke farmed at Melksham, Orcheston and Rowde and grocer Charles Simpkins had a farm at Avebury, nine miles distant. Brewer James Gent kept stock and grew crops in Rowde, two miles away, his horses, cows and pigs doubtless being fed during the winter on waste mash from the brewery.³⁹

Local interest in agricultural improvement is illustrated by several applications for premiums made from the Devizes area to the Royal Society for the Encouragement of Arts, Manufactures and Commerce, founded in 1754. Farmer Thomas Twitney from nearby Bromham submitted a recipe for destroying turnip fly in 1759.⁴⁰ Six years later Devizes wheelwright Robert Dowse's description of his newly invented 4 h.p. plough for draining land was witnessed by twenty-two of the town's leading inhabitants, including John Anstie, the Rev. Edward Innes, Wadham Locke, William Salmon and John Tylee.⁴¹ In 1768 brewer Charles Rose applied for a premium for cultivating the greatest quantity of the English madder plant upon an acre of land, detailing the planting process and the manufacture of different qualities for which he had found a ready local sale.⁴² Ten years later clothier John Anstie presented a machine for slicing turnips

to the Royal Society on behalf of a local farmer 'a very deserving Man – I wish he may meet with encouragement'. Anstie probably echoed widespread local sentiment when he wished 'success to the laudable endeavours of your Society for the promotion of useful knowledge'.⁴³ In 1813 this zeal for improvement led to the formation in Devizes of the Wiltshire Society for the Encouragement of Agriculture, whose 50 or so members included lawyers Locke and Salmon, and brewers and bankers John and Charles Tylee. The Society awarded prizes for stock, crops and husbandry, and held ploughing matches and sheep shearings, with monetary prizes, as well as publishing essays on agricultural topics.

This institution was a local replica of the prestigious Bath and West Society founded in 1777, to which 14 of the town's élite belonged.⁴⁴ The Society's aims were 'the encouragement of industry and ingenuity. . .to excite a spirit of enquiry. . . and to bring speculation and theory to the test of accurate experiment'.⁴⁵ At monthly meetings, members could mingle with gentlemen, farmers and manufacturers from Somerset, Gloucestershire, Dorset and Bristol, proud to be associated with such famous figures as Joseph Priestley, Arthur Young, Coke of Norfolk and Thomas Davis, and at the Annual General Meeting could indulge in 'much interesting debate'.⁴⁶ They could also correspond with members in Russia and America, broadening their commercial and agricultural horizons, making useful contacts and learning of new techniques and inventions. One AGM was graced by the presence of a Mohawk Indian chief, visiting this country to learn about agriculture.⁴⁷ The Society made its existence visible in Devizes by carrying out drilling experiments on Charles Fitchew's farm at Roundway,⁴⁸ while John Gale of Stert near Devizes conducted trials for them in fattening oxen on potatoes dressed with steam.⁴⁹ Clothier John Anstie, a member of the Society's Committee of Manufactures and Commerce and also a Vice-President, was much involved in the movement to improve British wool, regularly evaluating different breeds of sheep and testing new inventions for the Society, such as a machine for drying cloth.

In an age of growing intellectual curiosity, science, too, had its followers in the town, particularly among nonconformists. In 1770 Joseph Priestley (1733-1804), who had conducted his experiments at Bowood six miles away, published his work on electricity. Jan Ingen Housz (1730-

1799) also developed some of his scientific ideas at Lord Shelburne's house.⁵⁰ Newspapers, encyclopaedias, *The London Magazine*, *The Annual Register* and *The Gentleman's Magazine* were full of scientific information and enquiry.⁵¹ As John Locke had said 'a gentleman must look into (natural philosophy) to fit himself for conversation'.⁵² Interest in the subject, the collection of scientific and natural history books, instruments and specimens became part of a late-eighteenth century gentleman's culture, separating 'the middling sort' from the lower orders. Thomas Gisborne recommended scientific experiments and botanical enquiries as suitable pursuits for an apothecary's spare time.⁵³ Prison Governor William Brutton had a day and night telescope, while John Anstie possessed a patent copying machine a 'neat electrifying machine with apparatus, a reflecting telescope brass mounted and two 12-inch globes'.⁵⁴

In 1811, William Salmon ordered chemical apparatus from the catalogues of German-born scientist Friedrich Accum and Alexander Garden, experimental chemists in Soho.⁵⁵ Salmon's interest had perhaps been stimulated by visiting scientific lecturers. Public lectures, made possible by improved transport, were the current craze in England among the fashionable bourgeoisie, who aspired to partake of upper class culture. Speakers concentrated on the gentry centres in southern England, their high charges – 2s. 6d. – being directed at the upper end of the market. Some members of the Anstie family attended lectures in Devizes on The Transparent Orrery, displaying the universe with its stars and planets.⁵⁶ In 1784 Mr Waltire visited Devizes to give:

His Courses of Natural Philosophy and Chemistry. . . including Astronomy, Mechanics, Optics, Pneumatics, Hydrostatics, and Electricity. . .The courses of Chemistry are applied to explain the principles of Mineralogy, Agriculture, the Various Arts, natural appearances, and particularly to impress such Manufactories as depend upon it. Both courses are very full of observations and Experiments and due care is taken to join the pleasing and the important.⁵⁷

It seems likely that Anstie and Salmon attended these lectures, along with other burgesses with enquiring minds.

Some houses contained musical as well as scientific instruments and both sexes delighted in music, despite *The Ladies' Library* advising caution in approaching music, which 'enervates the soul

and exposes it to be conquer'd by the first Temptation which invades it'.⁵⁸ Musical instruments were mentioned in seventeenth-century inventories, Devizes surgeon Edward Anne leaving 'three pairs of organs, two virginals and one chest of violls', valued at £100 in 1687.⁵⁹ Eighteenth-century family group paintings often depict musical settings, with singers, harpsichord and instrumentalists. Although in the production of new music eighteenth-century Britain lagged behind Germany, Italy and France, the country was receptive to foreign influences. Many Continental craftsmen, fleeing from the Seven Years' War, had begun producing reasonably priced musical instruments in England.⁶⁰ Favourite instruments in Devizes were the fiddle, the piano and the flute. Newspapers advertised instruction books, such as *The Complete Tutor to the Violin* and the common flute was easy to learn. Benjamin Anstie wrote from Rowde in 1799: 'There are four in the family who can play on the flute and one on the piano'.⁶¹ Amelia Anstie thanked her brother Samuel in London for procuring a piano for her: 'It arrived last Saturday and it is indeed a very nice one. I like the tone and it is really *very* cheap at eighteen guineas'.⁶² Dr William Barwis possessed a harpsichord by Keene⁶³ and builder's wife Mrs Whichcord owned a violin and a piano.⁶⁴ The prison governor played a flute⁶⁵, and Josiah Eyles Heathcote operated a barrel organ.⁶⁶ Such activities were perhaps stimulated by musical meetings held in the town once a fortnight. These were long established, magistrate William Hunt attending Devizes concerts regularly in the mid-eighteenth century, and paying his 1 guinea subscription to William Salmon in April 1741.⁶⁷

Singing was widely practised among all classes. The resurgence of music in England with the visits of Handel, Haydn and Mozart and the composition of ballads and operas by native and foreign musicians provided a repertory of old and new music. Provincial booksellers purveyed sheet music and collections of ballads, anthems, country airs, catches, glees and opera songs. Elizabeth Blackburn noted that Richard Knight's son, John, 'like all the family had a fine voice and a taste for music'⁶⁸ and George Sloper remarked that cooper Thomas Wheeler 'was a very good and fine singer'.⁶⁹ At the celebrations on Roundway Hill for the birth of James Sutton's heir in 1783, booths were erected for glee singers⁷⁰ and songs and glees were sung after the Bear Club annual dinner.⁷¹ Salisbury at this time enjoyed a reputation as a centre of musical excellence, with a music festival dating back to the

seventeenth century and stimulated by the presence of Handel's friend James Harris and of the composer John Marsh between 1776 and 1783. One of the most celebrated instrument makers in England, Benjamin Banks (1727-1795) made copies of Amati's violins and Stradivari cellos.⁷² Concerts were held in the city once a fortnight in winter and once a month in summer, sometimes with foreign soloists. Lawyer William Wroughton Salmon and his wife attended the Music Festival there in August 1818⁷² and a Mrs Salmon, perhaps a relative, performed regularly at concerts. Musical accomplishments were becoming popular for girls. An eighteenth-century writer claimed that music had 'the power of filling up agreeably those intervals of time which too often hang heavily on the hands of women'.⁷³ James Sutton employed a music teacher for his daughters,⁷⁴ and a music master, Nathaniel Phillips, was a member of the Devizes Mercers Company in 1760.⁷⁵ In local schools music was part of the curriculum, so music making was becoming a part of bourgeois domestic life.

Music provided the background for the elaborate 'Pantheon' or Temple of Arts staged in Devizes by printer and stationer William Harrison in 1821 after many years' preparation, which was later taken to Bath, Bristol and London. Displayed in an 'elegant and commodious portable building' the exhibition featured sculptures, paintings, lustres and 'Mechanics', with works by English, Dutch and German artists, illuminated with wax lights in chandeliers suspended from eagles. The background music, specially selected from 'British and Foreign Masters', including a 'self-acting' organ and a Musical Clock, was intended to 'raise the mind. . . upon the soaring wings of ecstasy'. Claiming that there was nothing more interesting than the study of the several arts and sciences, which 'promotes those alliances and connexions which exist among men of science and learning', Harrison appealed for the patronage of 'a liberal and enlightened public', who doubtless flocked to such a dazzling collection of the arts under one roof, 'a work differing in every respect from any which has ever been offered to the world'.⁷⁶ Extravagant as his claims were, Harrison must have counted on middle class support for a venture which cost him over £2,000 and gambled on the growing bourgeois love of spectacle and appetite for the arts.

This general upsurge of interest in the arts was reflected in the establishment of theatres. Aping the London theatres, playhouses began to appear from



Fig. 1 The Town Hall, Devizes, built between 1806 and 1808, was designed by Thomas Baldwin of Bath. Its Assembly Room in the Adam style provided an elegant venue for social events.

c. 1730 in Plymouth, Portsmouth, Reading, and Salisbury, with dramatic companies making a regular circuit of towns. Between 1760 and 1820 at least 100 provincial theatres were erected and every town of any pretence had one. In 1788 Mr Baker, 'master of a company of comedians from Devizes', applied for a licence to perform in Salisbury,⁷⁸ while from that city came Shatford and Lee's touring company, playing a Spring season in a small theatre in Monday Market Street, Devizes in 1790. Performance of *The Rivals* by Sheridan three times weekly 'procured the patronage and respect of many of the first families in the town and neighbourhood'.⁷⁹ Attendance was so encouraging that a new theatre, costing £300⁸⁰ and 'on a scale equal to any County Theatre in the kingdom',⁸¹ was built in record time in 1792 by local builders, Whichcord and Gamble, a circumstance 'doubtless very pleasing to the numerous genteel residents in that polite town and neighbourhood'.⁸² The first performance in May included *Don Juan*, *The Road to Ruin*, and various short farces. Subscriptions of

10 guineas entitled fifteen persons to free admission every night 'to a place of liberal and rational amusement' during the season for twelve years;⁸³ no doubt there was some competition to acquire such distinction or to sponsor a performance. Attending the theatre provided an arena for social life and the diffusion of fashionable attitudes, as well as an opportunity for personal display, particularly for women. In a note to Mrs Stephen Hillman, Mrs Spalding esteemed it a pleasure 'to join Mrs Hillman's party if she intends going to the Play tonight . . . Dr and Mrs Spalding mean to shew themselves at the Theatre, if only for an hour'.⁸⁴

Perhaps the same desire to be part of the *haut monde* influenced guests at a glittering entertainment on 2 August 1819 when William Salmon staged an elegant *fête champêtre* at Drew's Pond near Devizes. One of the guests, Irish poet Tom Moore of Bromham, described the evening: 'a beautiful place, and everything gay and *riant*. . . a boat on the little lake, musicians playing on the island in the middle of it, tents pitched'.⁸⁵ Such

extravagant diversions were exceptional, but all year round there were opportunities for fashionable entertainment and civic conviviality. When advocating the siting of the County Court in the town in 1660, Wiltshire J.P.s had described Devizes as 'a town fitted for entertainment'.⁸⁶ Elections, the Assizes or the two-month militia training periods attracted gentry to the town, and became occasions for social events, where town and country élite could mingle. Perhaps influenced by the Bath social scene, seasonal evening subscription assemblies for cards, dancing and conversation provided an opportunity for display and a respectable outlet for women where the sexes could associate. In the Assembly Room of the newly-completed Town Hall, illuminated by 'two magnificently beautiful Grecian cut-glass chandeliers' presented by Mrs Sutton in 1808, a gathering of 315, including 'fashionable society from Bath and Clifton', danced from 10 p.m. until 6 a.m. with 'a grand supper provided by a person of Bath'.⁸⁷ The following year, 'a very grand Ball and supper' were held – 'where all the beauty and fashion of the town and neighbourhood met together – many ladies dressed with diamonds and every other brilliant

ornament'.⁸⁸ In 1820, the Brabants, Hugheses, Lockes and Tylees whiled the night hours away with country dances until 1 a.m. and quadrilles until three.⁸⁹ Less frenetic were William Halcomb's card assemblies at *The Bear* in his own Assembly Rooms;⁹⁰ Thomas Gisborne noted the popularity of evening card-playing in provincial towns.⁹¹ The Venison Feast given by the County M.P.s in August was another highlight of the social calendar. In 1790 M.P.s Henry Addington and Joshua Smith gave a grand entertainment to the principal inhabitants:

to which the neighbouring gentlemen were also invited . . . Amongst other elegancies there were three turtles and 4 fat bucks. . . and the day was spent in the utmost harmony. Many loyal and constitutional toasts were given with repeated huzzas, amongst which 'An Honourable accommodation or a glorious war' were not forgotten. The Wiltshire band (one of the finest in England) played martial music during the greatest part of the day, and in the evening several hogsheads of strong beer were given to the populace.⁹²

Despite Edward Gibbon's claim that 'the little civility of the neighbouring gentry' gave him little opportunity of dining,⁹³ a great deal of entertaining



Fig. 2 New Park was designed by James Wyatt for Devizes clothier and M. P. James Sutton. The only part now remaining is the coach wing of Roundway House as the building is now called.

went on among the higher ranks of town society. The Corporation were regularly entertained to dinner by the town's two M.Ps at their country houses and dining with friends seems to have been a frequent occurrence. On 10 April 1819, Tom Moore 'dined at Salmon's in the company of the Phippses, Mr Pearce, Wyatt, Tylee etc. . . talked among other things of the Bank question and the Poor Laws'.⁹⁴ No doubt lawyer Wadham Locke served for his guests the fish and oysters supplied to him by John Mills of Cripplegate, London.⁹⁵ Wiltshire M.Ps Charles Garth, Ambrose Goddard and Charles Penruddocke were frequent guests of their sons' godfather James Sutton. In a letter of 1800 to Mrs Sutton, Jane Estcourt referred to 'your charming circle at New Park'⁹⁶ and the following autumn Eleanor Sutton wrote to her daughter that she and her husband were 'both impatient to begin the New Park Nights Entertainment'.⁹⁷ At a dinner party in 1773 guests, including the Gents, Gibbes and Tylees, were served with carp, venison, veal, partridge, crayfish and roast tongue.⁹⁸ Eleanor Sutton's recipe book included directions for dressing fresh truffles, preserving pineapples and asparagus, making lobster soup and presenting a stag's head.⁹⁹ The household accounts listed lavish expenditure on claret, brandy, mussels, oysters, hock and champagne.¹⁰⁰ At one intoxicating dinner 'Brother Gibbes' was 'bereft of Speech' and had to be taken away at about 10 p.m., though Sutton wrote- 'I have not a symptom to tell me I had too much'.¹⁰¹

Feasting was a frequent occurrence for the élite. Guests at the inauguration of Mayor William Waylen in 1774 consumed considerable amounts of food, as Table 4 indicates. The fare, supplied largely by local butchers, bakers and grocers, cost £60 16s. 11 ½d.¹⁰²

Table 4. Fare at the Inaugural Mayoral Feast 1774

77 lbs of beef	2 venison pasties
2 quarters of lamb	7 pigeon pies
1 sturgeon	6 hams
5 turbots	4 geese
4 cods	36 fowls
4 sucking pigs	12 ducks
4 turkeys	20 tongues
truffles	anchovies
tarts	peaches, nectarines
cheesecakes	rich cake
mince pies	grapes, walnuts
orange puddings	lemon puddings
almond puddings	cider, madeira and wines

Source: W.A.N.H.S.L., W.C., Vol.2, p.172.

On 18 August 1784 baker George Sloper attended James Sutton's Mayoral Feast and the Bear Club Feast two days later.¹⁰³ Port, sherry, brandy, rum, beer and porter flowed freely at Bear Club dinners, and some glasses had to be replaced in 1813.¹⁰⁴ The anniversary of the Glorious Revolution was 'kept as a great festival', celebrated by a dinner presided over by Henry Addington, and processions, bonfires and fireworks, and later 'a ball for the ladies'.¹⁰⁵

Such a day of general festivity was never remembered in this town . . . although all ranks of people were most heartily united in celebrating this glorious event . . . yet the utmost regularity and decorum prevailed throughout the whole course of the day.¹⁰⁶

In 1789, George III's recovery from illness was celebrated with a procession led by a band, dinner at *The Bear*, with loyal and constitutional toasts and fireworks with 'several elegant transparencies emblematical of our beloved Sovereign', followed by supper and the obligatory hogsheads to the populace,¹⁰⁷ for whom such festivities offered light relief from the drudgery of everyday life. Throughout the war, victories such as the Battle of the Nile were marked by feasting, gun volleys, ox-roasting and fireworks. New Park and Southbroom House were illuminated for Duncan's victory at Camperdown in October 1797, which occasioned great rejoicing:

The Bells have scarce ceased ringing since Saturday morning. The flags continue to be displayed and everyone seems to be zealous in demonstration of joy. The principal part of the Town is to be illuminated this Evening and we are to meet at the Hall to drink the health of the brave Tars who have so eminently distinguished themselves.¹⁰⁸

The Peace of Amiens was celebrated with fireworks 'by a person from London'¹⁰⁹ and in 1814, an effigy of Napoleon, after being paraded through the streets, was ceremonially hanged in the Market Place, followed by the roasting of an ox and five fat bucks, with 'not a single instance of intemperance or disorder'.¹¹⁰ As well as providing occasions for diversion, the practice of recording major events by public ceremony stressed their significance in the public mind and enhanced feelings of unity and patriotism.

Convivial entertainment for some of the élite was provided by Lodge 341 of the Freemasons, inaugurated in 1788 and patronised by royalty. Four meetings a month were held at *The Crown*, *The*

Elm Tree, The White Hart or *The Black Swan*, where mason and innkeeper Walter Flay depicted masonic emblems on his inn sign. Toasts, songs, glees and duets enlivened the evenings. The Rector, the Rev. Lediard, banker Charles Tylee and grocers John and Stephen Neate were among the twenty-four members in 1815. It seems likely that the Salmons were also members, since their office clerk was Secretary of the organisation.¹¹¹ The membership of army officers stationed in the area had increased the numbers by the following year¹¹² and in 1819 the Lodge was visited by masons from Frome and the East Indies.¹¹³ Freemasonry symbolised the divergence of élite and popular culture in the eighteenth century. Socially exclusive, it offered a form of religious association and ceremony without the dangers of religious enthusiasm or piety, and was one of many associations linking the upper class and 'the middling sort'.

In sport, another élite activity was shooting, reflecting the late-eighteenth century revival of interest in countryside pursuits, while seventeenth-century wills had often referred to 'my birding piece'. A dozen of the leading inhabitants owning land of over £100 a year held game certificates, including banker Charles Tylee, whose drawing room was adorned by two stuffed ducks in a case.¹¹⁴ The increasing popularity of shooting, protected by 33 new Game Laws between 1760 and 1816, led to the establishment of gunsmiths in Devizes. James Sutton rode to hounds, in 1790 writing to his brother-in-law 'I was in full cry on Janice',¹¹⁵ Henry Addington spent part of the sporting season at New Park and both Sutton and Salmon employed gamekeepers on their estates.¹¹⁶ Hunting and shooting, associated with the upper ranks of society, became the target of middle class emulation and this trend was gently ridiculed in 1786 in a letter, purporting to come from a grocer:

Hearing that every person that took out a licence to shoot was to be a gentleman, I ventured to attempt that character for one year, at a cost of £87 19s. 6d.¹¹⁷

The élite, however, pursued a wide range of sports. Dr Robert Clare was described by Henry Hunt as 'a sporting man'¹¹⁸ and New Park had a bowling green.¹¹⁹ Cricket matches were played by a tradesman's eleven against the neighbouring towns of Calne, Marlborough and Westbury, the first recorded match on Wiltshire soil taking place in 1774, though in 1783 the Westbury team was censured for 'conduct unworthy of true players'.¹²⁰ Cricket, which had begun as a plebeian sport, was

taken up by the gentry after 1660, providing a convenient opportunity for gambling. Although sport was as yet largely local and devoid of institutional structure, it was becoming spectator-orientated and both publicans and gentry gave their patronage to attract custom or to ensure social harmony. Social distinctions were preserved, yet at the same time a sport such as cricket was a means of breaking down class barriers. Speaking of cricket, a foreign visitor commented: 'everyone plays it. . . the common people and also men of rank'.¹²¹ The Rev. John Skinner, too, noted servants playing alongside clergy and gentry.¹²² Sport also enabled skilled workers and artisans to acquire respectability and distance themselves from the cruel and violent amusements of the rabble.

Richard Warner spoke of 'balls, plays and cards usurping the place of . . . rude athletical sports or gross sensual amusements' in Bath,¹²³ but in the Devizes area 'the populace' continued to enjoy their traditional pastimes. Wrestling bouts, so popular in the West Country, took place at Tan Hill fair, and backsword contests, fought with heavy sticks, including a match between Wiltshire and All England in 1780, were staged on a dais opposite *The Bear* for a purse of 5 guineas, 'the blood to run an inch to entitle a man to a head, and the man that breaks 2 heads to be allowed a tyer'¹²⁴ Pugilism and the cruder animal 'sports' were perhaps safety valves for the aggressive and bloodthirsty instincts of the masses. Bull baiting, legal until 1833, was still being performed at Furzehill on the town's outskirts, where in April 1774 a fourteen-year old boy killed himself drinking rum.¹²⁵ Increasingly after 1750, popular recreation for the masses became divorced from church festivals and clerical patronage; the commercial exploitation of leisure penetrated the lower class market, with entrepreneurs seeking profit from popular spectacles. Fairs on the Green provided lively entertainment, with rope dancers, conjurers, nine pins, wild animals, raffles and wheels of fortune.¹²⁶ Robert Southey asserted that 'nothing is too absurd to be believed by the people in this country – anything in England will do for a show'.¹²⁷ In 1790, the credulous could see 'The Amazing Pig of Knowledge' which could tell the day of the month and the month of the year, guess which cards were drawn and recognise the value of money.¹²⁸ From the 1760s, travelling circuses were all the rage. Lions, tigers and a 9-foot tall elephant were the attractions at Alkins' Royal Menagerie which visited the town in 1820.¹²⁹ All these events

enlivened the monotony and strain of working class lives, as well as providing occasions for courtship, a loosening of social restraints and opportunities for crime.

Reflecting the social mix and unequal income distribution of the community, earthy sports and boisterous pastimes flourished alongside the civic rituals and more sophisticated tastes of wealthy traders and professionals, accentuating the polarisation between cosmopolitan and popular culture. Public lighting aided socialising and towns became 'social amphitheatres for the rural and urban élite'.¹³⁰ Withdrawing from participation in traditional culture, they turned to the expanding world of fashionable leisure and polite culture. Increasing literacy and access to printed books were widening men's intellectual experience and fostering the cult of travel, fashion and popular science. The élite were redefining themselves in cultural terms, conforming to a new set of values—sociability, toleration and gentility—in contrast to the rustic and sensual interests of the lower orders. As John Trusler remarked in 1766 'Scarce a town of any magnitude but has its Theatre Royal, its concerts, its balls, its card parties'.¹³¹ It might be thought that only cathedral cities and large towns had a way of life comparable to the urban experience, but the lifestyle of the bourgeoisie shows that Devizes, with a population of 4,747 in 1801, was by no means philistine or torpid in the late eighteenth century. Although no Literary and Scientific Institute was founded until 1833, interest in these subjects was already widespread. Merchants and shopkeepers, doctors, lawyers and clergy were buying books, collecting prints, attending plays and concerts. Dr Brabant was a friend of poets Tom Moore and Samuel Taylor Coleridge,¹³² and goldsmith Bennet Swayne was the first husband of the mother of Poet Laureate Thomas Campbell. The range of book-buying, musical activity and membership of philanthropic and social clubs in Devizes indicate a receptiveness to the new Enlightenment and the cultural hegemony of the professional and élite classes. As Byng wrote, 'the turnpike roads of the kingdom. . . have imported London manners'.¹³³

Undoubtedly influenced by visits to London and Bath, and by newspaper descriptions of fashions and activities in those cities, the Devizes élite were involved in a range of active social and cultural pursuits, from science to gardening, from dancing to book-collecting and the expansion of wealth led to a greater demand for organised leisure

activities. Nicolai Karamzin claimed that 'newspapers and magazines were in everyone's hands in England'¹³⁴ and this greatly assisted the dissemination of cultural ideas and the advertising of social events such as assemblies and balls, lectures and sporting contests. Georgian social and public life now revolved round the town, rather than the church. As a result of growing affluence, the late eighteenth century saw the rise of a leisure industry, organised on a commercial basis, catering for the wealthy bourgeoisie; culture and sport ceased to be the aristocracy's preserve and became middle class in character, bridging the divide between aristocratic culture and bucolic peasant pursuits. The wide availability of printed matter, including woodcuts, engravings and music scores, brought the arts within the range of people for whom art and music had been unobtainable in the seventeenth century. Culture became a commodity to be bought and sold, and within the purchasing power of 'the middling sort', who wished to emulate the good taste and refinement of their social superiors. Bourgeois horizons were widening and a fashionable culture was developing, making Devizes a social focus in its regional hinterland and emphasising the difference between urban and rural society.

J.J.Looney has claimed that gentry centres experienced the commercialisation of leisure before the industrial towns. Citing the examples of York and Leeds, he has shown how the large number of 'clubbable' men, such as attorneys and doctors, influenced the development of provincial culture.¹³⁵ Until the 1820s, when improved transport made London, spas and seaside resorts more viable and attractive social venues, the town was the centre of leisure life for the rural and urban gentry. In the acquisition of taste, there was a large element of social emulation, a desire to join the cultured set. *The British Magazine* remarked in 1763 that:

the present rage of imitating the manners of high life hath spread itself so far among the gentlefolks of lower life that in a few years we shall probably have no common folk at all!¹³⁶

Local antiquary Dr Davis satirised this social pretentiousness and the quest for fashionable elegance:

You have turn'd the grating of your woolcombs into the scraping of Fiddles; the screeking loom into the tinkling Harpsichord; and the Thumping Fulling mills into the glittering and contentious Organ.

Scents of perfumes are in your churches and the odours of train oil and fermenting Urine are no more smelt amongst you. Your houses are ornamented with Bath stone wrought into Pediments, entablatures and Pillastrades; your market house(a stranger to woolpacks,) is metamorphiz'd into a theatre for Balls, and Concertos and Oratorio's (sic).¹³⁷

Although Hannah More attributed the contagion of dissipated manners to 'a growing, regular, systematic series of amusements',¹³⁸ the permeation of society by polite manners and wider cultural interests acted as a civilising and integrating force, enhancing the urban image. There was, too, an element of moral earnestness, a belief that taste for the arts led to improvement and refinement. The provincials were anxious to absorb metropolitan culture and values and to 'bring Enlightenment to their own doorsteps'.¹³⁹ In a fluid society, manners and social habits mattered. Devizes provided an elegant display environment for the parading of wealth and refinement by social and cultural activities, and, like other provincial towns, became what one journal called 'the little London' of the part of the kingdom in which it was situated.¹⁴⁰

Notes

- ¹ 'On the Utility, Choice and Use of Pleasures': *Oliver Goldsmith and the Moonrakers* (ed.) G. Winchcombe (1972), letter LXXXVIII, appendix, p. 85
- ² M. Little, 'Samuel Fancourt 1678-1768; Dissenting minister and pioneer librarian', *The Hatcher Review*, Vol. 2, no. 14 (Salisbury 1982), pp. 162-170
- ³ *Memoirs of the first Forty Five Years of the Life of James Lackington* (1791), p. 387
- ⁴ T. Gisborne, *An Inquiry into the Duties of Men in the Higher Ranks and Middle Classes*, (1794), pp. 6-7
- ⁵ *S(alisbury) J(ournal)*, 3871, 22 April 1811
- ⁶ T. Gisborne, *op. cit.*, p. 471
- ⁷ *D(evizes) G(azette)*, 390, 7 Aug. 1823
- ⁸ W(iltsire) A(rchaeological) and N(atural) H(istory) S(ociety) L(ibrary), Box 327, MS. 2602
- ⁹ *Sf.*, 5100 (sic), 3 Aug. 1801
- ¹⁰ *Sf.*, 3593, 22 April 1805; the work was written by a Marlborough author in 1767
- ¹¹ Letter of 6 May 1799: Elizabeth Cunnington, 'The Cunnington Family History' (typescript study 1978), p. 114
- ¹² *DG.* 321, 28 Feb. 1822
- ¹³ *DG.* 389, 31 July 1823
- ¹⁴ T. B. Smith, 'The Early Life of Thomas Lawrence', *WANHM*, Vol. 9, (1865), p. 195
- ¹⁵ *Sf.*, 3893, 23 Sept. 1811

- ¹⁶ *The Book of Trades* (3 vols. 1818; 1994 reprint, Devizes), Vol. III, p. 12
- ¹⁷ The earliest English subscription list dates from 1617; by the eighteenth century there were over 2,000
- ¹⁸ Four Devizes seats were marked on the Andrews and Dury *Map of Wiltshire 1773*, those of Edward Eyles, Charles Garth, William Salmon and Willy Sutton
- ¹⁹ W(iltsire) and S(windon) R(ecord) O(ffice), 873/52, Rules of the Devizes Book Society 1810. By 1821 there were c. 900 Book Clubs in England: P. Clark and R. A. Houston, *Cambridge Urban History* (2000), Vol. II, p. 597
- ²⁰ WANHSL, S. C. 28, 113
- ²¹ WAHSL, W. T. 206, *A Catalogue of the curious collection of books chiefly relating to medals and antiquities of Dr. James Davis 1771*
- ²² This is the first known Devizes book publication
- ²³ WANHSL, Box 328, MS. 2605, George Sloper's diary
- ²⁴ *S(impsons) S(alisbury) G(azette)*, 40, 3 Oct. 1816
- ²⁵ *G(entleman's. M(agazine))*, Vol. LXXVII, (1807), part. 2, p. 811
- ²⁶ Miller was Head Gardener of the Chelsea Physic Garden
- ²⁷ Rev. A. C. Smith, 'Memoir of Mr John Legge of Market Lavington, Wilts', *WANHM*, Vol. XXVIII (1895), pp. 5-13
- ²⁸ *Sf.*, 3893, 23 Sept. 1811
- ²⁹ *DG.*, 390, 7 Aug. 1823
- ³⁰ *DG.*, 731, 14 Jan. 1830
- ³¹ R. Southey, *Letters from England* (1807), p. 115
- ³² Mrs Gent to James Sowerby, 17 Sept. 1810: WANHSL, Box 63A, MS. 736
- ³³ J. Sowerby, *The Mineral Conchology of Great Britain* (7 vols. 1812), Vol. 2, p. 101
- ³⁴ A member of the Bath and West Society who lived near Bath; later to be known as 'The Father of English Geology'
- ³⁵ William Wroughton Salmon to James Sowerby, 21 May 1810: WANHSL Box 63A, MS. 736
- ³⁶ Elizabeth Blackburn's Journal, 1810, in private possession, Southampton
- ³⁷ James Sutton to Henry Addington, 11 March 1788: D(evon) R(ecord) O(ffice), Sidmouth Papers, 152M/1788/F12. Sutton's brother-in-law, Henry Addington, M. P. for Devizes, was Speaker of the House of Commons, and later Home Secretary and Prime Minister. He was a frequent visitor to New Park
- ³⁸ Sutton to Addington, 17 June 1791: DRO, Sidmouth Papers 152M/1791/F3
- ³⁹ *DG.* 740, 18 March 1830
- ⁴⁰ R(oyal) S(ociety) of A(rts) Guard Book, Vol. 4, no. 66
- ⁴¹ RSA Guard Book, Vol. 11, no. 21
- ⁴² RSA Guard Book, Vol. B, no. 37
- ⁴³ RSA MS. Transactions 1779-1780, item 20
- ⁴⁴ Bath City Record Office, Bath and West Archives I, IX, Secretary's accounts 1796-1811. This was the first agricultural society outside London, with more than 500 members in 1805

- ⁴⁵ Bath City Record Office, Bath and West Archives, Rules 1777, p. v
- ⁴⁶ *SJ*, 2793, 19 Dec. 1791
- ⁴⁷ *SJ*, 3582, 17 Dec. 1804
- ⁴⁸ *SJ*, 2742, 27 Dec. 1790
- ⁴⁹ T. Davis, *General View of the Agriculture of Wiltshire* (1794), p. 53
- ⁵⁰ For Ingen Hausz, see N. and E. Beale, 'Looking for Dr. Ingen Hausz', *WANHM*, Vol. 93 (2000), pp. 120-130
- ⁵¹ *The Encyclopaedia Britannica* was published in 1771
- ⁵² Quoted in M. L. Espinasse, 'The Decline and Fall of Restoration Science', *Past and Present*, no. XIV, (1958), p. 76
- ⁵³ T. Gisborne, *An Enquiry into the Duties of Men*, (1794), p. 416
- ⁵⁴ *DG.*, 321, 28 Feb. 1822; *B(ath) H(erald)*, 150, 10 Jan. 1795; *SJ.*, 2933, 25 Aug. 1794
- ⁵⁵ WANHSL, Box 223, MS. 2497
- ⁵⁶ Amelia Anstie to Samuel Anstie, 28 Jan. 1799: Elizabeth Cunnington, 'The Cunnington Family History' (typescript study 1978), p. 117. The orrery or microcosm was a clockwork-driven model planetarium devised by George Graham FRS (1673-1751) and named in honour of Charles Boyle, 4th Earl of Orrery (1676-1731)
- ⁵⁷ *SJ*. 2400, 7 June 1784
- ⁵⁸ *The Ladies' Library*, (5th edn. 1739), Vol. 1, p. 17
- ⁵⁹ WSRO, Cons. S. will 1687
- ⁶⁰ For more information on late eighteenth century music in southern England, see J. S. Bromley, 'Britain in Europe in the Eighteenth Century', *History*, Vol. LXVI (1981), pp. 394-412; R. Dunhill, 'Handel and the Harris Circle', *Hampshire Papers*, no. 8 (1985); B. Robins, 'Eighteenth Century Catch Clubs in Salisbury and Southern England', *Hatcher Review*, Vol. V, no. 49, pp. 34-46
- ⁶¹ Benjamin Anstie to Samuel Anstie, 6 May 1799: Elizabeth Cunnington, 'The Cunnington Family History', p. 114
- ⁶² Amelia Anstie to Samuel Anstie, 29 Feb. 1804: *ibid*, p. 115
- ⁶³ *SJ.*, 2793, 19 Dec. 1791
- ⁶⁴ *DG.*, 278, 26 April 1821
- ⁶⁵ *DG.*, 321, 28 Feb. 1822
- ⁶⁶ *SJ.*, 3893, 23 Sept. 1811
- ⁶⁷ WSRO, 1553/68, William Hunt's notebook 1726-1742
- ⁶⁸ Elizabeth Blackburn's journal
- ⁶⁹ WANHSL, Box 328, MS. 2605, George Sloper's diary
- ⁷⁰ J. Waylen, *Chronicles of the Devizes* (1839), p. 272
- ⁷¹ The singing of catches and glees was given impetus in the eighteenth century by the establishment in London of the Nobleman and Gentleman's Catch Club in 1761, inspired by the revival of interest in Elizabethan and Jacobean madrigals
- ⁷² A. Cooper, 'Benjamin Banks, the Salisbury Violin Maker', *The Hatcher Review*, Vol. 3, no. 29, (1990), pp. 449-458
- ⁷³ *SJ.*, 4252, 24 Aug. 1818
- ⁷⁴ H. Chapone, *Letters on Improvement of the Mind, Addressed to a Young Lady* (1773; 1818 edn.), p. 193
- ⁷⁵ G(loucestershire) R(ecord) O(ffice), D1571, F641, James Sutton's household accounts 1765-1791
- ⁷⁶ WSRO, G20/6/1, Devizes Mercers Company records
- ⁷⁷ WANHSL, c/4/7-8
- ⁷⁸ *SJ.* 2589, 21 Jan. 1788
- ⁷⁹ *SJ.*, 2703, 29 March 1790
- ⁸⁰ C. B. Hogan, 'The ms. of Winston's Theatric Tourist', *Theatre Notebook*, Vol. 1, (1947), p. 89
- ⁸¹ *SJ.*, 2798, 23 Jan. 1792
- ⁸² *SJ.*, 2797, 16 Jan. 1792
- ⁸³ *SJ.*, 2814, 14 May 1792
- ⁸⁴ WSRO, 1090/52/1-2, Stephen Hillman's ledgers, Vol. 2, insert note
- ⁸⁵ WANHSL, W. C. Vol. 6, p. 29
- ⁸⁶ J. Waylen, 'The Wilts County Court', *WANHM*, Vol. XXVII (1893), p. 116
- ⁸⁷ WANHSL, Box 328, MS. 2605, George Sloper's diary
- ⁸⁸ Anon, *A Genealogical Account of the Mayo and Elton families of Wilts and Herefordshire* (2nd edn. 1907), p. 164
- ⁸⁹ *DG.* 223, 6 April 1820
- ⁹⁰ WANHSL, W. C., Vol. 13, p. 258
- ⁹¹ T. Gisborne, *An Enquiry into the Duties of the Female Sex* (1797), p. 196
- ⁹² WANHSL, c/3/100
- ⁹³ E. Gibbon, *Autobiography and Correspondence*, ed. A Murray (1865), p. 62
- ⁹⁴ J. Russell (ed.), *Thomas Moore, Memoirs, Journal and Correspondence* (1860), p. 197
- ⁹⁵ Billhead in Goddard scrapbook, Salisbury Museum
- ⁹⁶ Jane Estcourt to Eleanor Sutton, May 1800 : GRO, D1571, F207
- ⁹⁷ Eleanor Sutton to daughter Eleanor, 17 Aug. 1800: GRO, D1571, F349
- ⁹⁸ GRO, D1571, F655, entertainment book 1773-1811
- ⁹⁹ GRO, D1571, F652, Eleanor Sutton's recipe book
- ¹⁰⁰ GRO, D1571, F641, Sutton's household accounts 1765-1791
- ¹⁰¹ James Sutton to Henry Addington, n. d. : DRO, 152M/1792/F12
- ¹⁰² WANHSL, W. C. Vol 2, p. 172
- ¹⁰³ WANHSL, Box 328, MS. 2605, George Sloper's diary
- ¹⁰⁴ WSRO, 1090/22, Bear Club dinner accounts 1809-1817
- ¹⁰⁵ WAS, Box 328, MS. 2605, George Sloper's diary
- ¹⁰⁶ *SJ.* 2631, 10 Nov. 1788
- ¹⁰⁷ *SJ.*, 2649, 16 March 1789
- ¹⁰⁸ William Salmon to Henry Addington, 17 Oct. 1797: DRO, Sidmouth Papers 152M/1797/OZ29
- ¹⁰⁹ WANHSL, Box 328, MS. 2605, George Sloper's diary
- ¹¹⁰ *North Wilts Herald*, 3981, 15 Oct. 1937
- ¹¹¹ *SSG*, 72, 15 May 1817
- ¹¹² *SSG*, 1, 4 Jan. 1816
- ¹¹³ F. H. Goldney, *The History of Freemasonry in Wiltshire* (1880), pp. 155-156
- ¹¹⁴ *DG.* 390, 7 Aug. 1823.
- ¹¹⁵ James Sutton to Henry Addington, 7 Nov. 1790 : DRO

- Sidmouth Papers 152M/c1790/OZ15
- ¹¹⁶ WSRO, A1/306, list of gamekeepers 1731-1941
- ¹¹⁷ *The County Magazine 1786-1788* (Salisbury 1788), 1786, p. 31
- ¹¹⁸ H. Hunt, *Memoirs*, (3 vols. 1820), Vol. 1, p. 399
- ¹¹⁹ WANHSL, Box 328, MS. 2605, George Sloper's diary
- ¹²⁰ *V(ictoria) C(ounty) H(istory): Wiltshire*, Vol. 4 (ed. E. Crittall, 1959), p. 377
- ¹²¹ *A Foreign View of England in the Reigns of George I and George II; the letters of M. Cesar de Saussure to his Family* (ed. Mme. Van Muyden 1902), p. 295
- ¹²² H. Coombs and Rev. A. N. Bax(eds.), *Journal of a Somerset Rector* (1990), p. 15
- ¹²³ R. . Warner, *History of Bath* (Bath 1801), p. 349
- ¹²⁴ *Sj*, 2679, 12 Oct. 1789
- ¹²⁵ WANHSL, Box 328, MS. 2605, George Sloper's diary
- ¹²⁶ WANHSL, W. T. 192, 'Diary of Henry Crabb Robinson's Schooldays', p. 5
- ¹²⁷ R. Southey, *op. cit.* pp. 338-339
- ¹²⁸ *Sj*. 2731, 11 Oct. 1790
- ¹²⁹ *DG* , 251, 19 Oct. 1820. Philip Astley established the equestrian circus in 1770
- ¹³⁰ P. Clark, *English Country Towns 1500-1800* (1981), p. 2
- ¹³¹ J. Trusler, *The Way to be Rich and Respectable* (1787), p. 5
- ¹³² He treated Coleridge for his opium addiction and Coleridge sent copies of his poems to Mrs Brabant
- ¹³³ C. B. Andrews (ed.), *J. Byng, The Torrington Diaries*, (4 vols. ,1934-1938), Vol. 1, p. 6
- ¹³⁴ N. Karamzin, *Letters of a Russian Traveller 1789-1790*, trans. F. Jonas (1957), Vol. III, p. 329
- ¹³⁵ A. L. Beir, D. Cannadine and J. M. Rosenheim, *The First Modern Society* (Cambridge 1989), pp. 492-496
- ¹³⁶ *The British Magazine*, Vol. IV (1763), p. 417
- ¹³⁷ J. Davis, *Origines Divisanae* (1755), p. 39
- ¹³⁸ *The Works of Hannah More* (4 vols. , Dublin 1803), Vol. 4, p. 271
- ¹³⁹ R. Porter, 'Science, Provincial Culture and Public Opinion in Enlightenment England', *British Journal for Eighteenth Century Studies*, Vol. 3, (1980), p. 26
- ¹⁴⁰ *The Annual Register for 1761* (1762), p. 207.

Trees of Marlborough College and Environs

by Jack Oliver

A complete list of the tree species, including hybrids and distinctive variants, recorded between 2001 and 2002 is provided with indications of frequency, situation and spread. Exotics, semi-naturalised, and native species are considered. In the last group, diseases (especially fungal) have changed the balance of dominant species. Girth records are given from some exceptional trees.

It seems probable that Marlborough College and its immediate environs have 5 (or ?more) types of tree which have greater girths than any similar trees elsewhere in Wiltshire. There are 2 likely British Champions; and also a Railway Poplar which is the largest yet measured anywhere.

INTRODUCTION

Marlborough College was founded in 1843, and by 2003 the extent of its grounds covered 307 acres (124 hectares). These grounds extend to the north-west, west and south-west of Marlborough, but there are also College properties with extensive gardens along Hyde Lane, George Lane, and in the High Street in the centre of Marlborough. The concentrations of trees in this territory complement those studied in Savernake Forest (and Tottenham Park) to the SE of Marlborough (Oliver & Davies 2001; Oliver 2003). For instance, Willows, Poplars, Yews and Ashes are a more important component of the tree flora in this paper, than the Oaks and Sweet Chestnuts of the previous two aforementioned studies. To the south of the A4 road, the Marlborough College Nature Reserve was established in 1972. The Nature Trail covers many different habitats including Ash woodlands, Willow concentrations, trout ponds, the River Kennet, wetlands and water meadows, semi-ancient mixed woodland and chalk downland. To the north of the A4, most trees (such as Cherries, both wild and cultivated) fringe playing field areas on the chalk, or have been planted in staff or College House gardens. However there are also some small

copses, both wild and planted. The prehistoric 'Mound' contemporary with Silbury Hill, is dominated by Yews, many of which started life as miniature hedges long before the school was founded. Exotic trees have been brought back by staff and college 'old boys' following travels and expeditions in the past, and introduced from commercial dealers as part of special planting schemes in more recent years.

VERY COMMON AND SELF-PERPETUATING TREES

Of the large species, Ash (*Fraxinus excelsior*) and Sycamore (*Acer pseudoplatanus*) seed profusely and grow into saplings wherever permitted. The third commonest large tree, the only self-perpetuating conifer, is the Yew (*Taxus baccata*). Yews are concentrated on 'The Mound' and around 'The Duelling Lawns', but are to be found as seedlings and saplings elsewhere within the grounds. Five smaller tree species, more often than not shrubby, seed ubiquitously where not controlled. These are Hawthorn (*Crataegus monogyna*, Wiltshire's commonest tree species); Hazel (*Corylus avellana*,



Salix alba (photograph by Joan Davis, 2002)

old coppice stools also common south of the A4 road); Holly (*Ilex aquifolium*, also forming dense masses by layering); Elder (*Sambucus nigra*, which even forms epiphytic plants on larger trees by bird-sown seedlings); and Field Maple (*Acer campestre*, a common fringe and boundary tree).

Most Willow species are confined to the wetlands south of the A4. White Willow (*Salix alba*) forms dense damp jungles, mainly by layering rather than seeding. Over the last fifty years, White Willows have been out-competing the other common wetland willow, the Crack Willow (*Salix fragilis*) because of disease in the latter (see later subheading). The eleven other wetland willow (*Salix*) species and hybrids listed are all less common; but one willow/sallow species is very common throughout the grounds, and spreads by seed rather than (mainly) by layering. This is the Goat Willow, also known as Grey Sallow, or (for male trees) the Pussy willow (*Salix caprea*). It is common in wooded areas, in wetlands, and seeds readily in flowerbeds, edges and waste places.

Continuing the very common species, Wild Cherry (Gean, Mazzard, *Prunus avium*) seeds occasionally and also spreads by root suckers. The Wild Cherry is a conspicuous boundary feature around some of the northern fields, and is in some of the copses. The Silver Birch (*Betula pendula*) seeds profusely, forming saplings in central and peripheral areas of the College grounds. The last two very common tree types, conspicuous because of their great size, are Beech and Copper Beech (*Fagus sylvatica* and *F. sylvatica* 'Purpurea'). Most were originally planted, but seedlings occasionally survive to saplings where permitted.

FURTHER COMMON AND CONSPICUOUS LARGE TREES

1. Conifers

Nos. 3 and 4, the ten types of Lawson's Cypress (*Chamaecyparis lawsonia*) are characteristic trees near the central parts of the College grounds, and near buildings. There is also one peripheral group in a line south of the running track pavilion, (west of the Preshute White Horse), which line acts as a break to the prevailing winds. Many of the older Lawson's Cypresses have begun to layer, including the yellow, blue and juvenile-foliaged cultivars. There is a scatter of European Larches (*Larix decidua*) throughout the grounds. The Larches at the far west end of the Nature Trail have either yellow or rich red-purple female 'flowers'. Norway Spruces (Christmas trees, *Picea abies*) are also widely distributed, but with small concentrations in the Nature Trail Beechwood to the south, and by Field Cottage in Barton Dene to the north of the A4. Scots Pines (*Pinus sylvestris*, pink upper trunks) and the two subspecies of Black Pines (*Pinus nigra*, grey trunks) fringe some margins and occur in some copses, mainly to the north of the A4.

No other conifer types are both common and conspicuous; and none (apart from Yew, see previous section) were seen to produce successful seedlings.

2. Oaks

The only common mature Oak species is the English Oak (*Quercus robur*), which is scattered north and south of the A4, and mostly peripherally, including northern and southern boundaries and the Nature Trail to the south-west. Natural seedlings and saplings occurred, but some mature *Q. robur* trees were markedly afflicted by oak dieback disease (see Tree Diseases sub-heading).

3. Alders and Birches.

Common Alder (*Alnus glutinosa*) is common, but confined to banks of the River Kennet and its tributaries south of the A4 where seedlings and saplings can be found. The only common, conspicuous and self-perpetuating Birch apart from Silver Birch (see previous section) is Downy Birch (*Betula pubescens*, widely scattered with a few big trees, and nearly as common as Silver Birch).

4. Willows and Poplars

The silky pubescence on the under-surface of the leaves in the dense concentrations of large White Willows along the River Kennet cause striking scenic effects on sunny, breezy days, as the colour switches from light green to silver, either in swathes or en masse. The Crack Willows by contrast are distinguishable from a distance by willow scab disease browning and curling leaves and stunting shoot ends. Some large Crack Willows still survive; but compared with fifty years ago they are giving way to White Willows in height and quantity (see 'Diseases' sub-heading). In some places, Osiers (*Salix viminalis*) predominate.

Like the Goat Willows (see previous sub-heading), the College Poplars (*Populus* species and hybrids) are to be found scattered both north and south of the A4, on dry or wet ground. Unlike the Goat Willows, most or all were planted rather than naturally occurring. Of the eleven types listed (nos 64-74), six are hybrids and five of these are complex hybrids between N. American Black or Balsam Poplars and the European Black Poplar (*Populus nigra*). Many are large, but the greatest of all is just outside the College boundaries, in George Lane (see 'Special Trees' sub-heading).

5. Limes and Horse Chestnuts

Three Limes (Linden) species and two hybrids are to be found in the College grounds, but only one is both large and common. This is the native Common (Hybrid) Lime (*Tilia x europea*), whose parents are the Small-leaved and Broad-leaved Limes (*T. cordata* and *T. platyphyllos*). *Tilia x europea* is the world's tallest Lime, and Europe's tallest broad-leaf tree. The larger specimens, at 40m or so high, would seem to make it the tallest type of the many difference species, hybrids, and varieties of tree within the college grounds. All the large specimens have densely sprouting bases and masses of trunk burrs and sprouts. Some also have suckers from underground stems.

Although no masses of seedlings have been noted beneath the College Hybrid Limes (as can be found in Savernake Forest), these trees are vegetatively invasive in the vicinity of their massive bases and can be unpopular on account of the honeydew which can sometimes cause the lower leaves to become coated with black grimy mould in late summer. Also the honeydew can cause pitting of the shiny surfaces of parked cars. However this honeydew drips on to the soil to provide nutrition

for nitrogen-fixing cyanobacteria, which in turn create usable nitrogen compounds for the tree. There is in fact a complex four-way symbiosis, for the aphids that create the honeydew also have *intracellular* bacteria which help them use the Lime sap more effectively to create proteins. This complex symbiosis matches anything to be found in the Amazonian rainforests.

Of the three types of Horse Chestnuts to be found in the grounds, only one is large, common and seen to produce occasional seedlings and saplings by natural spread. This is the Common Horse Chestnut or Conker tree (*Aesculus hippocastanum*), now semi-naturalized in Britain but originally from Greece and Albania. Large conspicuous Horse Chestnuts flank each side of the A4, but big specimens are also to be found elsewhere in the grounds. Red Horse Chestnuts are less common, and are discussed in the 'Diseases' section to follow. Sweet or Spanish Chestnuts (*Castanea sativa*) are unrelated to Horse Chestnuts. Most of the College grounds are either too chalky or too waterlogged for these to thrive, but two medium-large specimens grow on the Hyde Lane boundary.

ROSACEAE

At least 56 tree types, more than a quarter of the total, come from this one family alone, out of the 28 tree families represented. Most Rosaceae trees are small, but with clear single trunks to above 5ft. The paradox is that some large multi-stemmed shrubs are far taller and more massive than the neat little single-trunk Japanese Flowering Cherry trees (*Prunus* nos 130 & 131). Examples of big shrubs include Cherry Laurel (*Prunus laurocerasus*) and Portugal Laurel (*Prunus lusitanica*) both of which can reach 12m high. These are common in many parts of the grounds as vigorously expanding layering shrubberies, but occasionally produce vertical trunks of about 1m in girth at 5ft above ground level, meriting inclusion as trees in the totals. Even Sloe (Blackthorn, *Prunus spinosa*), usually a 1.5-2m high thorny thicket (as in the far south-west of the Nature Trail), can sometimes form a proper trunk of a tree 4.5m high. However its hybrid with Plum (*Prunus x fruticans*) always forms a more substantial, taller, thorny tree. The *Prunus* genus alone supplies 25 tree types, with Wild Cherry (Gean, *Prunus avium*, discussed earlier) as the largest tree of the Rosaceae within the College grounds, as well as one of the commonest.

The three genera *Crataegus* (Hawthorns, Cockspurthorns), *Malus* (Apples), and *Sorbus* (Rowans and Whitebeams) each provide seven or eight tree types, and there are a further six Rosaceae tree genera to be seen near College buildings.

This family is represented therefore by very common native trees and shrubs (eg Hawthorn, Sloe, Gean), by common semi-naturalized species (eg Cherry and Portugal Laurels) and lastly by individual old and new small-tree garden favourites (eg Japanese Cherries, Purple-foliaged Asiatic Apple hybrids, Quince (*Cydonia*), Medlar (*Mespilus*) etc). Of the last group, only the beautiful Double-flowered Pink Japanese Cherry (*Prunus* 'Kanzan') was common, conspicuous in spring because of the dense massed pink blossoms.

DISEASES

1. *Aesculus carnea* (nos.149 ,150)

These Red Horse Chestnuts are susceptible to a degenerative canker. Several College trees are affected with the huge trunk ulcers, with raised edges, up to 40cm in diameter. They are often irregular, and can coalesce with adjacent ulcers. Underneath the larger, older ulcers, the wood can be crumbly. Grafted trees only have the canker ulcers above the graft union. One such tree has been recently felled. The cultivar 'Briottii' (no. 150) is so far unaffected, and could be a resistant variety.

2. *Quercus robur*

Over the last three years, a severer form than hitherto of Oak-Dieback Disease (ODBD) has afflicted numbers of English Oaks. It is an incompletely understood condition in which the organism *Phytophthora*, normally present and harmless in the soil becomes virulent and attacks the Oak roots. ODBD is thought to be a multi-factorial illness, with water levels and climatic conditions affecting the type and pathogenicity of the soil *Phytophthora*; however additional and unknown factors also operate. Several Oaks, all *Q.robur*, in the Nature Trail mixed-woodland have been affected and show the characteristic 'Stagshorn' effect of some dead branches in the crown. Occasionally part of a living branch has the small, yellowing leaves and weak shoots characteristic of a renewed attack of ODBD. One *Q.robur* in the Nature Trail woodland has been killed by ODBD, but most such Oaks of this species co-exist with mild or occasionally moderately

severe relapses from the illness. The Durmast Oaks (*Q.petraea*, no. 43), Hybrid Native Oaks (*Q. x rosacea*, no. 45) and the other Oak species (see nos. 40-46) within the College grounds are not (or hardly) affected by ODBD. This is exactly the same pattern as occurs in Savernake Forest.

3. *Ulmus* species

Dutch Elm Disease (DED) is caused by the synergistic (mutually enhancing) co-operation between the vectors, two species of bark beetle (*Scolytus scolytus* and *S.multistratus*), and the pathogenic fungus, *Ophiostoma* (or *Ceratocystis*) *noovo-ulmi*. In turn, the fungus itself can be killed by 'd-factor' strains. The d-factors are cytoplasmically transmitted 'virus-like' pathogens of fungi, mitochondrial double-stranded RNA elements. Unfortunately the d-factors have not been infective enough to eliminate the colonies of fungi spread between Elm branches and trees by the highly mobile beetles. As a consequence DED has spread remorselessly.

No mature English Elms (*Ulmus procera*, no. 98) survive anywhere within the College grounds, but the residual root suckers are common and vigorous along some hedgerows, boundaries, waste places and wooded edges. Beetle galleries are to be seen under the bark of dead and dying young trunks. Mature but young Wych Elms (*Ulmus glabra*) often survive to fruition in the grounds, but succumb to DED before they reach their full size and girth. So far, two smaller Wych Elm cultivars ('Camperdown' and 'Lutescens') are unaffected by DED. Along the south-western boundary of the Cotton House southern garden, a Hornbeam-leaved Elm (*Ulmus minor* ssp *carpinifolia*, no. 97) survives as a largish tree, with numbers of additional hedgerow suckers. We thought it could be resistant to DED, but one small upper branchlet seemed to show the sinister yellowing of leaves in the summer of 2002.

4. *Salix* species, especially *S.fragilis*.

Two fungal diseases are often found together on the same tree, and this is the case in some of the Marlborough College Willows. These are willow scab and black canker, caused by *Pollacia saliciperda* and *Glomerella miyabeana* (Rose 1989, 2003). Curled blackened shrivelled leaves in early or midsummer lead to die-back of shoots, often reducing in time potential Willow trees to scrubby ugly shrubs. Of the willows listed between nos. 75 and 88, in order of severity the following four types are attacked: Crack Willow, Corkscrew Willow,

Golden Willow and Weeping Willow. In influencing the landscape, these two fungal species have caused most devastation to the abundant and once dominant riverside Crack Willows. Fifty years ago, in the wetlands of the Marlborough College Grounds south of the A4, searches were necessary to find White Willows amongst the Crack Willows. White Willows are now both abundant and dominant. The occasional interspersed scrubby or thin tree with many shrivelled leaves and attenuated branches and shoots will nearly always turn out to be Crack Willow.

5. Long Term Effects of the Diseases

In affecting the landscape, DED is the most

important disease. It may be many human generations before Elms regain their former importance as countryside mature trees – if ever. There are many Willow and Sallow species and hybrids. As susceptibility between these different taxa varies so greatly, new dominant species and types readily take over in the wetlands and riverside which resist Willow Scab and Black Canker. This is survival of the fittest, evolution in action.

Over hundreds (or thousands) of years, ODBD would seem to favour Durmast Oaks (*Q. petraea*) and the Hybrid Native Oak (*Q. x rosacea*) over English Oak (*Q. robur*).

LIST OF TREE SPECIES AND HYBRIDS

Key

Frequency (F column)

C. Common, likely to be seen in many parts of the grounds.

O. Occasional.

R. Rare.

Situation (S column)

F. Fringes and/or staff gardens.

H. Used as hedging.

K. Near R. Kennet, ponds or wet areas.

L. Limited occurrences.

N. New planting(s) of young tree(s).

W. Widespread

Natural Spread:- (NS column)

S. Seedlings and/or natural saplings noted locally.

SS. Seedlings and or natural saplings extensive, or frequently seen.

V. Limited vegetative spread, suckering, layering etc.

VV. Extensive vegetative spread.

		F	S	NS
Ginkgoaceae.	1. <i>Ginkgo biloba</i> Maidenhair Tree	R	L	-
Araucariaceae.	2. <i>Araucaria araucana</i> Monkey Puzzle, Chile Pine	R	N	-
Cupressaceae.	3. <i>Chamaecyparis lawsoniana</i> Lawsons Cypress	C	W	V
	4. <i>Chamaecyparis lawsoniana</i> cvs. At least 9 distinctive cultivars of Lawson's Cypress.	C	F,H	V
	5. <i>Chamaecyparis obtusa</i> cvs. At least 2 distinctive (mostly dwarfed) cultivars of Hinoki Cypress.	O	F	-
	6. <i>Chamaecyparis pisifera</i> Sawara Cypress	R	F	-
	7. <i>X Cupressocyparis leylandii</i> Leyland Cypress	O	F,H	-
	8. <i>X C. leylandii</i> 'Castlewellan' Golden Leyland	O	F,H	-
	9. <i>Cupressus glabra</i> 'Pyramidalis' Blue Arizona Cypress.	R	F	-
	10. <i>Cupressus macrocarpa</i> Monterey Cypress	R	F	-
	11. <i>Juniperus chinensis</i> Chinese Juniper	R	F	-
	12. <i>J. recurva</i> Drooping Juniper	R	F	-
	13. <i>Thuja plicata</i> Western Red-cedar	O	L,H	V
	14. <i>Thuja</i> cvs. Two or more dwarf cultivars of Chinese and White Cedars.	R	F	-
Pinaceae	15. <i>Cedrus atlantica</i> Atlantic (Atlas) Cedar	O	L	-
	16. <i>Cedrus deodara</i> Deodar Cedar	O	L	-
	17. <i>Larix decidua</i> European Larch	O	W	-
	18. <i>Picea abies</i> Norway Spruce	O	W	-
	19. <i>Picea pungens</i> Colorado Blue Spruce	R	F	-
	20. <i>Pinus nigra</i> ssp <i>laricio</i> & ssp <i>nigra</i> Black Pine	O	W	-
	21. <i>Pinus radiata</i> Monterey Pine	R	F	-
	22. <i>Pinus sylvestris</i> Scots Pine	C	W	-
	23. <i>Pinus wallichiana</i> Bhutan Pine	R	F	-

	24. <i>Pseudotsuga menziesii</i> Douglas Fir	R	F	S
Taxodiaceae	25. <i>Cryptomeria japonica</i> Japanese Red-cedar	R	F	-
	26. <i>Sequoiadendron giganteum</i> Wellingtonia	R	F	-
	27. <i>Taxodium distichum</i> Swamp Cypress	O	K,L	-
	28. <i>Metasequoia glyptostroboides</i> Dawn Redwood	O	K,L	-
Taxaceae	29. <i>Taxus baccata</i> Yew	C	W,H	SS
	30. <i>Taxus baccata</i> cvs Golden & Columnar Yews	O	F	-
Magnoliaceae	31. <i>Liriodendron tulipifera</i> Tulip Tree	R	F	-
	32. <i>Liriodendron tulipifera</i> 'Aureomarginatum' Variegated Tulip Tree	R	F	-
	33. <i>Magnolia</i> At least 5 species, hybrids, & cvs (some shrubby)	R	F	-
Lauraceae	34. <i>Laurus nobilis</i> Bay Laurel	R	F	-
Fagaceae	35. <i>Castanea sativa</i> Spanish Chestnut	R	L	-
	36. <i>Fagus sylvatica</i> Beech	C	W,H	S
	37. <i>Fagus sylvatica</i> 'Purpurea' Copper Beech	C	W,H	S
	38. <i>Fagus sylvatica</i> cvs. At least 2 further Beech cultivars.	O	N	-
	39. <i>Nothofagus obliqua</i> Roble	R	L	-
	40. <i>Quercus cerris</i> Turkey Oak	R	L	-
	41. <i>Quercus dentata</i> Daimyo Oak	R	N	-
	42. <i>Quercus ilex</i> Holm Oak	O	L	-
	43. <i>Quercus petraea</i> Durmast Oak	R	L	S
	44. <i>Quercus robur</i> English (Pendunculate) Oak	C	W	SS
	45. <i>Quercus x rosacea</i> Hybrid Native Oak	R	L	S
	46. <i>Quercus rubra</i> (borealis) American Red Oak	R	L	-
Betulaceae	47. <i>Alnus cordata</i> Italian Alder	R	K	-
	48. <i>Alnus glutinosa</i> Common Alder	C	K	SS
	49. <i>Betula albo-sinensis</i> Chinese Red-bark Birch	R	N	-
	50. <i>Betula x aurata</i> Hybrid Native Birch	O	W?	S
	51. <i>Betula jacquemontii</i> Kashmir Beech	R	N	-
	52. <i>Betula nigra</i> Black River Birch	R	N	-
	53. <i>Betula papyrifera</i> Paper Birch	R	N	-
	54. <i>Betula pendula</i> Silver Birch	C	W	SS
	55. <i>Betula pendula</i> cvs. At least 3 distinctive Silver Birch cultivars	O	F,L,N	-
	56. <i>Betula pubescens</i> Downy Birch	C	W	SS
	57. <i>Betula utilis</i> Himalayan Birch	R	N	-
	58. <i>Carpinus betulus</i> Hornbeam	C	W,N	-
	59. <i>Corylus avellana</i> Hazel	C	W	SS
	60. <i>Corylus colurna</i> Turkish Hazel	O	N	-
	61. <i>Corylus maxima</i> (incl cvs & hybrids) Filbert	O	F,L	-
Juglandaceae	62. <i>Juglans nigra</i> Black Walnut	R	N	-
	63. <i>Juglans regia</i> Walnut	R	L	-
Salicaceae	64. <i>Populus x canadensis</i> Hybrid Black Poplar	C	K,W	-
	65. <i>P. canadensis</i> 'Regenerata' Railway Poplar	R	F	-
	66. <i>P. canadensis</i> 'Serotina' Black Italian Poplar	O	K,L	-
	67. <i>P. canescens</i> Grey Poplar	O	K,L	VV
	68. <i>Populus x jackii</i> Hybrid Balsam Poplar	R	L	V
	69. <i>P. jackii</i> 'Aurora' Dawn Poplar	R	L	V
	70. <i>P. nigra</i> 'Italica' Lombardy Poplar	R	F,L	-
	71. <i>P. simonii</i> Pekin Poplar	R	K	-
	72. <i>P. tacamahacca</i> (balsamifera) Eastern Balsam Poplar	R	L	V
	73. <i>P. tremula</i> Aspen	R	L	W
	74. <i>P. trichocarpa</i> Western Balsam Poplar	R	K	-
	75. <i>Salix alba</i> White Willow	C	K	SV
	76. <i>S. alba</i> 'Britzensis' Red Willow	R	K	-
	77. <i>S. alba</i> var <i>vitellina</i> Golden Willow	R	K	-
	78. <i>Salix caprea</i> Sallow; Goat or Pussy Willow	C	W	SS
	79. <i>Salix cinerea</i> ssp <i>oleifolia</i> Grey Willow	O	K	S

	80.	<i>Salix daphnoides</i>	Lilac Willow	R	KN	-
	81.	<i>S.x dasyclados</i>	Silesian Willow	R	K	VV
	82.	<i>S. elaeagnos</i>	Olive Willow	R	F	-
	83.	<i>S. fragilis</i>	Crack Willow	C	K	S,VV
	84.	<i>S. matsudana</i>	'Tortuosa' Corkscrew Willow	R	N	-
	85.	<i>S. purpurea</i>	Purple Willow	R	K	S,V
	86.	<i>S.x rubens</i>	Hybrid Crack Willow	?O	K	?S,V
	87.	<i>S.x sepulcralis</i>	Weeping Willow	O	K	-
	88.	<i>S. viminalis</i>	Osier	C	K	S,V
Tamaricaceae	89.	<i>Tamarix gallica</i>	Tamarisk	R	N	-
Tiliaceae	90.	<i>Tilia cordata</i>	Small-ldv Lime	R	L	-
	91.	<i>Tilia x europea</i>	Common (Hybrid) Lime	C	W	V
	92.	<i>Tilia henryana</i>	Henry's Hupeh Lime	R	N	-
	93.	<i>T. oliveri</i>	Oliver's Lime	R	N	-
Ulmaceae	94.	<i>T.x petiolaris</i>	European Silver Pendent Lime	R	L,N	-
	95.	<i>Ulmus glabra</i>	Wych Elm	O	W	S,V
	96.	<i>U. glabra</i> cvs.	Two or more Wych Elm cultivars	R	L	-
	97.	<i>U. minor (carpinifolia)</i>	Smooth leaved Elm	R	L	VV
	98.	<i>Ulmus procera</i>	English Elm	C	W,H	VV
Aquifoliaceae	99.	<i>Ilex aquifolium</i>	Holly	C	W,H	SS,VV
	100.	<i>Ilex aquifolium</i> cvs & hybrids.	At least 7 distinctive variants of the species, & its hybrids with <i>Ilex perado</i> .	C	W,H	V(?S)
Ericaceae	101.	<i>Arbutus unedo</i>	Strawberry Tree	R	L	-
	102.	<i>Rhododendron ponticum</i> ,	hybrids & cvs	R	L	-
Rosaceae	103.	<i>Amelanchier laevis (canadensis)</i>	Juneberry	R	L	-
	104.	<i>Cotoneaster frigidus</i>	Himalayan Tree Cotoneaster	O	W	(?S)
	105.	<i>C.x watereri</i>	Hybrid Tree Cotoneaster	O	W	(?S)
	106.	<i>Crataegus laevigata</i>	Midland Hawthorn	R	L	S
	107.	<i>Crataegus laevigata f. rosea</i>	Red Midland Hawthorn. Also 2 or more cultivars	O	L	(?S)
	108.	<i>Crataegus monogyna</i>	Hawthorn	C	W,H	SS
	109.	<i>Crataegus monogyna f. rosea</i>	Red Hawthorn	O	L	S
	110.	<i>Crataegus persimilis</i>	Broad-leaved Cockspurthorn	R	L	-
	111.	<i>Crataegus sub-mollis</i>	Soft-leaved Cockspurthorn	R	L	-
	112.	<i>Crataemespilus grandiflora</i>	Haw-Medlar	R	F,L	-
	113.	<i>Cydonia oblonga</i>	Quince	R	F,L	-
	114.	<i>Malus x purpurea</i>	Purple leaved hybrid Apple	R	F,L	-
	115.	<i>Malus domestica</i>	Apple	O	W	S
	116.	<i>Malus sylvestris</i>	Crabapple	O	W	S
	117.	<i>M. tschonoskii</i>	Pillar Apple	R	L	-
	118.	<i>Malus</i> hybrids & cvs	At least 3 more hybrids and cultivars of the 4 preceding Apples.	O	F,W	-
	119.	<i>Mespilus germanica</i>	Medlar	R	F,L	-
	120.	<i>Prunus avium</i>	Gean, Wild Cherry	C	W	S,VV
	121.	<i>Prunus cerasifera</i>	Cherry Plum	C	WH	SV
	122.	<i>Prunus cerasifera</i> vars <i>nigra</i> & <i>pissardii</i>	Pink & Pissard's Cherry Plums	C	WH	?
	123.	<i>Prunus domestica</i>	Plum	O	F	-
	124.	<i>Prunus dulcis</i>	Almond	R	F	-
	125.	<i>Prunus x fruticans</i>	Hybrid Sloe-plum	R	L	(?S),V
	126.	<i>Prunus laurocerasus</i>	Cherry Laurel	C	W	(?S),VV
	127.	<i>Prunus lusitanica</i>	Portugal Laurel	C	W	(?S),VV
	128.	<i>Prunus padus</i>	Bird Cherry	R	L	-
	129.	<i>Prunus persica</i>	Peach	R	L	-
	130.	<i>Prunus serrula, serrulata, speciosa, subhirtella,</i> and hybrids & cvs (Mainly Japanese)	Ornamental Cherries; at least 12 different types here.	C	W	-
	131.	<i>Prunus serrulata</i>	'Kanzan' Double-fl'd Pink Japanese Cherry	C	W	-
	132.	<i>Prunus spinosa</i>	Blackthorn, Sloe	C	W	S,VV

	133. <i>Pyrus communis</i> Pear	R	F	-
	134. <i>Pyrus pyrastrer</i> Wild Pear	R	F	-
	135. <i>Pyrus salicilifolia</i> Willow-leaved Pear	R	F	-
	136. <i>Sorbus aria</i> Whitebeam	O	W	S
	137. <i>Sorbus aucuparia</i> Rowan	C	W	S
	138. <i>Sorbus cashmeriana</i> Kashmir Rowan	R	N	-
	139. <i>Sorbus hupehensis</i> Hupeh Rowan	R	F	-
	140. <i>Sorbus intermedia</i> Swedish Whitebeam	O	L	-
	141.cvs of (mainly) nos 136 & 137 preceding Rowan & Whitebeam cultivars	O	FN	-
Fabaceae (Leguminosae)	142. <i>Cercis siliquastrum</i> Judah's (Judas) tree	R	F	-
	143. <i>Sorbus sargentiana</i> Sargent's Rowan	R	N	-
	144. <i>Laburnum anagyroides</i> Laburnum (incl. hybrids)	O	W	-
Myrtaceae	145. <i>Eucalyptus gunnii</i> Cider Gum	R	F	-
Cornaceae	146. <i>Cornus sanguinea</i> Dogwood Tree	C	W	SS,VV
Celastraceae	147. <i>Euonymus europaeus</i> Spindle	O	W	S
Rhamnaceae	148. <i>Rhamnus cathartica</i> Buckthorn	O	W	S
Hippocastanaceae	149. <i>Aesculus carnea</i> Red Horse-Chestnut	O	F	-
	150. <i>Aesculus carnea</i> 'Briottii' Red Horse Chestnut	R	N	-
	151. <i>Aesculus hippocastanum</i> Greek Horse Chestnut	C	W	S
Aceraceae	152. <i>Acer campestre</i> Field Maple	C	WH	SS
	153. <i>Acer cappadocicum</i> Coliseum Maple	O	FK	VV
	154. <i>Acer griseum</i> Paperbark Maple	R	F	-
	155. <i>Acer negundo</i> (incl cvs) Ash-leaved Maple	O	F	-
	156. <i>Acer palmatum</i> (incl cvs) Japanese Maple	R	F	-
	157. <i>Acer platanoides</i> Norway Maple	O	W	S
	158. <i>Acer platanoides</i> cvs Red & Variegated Norway Maples	O	F	S
	159. <i>Acer pseudoplatanus</i> Sycamore	C	W	SS
	160. <i>Acer pseudoplatanus</i> 'Simon Louis Frere' Variegated Sycamore	R	FN	-
Anacardiaceae	161. <i>Rhus typhina</i> Stagshorn Sumach	O	W	VV
Oleaceae	162. <i>Fraxinus angustifolia</i> Narrowleaf Ash	R	F	-
	163. <i>Fraxinus excelsior</i> Ash	C	W	SS
	164. <i>Fraxinus ornus</i> Manna Ash	O	L	-
	165. <i>Fraxinus oxycarpa</i> Caucasian Ash	R	F	-
	166. <i>Ligustrum vulgare</i> Wild Privet	C	W	SS,V
	167. <i>Ligustrum lucidum</i> Chinese Glossy Privet Tree	R	FL	-
Bignoniaceae	168. <i>Catalpa bignoides</i> Indian Bean Tree	R	F	-
Caprifoliaceae	169. <i>Sambucus nigra</i> Elder	C	W	SS
	170. <i>Viburnum lantana</i> Wayfaring Tree	O	L	S
	171. <i>Viburnum opulus</i> Guelder Rose	O	K,L	SS,V
	172.Other large <i>Viburnum</i> taxa & cvs	O	FL	V

SPECIAL TREES

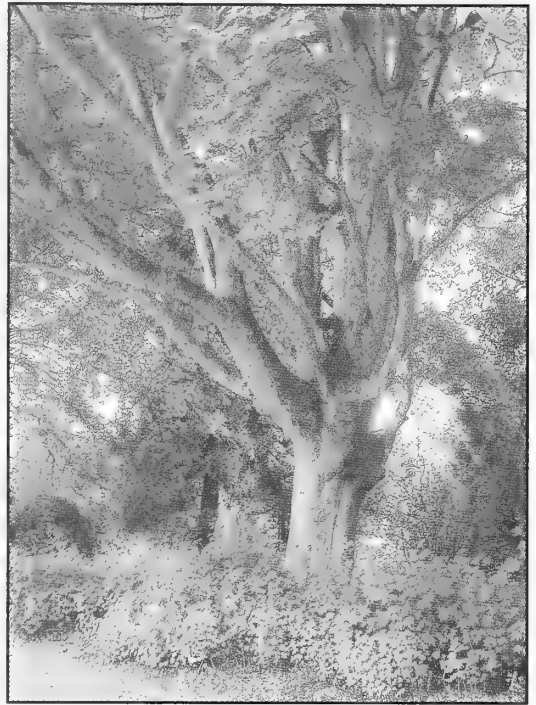
Within the College grounds there are some exceptional trees, most on account of their girths (and/or ages) for the species in question; but one of them is also interesting for its historical and cultural associations. I have included here three trees from two private gardens adjacent to College boundaries. Unless stated otherwise, girths are measured at 5ft (1.5 metres) from ground level.

Salicaceae

A Crack Willow pollard overhanging the River Kennet has equal (British) champion status with a Malmesbury tree, with a girth of over 480 cms. Unfortunately this tree is senescent and broken with few healthy shoots, and may soon die. The second largest Crack Willow (also a pollard) is near the Science Block, and has a girth of 340 cm. Much more impressive is the vigorous and healthy 'Great White Willow' in the south-westernmost water

meadow. This has an ancient trunk, girth 550 cm, which fell in the distant past, layered in several places and formed a secondary vertical trunk 660 cm in girth at 3ft from the ground. As far as comparisons are possible for this complex tree, it would seem to be another national champion, and is described fully elsewhere (Oliver 2002) Of three other very large White Willows, one at the far SE angle of the SE Trout Ponds has a basal circumference of 505cm (at 1ft), and carries colonies of epiphytic Intermediate Polypody (*Polypodium interjectum*) with exceptionally long fronds for any native fern of this genus.

Some of the College Poplars are large trees, and one (*Populus x canadensis* 'Serotina') has a large basal coppice, circumference (at 1ft), of over 6 metres. None compares with one just outside the College boundary, by the River Kennet north of Marlborough's George Lane. This is a Railway Poplar (*Populus x canadensis* 'Regenerata'), Marlborough's biggest and tallest tree. The girth here is 680cms, confirmed by the Tree Register of the British Isles (TROBI) as the largest tree of its kind ever recorded.



Acer cappadocium (photograph by Joan Davis, 2002)

Fagaceae

The largest Oak (*Q. robur*) by the New Pavilion north of the A4 and east of the Kennels has a girth of 462cm. Neither this tree, nor the American Red Oaks (*Q. rubra/borealis*) nearby, come anywhere near County girth records, but the New Pavilion English Oak is a tall, stately tree for which there are old historic photos. There is an impressively symmetrical and attractive 'Poplar Oak' (*Q. robur* 'Fastigiata') in a private garden off Marlborough High Street at the edge of College properties. This cultivar of the English Oak has a girth of 280cm at 5ft (above seven branches), and 362cm at 1ft, making it the largest of its kind in Wiltshire.

As with the Oaks, the fine large College Common Beeches are surpassed by many elsewhere in Wiltshire, especially in Savernake Forest. However, for Copper Beeches, the story is different; from girth measurements to date, Marlborough College has five of the top ten largest trees in Wiltshire, ranging from 350 to over 400cm in girth. One of these in the Master's Garden is 'The Tennyson Beech', under the shade of which Alfred Lord Tennyson composed some of his most famous works when visiting his nephew, a student at Marlborough College. Its girth in 2001 was 373 cm.

Aceraceae

The three Coliseum Maples (*Acer cappadocium*) in the Master's Garden and near the north bank of the River Kennet are probably the three largest in Wiltshire. The TROBI records place no 1778 (girth 265cm) as the Wilts County Champion; no 1751 is actually larger, but low forking makes direct comparisons difficult. All three trees are surrounded by dense widespread masses of red shoots derived from root suckers. North-east of Littlefield House, the two largest of three large Norway Maples (*Acer platanoides*) have girths of 339 and 320 cms. Old TROBI records would indicate one larger Norway Maple in Wiltshire, but I think this record was erroneous, and the two largest Littlefield trees are indeed the two largest Norway Maples in the county. Many boundary and hedgerow Field Maples have been coppiced or cut back over many years. One such Field Maple near the gate of one of the water meadows has a linear base which supports six trunks. Its circumference at 1ft is 620cms; but as with some other hedgerow Field Maples, it is hard to know whether or not more than tree has coalesced. There is a clear single-trunk Field Maple behind the Preshute tennis courts Leylandii hedge. Its girth is 300cm, making it the second largest in the county.

Bignoniaceae

In the same garden as the *Q. robur* 'Fastigiata' discussed above, there is an Indian Bean Tree (*Catalpa bignonioides*) with a girth of 316 cm in 2001. There may once have been a larger *Catalpa* in Wiltshire, but this one certainly comes next, and may now be the largest in the County.

Other Large Girth Trees

The largest Limes, Horse Chestnuts, Ashes and Yews within the College grounds, although impressive, are not record trees compared with some colossi and ancient specimens elsewhere in Wiltshire. The three largest Common Hybrid Limes were over 400cm in girth. The largest two Common Horse Chestnuts were 420 and 473 cm, and the largest Red Horse Chestnut was 310 cm. Three Ashes were between 390 and 400cms, but another with multiple trunks had a coppice base circumference of 875 cm (at 1ft). The two biggest yews were 383 and 385 cm. One Gean (Wild Cherry) had a girth of 190 cm, but another was 270cm at 3ft (a low forker). Staff are proud of their Swamp Cypress (*Taxodium distichum*), girth 313 cm. It is likely that some of the smaller tree species approach record status. One Holly, for instance had one of its trunks with a girth of 190cm, and another Holly Tree had a basal measure of 405cms at 1ft. The girths of five *Prunus* 'Kanzan' trees ranged from 130-143cm. A Pissard's Plum (*Prunus cerasifera* 'Pissardii') had the exceptional girth of 150cm, the second largest so far measured in Wiltshire.

SUMMARY

Comparison with the two previous papers (Oliver & Davies 2001; Oliver 2003) shows that the Marlborough College grounds carry more tree types than Savernake Forest, Savernake Forest Arboretum and the Tottenham Park Estate together, an area more than ten times as great! Part of this is accounted for by many small tree cultivars beloved by English gardeners; but also by the species and hybrids of Poplars and Willows in the College ground wetlands, and by exotics planted by exp-pupils and staff from foreign expeditions in the past (and from specialist tree nurseries in recent years).

Total Tree Species (Shrubs excluded, but including 26 tree species sometimes or often shrubby): 133

Total Tree Hybrids (4 hybrids, sometimes or usually shrubby): 24

Total Tree Taxa, including subspecies and distinctive variants and cultivars but excluding the smallest permanently dwarfed cultivars of larger tree species): 207

Extensive natural spread: 23 species

Occasional natural spread: 18 species and 2 hybrids

Some of the Marlborough College areas, especially near buildings and sports facilities and in staff gardens, are closely manicured with intensive gardening. In these places, natural regeneration of trees is not going to occur, but some special and exotic trees are valued. Numbers of these are exceptional by virtue of age and size, and sometimes rarity. Only following exigencies e.g. danger, new buildings required etc. would they be removed.

In the wilder areas, peripheries, copses, boundaries, wetlands and Nature Trail the trees can find their natural population levels. Along with the exotics, the wetland trees account for much of the extra species diversity. Over the last fifty years, especially over the last ten, fungal diseases have changed the balance of the dominant Willow species, favouring White Willow (but not some of its cultivars).

Acknowledgements

My thanks to Joan Davies for preparing the illustrations for this paper. Also to Sean Dempster, Simon Eveleigh and Robert Tindall from Marlborough College.

Bibliography

- OLIVER, J.E. & DAVIES, J.M., 2001 'Savernake Forest Oaks'. *WANHM* 94, 24-46.
- OLIVER, J.E., 2002 'The Natural History of a White Willow'. *Botanical Society of the British Isles (BSBI) News* 91, 25,26 and 75 (illustrations).
- OLIVER, J.E., 2003 'The Trees of Savernake Forest'. *WANHM* 96, 40-46.
- ROSE, D.R., 1989 & 2003 *Scab & Black Canker of Willow*. Arboricultural Advisory & Information Service, Alice Holt Research Station. Forestry Commission.

Miss Etheldred Benett (1775-1845): A Preliminary Note on her Correspondence

by R. J. Clevely

*Examination of this correspondence in various archives has provided further evidence of her own collecting, the circumstances of her publication of the *Catalogue of Wiltshire Fossils* (1831), and her close relationship with other geologists. In addition, it has yielded information about her interest in local village affairs, of events in the county, on family matters and the changes in her own circumstances over the years.*

A Memorial tablet on a wall in the Benett Chapel of All Saints Parish Church, Norton Bavant reads:

In Memory of ETHELDRED second daughter of Thomas Benett, Esq. of Pythouse, and Catherine his Wife, who died January 11th 1845, Aged 69.

She had been 43 years an Inhabitant of the Mansion House in this Parish of Norton Bavant.

Miss Benett was a daughter of Thomas Benett (1729-1797) descendant of a family owning land around Norton Bavant from the 15th century and which also became closely associated with Pythouse, near Tisbury. The family's involvement with Norton was limited after 1669, for the low-lying Norton Manor House was considered too damp and subsequently only occupied by unmarried sisters, one of whom was Etheldred Benett. The parish church contains other monuments to the Benetts in a side chapel and in the churchyard (Watkin 1985).

That simple memorial inscription fails to indicate that Etheldred Benett holds a significant position in the history of British geology, in fact she has been regarded as the 'first lady geologist'.¹ Her interest began in the early days of that science, at a time when it was gradually realised that fossils provided a useful method of understanding the sequence and relationship of geological formations. Consequently, her specimens, with the observations

and interpretations she had made during her field work, played a significant part in this progress.² For some thirty years she devoted much of her leisure to the collection of fossils near her home in Wiltshire, or along the Dorset coast, where the family habitually spent a summer holiday. It is thought that she was encouraged by her brother-in-law, Aylmer Bourke Lambert, who as a botanist and antiquary was a member of all the major influential scientific societies. Through him Miss Benett had contact with the principal geologists of the time, including authors of works on fossils. Until recently, however, the only information about her was contained in these books. In naming a Cretaceous sponge after her,³ Gideon Mantell had described her as, 'A lady of great talent and indefatigable research to whom I am under infinite obligations for many valuable communications on scientific subjects'. In their *Mineral Conchology*, the Sowerbys make forty-one acknowledgements of specimens received from her, many of them being either unique, or else the finest available at the time. When naming '*Ammonites benettianus*' after her, (*Min. Conchology*, 6:77, pl, 539) they recorded, 'we are indebted to the zeal of Miss Etheldred Benett whose labours in the pursuit of geological information have been as useful as they have been incessant'. Her major contribution to this principal fossil reference work was also acknowledged by Sir

¹'High Croft', Gunswell Lane, South Molton EX36 4DH

Roderick Murchison in his Presidential address to the Geological Society, when he reported her own publication (Murchison, 1832:373). In an obituary⁴ Mantell recorded:

For more than a quarter of a century Miss Benett, pursued with ardour and success the investigation and collection of the organic remains of her native county; contributing also by her pencil and pen, to the illustration of the geology of Wiltshire. To her zeal and talents, and the liberal encouragement she gave the local collectors, we are in a great measure indebted for our knowledge of the fossils of the chalk and green sand of Wiltshire, and more particularly of those in the neighbourhood of Warminster and Tisbury.

Ultimately, persuaded by her brother John Benett, she produced a 'Catalogue of Wiltshire Fossils' as part of *The Modern History of South Wiltshire*, that listed their occurrence. Her involvement in this publication is first mentioned in a letter to Mantell on 23 March 1818 in which she explained the circumstances and mentioned all those engaged in producing this 'Picnic' history of the county. Her various geological friends had encouraged her to undertake the geological section and with their assistance and her own 'pretty extensive collection' she had agreed – exclaiming, 'So there you see, I am fairly in for it!' Even this early, she intended that the 'Geology' would also be published as a separate study from the whole county history. In a letter to Mantell on 4 July 1831, Miss Benett declared, 'I am much flattered by the favorable opinion which you express of my little book,' despite the errors made in printing that she had had to correct by pen herself. The detailed list of fossils fills nine pages and there are three plates of the better and more curious specimens. The author uses two letters, the first dated 25 April 1831 as an Introduction, the second dated 1 January 1831 as a Preface. In the second, written to Sir Richard Colt Hoare, the editor, she gave a general account of the geological formations that had been recognised in the county and her observations on their relationship to those elsewhere in England. For each formation she listed the localities and provided a gazetteer of the fossiliferous exposures available at that period at Warminster, Heytesbury, Tisbury, Bradford and elsewhere. Of particular note was the famous site at Chute Farm, near Longleat, of a field called Brimsgrove that William Cunnington described, 'as if a cabinet had been emptied of its contents, so numerous, and so

various were the Organic Remains that could be found there'.⁵

Unmarried, as a young woman she had both the time and resources to participate in the developing science of geology and adopt William Smith's stratigraphical principles when collecting.⁶ The Lower Cretaceous sedimentary rocks of Southern England are variable in occurrence, lithology and palaeontology, but through the fossils that they collected and exchanged, Mantell, Miss Benett and others gradually reached a mutual interpretation of the relationship of the exposures that existed in their own neighbourhoods, close to modern understanding. In most years she endeavoured to spend a month or so in London – 'as it is the only jaunt of pleasure I have in the year' (4 June 1822); but during the Autumn stayed at Weymouth, 'where I cannot help collecting the fine fossils . . . though I have had such quantities of them . . .' (11 Dec. 1831). On one occasion, rejecting Mantell's suggestion to visit Portland she commented (2 November 1835):

A lady going into the quarries is a signal for the men begging money for beer, and the few times I have been there I never got a specimens worth bringing home. All my Portland fossils have been purchased in Weymouth!

Later, she had far less time available for she wrote on 27 February 1833: 'I am one of the working Bees in our family Hive', and for the last twenty years of her life was often incapacitated by illness, when, ' . . . I was not equal to the fatigue of searching for [the fossils] myself' (12 Apr. 1824). She was always prepared to pay a reasonable price for specimens and had also employed collectors to work on her behalf; locally there was John Baker⁷ – mentioned as her 'best collector', or 'my man at Warminster'. She also employed several others at Tisbury, and local residents in Dorset, for there are references to 'my man at Weymouth' and 'my collector at Christchurch' [possibly Miss Beminster, who also sent many specimens to the Sowerbys].⁸

Miss Benett's collection was of some consequence in her own time, given both its size and diversity, and its value in clarifying the occurrence of particular fossils. One result was that there were frequent visitors to her home at Norton Bavant, who arrived by the Bath to Salisbury coach. She informed Mantell in August 1838:

there are one or two Coaches pass this House daily between 10 and 11 o'clock . . . and we frequently meet

friends at the end of our road, being of course previously appraised of the day of their coming.

Many of her specimens are important since they were among the first to be illustrated and described, while a few are unique through their scarcity or special preservation.⁹ Some of these were donated to various British museums and organisations, others were sent to the Sowerbys, but her main collection is now in the Academy of Natural Sciences in Philadelphia, after being purchased in the late 1840s. In recent years, both Sarah Nash (1990) in this journal, and Hugh Torrens with numerous American colleagues (1989, 2000), have discussed her fossil collection, the former providing a map of Wiltshire localities and the latter detailing its 'rediscovery' in Philadelphia. It is also apparent from her correspondence that she collected shells, and was equally familiar with the literature on conchology. Writing to Mantell on 17 May 1817 Miss Benett confessed that she had been so busy with her shells that she had not been able to pay any attention to his fossils. In another to J. De Carle Sowerby on 10 September 1825 she reported:

I have lately been arranging my British Shells. . . I have discovered a quantity of fresh-water shells in this village, which I had no idea we possessed until now. The species which I have met with are: *Helix palustris*, *planorbis*, *spirorbis* and *vortex* – the specimens tolerably plentiful; *Helix alba*, *contorta* and *hispida* – very scarce; a few *Bulla fontanalis*; *H. stagnalis* plentiful in a village near us . . . *Helix annularis* is also found with *H. stagnalis*.

The rest of that page and all the last were devoted to other shells that she could not identify and ends, 'I have though more of the subject than of the writing I see in this letter'.

Several of the species listed would appear to be new records for this square ST94 under the national mapping scheme.¹⁰ Another letter (23 October 1826) to the shell dealer G.B. Sowerby (the 1st) in response to an offer he made at the time he published *The Genera of Shells*, to sell representative lots of these to collectors at £5 each, gives some idea of her gradual decline:

I am very sorry that your letter of the 2nd of September should have remained so long unanswered, but owing to your omitting Norton on the direction it was sometime before it reached me; and I have long been such an Invalid that writing many letters has been an exertion more than I was equal to. I believe you are not aware that I remained

in London till nearly the end of August. I was detained the last two months by severe illness which has left me so low in purse, as well as in health, that I regret to say that I cannot with prudence become a subscriber to your proposed scheme, although ten pounds worth of shells would have been a brilliant addition to my collection. I am the more sorry that the success of your plan is so necessary as the little assistance I might have afforded you is so inconvenient to me just now. I hope you have met with many others who are both able and willing to assist you in your plan.

Fortunately, much of her correspondence with Mantell has survived and is preserved in the Alexander Turnbull Library, in Wellington, New Zealand. A few other letters to the Sowerbys, and several to S.P. Woodward, the Norfolk naturalist with whom she exchanged specimens, are held by institutions in the U.K.

Examination of this material has provided further background to her collecting methods and relationships with her other contemporaries (Cleevely 1998a, 1998b). These letters reveal that her practical knowledge of geological formations and their fossils enabled her to participate in resolving problems of correlation between differing sedimentary rock-types. This experience also ensured that she was not deceived on the source of the fossils that were acquired. The letters also contain references to other facets of her life, social background and family incidents, all of which colour existing accounts of her life and reflect the history and attitudes of that period.

Family matters and illnesses often prevented Miss Benett from pursuing her collecting and forced her to give up geology for long periods. She explained this as being the cause of a long lapse in her correspondence with Mantell on 12 April 1825, and the vexation and annoyance at being deprived of her great amusement in pursuing the subject. As evidence she mentioned:

I need only inform you that with my house full of fossils in confusion, a fine set of cabinets which I purchased last year still remains empty, and that having had Professor Buckland's Book from the moment it was published, I was forced to acknowledge to him the other day, that I had not yet read it!¹¹

In 1818, her brother John Benett (1773-1852), who lived at Pythouse near Tisbury, contested an election for Wiltshire against the current MP Mr.

BennettJuly 15. 1813

Sir

I was leaving home for a week on a fatal illness the day after I was favour'd with your letter and I flatter'd myself that you would rather excuse the delay occasioned by my absence than receive a more formal letter of acknowledgements that from want of sufficient time to give the subject due consideration must have been devoid of the information you would wish to receive. Mr Lambert at the time inform'd me of your visit to him in Governor Street, and that he thought it might be in your power to communicate much valuable information to me respecting the Saxon Pottery which he knew had never fallen in my way, and he also thought my communications respecting those of this neighbourhood might not be unacceptable to you, as much of local information can only be obtain'd correctly from those who reside on the spot. by your letter to Mr Lambert I should guess that you had seen some of the Wiltshire Chalk Pottery, probably at Mr Lowbys, those I sent to him, if so you have the advantage of me in this particular, and are therefore better able to judge of the analogy between them and the Devon Pottery than myself. but those belong to two (in my opinion) very distinct Strata, and it must remain with me to separate them for you. that there was some analogy between the Saxon and the Wiltshire Pottery, I learnt from the valuable Works of Mr Parkinson who points out the oval Commonite and the Scaphite as inhabitants of the Saxon Hills, these are very scarce Pottery with us, and I should judge from his Works

Miss Bennett's first letter to Gideon Mantell (15 July 1813) in reply to his request to exchange information and specimens

Wellesley.¹² He was successful and served as the M.P. from 19 July 1819 until 3 Dec. 1832; in a subsequent election he became the M.P. for South Wilts., serving from 17 December 1832 until 1 July 1852, a few months before his death that year on 1 October. Inevitably, these family affairs were

mentioned in her letters and that of 15 September 1818 conveyed something of the trauma of the first campaign:

A contested election sets even Geology at defiance, and a Brother's life at stake, you may well suppose

rendered the scene much too interesting for me to think with effect on any other subject. Our opponent finding honorable means were of no avail against the Man, who was really the choice of the County, stuck at nothing, however dishonorable, to attain his end. He has carried his Election, but by means which has made him detested by all the respectable part of the County. By bribery and corruption of every kind he raised a Mob against us, and the mischief he has done by the demoralization of the lower classes is most deplorable and will be dreadfully felt for years. My Brother's life was preserved through the Election by means most honorable to him, most gratifying to all his family. — The Yeomen of the County . . . seeing the urgency of the case, from the highest to the lowest gave up all their own concerns for the whole time the Election lasted and at the risk of much personal danger, expence and inconvenience, kept up a spontaneous Guard of from four hundred to six hundred daily, and without whom my Brother could not move but at the risk of his life, so dreadfully had Mr. Wellesley poisoned the minds of the lower classes against the Man whose conduct they had all been eye witnesses for more than 20 years. A most striking proof how far Beer and falsehood will go with ignorant People. — Ours however is the Triumph, and I trust that a time will come when Mr Wellesley will find that the County of Wilts. is not to be carried a second time by bribery, falsehood and intimidation, nor would it now if we had been aware that such dishonourable means would have been used against us, but Mr Wellesley was deep in electioneering, it was my Brother's first attempt, and as there had not been a contest in Wiltshire for 46 years, no one suspected such conduct therefore [and] could not guard against it.¹³

Occasionally village affairs were mentioned and on 22 May 1837 she was preoccupied with what was an important local matter:

We have lost our poor old Vicar and the living being very small, the Property my Brothers, but he no ways interested in the Tithes as it is an endowed Vicarage; Ourselves having resided here thirty five years and being the only resident Gentleman's family, we sent the strongest memorial which we could pen to the Lord Chancellor requesting him to present a Neighbouring Curate, who was eminently qualified for the situation. Under the circumstances which we detailed to his Lordship we thought it almost impossible that he could have rejected our Petition. He has done so however and has given it to the Archdeacon of Barbados, who has been twelve years

in the West Indies and is returning broken in health wanting a quiet cure and little to do when no place in the Kingdom requires an active Pastor more than this Village does at the present time; the Archdeacon is not yet arrived and in the mean time the place has only a young Curate who of course can do nothing more than the regular service of the Church and in this state the parish has been these three Months. We are told that the Archdeacon is a good man and he may be so, but of course he can know nothing of the concerns of a country Village in England and it is hard to have such an utter Stranger poked close to our Noses for the rest of our lives; his way into the Village is by our door and our gardens — join only the fence between them, when we have a Clergyman at hand who is known, beloved and respected by all the lower Classes as well as the higher wherever he has been. This business distresses us sadly, but the Chancellor has the power and has used it, in spite of our solicitations.

August seems to have always been a particularly eventful month in the village, for the following year she provided some background to the rebuilding of the church. Presumably, since the family were involved they had reconciled their views on the new appointment. In a letter 10 August 1838 she had to apologise to Mantell for not despatching specimens as:

My mind has been occupied, I may say entirely engrossed, by one subject the last three or four Months at the least; the pulling down and rebuilding of our Parish Church, a work in which there is always many difficulties to encounter; and as this Place has been our family residence for more than 400 years, and the old Church contained the remains of our Ancestors for that period we know; and we mean to lie there ourselves, it is a work of more than common interest to us; Parish Committees are naturally for doing things at the least possible expence to themselves, while we as naturally wished it well done: our Property here is only a life interest in a huge old House to be kept in habitable repair, and about five Acres round it; but knowing our anxiety about it they would have let the Church fall on our heads, as it would very soon have done, if we had not *bought* every step we have gone in the business; and have driven it out so late that we laid the first stone only on the 31st July — but it is laid, and late as it is, we hope to cover in by the end of October. — We geologists know the value of good Materials and I decided on Tisbury Portland Stone, which has been a great difficulty, on account of

carriage 12 or 13 Miles, but here we have only Chalk and Barr Stone, neither of which suited our ideas for durability; their Architects always estimate too low, and no one would take the Contracts at his Prices, however we have surmounted it all and are at work, but there are still many exertions about it which keep me in a worry. You are such an anxious minded Person yourself that you will perfectly understand my feelings on the business; had I my old good health and nerves I would gladly have taken the responsibilities on myself to have had the power of beginning two Months earlier.

In a pamphlet on Norton Bavant, Watkin (1985) recorded that this work in a 'vaguely Perpendicular style' was completed by William Walker of Shaftesbury in 1840; further work was carried out in 1863 and the tower was finally restored in 1894.

Other letters between 1829 and 1838 to the Norfolk geologist Samuel Woodward, resulting from their mutual exchange of fossil specimens, mentioned her interest in collecting seals, for several refer to their despatch and receipt. This had also been indicated earlier in a letter to Mantell on 20 October 1816, in which Miss Benett thanked him for the explanation of his own fine seal and told him that the one she was using herself was that of the first Duke of Richmond & Aubigny according to 'a clever Herald and antiquary'.

In common with other families during the 19th century, the Woodwards endeavoured to gather portraits, particularly the fashionable silhouettes, of their friends and acquaintances. In fact, it is solely through this pursuit that there is a likeness of Miss Benett. This is first mentioned in a letter of 6 May 1834 when Miss Benett promised: 'I will get a sketch of myself when I have an opportunity'. On 22 Nov. 1835, she wrote:

I have not had any opportunity of having my shade taken and if I ever should get it, I fear, it will only disappoint you, as I have no profile, having no prominent feature.

Finally, she was able to send it and wrote on 15 May 1837:

I was going to Bath . . . and had . . . determined to have a Profile of myself taken, if I could get it done. I walk'd one day to find a person . . . till I was ready to drop with fatigue. . . . I only succeeded about an hour before I left Bath, and such as he has made me in a Bonnet Cap and velvet Spencer, you have me; or rather I should say, you have me not, for I do not think it will give you the least idea of me!; the dress I



A silhouette of Miss Etheldred Benett. The only known likeness of her produced for Samuel Woodward in 1837

am never seen in but in my Pony Carriage and it makes me look at least ten years older than I am; I could not alter my dress when I found the Man, for I had not a moment to spare.

That profile has featured in every account of Miss Benett, since it was used by H.B. Woodward for his history of British geology.¹⁴

An indication of her wider concerns was provided in another letter to Mantell on 22 March 1841 that mentioned a difficulty she had encountered arising from growing national concern over conditions in various industries, and the passing of an early Chimney Sweeps Bill intended to reduce the use of children. Miss Benett grumbled about this:

That stupid Chimney Sweeping Bill engrosses the attention of us Inhabitants of old Houses in the Country at present, I am certain no Machine can clean a Chimney where wood is burnt, for it must be scraped and no machine can possibly pull down Jack Daw's Nests, with which the Chimnies [sic] of Country Houses are so frequently filled; we are obliged to keep copper wire Nets, and strong ones too, over the tops of our Chimnies at all times to prevent it; fix'd on as fast as possible, and the

Chimnies so high as to make it dangerous at all times to get to the top for necessary repairs even. Our only two sitting rooms and the best spare bedroom are supposed to be impracticable to a machine; the Chimnies are in the principal Walls of the House, and the House 200 years old this year; so a pretty prospect we have of shaking it all to pieces, to say nothing of the expence and inconvenience if we should have to change the direction of the Chimnies. I hear that Lord Heytesbury, who enlarged and new fitted up his House at a great expence and five years ago, is now obliged to pull to pieces two of the sitting rooms and one other at a very considerable expence from this cause.

A letter of 12 September 1841 to her brother-in-law, A.B. Lambert (1761-1842) reflects her wide interests and views:

We have told our clerical friends of the wants of the New Zealand Church, but clergymen are scarce in this Neighbourhood. I have the fossil you speak of for

Benett 14 Nov. 1842

My dear Sir

Your kind letter followed me here a few days after my arrival, I was truly grieved to see such a sad report of your own health: God grant that your painful forebodings may not be realized: your having arranged your papers &c will in any case be a comfort to you, as it will relieve your mind from a weight which might press heavily upon it in the case of your illness increasing severely, which however I hope may be averted: your own knowledge of your case might possibly be usefully employed if you would give your attention solely to that point, and indeed it is become necessary; but your ardent wish to relieve others prevents your giving yourself a fair chance. I had been of necessity over working myself for two months before I came here

Dr. Mantell sent it to me many years ago from Tilgate Forest, a small specimen too, which is much more valuable to me than a large one. He gave a very fine large one to the British Museum, which I have seen there. Thanks for your account of it. Thanks also for mentioning the Shells, but you know they are things one could not purchase without seeing them, and perhaps I may have half of them already, which even if cheap would bring those I wanted dear, as a Lady would get nothing for her duplicates. I pick up a few here and there and so get on with them; I start on a 'frisk' in my Pony carriage tomorrow with the intention of going as far as Southampton for a couple of days, if not stopp'd by the forest flies on the way; but I have a horror of them, they make horses almost frantic, and if I should get so far, shall probably get a few shells there, at least I did so last time. The brilliancy of the gardens is now on the decline but they are still gay and while the present sunshine lasts the flowers will perk up their heads, but the heavy rains will spoil most of them; the *Yucca filamentosa* is

and was going to Portland the next day, when he said he would see about it, I expect I shall hear of them shortly, but as I may probably have to wait a little for them, I would not longer delay writing to you, as the Man who used to get them for me said they were not found in the regular working of the Quarries but they knew where to dig for them, and I imagine only do so when applied for not to spoil the sale of them; when I have got all the information which I am in view of you shall hear from me again, and with my earnest wishes for the restoration of your health I remain my dear Sir very sincerely Yours

Etheldred Benett

Pray allow me to remark that you have lately taken to spelling my Christian name Ethelred whereas it is Etheldred as above

b. York Buildings

14 Nov: 1842

P.S. For Mr. Horace Smith's pen I don't think it moved me much; I certainly should not like to meet your old friends in the spot in which he has attained them.

blowing splendidly opposite our windows.¹⁵ I am glad you have got a Lodging to suit you but I should not like residing at an inn, even with a view of the Royal Gardens from my Windows. It seems by your account of it that you must have got the Ball Room. Take care that they don't kick up a *bobbery* some day when you are out of it and you on your return find them all a dancing and a dancing. Now good night, with our kind remembrances.

From later letters, it would seem that Miss Benett was rather frail, despite her earlier energetic collecting activities, for she was often ill and affected by the extremes of weather. At times her medical adviser prescribed doses of quinine to gain relief from the pain of arthritis and eventually she became very lame. From 1842, she had difficulty in moving about – ‘now I am unable to go to see anything’. Her trips were limited to drives in a pony carriage around the neighbourhood and her jaunts to London and Weymouth ceased, for she declared that she had not yet got sufficient courage to use the railroads. During the following year on 9 August 1843 she informed Mantell, ‘my fossil room is a perfect chaos. It is so very long since I have been able to do anything to it . . . but I cannot help buying when they come my way’.

To achieve all that she did in her life, apart from being resourceful, she would need to have been rather formidable and determined. This is reflected in her forthright concern over the correct spelling of the family name. In a letter to the Norfolk geologist Samuel Woodward (2 May 1829), she wrote: ‘Pray excuse my saying that there is only one ‘n’ in my name – it is Benett’.

In November 1842, writing to Gideon Mantell, who had been a correspondent for thirty years, she took him to task in a postscript for a more critical error: ‘Pray allow me to remark that you have lately taken to spelling my Christian name Ethelred whereas it is Etheldred as above’ [referring to her signature]. Confusion over her name had earlier led to the assumption that her gift of fossils to the Emperor of Russia had been made by a man and an honorary doctorate from the University of St. Petersburg was sent in acknowledgement. (Jackson, 1881, 40).

She was also cautious when determining the fossils, realising that ‘more good specimens’ were needed before recognising a new species; and was extremely cautious about lending her specimens unless she had numerous duplicates. When assisting Sowerby to determine the nature of the

large Cretaceous bivalves then being found throughout the Cretaceous, by lending him her specimens, that he named ‘Inoceramus’ (see *Trans. Linn. Soc.*, 13:453-8), Miss Benett waited until she could safely take them up as ‘travelling companions’ on a coach journey to London (letter 10 Feb. 1815).

Conclusion

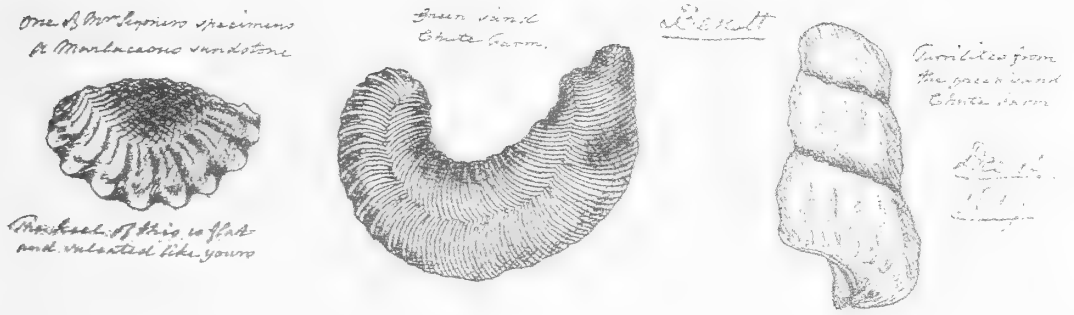
She was undoubtedly a lady of consequence, both in the 1800s and even at the present time, for research on her fossil collections still continues. The obituary attributed to Mantell (1846), recorded that ‘in private life this excellent lady was highly respected and beloved by a large circle of friends for her sincerity of manners and never tiring charity and benevolence.’ Her concern for others is apparent from the contents of many letters, but must have been rather awkward for Mantell himself, as Miss Benett persisted in enquiring about his wife and family, long after they had all separated from one another.

In the future, it is hoped to publish further transcriptions of her letters, together with chronological lists of all the correspondence that has been preserved in various archives, for the benefit of other researchers.

Acknowledgements

I owe a particular debt of gratitude to Tim Lovell-Smith, of the Manuscript & Archives Section, at the Alexander Turnbull Library, who kindly provided copies of the Benett letters in the Mantell Archive in connection with my research on Mantell's collections and publications. These, together with the occasion of the Mantell Bi-centenary Symposium in 1990, resulted in their use for an entertainment based on these letters ‘Believe Me, Dear Sir!’, which induced this further study of Miss Benett.

It is also necessary to record my appreciation of the help given me by the librarians and staff at the Natural History Museum, London, during my various projects on 19th-century natural history derived from work on the Sowerbys. Similarly, I am very grateful to the Librarian of the Special Collections at Bristol University for access to Benett letters in the Eyles collection and to staff at Norwich Castle Museum for the opportunity to examine the Samuel Woodward archive volumes.



Sketches by Miss Benett of fossils in her collection that headed a list of her comments on some fossils sent her by Gideon Mantell (letter, 14 December 1817), but they are not referred to in her letter and only briefly acknowledged in Mantell's reply of 31 January 1818. In the centre, the fragment of an ammonite she named 'Drepanites striatus' figured in her Catalogue (1831, pl. 16, upper left). The original specimen (ANSP 66006) is now in the Invertebrate Paleontology Department, Academy of Natural Sciences, Philadelphia, identified as *Hyphoplites pseudofalcatus* (Semonov, 1899). See Spamer, Bogan and Torrens (1989), 145-9.

Notes

- Woodward, H.B., 1911: see p. 126 In *History of Geology*. Watts & Co., London: vi+154 pp.
- Cleevely, R. J., 1998a and 1998b, '?? The first female palaeontologist; & Picture Quiz reply.' *The Linnean*, 14 (2):4-9; 25-6.
- Mantell, G.A., 1822, see p. 177 In *Fossils of the South Downs*, where he named the Cretaceous sponge *Ventriculites benettiae* after her.
- Mantell, G.A., 1846, [From a Correspondent] Obituary. Miss Etheldred Benett. *London Geological Journal*, 1846:40.
- This quote of Cunnington's was used by Miss Benett in the introduction to her catalogue (p.iii); James Sowerby published something very similar in his *Mineral Conchology*, Vol. 1, 1813:146, when referring to fossils from Chute Farm. Sarah Nash (1990) trying to locate the site, could only find a 'Brims Down' (p. 163) and reported (p.165) that a site known as 'Picket's Field' exposed similar deposits.
- 'William Smith's stratigraphical principles': stratigraphy is the term given to the study of the occurrence of the earth's rock formations, the principles of which were first established by Smith in 1815 with the publication of his geological map (Winchester, Simon, 'The Map that changed the World', Penguin Books). However, these ideas had been formulated in part by several other workers. Smith's 'Law of Super-position' recognised that in normal circumstances the youngest deposits will rest on the older and that the succession of rock formations will follow bed upon bed in chronological order. Inevitably earth movements will disturb the original sequence and can cause complications such as inversions through folding and other earth movement, or dislocations through faulting, both of which can be confused further by erosion. Smith's second principle was that layers of sediment can be recognised by means of the fossils they contain. This enables geologists to correlate certain formations, although occurring in different places and even of different lithologies, on the basis of identical fossils. For other references to Smith see: Joan Eyles, *Dictionary of Scientific Biography*, 12, 1975: 486-92.
- John Baker (fl. 1814-50) lived at Warminster and supplied the local Upper Greensand fossils to many 19th century collectors including the Sowerby family.
- Miss Beminster (fl. 1820s) lived at Christchurch and Hordle, Hants.; she corresponded and collected for James Sowerby.
- Torrens, H.S., Benamy, E., Daeschler, E.B., Spamer, E.E. & Bogan, A.E., 2000, 'Etheldred Benett of Wiltshire, England, the first lady geologist - Her fossil collection in the Academy of Natural Sciences of Philadelphia, and the rediscovery of "lost" specimens of Jurassic Trigoniidae (Mollusca :Bivalvia) with their soft anatomy preserved.' *Proceedings of the Academy of Natural Science of Philadelphia*, 150:59-123.
- The species have been re-determined by Dr. Mike Kerney (pers. comm.) as: *Helix palustris* = *Lymnaea palustris* (Müller); *Helix planorbis* = *Planorbis planorbis* (L.); *Helix spirorbis* = *Anisus leucostoma* (Millet); *Helix vortex* = *Anisus vortex* (L.); *Helix alba* = *Gyraulus albus* (Müller); *Helix contorta* = *Bathyomphalus contortus* (L.); *Helix hispida* = *Trichia hispida* (L.); *Bulla fontanalis* = *Physa fontinalis* (L.); *Helix stagnalis* = *Lymnaea stagnalis* (L.); *Helix annularis* = ? *Cepaea nemoralis* (L.)
- This was very probably William Buckland's *Reliquiae Diluvianae; or Observations on the organic remains contained in the caves, fissures, and diluvial gravel*, published in 1823, that related fossil remains, particularly those he had discovered in the Kirkdale

cavern, to the Flood. Several contemporary geologists (Farey, Fleming, Fitton, Smithson) immediately refuted this contention.

- ¹² This seems to be confirmed by information on the Web associated item "Election Time: England 1820" on the 'FREE postage mark' used by MPs, which uses a letter from John Benett, dated 14 Feb. 1820, to the Highworth solicitor James Crowdy, concerning the election for the Parliament of 4 Aug. 1818 - 29 Feb. 1820. This states that John Benett had been elected at a by-election in 1819, following the retirement of Paul Mellen on the grounds of ill-health. Apparently in 1820, Benett stood with John Dugdale Astley of Everleigh House, Wilts, who became the candidate for the other county seat at this election. William Pole Tylney Long Wellesley, who had contested and was elected in the campaign of 1818, did not offer himself in 1820.
- ¹³ John Benett was subjected to another riot at Pythouse during the 1830 riots of agricultural labourers seeking an increase in wages and against the use of threshing machines – see the account Chapter 10, p. 156 in *The Village Labourer 1760-1832 . . .*, by Hammond, J.L. & B. (1920).
- ¹⁴ see H.B. Woodward *History of geology* (1911,126).
- ¹⁵ *Yucca filamentosa*, the Silk Grass, named for the curly white threads which come from the leaf margin, and which produces a pyramid of creamy-white flowers. It was one of the many plants brought to England by John Tradescant the Younger (1608-1682) from N. America in 1675. This was a hardier species than *Yucca*.

References

- BENETT, E. 1831a, A catalogue of Wiltshire fossils. In Sir R.C. Hoare, *The Modern History of South Wiltshire*, Vol. 2, Part 2 (The Hundred of Warminster, by H. Wansey & Sir R.C.Hoare). London: J. B. Nichols & J. G.Nichols, 117-126
- BENETT, E. 1831b, *A Catalogue of the Organic Remains of the County of Wiltshire*. J.L. Warminster: Vardy, iv, 9 pp, 18 pls.
- CLEEVELY, R.J. 1998a. The first female palaeontologist. *The Linnean*, 14 (2), 4-9
- CLEEVELY, R.J. 1998b. [Etheldred Benett] Picture Quiz reply. *The Linnean*, 14 (2), 25-6
- CHARLESWORTH, E. 1840. Etheldred Benett. Collection *London Geological Journal*, 1 (2): inside cover
- JACKSON, Rev. Canon J.E. 1881. The Eminent Ladies of Wiltshire History. *WANHM*, 20, 26-45
- MANTELL, G.A. 1846. Obituary of Etheldred Benett. *London Geological Journal*, 1 (1), 40
- MURCHISON, R.I. 1832. Presidential Address to the Geological Society, 17 February 1832. *Proceedings of the Geological Society*, 1832 (25), 362-386
- MURRAY, J. 1848. Memorial to Etheldred Benett. *Mining Journal*, 18, 54 (29 January 1848)
- NASH, Sarah E. 1990. The Collections and life History of Etheldred Benett (1776-1845). *WANHM*, 83, 163-9
- SPAMER, E.E., BOGAN, A.E. & TORRENS, H.S. 1989. Recovery of the Etheldred Benett collection of fossils ...Analysis of the taxonomic nomenclature. And Notes and Figures of Type specimens. *Proceedings of the Academy of natural Sciences of Philadelphia*, 141, 115-189
- TORRENS, H.S., BENAMY, E., DAESCHLER, E.B., SPAMER, E.E. & BOGAN, A.E. 2000. Etheldred Benett of Wiltshire, England, the first lady geologist – Her fossil collection in the Academy of Natural Sciences of Philadelphia, and the rediscovery of 'lost' specimens of Jurassic Trigonidae (Mollusca: Bivalvia) with their soft anatomy preserved. *Proceedings of the Academy of Natural Science of Philadelphia*, 150, 59-123
- WATKIN, B. 1985. *Norton Bavant*. A5 printed pamphlet: 4pp
- WOODWARD, H.B. 1911, *History of Geology*. London: Watts & Co., vi+154 pp

Correspondence Archives

- Benett – Mantell letters [1813 – 1843] in Alexander Turnbull Library, Wellington, National Library of New Zealand. MS Papers 83 Folders 10a, 100.
- Benett – Sowerbys letters [1814 – 1840] in the Eyles Collection, Special Collections Library, Bristol University.
- Benett – Samuel Woodward [1829-38] in Norwich Castle Museum, Samuel Woodward Volumes, 1832-35.

Thomas Kytson and Wiltshire Clothmen, 1529 –1539

by Colin Brett

This article concerns the purchases of cloth, by the sixteenth-century London merchant Thomas Kytson, from Wiltshire clothiers, or clothmen as he preferred to call them, and the export of those cloths to the four seasonal marts in Antwerp and Bergen-op-Zoom. A previous article covered Kytson's dealings with Somerset clothmen.¹

Thomas Kytson, born in 1485, was the son of Robert Kytson of Warton in Lancashire. In his youth he travelled to London and was apprenticed to the mercer Richard Glasyer. On the completion of his apprenticeship he was admitted a freeman of the Mercers' Company in 1507.² He became a member of the Merchant Adventurers Company and dealt extensively in cloth exported to the cloth marts in Flanders and by so doing became an affluent London citizen. By 1521 he had amassed enough money to purchase Hengrave Hall near Bury St. Edmunds in Suffolk from the Duke of Buckingham for £2,340, the estates being valued at £115 yearly. Later in the decade he acquired manors in Devon, Dorset, Lancashire, Somerset and Suffolk as well as property in London. He obtained a licence from Henry VIII to build an embattled manor-house at Hengrave. This house, begun in 1525 and finished in 1538, was on a magnificent scale and reflected the great wealth of its owner. This wealth enabled him in 1521 to lend Henry VIII £2,340³ and the next year, in an assessment of the goods and lands of the citizens of London, he was assessed in goods at 1,000 marks, later amended to 4,000 marks, and in lands at 600 marks.⁴ He had extensive financial dealings with the Crown and in 1523 he was indebted to the Crown for £600.⁵ In 1535 he was again assessed at 4,000 marks (the seventh highest out of 146 citizens).⁶ He had a house, with a chapel, in Milk Street in the parish of

St. Mary Magdalen's, a garden in Coleman Street, and another house with a chapel in Stoke Newington, besides other houses in Suffolk and Devonshire. After serving as an alderman he also served as sheriff of London in 1533 and was knighted the same year.⁷ Kytson died on 11 September 1540 and was buried at Hengrave.⁸

In 1517 Kytson was recorded as one of 'late Treasurers of the Merchauntes adveneturers by yonde the see',⁹ and in 1525 was elected as one of the four wardens of the Fellowship of Mercers.¹⁰ As such he sat on the frequent General Courts of the Fellowship of Mercers and presided over the Courts of Assistants of the Mercers. He traded extensively in cloths and other goods at the cloth fairs in Flanders and appears to have had a house and a staff of 'servants' in Antwerp. Included in this staff would have been his 'factor' who received the cloths when they were shipped over from London and carried out the transactions with the continental merchants. Kytson became, probably, one of the most affluent of the mercers in the 1530s. After his death an inventory of his goods revealed that his warehouses in London held imports of cloth of gold, satins, velvets, tapestries, fustians, furs, bags of pepper, madder, cloves etc. valued at £1,181 15s. 1d.

The records of Tudor merchants are few in number, but among Kytson's books remarkably preserved are two in which are recorded his shipments of cloth to the annual marts. To some

extent the shipping entries in those two books are duplicated.¹¹ The second of the books, 'Thomas Kytson's Boke of Remembraunce'¹² also, more importantly, records the clothmen from whom he purchased the cloth and the prices he paid. Other entries include sales of various goods imported by Kytson from the continent, notes concerning goods being sent to Hengrave, purchases of land and property, and memoranda concerning recompense paid to the merchants in Antwerp or Barrow who had bought faulty cloth from Kytson. That book which was started in 1529 and was continued until shortly after Kytson's death, contains some scrawled entries by Kytson himself, but the entries are mainly by his factors or apprentices George Collyns, Robert Mathe, Thomas Wasshington and Nicholas Lunne, with a few later entries in the impeccable hand of William Cockyshed. A third book was kept by Thomas Wasshington and is his account of his dealings as Kytson's factor at the *Sinxten* mart held in 1536.¹³

Four annual cloth marts were held in Flanders, to which convoys of ships set out from London laden with cloth and other exports such as tin, lead and leather. The four marts were the *Paasmarkt* or *Pask* mart (the passion or Easter mart) which began on Maundy Thursday; the *Pinxten* or *Sinxtenmarkt* (the Pentecost Fair) which began on the second Sunday before Whitsuntide; the *Bamis* mart (St. Bavo's Fair) which started on the second Sunday after the feast of the Assumption (15 August) and the *Koudmarkt* or Cold mart which commenced on the Thursday before All Hallows Eve (31 October). The *Sinxten* and *Bamis* marts were held at Antwerp, and the *Pask* and Cold marts at Bergen-op-Zoom (known to English merchants as 'Barrow'), Antwerp, located near the conflux of the Rhine, Maas and Scheldt rivers, was on the trade routes used by German and Italian traders on their missions to Italy and the Danube basin. It was also conveniently sited for access to English and French ports, and placed on the sea routes used by the Hanseatic traders. Bergen-op-Zoom, only some thirty miles distant from Antwerp, was equally placed to enjoy the benefits of pan-European trade, but by the time that Thomas Kytson was using the marts its rôle was changing. Bergen-op-Zoom continued as a 'fair town' but mainly dealt with foreign traders only during the *Pask* and Cold marts. Antwerp, however, enlarged its foreign dealings from the peaks of the *Sinxten* and *Bamis* marts such that its business became more continuous, but this expansion was moderated by

the Merchant Adventurers' desire to maintain the periodicity of their trading at all four marts, especially the *Sinxten* mart. Antwerp drew merchants from across Europe to buy the famed English cloths and its Bourse provided the pre-eminent financial centre for the exchange of currency or the settlement of bills. In addition, Antwerp very nearly monopolized the European cloth-finishing industry. In 1537, there were 1,348 cloth finishers and journeymen employed in the conversion of the unfinished English cloths to the final fully-dressed and dyed cloth that the European middle classes craved for.¹⁴

An extract from the 'Boke of Remembraunce' of the entries relating to Kytson's dealings with Wiltshire for one year is given in Appendix 1. The shipping entries, notes and memoranda are written in English, but the records of purchases and sales are written in a mixture of abbreviated French, Latin and English, with the purchase prices being in code. This use of coded information was in accordance with the rules of the Mercers that 'no parson [person] shall discover to any straunger oute of the felishipp . . . what his good cost hym at the first bying or any tyme after . . . [and] the previtie or Secrettes of the buying of the wares shall not be discoverd nor understoud, uppon payn of £20 sterling'.¹⁵ A typical simple entry of two purchases is

Acchat de John Coope' de Edynton in Wilshere le 25		
io' de May A° 1531		
Item v whit, de sC s pd pc'		xiiij ^h iij ^s iiij ^d
Item l fyn whit de f ⁱ C' p ^d		iiij ^h vj ^s 8 ^d
	Sm ^a Tolls	xvj ^h xs
pd le mayn' io'	Sm ^a	xvj ^h xs

which equates to

Bought of John Cooper of Edington in Wiltshire the		
25th day of May of the year 1531		
Item 5 whites at 46s 8d the piece		£13 3s 4d
Item 1 fine white at £3 6s 8d		£3 6s 8d
	Total sum	£16 10s
Paid the next day	Sum	£16 10s

The first two lines record the initial bargain struck between Thomas Kytson and John Cooper for 5 white cloths at 46s. 8d. the piece, and the third line records that a further 1 cloth of finer quality was bargained for, with the total amount to be paid being given on the fourth line. The final line shows that Cooper was paid the next day.

Throughout the book the coded price (here in

italics) appears to be the maximum price Kytson was prepared to pay, or in the cases of the entries of his sales the minimum at which he hoped to sell his wares. The majority of cloths purchased were in packs of 10, and the purchase price was given for the pack. When smaller quantities were purchased the price was either for the pack, the half-pack or for individual cloths.

Sometimes not all the cloths that were bargained for were delivered at the time of bargaining. Such an entry in Kytson's book is

Acchat de Thomas Davy of Warmester le 8 io^r de
ffbruary A^o 1531

Item xx whit_s de mp^h ff s sd at xxviii^h xiiis iiiid le
packe lvij^h vjs viiid

Sm^a lvij^h vjs viiid

Resaved xiiij whit_s of the said 20 reste to Rs vij whit_s /
whiche he haythe promysed to deliv' on this syde
palme Sunday next comyng And he to have after the
said rayt as he hasse for thes afore resaved

pd le eodem io^r xxviii^h 13^s 4^d

Rs le 14 io^r de M^oche a^o 1531 vij whit_s

Rs le 19 io^r de M^oche a^o 1531 v whit_s

which equates to

Bought of Thomas Davy of Warminster the 8th day
of February of the year 1531

Item 20 whites at £28 13s 4d at £28 13s 4d

the pack £57 6s 8d

Sum £57 6s 8d

Received 13 whites of the said 20, [the] rest to receive
7 whites, which he hath promised to deliver on this
side Palm Sunday next coming. And he to have after
the said rate as he has for these afore received

paid the same day £28 13s 4d

Received the 14th day of March of the year 1531

7 whites

Received the 19th day of March of the year 1531

5 whites

Here the bargain was for 20 whites but only 13 were delivered by Thomas Davy, and he was paid for only 10 of them, perhaps as a security that the bargain would be honoured by Davy. Five weeks later the 7 cloths required by the bargain were delivered, and five days after that an additional 5 cloths were delivered. Kytson's factors often, as in this case, did not record that the outstanding and additional cloths were paid for.

Another entry of a similar kind is

Bought of Rychard Batte the 21st day of May of the
year 1534

Item 50 whittes at £32 16s 8d at £32 16s 8d the pack.

Sum £164 3s 4d

Memorandum. Resaved at the bargayn makyng 40
whittes, and he hathe promysed to delyver 10 whittes
moo within 2 days hereafter

Resaved the 23rd day of May of the year 1534

10 whittes at £32 16s 8d £32 16s 8d

Richard Batte was as good as his word in delivering the 10 'whites' within two days, which raises the question of how he managed it. Batte, of Westbury, had probably travelled to London with his fellow townsman William Adlam and John Brede, Robert Petter and John Norinton of Devizes who all made bargains with Kytson on 21 or 22 May. Batte could not have arranged for the 10 cloths to be transported from Westbury to London within the two days. Had he been touting the cloths around the London mercers or did he sell another clothman's 'whites' to Kytson on 23 May? An alternative, but unlikely, suggestion is that Kytson might have travelled to Wiltshire to deal with his clothmen; but he would then have had the task of taking some 141 cloths of Batte and his fellow workers to London. The entries in the 'Boke' do not suggest that the prices paid to Kytson's suppliers were offset by the costs incurred in taking the cloths to London, or that they were specifically charged for these costs.

Kytson's main interest was in the unfinished broadcloths or 'whites' although he did buy significant quantities of 'penestones'¹⁶ from Cheshire and also some 'Kentish russets',¹⁷ 'friezes',¹⁸ 'cottons',¹⁹ 'kersies'²⁰ and 'Castlecombs'.²¹ The main centre of production of the 'whites' was in the valleys of the Avon and Frome rivers, and the area from Warminster to Devizes, so that Kytson's suppliers came predominantly from Somerset and Wiltshire. The places where most of his suppliers lived may be determined from the entries in his 'Boke of Remembraunce'. Although Professor Carus-Wilson, when writing about Kytson's 'Boke', stated 'the pre-eminence of west Wiltshire for the manufacture of white woollen broadcloth is immediately apparent from a perusal of Kitson's book',²² the present author has shown that this claim is incorrect.²³ Wiltshire came second to Somerset in supplying Thomas Kytson with the cloths which he exported to the Continent. From the entries in Kytson's 'Boke' the overall statistics relating to his purchases and exports of 'whites' may be determined, and are shown in Table 1. The purchases are here collated in 'Exchequer years' so

that Kytson's share of the English exports may be determined. The Exchequer year ran from Michaelmas to Michaelmas because the Crown, like other great landlords, made up its accounts at harvest time. The export figures for cloth and the customs derived from them were recorded by port officials and ultimately the summation of these figures was made up by Exchequer clerks in the Exchequer Enrolled Accounts.²⁴

The Wiltshire clothmen and the numbers of 'whites' they sold to Kytson in each 'Exchequer year' are shown in Table 2. The clothmen and their

collated numbers of cloths are listed in chronological order, as they appear in the 'Boke'.

Unlike in Somerset where Thomas Kytson bought the greatest number of cloths from a single clothman (3340 cloths from John Cleveland of Beckington), Kytson had no preferred Wiltshire clothman to supply his needs. Over the 10 years covered by his Boke of Remembraunce the principal Wiltshire suppliers were Richard Batte, Roger Tanner and John Lawrens, all of Westbury, who each supplied more than 400 cloths. Richard Erle of Melksham, Robert Adlam and John

Table 1. Thomas Kytson's purchases and exports of white broadcloths, 1529 - 1539.

	Exchequer Year, Michaelmas to Michaelmas									
	1529-1530	1530-1531	1531-1532	1532-1533	1533-1534	1534-1535	1535-1536	1536-1537	1537-1538	1538-1539
Number of whites bought by Kytson										
Wiltshire*	280	257	593	619	450	364	746	803	413	581
Somerset	276	530	802	1031	1029	713	758	980	538	500
other or unknown*		35	14	34		30	27	33	33	20
Total	556	822	1409	1684	1479	1107	1531	1816	984	1101
Wiltshire share %	50.4	31.3	42.1	36.8	30.4	32.9	48.7	44.2	42.0	52.8
Number of whites exported by Kytson										
Wiltshire	288	246	437	655	548	284	659	939	123	894
Total	625	990	1050	1722	1848	818	1480	2012	799	1599
Wiltshire share %	46.1	24.8	41.6	38.0	29.7	34.7	44.5	46.7	15.4	55.9
Total number of cloths exported by denizens. **	42,812	36,069	32,241	44,105	50,292	42,235	51,143	47,458	49,288	37,699
Kytson / Wiltshire share of total exports %	0.673	0.682	1.355	1.485	1.090	0.672	1.289	1.979	0.250	2.371

Sources:

1, Cambridge University Library (CUL) Hengrave Hall MS.78/2. (Raw data).

2, E. M. Carus-Wilson and O. Coleman, *England's Export Trade 1275-1547*. (Number of cloths exported by denizens).

* The figures for cloths from Wiltshire and of other or unknown clothmen differ slightly from those originally given in Reference 1. This is partially accounted for by re-attribution e.g. Katherine Pyarde (whose domicile is not given) is now assumed to be the widow or daughter of Christopher Pyarde of Trowbridge. Additionally a few whites ('course whites of Herefordsher making', 'Walche whites', 'Castelcomes' made in Gloucestershire and Oxfordshire, and 'long whites' of Weobley and Ludlow) are not included in the above figures.

** Woollen cloths were accounted for in terms of the standard 'cloth of assize', measuring approximately 24 yards long by 1½ to 2 yards wide when fulled and finished. Cloths of other sizes were converted for customs purposes into cloths of assize. The Wiltshire broadcloth 'whites' conformed to cloths of assize. 'Denizens' are defined as merchants who were regarded for customs purposes as if they were native-born subjects of the King and who cannot be identified as aliens from the accounts.

Table 2. Sales of 'whites' by Wiltshire clothmen to Thomas Kytson.

Clothmen ²⁵	Exchequer Year, Michaelmas to Michaelmas											
	1529	1530	1531	1532	1533	1534	1535	1536	1537	1538	1529	
	1530	1531	1532	1533	1534	1535	1536	1537	1538	1539	1539	
George Adlam of Westbury	20											20
John Reynold of Steeple Ashton	15											15
Thomas Ashlocke of Haytesbury	120							40				160
Richard Erle of Melksham	100	105										205
John Cooper of Edington	5	32										37
Robert Adlam of Westbury	20				30			40	40	120	#	250
Edward Hannam of Westbury		15										15
Roger Tanner of Westbury		40	176	232	10							458
Robert Bathe of Westbury		40	37									77
John Lawrens of Westbury		15	94	66	51		150	60				436
Thomas Davy of Westbury		10	45									55
John Vaugham of Westbury			190	110								300
John Usher of Westbury			10									10
John Baker of Devizes			1									1
William Eyer of Warminster			10									10
John Adlam of Westbury			30	105				20				155
John Knyght of Devizes				26								26
John Knyght						5						5
John Norinton of Devizes				20	53		81	65				219
Richard Batte (Bates) of Westbury				40	105	60	289	181				675
Robert Maye of Melksham				20	20	40						80
Richard Mydlecode of Warminster					20			10				30
'another man'					10							10
John Knyght of Bishopstrowe					10		10	10				30
Edward Longford Lanckforth) of Trowbridge					10			10				20
John Blagdon of Longbridge					60							60
John Brede of Devizes					10							10
William Adlam					40				20			60
William Adlam the elder							30		40	30		100
William Adlam the younger							20					20
Robert Petter of Devizes					8							8
Robert Heryot of Trowbridge					13						5	18
Thomas Davy of Horningsham							28		20			48
John Smyght (Smeth) of Devizes							15		86			101
Geoffrey Whitacher of Westbury							93	18				111
Richard Bathe							50	15				65
John Dyet of Trowbridge							1					1
John Radmund of Wilton							5					5
John Coke of Laycock							17					17
John Hedge of Malmesbury								20*				20

William Stumpe of Malmesbury							59*				59
Thomas Bayley the elder							1				1
Thomas Baylyff (Bayley)								50			50
William Blackden (Blacdon)							60	60			120
John Rawlins of Warminster							20				20
Edward Banwell of Westbury							10	10	10		30
Aldhelm Lambe							13	16		54	83
Thomas Longe								3			3
Robert Bridges of Iford								10			10
John Bennett of Warminster								40			40
John Usher of Warminster								15			15
William Holbroke of Salisbury								5			5
Richard Adams of Laycock								12	26	19	57
John West of Trowbridge								5	10		15
George Rawlins of Warminster								15			15
Richard Cross of Erlestoke								10			10
John Duffell of Westbury								10			10
John Lyversidge of Kilmington									30		30
Humphrey Yerbyrre									30		30
John Smethe of Westbury									6		6
William Allen of Calne									78	70	148
Alexander Langford junior									32	96	128
Alexander Langford senior									26	62	88
the wife of Richard Bayth (Bathe)									40	105	145
Katherine Pyarde									5	20	25
Roger Wynssloe of Keevil										22	22
John Alway of Keevil										10	10
John Walesse of Trowbridge										45	45
Robert Fraunces of Bromham										1	1
Totals	280	257	593	619	450	364	746	803	393	659	5164

Source: CUL Hengrave Hall MS.78/2.

* Those cloths are recorded both as 'whites' and 'Castelcomes'.

80 of these 120 whites were purchased by Kytson on 11 October 1539 (at the beginning of the 1539 to 1540 Exchequer year).

Vaugham of Westbury and John Norinton of Devizes each delivered more than 200 cloths. Towards the end of Kytson's life, the Alexander Langfords (senior) and (junior), of Trowbridge, William Allen of Calne and the widow of Richard Bathe became major Wiltshire suppliers to Kytson. As in Kytson's dealings with his Somerset contacts it is not to be supposed that other clothmen from whom Kytson purchased cloths were necessarily small producers. Clothmen such as Thomas Ashlocke of Heytesbury, Robert Bathe and the

William Adlams of Westbury, Robert Maye of Melksham, John Smethe of Devizes and William Blackden who supplied Kytson with cloths in packs of 10 must have been major producers who sold their cloths at other times to other merchants. Kytson bought 'whites' from about 70 Wiltshire clothmen over the ten-year period covered by his 'Boke of Remembraunce'. He was only one of many merchants who purchased 'whites' for export to meet the insatiable demand of the Continent for English cloths.

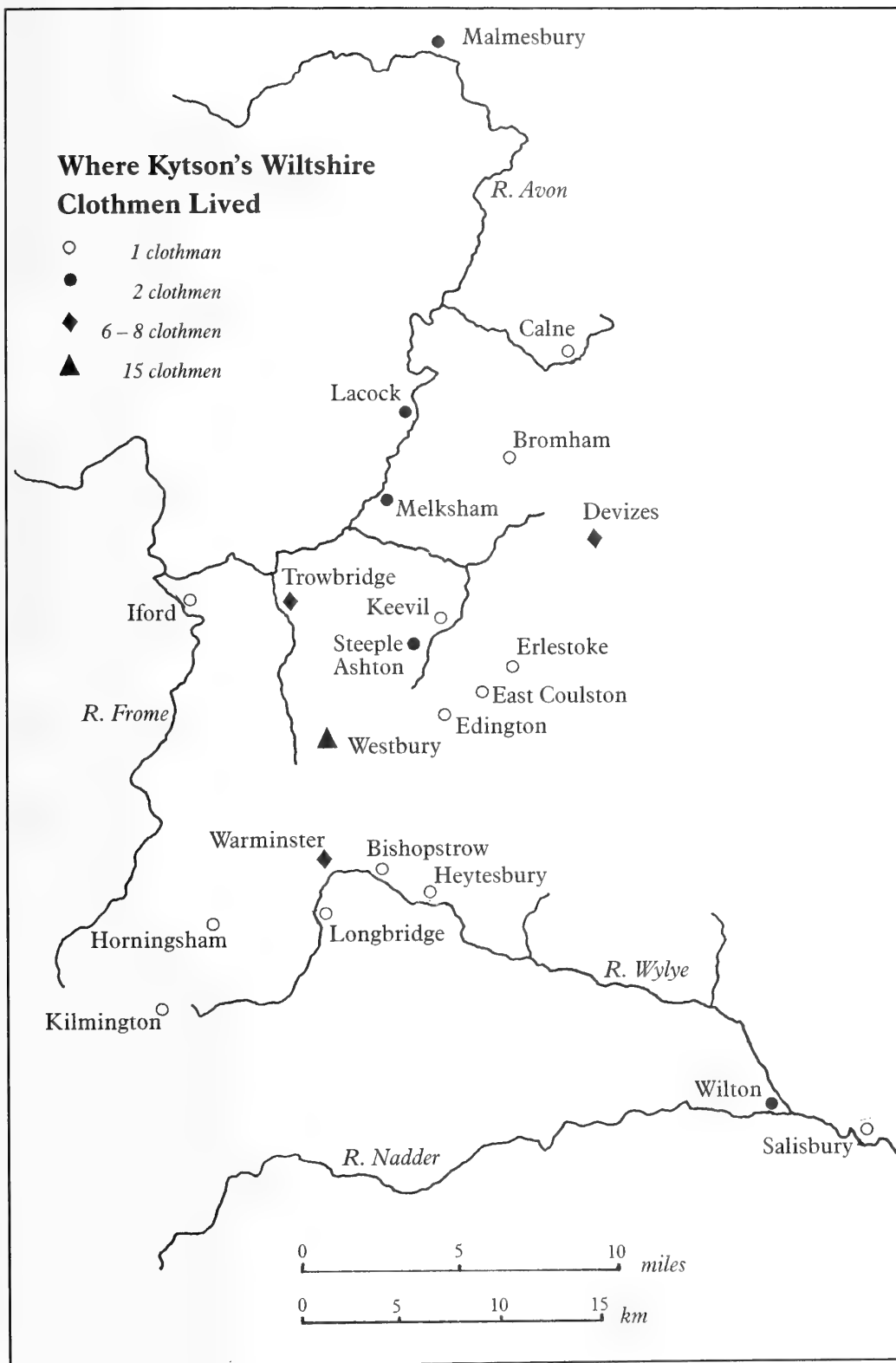


Table 3. Some prices paid for Wiltshire white cloths by Thomas Kytson.

Clothman	Price paid for a pack of 10 cloths
Robert Maye of Melksham	£35, £35, £35 13s. 4d.
Roger Tanner of Westbury	£25 13s. 4d., £29, £29, £29, £29, £30
John Lawrens of Westbury	£28 13s. 4d., £30, £29, £30, £32, £31 10s, £30
Robert Adlam of Westbury	£26 13s. 4d., £30, £32, £32 6s. 8d.
Richard Batte of Westbury	£33, £32, £32 10s, £32 10s., £32 10s., £32 10s.
Richard Adams of Laycock	£33, £32, £32, £32
John Knight of Bishopstrowe	£28 5s., £28, £28
John Vaugham of Westbury	£29, £29, £29, £29
Richard Erlle of Melksham	£33 6s. 8d., £40, £33 6s. 8d., £33 6s. 8d., £40
Roger Wynssloe of Keevil	£32 10s. and £4 10s the cloth

Source: CUL Hengrave Hall MS.78/2.

The prices that Kytson paid for cloths depended on the quality of the spinning and weaving. In 1529 George Adlam of Westbury and Richard Erlle of Melksham were paid £33 6s 8d for each pack of 10 cloths, whereas John Reynolds of Steeple Ashton received only £25 which was about the lowest price that Kytson ever paid for white broadcloths. Most of the clothmen were recorded as supplying cloth of only one quality. John Cooper of Edington, as shown in the example quoted above, supplied whites at £25 6s. 8d. the pack (£2 10s. 8d. each) and one 'fyn whiit' at £3 6s. 8d.. Another example is:

Bought of John Norinton the 29th day of May of the year 1536

Item 41 whites at £30	£30 the pack	£123
Resaved 36 fyne & 5 cowrsse		£14
Resaved the 2nd day of June 5 whites fine		
	Total sum	£137

Here John Norinton of Devizes made a bargain to supply 41 cloths at £30 the pack, but five of them were of a coarse quality for which he was to be paid at the rate of £14 the half pack. Four days later Norinton supplied 5 whites of a fine quality to honour the original bargain. The most that Kytson ever paid for a Wiltshire white broadcloth was £4 13s. 4d., but there were exceptional circumstances on this occasion. Thomas Wasshington recorded:

Bought of Thomas Bayley thelder by the handes of hys servand William Wyllkyns the 4th day in March of the year 1535[6]

Item one fyne whitte at £4 13s 4d at £4 13s 4d

£4 13s 4d

Memorandum that the sayd William Wyllkyns hath promysed the sayd clothe to be 29 yards at the watter paid the same day, Sum £4 13s 4d

The normal length of a broadcloth was about 25 yards but on this occasion Thomas Bayley had sent a cloth which would have measured 29 yards 'at the watter' i.e. when wetted, as required by Statute.

The prices that were paid by Kytson to some of his suppliers for packs of 10 cloths are shown in Table 3. Most clothmen supplied cloth of consistent quality as shown by the prices they received. Others, like Richard Erlle and Roger Wynssloe, provided Kytson at two separate prices indicating coarse and fine qualities.

It is possible to determine the average prices which Kytson paid for the Wiltshire whites and these are given in Table 4 both for single cloths and the more usual pack of 10 cloths.

It is also possible to determine what Kytson paid out for all the cloths that he purchased from the Wiltshire clothmen. His total expenditure for

Table 4. Prices paid for Wiltshire white cloths by Thomas Kytson

Exchequer year	Price paid by Kytson	
	per cloth	per pack
1529 – 1530	£2 18s 10d	£29 8s 0d
1530 – 1531	£2 15s 1d	£27 11s 0d
1531 – 1532	£2 18s 5d	£29 4s 3d
1532 – 1533	£3 1s 0d	£30 10s 0d
1533 – 1534	£3 2s 10d	£31 8s 4d
1534 – 1535	£3 5s 9d	£32 17s 4d
1535 – 1536	£3 2s 11d	£31 9s 0d
1536 – 1537	£3 3s 7d	£31 15s 9d
1537 – 1538	£3 4s 7d	£32 5s 11d
1538 – 1539	£3 3s 10d	£31 18s 8d

Source: Calculated from details in CUL Hengrave Hall MS.78/2.

Wiltshire ‘whites’ over the ten-year period was £16,010 8s. 3d. at an average of £30 15s. 8d. for each pack of 10 cloths.

Kytson was able to export virtually all the ‘whites’ that he bought. In 1514 an Act had forbidden the export of unfinished cloth valued at more than 5 marks (£3 6s. 8d.).²⁶ In 1536 a further Act raised the price limit to £4 for whites and £3 for coloured cloths.²⁷ With a few exceptions Kytson paid less than £4 for single ‘whites’ and exported these cloths within the law. However, he also exported the few dearer cloths that he bought. The single fine ‘white’ that Thomas Bayley sold for £4 13s. 4d. was exported to the *Sinkson* mart in 1536, and two ‘fyne whites’ of Roger Wynssloe of Keevil which cost Kytson £4 10s. each were exported to the Cold Mart in 1538. One ‘fyne whitte’ that Kytson bought for £4 6s. 8d. from Richard Batte of Westbury on 28 April 1537 was exported to the *Sinkson* mart at Whitsuntide in 1537 as ‘1 white no 41 of Richard Battes for store’. Later in the year Thomas WASHINGTON recorded:

Delivered to my master the 15th day in December in the year 1537

Item 1 fyne whitt of Richard Battes at £4 6s 8d
which was dyed black in Flanders.

Here was an example of Thomas Kytson reserving a particularly good white broadcloth for his own use and identifying it as ‘for store’ so that it was not sold to the dealers in Antwerp. There the unfinished cloth was dyed and returned to London after the Cold Mart in 1537.

With one exception all the Wiltshire cloths purchased by Kytson were described as ‘whites’. However in 1535 Kytson purchased 40 ‘Castellcomes’ and 19 whites from William Stumpe and 20 whites from John Hedge of Malmesbury. When Kytson exported these cloths they were all described as ‘Castelcomes’. No other Wiltshire clothmen supplied ‘Castlecombes’ to Kytson. He did however buy them from clothiers in Gloucestershire and Oxfordshire.²⁸

Unlike the several Somerset clothmen who supplied Kytson with other goods, like silver, kersies and other types of cloth, only one Wiltshire clothman sold anything other than cloth to him.

Bought of John Duffell of Westbere under the planne the 17th day of Maye of the year 1537

Item 10 whyttes at £32 at £32 the packe	£32
Sum	£32

Later, on the same page, a memorandum was penned:

Memorandum John Duffell owth as dothe a pere by a nowut made the 24th day in December in the year 1537 & also by a byll of Thomas Harfordes owne hand as dothe a pere

& for rest thatt he owthe is with the 20^o nobyllles
£25 14s 1d
Rebatte for 79 barell of 3 halpenny bere at 3s the
barrell Sum £11 17s
So rest £13 17s 1d

paid to the sayd John as this daye beyinge the 24 day of December in the year 1537

Item in redye monye to the Sum of £6 13s 4d
Sum £20 9s 5d

Memorandum that the sayd John Duffell hathe promysed my master of gyft 2 barrelles of 3 halpeny bere to be delyvered medyatlye after Cristmas in the year 1537 paid & quytt

An entry in the margin of Kytson’s ‘Boke’ records that John Duffell was paid for his 10 ‘whites’. Duffell was then lent 20 nobles (£6 13s. 4d.) by Kytson but was also in debt in respect of a bill of Thomas Harford’s. Set against Duffell’s total debt of £25 14s. 1d. was a rebate of £11 17s. for 79 barrels of beer supplied by him. He was then paid a further £6 13s. 4d, making the total sum of £20 9s. 5d. owed to Kytson. Perhaps in recognition of the loans Duffell gave Kytson two further barrels of beer. Later Duffell must have paid the outstanding debt which is marked as ‘quit’.

From earlier entries in the ‘Boke’ it is evident that as well as selling cloth John Duffell brewed beer:

Sold to John Duffelde bere bruyar the 11th day of November 1533

Item 2 sakes of hoppys n^o 4 weight 5Cwt / n^o [blank] weight 5Cwt 3qtr 14lb.

Sum weight all m^l [=10Cwt] 3qtr 14lb, at 7s [the Cwt] £3 16s

Memorandum that John Duffeld hayth resaved of Thomas Harford £4 the 8th day of January [1533/4], to be payd in bere, and after that the said £4 be paid the said John Duffeld hayth granted to delyver [word illegible] £4 of his old detts, and further as my master & he can agre.

Sold to John Duffell macer the 18th day of January of the year 1533[4]

Item 1 sacke of hoppys at 7s at 7s, weight 3½Cwt 3lb.

Sum 24s 9d
 Item on sacke hoppes the first day of Marche of the
 year 1533[4], weight 4Cwt 10lb at 7s the Cwt.
 Sum 28s 7d halfpenny

Sold to John Duffel bere bruar the 29th day of Aprill
 of the year 1534

Item 1 sacke of hoppys weight 2Cwt 2qtr 27lb at 7s
 the Cwt. Sum 19s 2d

Sold to John Duffelde macer the 19th day of July of
 the year 1534

Item 1 sacke hoppys weigth 2Cwt 21lb at 7s the Cwt
 Item more 1 sacke weight 2Cwt 7lb at 7s the Cwt

Item more the 24th day of July 7 sackes weight as
 follows. 1 weight 2Cwt 2qtr, 4Cwt 16lb, 3Cwt 3qtr 8lb,
 3Cwt [1]qtr 14lb, 3Cwt [1]qtr 6lb, 3Cwt 2qtr 18lb,
 3Cwt 3qtr 2lb,

Sum weight all 28Cwt 3qtr 18lb at 7s the Cwt.
 Sum £10 2s 4d halfpenny

To paye at plessure

John Duffell, described both as a 'bere bruyar' and 'macer'²⁹ was shown as not only buying sacks of hops but also borrowing £4 from Thomas Harford. Elsewhere in the 'Boke' it becomes evident that Thomas Harford was a fellow mercer of Thomas Kytson, and although there is no record that Kytson bought from Harford his cloths were sometimes included with Kytson's purchases in the fardells of cloths exported to Flanders. The above memorandum perhaps indicates that in 1533-4 Kytson was a go-between for loans made by Harford to Duffell. Four years later Duffell still owed money to Harford, as well as being in debt to Kytson. Kytson certainly profited from Duffell's beer. Assuming that Duffell's barrels each contained 36 gallons and that the beer could be sold at three half pence (1½d.) a gallon, the 3s. purchase price per barrel could have turned into a sale price of 4s. 6d., or a 50% profit.

The 'Boke of Remembraunce' records the exports made by Kytson, and the majority of these are of cloth, with some Cornish tin also included. For each mart there was a record made of the ships and the cloths assigned to each master for the passage to Flanders. The export of goods to the four annual fairs was governed by the rules of the Merchant Adventurers. No merchant was allowed to ship his goods independently but had to use and pay for the ships chartered for the collective use of all of the merchants. The Merchant Adventurers had three classes of officials to manage the convoy from London to Flanders. When a fleet was about

to sail for a mart 'appointers' were chosen, to see to its equipment and protection, and those men were either elected in General Court or named by the different fellowships of the Adventurers.³⁰ In order to pay for the fleet 'conduitors' were chosen who assessed and levied the necessary rates to pay for the convoys (the 'conduit money'), and kept the accounts.³¹ Those accounts were checked by the 'auditors'.³² The London Fellowship who chartered the ships also determined when the fleet sailed, where it went or even if it went at all, depending on the circumstances and the likelihood of attack by Scots or Scandinavian pirates.³³ The 'appointers' had 'to se that the shippes have theire complement and also furnysshed with men, with vitail, takkle & ablements of Warre, lyke & accordyng to the Charter partie'.³⁴ In 1522 Kytson had been elected as one of the eight 'appointers' of the Merchant Adventurers for the *Pask* mart,³⁵ and in the next year he became an elected 'conduitor' for the *Sinxten* mart fleet and sought naval protection by Henry VIII from 'the Kyng of Denmarke [who] ys uppon the See with a grete Navye of Shippes and ys arved in the Cost of Flaunders'.³⁶

In order to mitigate the financial loss that might have occurred if a ship had been attacked or lost at sea Kytson arranged, for every sailing to the marts, for his cloths to be sent on several ships. The materials were made up into 'fardells' of about 40 cloths,³⁷ and occasionally there was also a 'truss' of a smaller number of cloths. No one fardell contained more than 32 of any clothman's cloths, and even the small number of cloths of a minor producer was spread throughout the fleet. When Kytson shipped 39 fardells to the Cold mart in Barrow in 1536 they were distributed between 24 ships, and of these ships, 19 carried 30 fardells with Wiltshire cloths in them. The prime-quality whites were wrapped either in canvas or even in the inferior 'coarse whites' or the cheaper 'cottons' or 'penestones'. Kytson's clerks recorded

there was spent in canvass . . . for hedges & sydes shypyd to the Synckson mart 1536, 76 yerds. Thes 76 yerds mad 4 sydes, quantity in every syd 10 yerdes. 5 [sic = 4] hedges, quantity in every hede 9 yerds. Total sum 76 yerds.

Item more spent for a syde 19 yerds. Sum 95 yerds, yelles 71.

Often there is an entry in the make-up of a fardell, such as - 'Item 1 whitt cowsse of [John] Norintons, wrappers'. Part of a typical entry in Kytson's 'Boke' is

The shyping by the grace of God to the Colde mart anno domini 1535

A fardell³⁸ no *f* in the James of Baryng master under God Thomas Wattes

Item 32 whites no 2 de Richard Battes

Item 8 penystones de J[ohn] G[ranthams] wrappers

A fardell no *C* in the Mary Gabriell master under God John Clarke

Item 32 whites no 4 de Gyffray Whi[t]ackers

Item 7 penystones de J[ohn] G[ranthams] wrappers

A fardell no *p* in the James of Barkyn master under God Thomas Wattes

Item 6 whites no 2 de Richard Battes

Item 6 whites no 4 de Gyffray Whi[t]ackers

Item 10 whites no 1 de J[ohn] Clevelodes seconds

Item 10 whites de Thomas Harefordes

Item 7 penistones de John G[ranthams]

A fardell no *ff* in the Owsse of London master under God Robert Archer

Item 32 Castell comes no 6 de William Stumpes

Item 7 penytones of John Granthams

A fardell no *fs* in the Mary Thomas of London master Richard Rede

Item 8 Castell comes no 7 de John Hidges

Item 10 whites no 2 de Richard Battes

Item 2 whites no 4 de Gyffray Wh[i]tackers

Item 1 white no 1 de J[ohn] C[levelodes] thrids wrappers

Item 1 penystones de John Granthams

The number of the fardell was always given in code;

the codes for numbers 3, 6, 8, 13 and 14 being illustrated.³⁹ Prior to making up the fardells each batch of clothman's cloths was allocated a number, and here the numbers 1, 2, 4, 6 and 7 corresponded to the cloths of John Clevelod, Richard Batte, Geoffrey Whitacker, William Stumpe and John Hedges respectively.⁴⁰ Professor Carus-Wilson has stated that Kytson's 'cloths were carefully graded and described by numbers ranging from 1 to 19',⁴¹ but this is not the case. The numbers related to the clothman, and were allocated afresh for each shipping. If a clothman supplied different grades, as did John Clevelode, the grades were usually all allocated the same number. Here the clerks noted that John Clevelod's 10 seconds and 1 'thrid' (third) were both given the same identification number '1'. Occasionally, as shown in Appendix 1 in the extracts from Kytson's 'Boke' for the whites exported to the *Synxten* mart in 1537, a clothman's whites might have two numbers allocated but these were for different grades, e.g.

no 4 of John Smeths fine' and 'no 7 of John Smeth C[oarse],

'no 19 of T[homas] Bayles' and 'no 23 of Baleys fine'

'no 1 of Richard Battes' and 'no 41 of Richard Battes for store.

For the shipping to this Cold mart Kytson used 13 different ships to carry 23 fardells of cloth. Wiltshire cloths were included in 13 fardells carried in 11 of the ships. It is also recorded that 11 of the ships also carried 121 blocks of Cornish tin as shown in Table 5. Each block was allocated a separate number which was recorded by the clerk, Nicholas Lunne, who also noted 'Total sum 121 blockes tynne Cornysse to the Cold Marte A° 1535, freight fre'.

Ship and home port	Master's name	Cornish tin	Cloth
		Number of blocks	Fardell numbers
Trinite of London	Richard Holmes	12	1, 9
Catherine of Calais	John Sowle	10	2, 5
James of Barking	Thomas Wattes	10	3*, 8*
Owsse of London	Robert Archer	14	4, 13*
Mary Gabryell	John Clarke	15	6*, 7
Edward of Hull	Thomas Perrett	10	10, 15*
Francis of London	John Leche	10	11*
Mary Thomas of London	Richard Rede	10	12, 14*
Cristopher of Feversham	Robert Barrye	10	16*, 18
Mary & John of Orwell	John Sandes	-	17*, 20
John Baptist of Lee	Robert Morsse	10	19*, 23*
Cristopher of Maidstone	Symond Barnes	10	21*
Wolsey of London	Robert Gage	-	22*

Table 5. Kytson's exports to the Cold Mart 1535

Source: CUL Hengrave Hall MS.78/2.

* indicates the fardells that contained Wiltshire cloth

The weight of each block of tin being approximately 3 hundredweight probably accounted for them being carried 'freight free' as they would have been useful as stabilizing ballast.

The numbers of white broadcloths exported by Thomas Kytson to the Flanders marts are shown in Tables 6 and 7. The exports are collated in 'Exchequer years'.

When the numbers of cloths exported by Kytson are compared with his purchases there are some differences in the annual totals, but those may be explained by the fact that cloths were being sent by the clothmen to London after the last sailing to the *Sinxten* or *Bamis* marts and before the end of each Exchequer Year. It also appears that not all of the cloths that Kytson purchased were exported. The total number of Wiltshire cloths exported by him over the ten-year period amounted to 5073 out of the 5201 that he purchased.

The 'Boke of Remembraunce' records the sales made by Thomas Kytson in England, and of these only six were made to Wiltshire men. These were only a fraction of the sales made by Kytson to

Somerset clothmen and they all occurred early in the decade covered by the 'Boke'.

Sold to Thomas Taylour of Trowbridge in Wiltshire the 27th day in October of the year 1529

Item 36 whittes bowght of Alys Cope Widdowe as shall apere in Purchases folio 142 at *44s 5d 1 halfpenny* sterling the clothe & solde to the said Taylor at *46s 5d* sterling the clothe at all one with a nother £83 10s

Total Sum £83 10s

Paid the same day £83 10s

Sold to Syr Edward Baynton knyghte of Wilsher the 27th day of May of the year 1530

Item 1 chyne [chain] of fyne gold, weight 29 ½ ounces at 54 s 10d the ounce & 5d over in all

£80 18s

Item in Redy mony to Master Edgar for hym £35 2s

Sum £116

To pay at Haloutyd next £58

To pay at Ester next £58

Sold to Robert Adlame the 15th day of September of the year 1530

Table 6. Thomas Kytson's exports of white broadcloths to the Flanders marts.

Exchequer Year, Michaelmas to Michaelmas		Mart				Total
		Cold	Pask	Sinxten	Bamis	
1529 - 1530	Wiltshire	60		228		288
	Total	197		428		625
1530 - 1531	Wiltshire	86	70	51	39	246
	Total	306	311	157	216	990
1531 - 1532	Wiltshire	186	191	60		437
	Total	328	495	227		1050
1532 - 1533	Wiltshire	350	135	170		655
	Total	751	438	533		1722
1533 - 1534	Wiltshire	187		341	20	548
	Total	576		983	289	1848
1534 - 1535	Wiltshire	135		149		284
	Total	278		540		818
1535 - 1536	Wiltshire	282		377		659
	Total	602		878		1480
1536 - 1537	Wiltshire	640		299		939
	Total	1181		831		2012
1537 - 1538	Wiltshire	0		123		123
	Total	369		430		799
1538 - 1539	Wiltshire	483		330	81	894
	Total	818		700	81	1599
1539 - 1540	Wiltshire	0				0
	Total	14				14

Source: Calculated from details in CUL Hengrave Hall MS.78/2.

Table 7A. Thomas Kytson's exports of Wiltshire white broadcloths, 1529 – 1534.

Mart	Exchequer Year, Michaelmas to Michaelmas														
	1529-1530		1530 ----- 1531				1531 ---- 1532			1532 ---- 1533			1533 ---- 1534		
	Cold	Sinxten	Cold	Pask	Sinxten	Barnis	Cold	Pask	Sinxten	Cold	Pask	Sinxten	Cold	Sinxten	Barnis
Clothman															
Nic. Affarnwell	60														
George Adlam		20													
Thos. Ashlocke		120													
Richard Erlle		68		60	45										
John Reynolds		15													
John Cooper		5	11	10	6										
Richard Adlam			20												
Roger Tanner			40				28	56	30	110	60	60	72	10	
Edm Hannam			15												
Robert Baythe						39	37								
John Lawrens							40	45		50		40		50	
Thomas Davy of Warminster							30	25							
John Ussher							10								
John Vaughan							40	55	30	110		50			
John Baker							1								
William Ayre								10							
John Adlam										80	55				
John Knyght of Devizes											20				
John Norinton												20		53	
Robert Maye													20		20
Richard Batte													95	50	
Rich Mydlecote														20	
Robert Adlam														40	
John Knyght of Bishopstrowe														10	
William Adlam														40	
Robert Petter														8	
John Blagdon														60	
Total	60	228	86	70	51	39	186	191	60	350	135	170	187	341	20

Source: Calculated from details in CUL Hengrave Hall MS.78/2. The clothmen and their collated numbers of cloths are listed in chronological order, as they appear in the 'Boke'.

Item 1 pece holland quantity 42½ Aunes⁴² 25½ elles
at 10d 21s 3d

Item 1 pece holland quantity 41½ Aunes 24 elles 4
quarters⁴³ at 12d 24s 10d

Item 1 pece holland quantity 41 Aunes 24 elles 3
quarters at 13d 26s 8d halfpenny

Item 2 half bales of wode 3C [1]qtr 26lb at 18s the C
£3 2s 7d

Total Sum £6 15s 5d

Item plus a elle of barras canvas at 4d

Total Sum £6 15s 9d

Resaved the same £6 15s 9d

Sold to John Rennoldes of Stepulaston in Wilshar
Clotheman the 22nd day of May of the year 1531

Item one Balle of Ulmus fustyan at £21 10s [Flemish]
price £17 16s 8d

To pay the 24 day of August next

Memorandum that my master hasse in gayge for the
payment of the said £17 16s 8d one baylle of drye
pepper weight 2C [1]qtr 20 lb of the said John
Raynoldes to be delyvered to the said John at the

Table 7B. Thomas Kytson's exports of Wiltshire white broadcloths, 1534 – 1539.

Mart	Exchequer Year, Michaelmas to Michaelmas										
	1534 - 35		1535 - 36		1536 - 37		1537 - 38		1538 - 39		1539
	Cold	Sinxten	Cold	Sinxten	Cold	Sinxten	Cold	Sinxten	Cold	Sinxten	Bamis
Clothman											
Geof. Whitacker	10	43	48	10							
John Smyght of Devizes	10				20	33					
Wm. Adlam sen.	30										
Wm. Adlam jnr.		20									
Wm. Adlam								20	70		
Robert Heryot	10									5	
Richard Bathe	50										
Robert Maye	25	20									
John Knyght		5									
Thomas Davy of Horningsham		18			20						
Thomas Radmund		5									
Richard Batte		20	80	190	150	91					
John Coke		17									
John Dyett		1									
John Lawrens			40	90	55						
William Stumpe			59								
John Hedges			20								
John Norinton			35	46	65						
William Blackdon				40	40	40					
Thomas Bayley				1		30					
Thomas Long					3						
Edw Lanckford					10						
Robert Bridges					10						
William Holbrok					5						
John Weste					5			8			
John Ussher					15						
John Bennett					40						
John Rawlins					80						
Edward Banwell					20			10			
John Knyght of Bishopstowe					20						
Aldhelm Lambe					30				14	40	
Thomas Ashlocke					40						
Richard Adams					12			11	34		
Richard Crosse						10					
Richard Midelcote						10					
John Duffel						10					
Robert Adlam						52			80		80
John Adlam						8					
George Rawlins						15					
John Smethe of Westbury								6			

John Leveragesage								10	10				
William Allen								58	40	50			
Katherine Pyet									10	14	1		
Alex. Langford jun									53	75			
Alex. Langford sen									50	40			
Roger Wynsloe									42				
Mistress Baythe (Bathe)									80	60			
John Walles										45			
Robert Fraunces										1			
Total	135	149	282	377	640	299	0	123	483	330	81	0	

Source: Calculated from details in CUL Hengrave Hall MS.78/2. The clothmen and their collated numbers of cloths are listed in chronological order, as they appear in the 'Boke'.

payment a fore rehersed of £17 16s 8d
delivered to John Raynoldes the 26th day of August
of the year 1531

Item 1 baylle of drye pepper weight 2C [1] qtr 20 lb.
And quites.

Sold to John Norinton of the Vyes Clotheman the
25th day of May of the year 1531

Item 2 ballettes of woode weight 3 ½ C 4 lb at 17s the
hundreth. Sum £3 1d halfpenny farthing
Sum £3 1d halfpenny farthing

Sold to Roger Tanner the 22nd day of August of the
year 1532

Item one tonne of Syvell oyle at £15 at £14.
Sum £14

Perhaps in the sale to Thomas Taylour of the 36
whites that he had bought from the widow Cope,
can be discerned a desire to sell quickly these poor
quality cloths at a minimal profit rather than risk
their failure to sell in the Flanders marts.

The sale of the fine gold chain to Sir Edward
Baynton illustrates two points. Firstly, that Kytson
sometimes rounded up the sale price to his
advantage, here the actual price of £80 17s. 7d was
increased to a round £80 18s. Secondly, Kytson
charged Sir Edward £35 2s. which the latter must
have owed to 'master Edgar',⁴⁴ and was given until
'Haloutyd' (All Hallows, 1 November) and the
following Easter to pay the total debt in two
instalments.

The two sales of woad indicate that Robert
Adlam and John Norinton probably fulled and
dyed some of their cloths for local sale. The 'Seville
oil' sold to Roger Tanner would have been olive oil
used in the spinning of the wool and distributed or

sold by him to his spinners. Oil was used at the rate
of about 8 to 10 pounds per the 60 or 70 pounds of
wool in each cloth⁴⁵ so a tun of oil would have been
sufficient for approximately 300 cloths. The
'holland' (a linen fabric made in the province of
Holland in the Low Countries), the 'barras' canvas
(a coarse cloth made of hemp or flax, in this case of
unknown provenance)⁴⁶ and the 'Ulmus' fustian (a
coarse cloth made in Ulm from cotton and flax)⁴⁷
illustrate the kind of fabrics that Thomas Kytson's
factors bought in the marts and then had shipped
home to London. These purchases are not recorded
in the 'Boke', but the dispersal of the imported
materials are sometimes commented on:

Delivered to my master the 24th day of December of
the year 1530

1 fyne pece of Holonde, quantity 24 Flemish elles, the
which pece holonde clothe my master dyd geve to
Master Recorder of London

Delivered to my master the 7th day of July of the year
1531

one turks carpett, which carpett my master gaffe to
master Recorder of London

It is noteworthy perhaps that Kytson made these
two gifts of a length of holland and a Turkish carpet
to the 'master Recorder of London', one John Baker
who served in this elected office from 1526 to
1535.⁴⁸ As the vast majority of the entries in
Kytson's 'Boke' (except for the shipping lists and
memoranda of deliveries to his wife at Hengrave)
are concerned with the recording of amounts of
money involved in the purchase or sale of goods,
the question is raised whether the gifts to John
Baker were bribes; was Kytson guilty of some
misdemeanour or did he seek Baker's help in some

advancement? Within a year or so Thomas Kytson was elected to the shrievalty of London.

The sale of one bale of Ulmus fustian to John Rennolds was coupled with a sale of nearly two and a half hundredweights of pepper. Thomas Wasshington noted in his memorandum that his master had 'in gayge' (engaged = bound by contract) for the sale of one bale of dry pepper to Rennolds. The pepper was to be delivered to Rennolds in three months time when the payment of £17 16s. 8d. for the fustian was made. Presumably John Rennolds subsequently sold most of the pepper to his Wiltshire neighbours.

Other entries in the 'Boke' are of interest to Wiltshire, such as the memoranda penned by the clerks:

Memorandum that I Thomas Wasshington hath paid unto Henrye van Acland of Andwerpe for stoppes, holes & other fawtes in John Vaugham clothes sold to hym in the Sinkson Martte 1533, Sum 40s Flemish

Memorandum that I Thomas Wasshington hath paid unto Lenard Depetter factor for Nycholas Wollffe for stoppes, holes & other fawtes in John Adlam clothes sold to hym in the Bamis martt 1533. Sum 40s Flemish

Here Thomas Wassyhgtton was recording that recompense had been paid to Henry van Acland and Nicholas Wollffe for faulty cloths of John Vaughan and John Adlam sold at the *Sinxten* and *Bamis* marts in 1533. The two Flemish merchants had each been paid 40 Flemish *schellingen* (shillings). Altogether there are records of 13 instances where recompense was paid for faulty cloths made by Wiltshire clothmen. It is not clear exactly how many cloths were faulty but on the basis that recompense was paid at some 10s. or 15s. per cloth, it appears that about 28 cloths or 0.5% of Kytson's exports of Wiltshire 'whites' had escaped detection by the aulnagers' inspections before they were exported. Another entry of this type is:

Memorandum that I Nicholas Lonne [Lunne] hath resaved agayn of the Pymmels 10 whites of Roger [Richard] Battes whiche I sold to them in the Passe marte 1534, which was sold to them for £51 [0]g, which I toke a gayne as yt was agreatt by 2 indeferent men whiche clothes was fulle of holles & stoppes, and was sold agayne to Ayrt van Wellick as yt appereth by my enteryng [?] for £45 [0]g [Flemish]. Wherin ther was lost £6 [0]g to be resaved of Richard Batte.

Item mor paid by me Nicholas Lonne to Anthony Bumbargym for fawttes in Robert Mayes clothes sold to hym in the Cold mart 1533 for holles & stoppes. 6s 8g [Flemish]

Resaved of Robert May the 28th day in September 5s sterling

This entry records that two independent arbitrators had been appointed to settle the complaint of the Pymmels against Kytson. The Pymmells probably were agents, because there are instances where faulty cloths were recorded as being 'resaved from the Pymmels, sold to Garard van Rotyngnam'. Nicholas Lunne had taken back 10 whites of Richard Batte, repaid the Pymmels their 51 Flemish *pond groot* and resold the defective cloths to Ayrt van Wellick for 45 *pond groot*. Lunne then recorded that the resulting loss of 6 *pond groot* was to be received from Richard Batte in the future. In the second item there is a glimpse of the exchange rate at the Cold mart in 1533. The payment of 6 *schellingen* 8 *groten* is equated with the 5 shillings sterling which the clothman, Robert May subsequently paid. The exchange rate was 26 *schellingen* 8 *groten* to 20 shillings sterling.

From these records can be learnt the names of some of Thomas Kytson's dissatisfied customers in Antwerp and Barrow. Besides Henry van Acland, Nicholas Wollffe, the Pymmels, Ayrt van Wellick and Anthony Bumbargym there were Philip Lenycke, John van Clett, George Kester and Jacob Stott.

Thomas Kytson's financial arrangements with his clothmen show that he always paid his established suppliers in cash on receipt of the cloths. When he made a bargain with a new supplier it appears that, not surprisingly, he wanted to see all the cloths that he had bargained for before paying any money. An entry in Kytson's 'Boke' reads

Bought of George Adlame of Westbere under playne the 18th day of March of the year 1529

Item 20 whites £33 6s 8d at £33 6s 8d the pack. Sum £33 6s 8d

Resaved the same day 10 whites paid the same day £33 6s 8d

Item that I George Adlame promyse my master to delyver by twene this & Witsontyde & herveste. 10 whites. I have sette my hand & he to have for them £33 6s 8d, so that they be as good of leynthe, wole, spyunnyng & making &c by me [signed] George Adlam Resaved the 18th day of May of the year 1530 10 whites

The bargain made in March 1529/30 was for 20 whites at £33 6s. 8d. the pack, but only 10 whites were received and paid for on the same day. George Adlam put his signature to his promise to deliver the remaining 10 whites between Whitsuntide and harvest. The cloths were received by Kytson on 18 May.

A similar entry in the 'Boke' is

Bought of Richard Batte the 8th day of September of the year 1535

Item 100 whites at £32 the pack Sum £320
of the which 100 whites ys resaved at this day 40 whites. So that there resteth 60 whites which he haith promised to delyver be twyxt this and Alhalloutide next comyng. And that thay shall be of as good spynnyng, lenth and maykyng as thes a fore resaved, and yff he make more the said 60 whites to delyver them at the said prisse which ys £32 for every packe.

To in hand as the clothes ys resavid £220
To pay the fyrst day in May next. Sum £100
Resaved the 7th day of October of the year 1535
40 whites

Resaved no moo whites of Richard Batte to the Cold Mart 1535 but 80 whites for the which he was paid after £32

Here Richard Batte bargained with Kytson to supply 100 whites of which only 40 were delivered. Batte then promised to deliver the remaining 60 before All Hallows (1 November), but only managed to deliver a further 40. This entry illustrates a further point. All Hallows was the last day allowed by the Merchant Adventurers for shipping to the Cold mart.⁴⁹ By not receiving the last 20 cloths by this date Kytson missed the opportunity to sell them at the Cold mart. Although Richard Batte missed the All Hallows deadline he delivered a further 190 whites to Kytson by the following June.

Before 1535 clothiers had usually marked their cloths with a distinctive mark, but by a Statute enacted in that year it had been made imperative: 'every Clothier within this Realm shall weave, or cause to be woven, his or their several Token or Mark in all and every Cloth, Kersey and other Cloths, whatsoever they be, made and wrought to be uttered and sold.'⁵⁰ The 'Boke' contains drawings of the marks of 24 Wiltshire makers, all entered between 1535 and 1538. The marks are illustrated in Appendix 2, together with a note of the colour of each mark.

In the autumn of 1538 Nicholas Lunne penned the following entry

Bought of the wyffe of Richard Bayth by the handes of Aldam Lame the 6th day in September 1538.

Item 80 whites at £32 at £32 the pack. Sum £256.0.0d
[a clothier's mark appears in the margin]

Resaved the same day 40 whites, and he hayth promysed that the other 40 to be delyvered on this syd Alhalowtid and that they shall be of as good woll, lenth, spynnyng & maykyng as thes ayr afor resaved, and to pay as thay ayr resaved the 2 partes in hand and the rest at Candemas next; and yff Aldam Lam have ned off £20 or £30 14 days after Alhalowtide he to have ytt in party payment off his bill payable at Candemas; & he hayth further promysed that lyk as thay be marked in the ledes thay shall hold the sayme lenthes when thay come owt of the watter.

and later he added

Resaved the 31st day in October 1538 25 whittes
Resaved more the same day 5 whites
Resaved the 19th day in November 1538 7 whites
Resaved the same day in November off this mark
5 whites

[another clothier's mark appears in the margin]

£224

Resaved the 22nd day in November 1538 3 whites

These entries show that on 6 September 1538 Aldam Lame [Aldhelm Lambe] made a bargain on behalf of Richard Bathe's widow for the sale of 80 whites of which half were delivered that day with the promise that the remaining 40 would be delivered before 1 November. Richard Bathe *alias* Wheatacre [Whitaker] of Edington had last sold cloths to Thomas Kytson in June 1536 and had died a few months before.⁵¹ Aldhelm Lambe, probably of the adjacent parish of East Coulston, was thus acting for the recently bereaved widow Bathe.⁵² The 40 whites delivered on 6 September were paid for on that day, with the promise, by Nicholas Lunne, that the remaining 40 would be paid for on Candemas Day (2 February). If however, Lambe wanted £20 or £30 before the middle of November it would be given to him but deducted from the amount due to him at Candemas. Aldhelm Lambe returned to London on 31 October with 30 whites from widow Bathe, thus failing to deliver all of the 40 promised whites by the All Hallows deadline.

Another entry shows that Lambe delivered 10 of his own whites on that same day, and another two on 2 November. He was in London again on 19 November when 12 more of the widow's cloths were delivered and also a further two of his own. Three

days later Nicholas Lunne received a further three of the widow's whites. Here are further instances of a clothman making deliveries of cloth on near-adjacent days without being able to return home to Edington and back to London, just as did Richard Batte in 1534 (see above). Why did Lambe deliver 25 and 5 whites separately on 31 October? Had he been unsuccessfully touting the cloths to other merchants? Also why were the 7 and 5 cloths recorded as separate deliveries on 19 November? This second question is easier to answer. When Nicholas Lunne penned his original entry on 6 September he added a clothier's mark in the margin of the 'Boke'. This mark must have been that of the recently deceased Richard Bathe. Of the 12 whites delivered on 19 November seven of them were probably marked with Bathe's mark but the other five are recorded as being marked with another mark that incorporates the initials IB. Richard Bathe's wife's name was Joan⁵³ who had thus changed from using her late husband's mark to a new mark of her own. This mark was obviously not recognised by Nicholas Lunne who therefore recorded the 'IB' mark in the margin of the 'Boke'. Although the Merchant Adventurers' rules were that no cloths were to be shipped to the Cold mart after All Hallows, Lunne was accepting cloths up to 22 November, the day that he received the last 3 whites of Joan Bathe. He had recorded the make-up of the 24 fardells and three trusses that were shipped to the Cold mart in 1538:

The shipping by the grace of God to the Cold Marte holden in Barrow a° 1538

a fardell no *f* in the Mary Gabriell of Birkylsay master under God John Hurlock

Item 32 whites n° 1 of mastres Baythes

...

a fardell no *f* in the Mary Fortune of Lee

Item 8 whites n° 1 of mastres Baythes

...

a fardell no *In* in the Catherine of Calles

Item 3 whites n° 1 of mastres Baythes

...

a truss no *mC* in the Peter of London

Item 7 whites n° 1 of mastres Baythes

...

a truss no *mB* in the Trinite of London

Item 3 whites n° 1 of mastres Baythes

and after he had finished he added:

Memorandum that there remanet unpacked 5 whites here at home of this marke which was resaved of

mastres Baythe and Aldam Lamme by the handes of Geffray Whitacker in the sted of thers the 19th day in November a° 1538

He then drew the IB clothier's mark, and added 'the strypes yellow and the letters rede'.

The inference is that 'mistress' Joan Bathe and Aldhelm Lambe were seen by Nicholas Lunne to be a form of partnership that had used Geoffrey Whitaker to take the five whites marked with Joan's IB mark to London. Two Geoffrey Whitakers are known, one of Westbury who sold whites to Kytson in 1534 and 1535, and the other of Tinhead in the parish of Edington who objected to his cloths being subjected to searching by London aulnagers in the second half of the century⁵⁴ and whose will was proved in 1601.⁵⁵ Richard Bathe (Whitaker) did not have a son called Geoffrey so it would seem likely therefore that the Geoffrey who delivered Joan Bathe's 5 whites was the Geoffrey of Westbury, perhaps a brother or near-relative of Richard Bathe.⁵⁶

Altogether 85 whites of Joan Bathe had been delivered, all but five with the recognised mark of Richard Bathe which were sent to Barrow and five with the new mark which were not. The next March Thomas Wasshington added:

Memorandum that thes 5 whites were delivered to [?]Cerle the 23rd day in March A° [1538/39]

Thomas Kytson passed on these five whites instead of exporting them. When the record was made of the whites exported to the next mart – the *Sinxten* mart at Antwerp – only those whites of Joan Bathe and Lambe that had been received in London after 22 May 1539 were included.

Lambe made the usual promises, as several times recorded by Kytson's clerks, that the remaining 40 cloths would be up to the standard of the cloths already delivered, but in addition he 'further promised that like as are marked in the leads they shall hold the same lengths when they come out of the water'. Lambe was making this promise, on behalf of Joan Bathe, in accordance with the 1535 Statute which stipulated that

When any such Cloth shall be ready made and dressed to be put to sale, every . . . clothier shall set his Seal of Lead unto every . . . Cloth and Kerseys, in which Seal of Lead shall be contained the true and just Length of every . . . Cloth and Kersey, as it shall duly be found by every Buyer of the same, upon due Proof thereof to be tried by the Water. And in case

upon any such Proof to be made by any Buyer of them at the Water, there shall be found less . . . Length than is contained and specified in every of their said Seals, then every . . . Clothier . . . shall lose and forfeit unto every such Buyer . . . the double Value of so much Cloth as shall want . . . in Length.⁵⁷

Lambe was therefore confident that Joan's whites would comply with the recent Statute.

It appears that each clothman normally took his own whites to London in order to make his bargain with Thomas Kytson, but in addition to the above case of Aldhelm Lambe helping the widow Bathe in autumn 1538 there are a few entries where the clothmen used other men to carry their cloths.

4 March 1536	Thomas Bayley the elder by the hands of his servant William Wylkyns
13 Oct 1536	John Bennett of Warminster by the hands of Robert Stokes
27 April 1537	John Smeth of Devizes by the hand of T Clevelode
24 May 1538	William Allen by the hands of William Ysse
6 June 1538	William Adlam by the hands of Robert Adlam the younger
24 Oct 1538	Richard Adams of Laycock by the carrier William Lerde
15 Nov 1538	Alexander Longford the elder by the hands of John Nashe carrier
22 May 1539	the wife of Richard Bathe by the hands of Aldhelm Lambe
10 June 1539	the wife of Richard Bathe by her carrier
2 June 1539	Aldhelm Lambe by John Barle
6 June 1539	Aldhelm Lambe by Ryse Peyett
6 June 1539	Aldhelm Lambe by Thomas Grove

In the early years of the 'Boke' a record was kept of the costs of shipping the wares to and from the fairs. These records are all lightly crossed out, not because they were wrong, but probably as though they were re-entered in another book, now lost.⁵⁸ The following record illustrates the varied costs involved in getting the fardells of cloth on to the ships, and other ancillary costs:

Costes of clothes shipped to the Cold Mart holden in Barrowe A° 1531	
pd for byndyng of 11 fardells at 9d the fardell	8s 3d
pd for caryng to the watter syde of 7 fardells at 6d the fardell.	Sum 3s 6d
pd for caryng to the wattersyde of 4 fardells and to the cartars for watching for them, at 9d the fardell	3s 3d

pd for cokkettes	16d
pd and geven to the maryners of Birkilsay for taykyng in of a fardell when yt was lykly to rayne	2d
pd and Geven to the Sarchers	4s
pd for portrage, cranage and lyghtrage of 11 fardells and a trusse	11s
pd and geven to the lyghtermen for rowyng a gaynst the streme at nyght with a fardell and for taykyng uppe of yt at the key	6d
pd for caying of a empty pype to the Ayle brewars	1d
pd for my boott hire for this shipping	7d
pd for my boot hire for shipping 3 hogges heddes of bere in Richard Harwood	2d
pd for caryng to the watter syde of a pipe with ayle	4d
pd for caryng to the watter syde of a chist, 2 ferckynges with brawne and a hampper	4d
pd for portrage and cranage of the pipe with ayle and the chist	4d
pd for my boott for shipping of the ayle	1½d
pd for my boyett for shippyng of the hampper with venyson in Perys Smeth of Flussing	2d
pd for a lydd for the sand boxe	1d
Total sum of all the costes	34s 2½d
pd & quite	

Not only are there payments for the expected costs of binding up the fardells, the portorage, cranage and lighterage charges, and the 'cokkett' or sealed export permit obtained from the Customs House, but also incidental expenses paid to the porters for watching over four fardells while they were at the waterside, and a gratuity given to the mariners for saving a fardell from getting wet when it was likely to rain. The fardells were taken to the quay at Barrow by lighter, and rowed against the stream. The incidental costs of carrying a chest, two ferkins of brawn, a hamper of venison, three hogsheads of beer and a pipe of ale were also included in the costs. The references to Richard Harwood and Perys Smeth refer to the ships of these two masters. From elsewhere in the 'Boke' it becomes evident that Harwood's ship was the *John Baptist* of London, and that Smeth's unnamed vessel was not used for carrying the fardells of cloth to any of the marts even though it was used on this occasion for carrying provisions. Other costs sustained by Kytson included making sure that cloths were in good condition before they were shipped to the fairs. For this he employed the services of two London shearmen, Harry James and Matthew Sharpe. One entry reads, 'delyvered to Herry James shereman to wasshe & drye a whitte of

Wylliam Adlam the younger the 14th day in February 1534. Resaved the 3rd day in Marche 1534, 1 whitte as is above rehersed', and a similar entry was made in December 1536 for Harry James to dry, fold and tack &c 2 whites of Richard Batte's.

From Thomas Wasshington's account for the *Sinxten* mart of 1536 can be learned the gross profit that Kytson reaped from his sales. Wasshington recorded the sale of 859 cloths for £4,300 13s. Flemish. At the exchange rate of 25 *schellingen* 6 *grogen* for each pound sterling (the rate at which Wasshington had had to borrow money in Antwerp) the price of those 859 cloths, that had cost Thomas Kytson £2,588 5s. 6d. sterling, was equivalent to £3,235 6s. 5g. Flemish. The gross profit that Wasshington gained for his master was therefore £1,065 6s. 7g. Flemish or 32.9%

Typical of Wasshington's entries that relate to Wiltshire clothmen (names underlined) are:

Sold to Ullryght factor for the Pymmels &c	
Item 152 whittes of John Clyfflodes fynest makying of £32 sterlyng the packe	
Item 2 whittes of John Clyfflodes second makying of £3 14s the pece	
Item 40 whittes of <u>Wylliam Blackedonnes</u> of £34 10s sterlyng the packe	
Item 10 whittes of <u>Geffrey Whitacher</u> of £34 the packe.	
Total sum 204 whittes at £52 10s g the packe	£1071 0s 0g
To pay in redy monney	£534 2s 1g
To pay in the Colde Martt next commyng 1536	
Sum	£536 17s 11g

Sold to Wylliam van Innersell of Andwerppe &c	
Item one fyne whitte of <u>Thomas Bayles</u> of £4 13s 4d the pece at £7	Sum £7 0s 0g
Resaved be me Thomas Washyngton in silver & quit	

Sold to Frans Gyles and George Kesselor of Andwerppe &c	
Item 90 whittes of <u>John Lawrens</u> of £30 sterlyng the packe	
Item 8 whittes of Thomas Joes of £3 10d sterlyng the pece	
Item one whitte of John Clyfflodes second makying of £3 16s sterlyng	
Item one whitte of <u>John Norrynton</u> best makying of £3 the pece	
Total sum 100 whittes at one with another £47 g the pack	Sum £470 0s 0g
To pay in the Bawius Martt next commyng	
Sum	£235 0s 0g

To pay in the Colde Martt next commyng	
Sum	£235 0s 0g

Each entry gave the sterling purchase price in code (here in *italics*) and the sale price in Flemish currency. – *ponds groot*, *schellingen* and *grogen*. Usually the buyers were not expected to pay for their purchases until the next *Bamis* mart or the Cold mart, some four or six months after the *Sinxten* mart. However in the second example the single fine white cloth of Thomas Bayley was paid for when Wasshington sold it to van Innersell. The purchase price of this single cloth had been £4 13s. 4d. sterling, equivalent to £5 19s. 0g. Flemish. In this case the sale price of £7 0s. 0g. gave a profit of £1 1s. 0g. or 17.6%. In the first example the purchase price of all 204 whites was £665 16s. 0d. sterling, or £848 17s. 11g. Flemish, which gave a profit of £222 2s. 1g. or 26.2%. In the third example a gross purchase price of £301 2s. 8d. sterling equivalent to £383 18s. 11g. Flemish gave a profit of £86 1s. 1g. or 22.4%. These figures pose the question, why did these cloths not reap the average profit obtained from all the cloths at the *Sinxten* mart in 1536?

Thomas Kytson's 'Boke of Remembraunce' records his dealings with his clothmen and others for the decade before his death, and the export of the cloths to the four seasonal markets in Flanders. In totality Wiltshire clothmen came second to their Somerset neighbours in supplying Kytson with the broadcloths or 'whites' that contributed to England's main export in the Tudor period. Nearly seventy Wiltshire 'clothmen' appear in Thomas Kytson's 'Boke' as producers of cloth. These men and women, together with some of the carriers, Kytson's apprentices and factors, the London shearmen, the masters of the little ships and the purchasers in the annual marts are the named people in the chain of commerce taking Wiltshire cloths to the Continent. The names of the sheep farmers, spinners and weavers, upon whose labour all the cloth trade was based, remain unknown.

References and Notes

- ¹ Brett C.J., *Proceedings of the Somerset Archaeological and Natural History (PSANH)*. Vol. 143, pp29–56. Some of the details of Thomas Kytson's trading are common to both Wiltshire and Somerset and are repeated in this article.
- ² *Dictionary of National Biography*.
- ³ *Letters and Papers, Foreign and Domestic, of the Reign of Henry VIII*, Vol. 3 Part 1, p.503.

- ⁴ *Ibid.* Vol. 3 Part 2, p.1052.
- ⁵ *Ibid.* Vol. 3 Part 2, p.1530.
- ⁶ *Ibid.* Vol. 8, p.184.
- ⁷ *Ibid.* Vol. 6, p.279.
- ⁸ For some other details of Thomas Kitson see Brett C. J. *loc. cit.*
- ⁹ *Acts of Court of the Mercers' Company*, p.453.
- ¹⁰ *Ibid.*, p.698.
- ¹¹ Cambridge University Library, Hengrave Hall MS.78/1 (Goods shipped to the markets in the Low Countries 1512–39) and MS.78/2 (The Boke of Remembraunce 1529).
- ¹² The first page is enscribed 'The boke of Remembraunce belongyng unto me Thomas Kytson of London Mercer made the xxth daye in Septe[m]ber An^o 1529'.
- ¹³ Cambridge University Library, Hengrave Hall MS.78/4 (The Account of ye Synkeson martt, holden at Andwerppe for my Master Syr T. Kytson, Knight & Alderman of London by me Thomas Wasshyngton, 1536).
- ¹⁴ Baumann W-R. *The Merchants Adventurers and the Continental Cloth Trade*, (Berlin, 1990), p.38.
- ¹⁵ *Acts of Court of the Mercers' Company*, p.278.
- ¹⁶ 'Penestone' is the obsolete form of 'penistone', a kind of coarse woollen cloth similar to a 'kersey'.
- ¹⁷ 'Russet' was a coarse woollen cloth of a reddish-brown, grey or neutral colour.
- ¹⁸ 'Frieze' was a coarse woollen cloth with a nap, usually on one side only.
- ¹⁹ 'Cotton' was a woollen cloth similar to a frieze.
- ²⁰ 'Kersey' was a narrow woollen cloth which did not have the completely felted surface of a broadcloth or 'white'.
- ²¹ 'Castlecumb' was a woollen broadcloth of a red or white colour made in or near Castle Combe.
- ²² *V. C. H. Wilts.* Vol. 4, p.139.
- ²³ Brett C. J., *loc. cit.* pp.29–56.
- ²⁴ Carus-Wilson E. M. and Coleman O., *England's Export Trade 1275-1547*, (1963).
- ²⁵ The various spellings of the clothmen's names and their places of residence, as given in the 'Boke', are here rationalized.
- ²⁶ *Statutes at Large*, 5 Henry VIII, c.3.
- ²⁷ *Ibid.*, 27 Henry VIII, c.13.
- ²⁸ The other suppliers of 'Castlecumbes' were Harry Summers of Sodbury, William Bennet of Stroudwater, Thomas May and Thomas Wulworth of Wotton-under-Edge, Robert Payne of Burford, Nicholas Touker and Nicholas Tayler of Kingswood, Walter Osborne of Essington and John Woodward and John Eskyns of Dursley.
- ²⁹ The author suggests that 'macer', (from Latin *macere* to make wet, to soak, to steep,) equates to 'masher' = one who mashes malt in the beer-producing process.
- ³⁰ *Acts of Court of the Mercers' Company*, pp.207, 226.
- ³¹ *Ibid.*, pp.194, 200-2, 214, 223 etc..
- ³² *Ibid.*, p.194.
- ³³ *Ibid.*, p.394. The danger from pirates had been reported to the General Court of the Fellowship of Mercers in 1511, 'there be dyvers shippes of warre of Skottes upon the See, whiche have taken certen Shippes of Englonde laden with divers merchaundises, and cast the Englimen over borde into the See'.
- ³⁴ *Ibid.*, p.195.
- ³⁵ *Ibid.*, p.537.
- ³⁶ *Ibid.*, p.568.
- ³⁷ When, as in the majority of cases, most of the cloths were the long broadcloths, each fardell would have weighed about 1 ton, corresponding to the contemporary tonnage unit of a 'tun' or 'tontight'. When the fardells included many of the lighter and shorter 'cottons', 'penestones' and 'kersies' the total number of cloths in each fardell rose to over 50.
- ³⁸ The sign *ff*, was used as an abbreviation for 'fardell'. The same sign was also used for 'Flemish'.
- ³⁹ Kytson's code was; $\mathcal{F} = 1, m = 2, f = 3, S = 4, n$ or $N = 5, C = 6, B = 7, p = 8, A = 9$, and $o = 0$.
- ⁴⁰ John Grantham's penestones and Thomas Harforde's whites were never allocated identification numbers.
- ⁴¹ *V. C. H. Wilts.* Vol. 4, p.140.
- ⁴² The holland was purchased in units of the old Aune. From these examples it is evident that 1 Aune = 1½ English elles or 2 yards 3 inches. See next note.
- ⁴³ An English elle was 1¼ yards, or 5 quarters. Fractions of an elle were quoted in quarters of a yard.
- ⁴⁴ 'Master Edgar' or 'Thomas Edgar gentleman' was an occasional purchaser of goods from Thomas Kytson. Edgar features in the London Court of Husting Roll where he is described in 1537 as being 'of "Baynors Castle"', in the parish of St Andrew Castle Bayn[ar]d': Corporation of London Record Office, Court of Husting: Calendar of Deeds & Wills: Vol. 6, ff. 121v and 122r. Thomas Kytson, when he became an Alderman in July 1534, was described as also being of Castle Baynard: Beaven A.B., *The Aldermen of the City of London*, Vol. 2, p.28. Kytson and Edgar were thus neighbours. The author is grateful to James R. Sewell, City Archivist, for providing these two references.
- ⁴⁵ Mann J. de L., *The Cloth Industry in the West of England 1640 to 1880*, (1987), pp.319, 321. Although the figures quoted by Mann relate to a period later than the Tudor era, they may be justified in being used in making the approximate calculations of Roger Tanner's usage of olive oil.
- ⁴⁶ Other types of canvas dealt with by Kytson were 'Normandy' and 'vettery'. The canvas was destined to be used for various domestic uses such as table cloths, linings for doublets and kirtles, sheets and mattress covers, aprons for 'the sculyons & ye mayde' and saddle cloths, besides being used for packing goods for shipment.
- ⁴⁷ Other types of fustian were 'Osbornes', 'beverne' and 'Purynges'.
- ⁴⁸ John Baker's name occurs in *A List of the Recorders of the City of London from 1298-1850* extracted from the

records of the Corporation of the City of London and printed by direction of the Court of Aldermen in 1850. The author is grateful to James R. Sewell, City Archivist, for this information.

⁴⁹ *Acts of Court of the Mercers' Company*, p702.

⁵⁰ *Statutes at Large*, 17 Henry VIII, cap.12. The Act for the true making of Cloth.

⁵¹ Public Record Office (PRO) PROB 11/27, the will of 'Richard Bathe *alias* Richard Wheteacre' was made on 20 May 1538 and probate was granted on 24 July 1538.

⁵² *Ibid.* Richard Bathe made 'my brother Aldem Lambe' one of two overseers of his will. An Aldem Lambe of East Coulston is mentioned in *V.C.H. Wilts.* Vol.8, pp.235-7.

⁵³ *Ibid.*

⁵⁴ Ramsay G. D., *Wiltshire Woollen Industry*. p.54-7.

⁵⁵ *Wiltshire Notes & Queries*. Vol. 8, p.541.

⁵⁶ Richard's sons were John, Robert, Aldem, Henry and Richard: PRO PROB 11/27.

⁵⁷ *Statutes at Large*, 17 Henry VIII, cap.12.

⁵⁸ Where other entries in the 'Boke' are crossed out, and intended not to be part of the record, they are marked 'vacat' in the margin (i. e. null and void).

Appendix 1 Extracts from Kytson's 'Boke of Remembraunce'

Extracts from the 'Boke of Remembraunce' relating to Wiltshire, for the Exchequer Year 1536 to 1537 (Michaelmas to Michaelmas).

Original Latin and French words have been translated. Abbreviated text has been expanded to the clerks' usual spelling. Arabic numerals originally in code are here decoded and placed in italics, and names relating to Wiltshire are in bold text. Some punctuation has been added.

Bought of **Edward Lanckforthe** [7 October 1536]

Item 10 whites at £31 at £31 the pack. Sum £31

Bought of **John Smethe** of Viase 7 October 1536

Item 20 whites at £30 at £30 the pack Sum £60

Resaved 26 October 1536 4 whites

Memorandum that there ys to resave of this 20 whites 4 whites he hayth promised to deliver be twyxt this and Alhallowtide next and that thay shall be of as good spynnyng, lenth and maykyng as thes 16 a fore resaved

To pay in redy mony £30

To pay at Candelmas next Sum £20

Bought of **Thomas Longe**

Item 3 fynne whites at £3 11s. Sum £10 13s 0d

Bought of **Robert a bridge** of Yford in Wilshire

Item 10 whites at £32 13s 4d at £32 13s 4d £32 13s 4d

Bought of **John Bennett** of Warmister by the handes of Robert Stokes 13 October 1536

Item 40 whites at £30 at £30 the packe save 20s over in all.

Sum [blank]

Memorandum that there ys to resave of thes 40 whites 5 whites he haith promysed and all that he maikes be twyxt this & Alhallowtide next and that thay shalbe of as good wolle, lenthe, spynnyng and maykyng as this 35 afore resavid.

Resaved 10 November 1536 5 whites

To pay in redy mony £54

To pay at Cristimas next. Sum £25

To pay at Ester next in 1537. Sum £25

Bought of **Thomas Davy** of Harnyngsham in Wilsher [October 1536]

Item 15 whites at £27 at £27 the packe. Sum £40 10s 0d

Item mor 2 whites at 54s the pece £5 8s 0d

Item more the first day December 3 whites £8 2s

Total sum £54

Bought of **John Ussher** of Warmister in Wilshire 20 October 1536

Item 10 whites at £31 at £31 the packe. Sum £31 0s 0d

Resaved 30 October 1536 5 whites

Bought of **William Holbroke** of Salisbery 21 October 1536

Item 5 whites at £10 5s at £10 5s the half pack. Sum £10 5s

Bought of **Richard Addams** of Laycocke in Wilshere 28 October 1536

Item 8 whites at £3 6s the clothe. Sum £26 8s 0d

Item 2 whites at £2 19s 4d. Sum £5 18s 8d

Sum £32 6s 8d paid

Memorandum that he haith promysed my Master that he shall have 2 clothes mo be twyxt this and Alhallowtide next & that thay shall be of as good wolle, spynnyng & maykyng as the best of thes 8 a for resaved

Resaved 2 December 1536 2 whites

Bought of **John Weste** of Turbrig in Wilshere 11 Novemebr 1536

Item 5 whites at £16 at £16 half pack. Sum £16 paid

The shipping by the grace of God to the Cold Marte in AD 1536

A fardell no 1 in the *John Baptist* of Lee master John Goodlad

Item 32 whites no 1 of **Richard Battes**

Item 8 penystones of Granthams

A fardell no 2 in the *Savior* of London master under God Richard Rede

Item 32 whites no 2 of **John Bennetes**

Item 8 penystones of Granthams

A fardell no 3 in the *Antonye* of Sandwiche master under God John Leche

Item 12 whites no 3 of **John Smethes**

Item 20 whites no 4 of **John Rawlins**

Item 6 penystones of Granthams

A fardell no 4 in the *Margett* of Hulle master under God Almon Binckes

Item 27 whites no 1 of **Richard Battes**

Item 3 fyne whites of **T[homas] Long**

Item 2 whites no 3 of **John Smethes**

Item 6 penystones of Granthams

A fardell no 6 in the *Peter* of London master under God Christofer Rawlins

Item 10 whites no 6 of **Edward Lanckeford**

Item 10 whites no 7 of **Robert Bridges**

Item 10 whites no 8 of William Bians

Item 2 whites no 2 of **John Bennettes**

Item 6 penystones of Granthams

A fardell no 7 in the *Mary Fortune* of Ypswytche master under God Simond Jacobs

Item 12 castelcomes no 9 of Robert Paynes

Item 10 whites no 10 of **John Knyghtes**

Item 10 whites no 11 of **Aldem Lambe**

Item 6 penystones of Granthams

A fardell no 8 in the *Christofer* of Meltenshore master Richard Rede

Item 20 whites no 12 of **William Bladcons**

Item 3 whites no 11 of **Aldem Lambe**

Item 10 whites no 0 of Thomas Harefordes

Item 5 penystones of Granthams

A fardell no 9 in the *Margett* of Hulle master under God Almon Binckes

Item 20 whites no 13 of Mistress Gastrodes

Item 10 whites no 14 of **Edward Banwells**

Item 2 castelcomes no 9 of Robert Paynes

Item 6 penystones of Granthams

A fardell no 13 in the *Mary Fortune* of Ipswytche master under Simond Jacobe

Item 20 whites no 16 of Richard Cooke

Item 10 whites no 17 of **John Usshers**

Item 2 whites no 3 of **John Smethes**

Item 1 white of William Holbroke wrapper

Item 4 penystones of Granthams

A fardell no 14 in the *My[c]hell* of London master under God Thomas Gygges

Item 15 whites no 18 of William Baxter course

Item 15 whites no 19 of **Thomas Davy**

Item 2 whites no 15 of Clevelodes seconds

Item 1 white of William Holbroke wrapper

Item 4 penystones of Granthams

A fardell no 16 in the *My[c]hell* of Wamotho master under God Harry Browne

Item 10 whites no 21 of Harry Davison

Item 20 whites no 22 of **J[ohn] Lawrens**

Item 2 whites no 15 of Clevelodes seconds

Item 1 white of William Holbroke wrapper

Item 4 penystones of Granthams

A fardell no 19 in the *George* of London master under God Robert Gansse

Item 26 whites no 15 of Clevelodes fine

Item 5 whites no 24 of **John West**

Item 1 white no 23 of mastress Bladcons

Item 1 white of John Clevelodes wrapper

Item 4 penystones of Granth[am]s

A fardell no 20 in the *Peter* of London master Christofer Rawlins

Item 7 whites no 11 of **Aldam Lambes**

Item 5 whites no 17 of **John Ussher**

Item 10 whites no 25 of Thomas Foster

Item 5 whites no 21 of Harry Davison

Item 4 whites no 3 of **John Smethes**

Item 1 white no 23 of mastress Bladcons

Item 1 white of John Clevelodes secondes wrapper

Item 4 penystones of Granth[am]s

A fardell no 21 in the *Peter* of London master under God Richard Holmes

Item 25 whites no 22 of **J[ohn] Law[re]nes**

Item 6 whites no 2 of **John Bennettes**

Item 1 white no 26 of **Richard Addams**

Item 1 white of John Clevelodes wrapper

Item 4 penystones of Granth[am]s

A fardell no 22 in the *Trinite* of London master under God Robert White

Item 32 whites no 1 of **Richard Battes**

Item 1 white of **J[ohn] Clevelodes** second

Item 4 penystones of Granth[am]s

A fardell no 23 in the *John Baptist* of Lee master under God Richard Polter

Item 29 whites no 1 of **Richard Battes**

Item 3 whites no 26 **Richard Addams**

Item 6 penystones of **J[ohn] Gr[antham]** wrappers

A fardell no 26 in the *James* of London master under God William Smallis

Item 32 whites no 4 of **John Rawlins**

Item 6 penystones of Granthams

A fardell no 27 in the *Peter* of London master under God Richard Holmes

Item 20 castelcomes no 27 of **N[icholas] Taylers**

Item 8 whites no 4 of **John Rawlins**

Item 4 whites no 0 of Thomas Harefedes

Item 6 penystones of **J[ohn] Granthams**

A fardell no 28 in the *Trinite* of Lee master under God Robert Ryngland

- Item 8 whites no 20 of T[homas] Pawmer fine
- Item 9 whites no 12 of **William Blacdon**s
- Item 5 whites no 14 of **Edward Banwell**
- Item 5 whites no 10 of **John Knyghtes**
- Item 2 whites no 26 of **Richard Addams**
- Item 3 whites of Thomas Harefordes
- Item 6 penystones of Granthams

A fardell no 29 in the *John Evangelist* of Tastocke master under God John Powell

- Item 32 whites no 28 of **John Norintons**
- Item 1 white of Thomas Harefordes wrapper
- Item 4 penystones of Granthams

A fardell no 30 in the *John Evangelist* of Tastocke master under God John Powell

- Item 15 whites no 28 of **John Norintons**
- Item 8 whites no 18 of [William] Baxters
- Item 4 whites no 26 of **Richard Addams**
- Item 1 white no 15 of Clevelodes second
- Item 4 whites no 0 Thomas Har[efor]des
- Item 5 penystones of Granthams

A fardell no 31 in the *Christofer* of Alborowe master under God Bennett Bartram

- Item 13 whites no 28 of **John Norintons**
- Item 13 castelcomes no 29 of Walter Osbornes
- Item 6 castelcomes no 30 of William Coldwell
- Item 1 castelcome no 30 of Coldwell fine
- Item 1 white cowsse of **Norintons** wrapper
- Item 5 penystones of Granthams

A fardell no 32 in the *My[c]hell* of London master under God Thomas Gygges

- Item 32 whites no 31 of **Thomas Aslockes**
- Item 1 white **Norintons** cowrse
- Item 4 penystones of Granthams

A fardell no 33 in the *George* of London master under God Robert Gansse

- Item 28 whites no 1 of **Richard Battes**
- Item 3 whites no 5 of Leonard Andles
- Item 1 castelcome no 30 of Coldwell
- Item 1 white of Mastress Blacdon's course
- Item 4 penystones of Granth[am]s

A fardell no 35 in the *Peter* of London master Christofer Rawlins

- Item 20 whites no 4 of **John Rawlins**
- Item 10 whites no 22 of **John Lawrens**
- Item 2 whites no 20 of Palmers fine
- Item 1 white of Mastress Blacdon's corse wrapper
- Item 4 penystones of Granthams

A fardell no 36 in the *Mi[c]hell* of Wamothe master under

god Harry Browne

- Item 14 whites no 23 of Mastress Blacdon's
- Item 3 whites no 21 of Harry Davison
- Item 5 whites no 20 of T[homas] Palmer 7
- Item 5 whites no 14 of [**Edward**] **Banwell**
- Item 5 whites no 10 of **J[ohn] Knyghtes**
- Item 2 whites of Mastress Blacdon's co[r]se wrapper
- Item 1 penystone of Granthams

A fardell no 37 in the *Mary Anne* of Berkelsay master under God John Ayre

- Item 9 whites no 12 of **William Blacdon**s
- Item 5 whites no 19 of **Thomas Davis**
- Item 10 whites no 11 of **Aldam Lambes**
- Item 8 whites no 31 of T[homas] **Ashlocke**
- Item 2 whites of **J[ohn] Norintons** wrapper
- Item 1 penystone of Granthams

A fardell no 39 in the *Thomas Sunday* of Birkylsay master under God John Fresell

- Item 2 whites no 26 of **Richard Addams**
- Item 7 whites no 18 of William Baxters
- Item 1 white no 32 of Robert Chapman f[ine]
- Item 2 whites no 1 of **Richard Battes**
- Item 1 white no 34 of Robert Style fine
- Item 2 whites no 35 of Richard Chapman f[ine]
- Item 1 white no 9 of Robert Paynes
- Item 3 whites no 36 of Richard Powell
- Item 2 whites no 15 of J[ohn] Clevelod
- Item 1 white no 28 of **J[ohn] Norinton**
- Item 7 penystones of Thomas Fille

A Item in the [blank]

Item 2 losse whites no 12 of **William Blacdon**s

Memorandum that ther ys spent in Canvas this shippingg to the Cold Marte into 1535 [sic]

Item 247 elles of canvas ffor 13 hedis and sydes delyvered in this Cold Marte 1536

Bought of **John Norinton** of the Viesse 23 November 1536

Item 60 whites at £28 at £28 the pack. Sum	£168 0s 0d
Item 5 whites at £10 the halfe pack. Sum	£10 0s 0d
Total sum	£178
paid in redy mony	£70 0s 0d
to pay in redy mony	£78 0s 0d
to pay at Cristemas next Sum	£30 0s 0d

Bought of **Thomas Aslocke** of [Haytesbury] 28 November 1536

Item 40 whites at £29 15s the pack. Sum	£119 0s 0d
To pay in redy mony	£40 0s 0d
To pay at myd Lent	£40 0s 0d
To pay at mydsomer next 1537	£30 0s 0d

Memorandum that there ys to resave of the said 40 whites one white whiche he haith promised to be delyvered within this 3 days

Resaved the first day of December 1536 1 white

Delyvered to Harry James shere man the first day of December 1536

Item 2 whites of **Richard Battes** to dry, fold and tack &c

Resaved 3 December 1536

Bought of **Richard Batte** 26 January 1536[7]

Item 40 whites at £31 15s at £31 15s

of the which 40 ther was 1 fawty clothe which was delyvered unto Roger Patyens 18 April 1537

Rest net 39

Resaved 27 Aprill 1537 1 white

Resaved the same day 40 whites at £31 the pack. Sum

£124

Resaved 28 Aprill 1537 Item 1 fyne whitte at £4 6s 8d

Resaved 17 Maye 1537 10 whites at £31

Total sum £282

Bought of **William Blacden** in Wyltshere 13 February 1536[7]

Item 12 whittes at £33 6s 8d

Resaved 8 March 1536[7] 4 whites

Resaved 12 Aprill 1537 14 whites

Resaved 12 Maye 1537 7 whites

Resaved 18 Maye 1537 3 whites

Sum 40 whyttes at £33 13s 4d the pack

Sum £133 6s 8d

To paye in hande

£66 13s 4d

To paye the 14 dayes

after Haloutyd 1537

£66 13s 4d

Bought of **George Rawlyns** of Warminster 3 March 1536[7]

Item 10 whites at £28 13s 4d £28 13s 4d

Item Resaved 17 March 1537 [sic] 5 whyttes at £14 6s 8d the halff packe. £14 6s 8d

Bought of **Richard Crosse** of Eyrlestocke in Wylsher 23 March 1536[7]

Item 10 whites at £30 at £30 the packe. Sum £30

Bought of **Rychard Mydelcott** of the paryshe of Busshopstow in Wylsher 24 March 1536[7]

Item 10 whittes at £29 13s 4d. £29 13s 4d

Bought of **John Smeth** of the Viase 27 Aprill 1537

Item 30 whites at £30 the packe and 7s 6d over in all. Sum £90 7s 6d

Resaved by the handes of **T[homas] Clevelode** for **John Smythe** 17 May 1537 3 whites at £3. Sum £9

23 whites at £31. Sum £71 6s

10 whites at £28 1s 6d Sum £99 7s 6d

Bought of **Jhon Lawrans** of Warmister 11 May 1537

Item 25 whites at £29 the packe. Sum £72 10s

Sum £72 10s

Memorandum thatt **John Lawrens** hathe promysed to

deliver all the Clothes thatt he shall macke between thys and shyping next

Bought of **Thomas Baylyffe** in Wylsher 12 Maye 1537

Item 20 whittes at £36 13s 4d

Item 10 whites at £33 6s 8d £106 13s 4d

Sum £106 13s 4d paid

Resaved 18 Maye 1537 20 whites fine payable at Mydsomer & at My[c]helmas next

Bought of **John Duffel** of Westbere under the planne 17 Maye 1537

Item 10 whyttes at £32 at £32 the packe. £32

Sum £32

Bought of **John Adlam** of Wylsher 17 Maye 1537

Item 20 whyttes at £32 at £32 the packe.

£64 0s 0d Sum £64

Bought of **Robart Adlam** in Wylsher 17 Maye 1537

Item 40 whyttes at £32 the packe. £128

The shipping by the grace of God to the Synxson Marte holden in [Antwerp] AD 1537

A fardell no 1 in the *George* of London master under god Richard Walgrave

Item 32 whites no 1 of **Richard Battes**

Item 7 penystones of John Granth[am]s

A fardell no 7 in the *Mary My[c]hell* of Birkilsay master under God Richard Dalton

Item 19 whites no 2 of John Clev[el]odes

Item 13 whites no 3 of **William Blacdens**

Item 6 penystons of John Granth[am]s

A fardell no 8 in the *Anne Fortune* of Calles master under God Robert Johnson

Item 12 whites no 3 of **William Blacdens**

Item 20 whites no 4 of **John Smeths**

Item 6 penystons of John Granth[am]s

A fardell no 10 in the *Trinite Kydman* master under God William Rogers

Item 32 whites no 1 of **Richard Battes**

Item 6 penystons of John Granth[am]s

A fardell no 13 in the *Peter* of London master under God William Goodwyn

Item 10 whites no 7 of **John Smeths** C[oarse]

Item 10 whites no 8 of **George Rawlyns**

Item 10 whites no 9 of **Richard Crosses**

Item 2 whites no 10 of John Gastreds fine

Item 9 penystons of Granth[am]s wrappers

A fardell no 14 in the *Mary Mi[c]hell* of Birkylsay master Richard Dalton

Item 10 whites no 11 of John Chapmans

Item 10 whites no 12 of William Byams
 Item 10 whites no 13 of **Richard Middeltotts**
 Item 1 white no 14 of Robert Stills
 Item 1 white no 3 of **William Blacdon**s
 Item 9 penystons of Granth[am]s

A fardell no 15 in the *Peter* of London master under God William Goodwyn
 Item 15 whites no 1 of **Richard Battes**
 Item 9 whites no 6 of Mores Flewell[an]s
 Item 4 whites no 3 of **William Blacdon**s
 Item 4 castlecoms no 5 of Nicholas Taylors
 Item 9 penystons of Granth[am]s

A fardell no 18 in the *Peter* of London master under God William Goodwyn
 Item 20 whites no 18 of Harry Davisons
 Item 10 whites no 19 of **T[homas] Bayles**
 Item 2 whites no 3 of **William Blacdon**s
 Item 10 penystons of John Granth[am]s

A fardell no 20 in the *Mary* of London master under God Thomas Dayll
 Item 20 whites no 23 of **[Thomas] Baleys** fine
 Item 3 whyttes no 24 of Rychard Dyers fyne
 Item 4 castlecomes no 25 of John Easkyngs
 Item 5 whyttes no 3 of **William Blackdon**s
 Item 10 penystons of Granthans wrappers

A fardell no 22 in the *Barbor* of Chechester master under God Richard Banwell
 Item 12 whites no 6 of Mores Fluellen
 Item 10 whites no 1 of **Rychard Battes**
 Item 10 whites no 29 of **Jhone Duffells**
 Item 10 penystons of Jhone Granthams

A fardell no 24 in the *Mary* of London master under God John Banwyn
 Item 32 whittes no 30 of **Robert Adlams**
 Item 1 corse whit of Jhone Chapman wrapper
 Item 4 penystons of Jhone Granthams

A fardell no 25 in the *Trinite* of London master under God Richard Holmes
 Item 20 whites no 31 of **William Robert Adlames**
 Item 8 whites no 30 of **Robert John Adlames**
 Item 3 whites no 6 of Morres Fluellen
 Item 1 whit no 18 of Harry Davysones
 Item 1 whitt of Jhone Chapman wrapper
 Item 4 penystons of Jhone Granthams

A fardell no 28 in the *Mawdelyn* of London master under God Richard Rede
 Item 2 whites no 18 of Hary Davisons
 Item 10 whites no 35 of T Pawm[er]s fine
 Item 10 whites no 36 of T Pawmers seco[n]ds
 Item 5 whites no 37 of John Grastreds
 Item 5 whites no 8 of **George Rawlins**

Item 7 penystons of Granth[am]s wrappers
 Item 1 white of John Chapmans wrappers

A fardell no 29 in the *Leonerd* of Walderswyk master under God Thomas Crakeman
 Item 20 whites no 23 of **T[homas] Bayley**
 Item 9 whites no 6 of [Mores] Flewellens
 Item 3 whites no 4 of **[John] Smeths** fine
 Item 12 penystons of Granth[am]s wrappers

A fardell no 30 in the *Trinite* of London master under God Richard Holmes
 Item 10 whites no 11 of John Chapmans
 Item 3 whites no 14 of Robert Styllle fine
 Item 1 white no 38 of William Biams fine
 Item 1 white no 18 of Harry Davisons
 Item 1 white no 1 of **Richard Battes**
 Item 5 whites of Thomas Harefordes
 Item 3 whites no 39 of Awen Shankey
 Item 3 whites no 3 of **William Blacdon**s
 Item 3 whites no 40 of John Clevelodes
 Item 1 white no 22 of John Peremans
 Item 1 white no 41 of **Richard Battes** for store
 Item 8 penystones of Granth[am]s wrappers

Appendix 2 Makers' Marks of Wiltshire Clothmen

21 October 1535
 William Stumpe
 of Malmesbury



blew

29 October 1535
 William Stumpe
 of Malmesbury



blew

1 September 1536
 John Lawrence
 of Warminster



murray

22 September 1536
 William Blackdon



rede

22 September 1536 John Knyght of Bishopstrowe		murray	28 November 1536 Thomas Ashelocke of Heytesbury		rede
22 September 1536 Aldhelm Lambe of East Coulston		blewe	9 March 1537/8 John Lyversidge of Kilmington		rede
13 October 1536 John Bennett of Warminster		murray	27 April 1537 John Smethe of Devizes		
20 October 1536 John Usher of Warminster		murray	27 June 1538 Alexander Langford the younger of Trowbridge		murray
28 October 1536 John Norrington of Devizes		rede	23 August 1538 Richard Adams of Laycock		blewe
28 October 1536 unknown		rede	23 August 1538 Roger Winslow of Keevil		blewe
28 October 1536 Richard Adams of Lacock		blewe	29 August 1538 William Allen of Calne		m[ono]g[ram] rede & the rest rede & blewe
2 November 1536 Edward Banwell of Westbury		murrey	6 September 1538 Richard Bathe of Edington		blewe
11 November 1536 John West of Trowbridge		rede	18 September 1538 William Adlam the elder of Westbury		rede

10 October 1538
Aldhelm Lambe
of East Coulston



18 October 1538
Alexander Langford
the elder
of Trowbridge



19 November 1538
the wife of Richard Bathe
of Edington



the strypes yallow & the letters rede

murray [murrey] = the colour of the mulberry, purple-red

Hundredweight 4 quarters (qt')
Quarter 28 Avoirdupois pounds (lb)

ALE, BEER, OIL and WINE

Barrel 36 gallons
Hogshead 54 gallons
Pipe 126 gallons
Tun (tonne) 252 gallons

CLOTH

English ell 45 inches = 1¼ yards (yds) = 5 quarters (q or qt')
Flemish ell 27 inches
French ell 54 inches
Aune (An₃) 1½ English ells = 2 yards 3 inches

CURRENCY

English
Pound sterling (li) 20 shillings sterling (s)
Shilling 12 pence sterling (d)
Noble 6s 8d

Flemish

Pond groot 20 schellingen Flemish (s ff.)
Schellingen Flemish 12 groten Flemish (g ff.)

(The exchange rate in the mid-1530s fluctuated about 26 schellingen Flemish to 20 shillings sterling)

Appendix 3 Weights, Measures and Currency

Glossary of some words used in Kytson's 'Boke of Remembraunce'. The abbreviations or spellings used by Kytson and his clerks are in parentheses.

BASIC UNITS OF LENGTH

Yard (yd) 3 feet = 36 inches
Quarter (q or qtr) 9 inches

BASIC UNITS OF WEIGHT

Ton 20 hundredweights (C, hundreth)

HOPS

Sack indeterminate, but usually about 3 hundredweight

PEPPER

Bale about 2 hundredweight

TIN

Block about 3 hundredweight

WOAD

Bale 2 Balletts
Ballett about 7 quarters (qt') = about 196 pounds (lb)

Neolithic of the Wylve Valley 1: Millennium Re-investigation of the Corton Long Barrow, ST 9308 4034

by Michael J. Allen and Julie Gardiner
with a contribution by Rob Scaife

Millennium events in the parish of Boyton included an archaeology day, led by the writers, during which a visit was made to the Corton (Boyton 1) Long Barrow. This visit prompted a limited piece of research on this monument which had not been investigated since 1804. Augering through the edge of the barrow and beyond its obvious extent encountered a buried soil beneath the mound and provided the first recorded evidence for one of the flanking ditches. Limited description and analysis were undertaken and a magnetic susceptibility profile constructed. Preserved land snails and pollen from the buried Neolithic land surface indicated clearance of ancient woodland prior to construction, but not for this monument. Documentary evidence revealed an interesting history of antiquarian research and an unexpected error in the recording or transcription of Mr Cunningham's survey measurements.

In 1801 Mr (Aylmer Bourke) Lambert of Boyton House, Boyton, in the Wylve Valley issued an invitation to Mr William Cunningham of Heytesbury to 'open every barrow upon his property' (Cunningham 1975, 16). One of the first barrows Cunningham opened in that same year was the Corton Long Barrow (Boyton 1, NMR No ST 94 SW 37) situated in Tenant Field, Barrow Hill above the village of Corton. No records of that opening have been found but, on revisiting the barrow in 1804 (11-12 September), Cunningham concluded that his earlier excavation must have recovered a secondary burial, as the presence of a large sarsen boulder and 'eight skeletons lying promiscuously in various directions' on the old ground surface (Hoare 1812, 102) in the later (1804) excavation indicated that the monument was a Neolithic long barrow (Thurnam 1869, 180).

The barrow (SM12341) overlooks the Wylve from its position on the chalk slopes of the southern side of the valley at a height of about 140 m OD (Figure 1). It is false-crested, more than 1½ km

from the summit of a convex, inverted bowl-shaped Middle Chalk slope. This slope descends below the barrow and then drops suddenly via a steep ancient river cliff ('Landfall') into the Wylve Valley (Figure 1c). Topographically, therefore, the barrow is carefully and specifically sited. From it, splendid views are afforded of the valley floor and of chalk spurs from Battlesbury to the west, down through Heytesbury, Knook, and Codford with Salisbury Plain behind. The barrow itself is not well viewed from the upslope, southern side of Corton or from Boyton Down. Only limited views of it are possible along the valley side and, because of the steep convex slope on which it is sited, it becomes invisible from only metres downslope to the north. It is clearly sited to look over, and to be seen on the skyline from, the Wylve Valley itself. It is less spectacularly displayed towards, but is nevertheless clearly visible from, the northern valley sides of the Wylve (from Upton Lovell and Codford Downs). The valley floor itself, unusually, supports at least one long barrow at Sherrington (Sherrington 1).

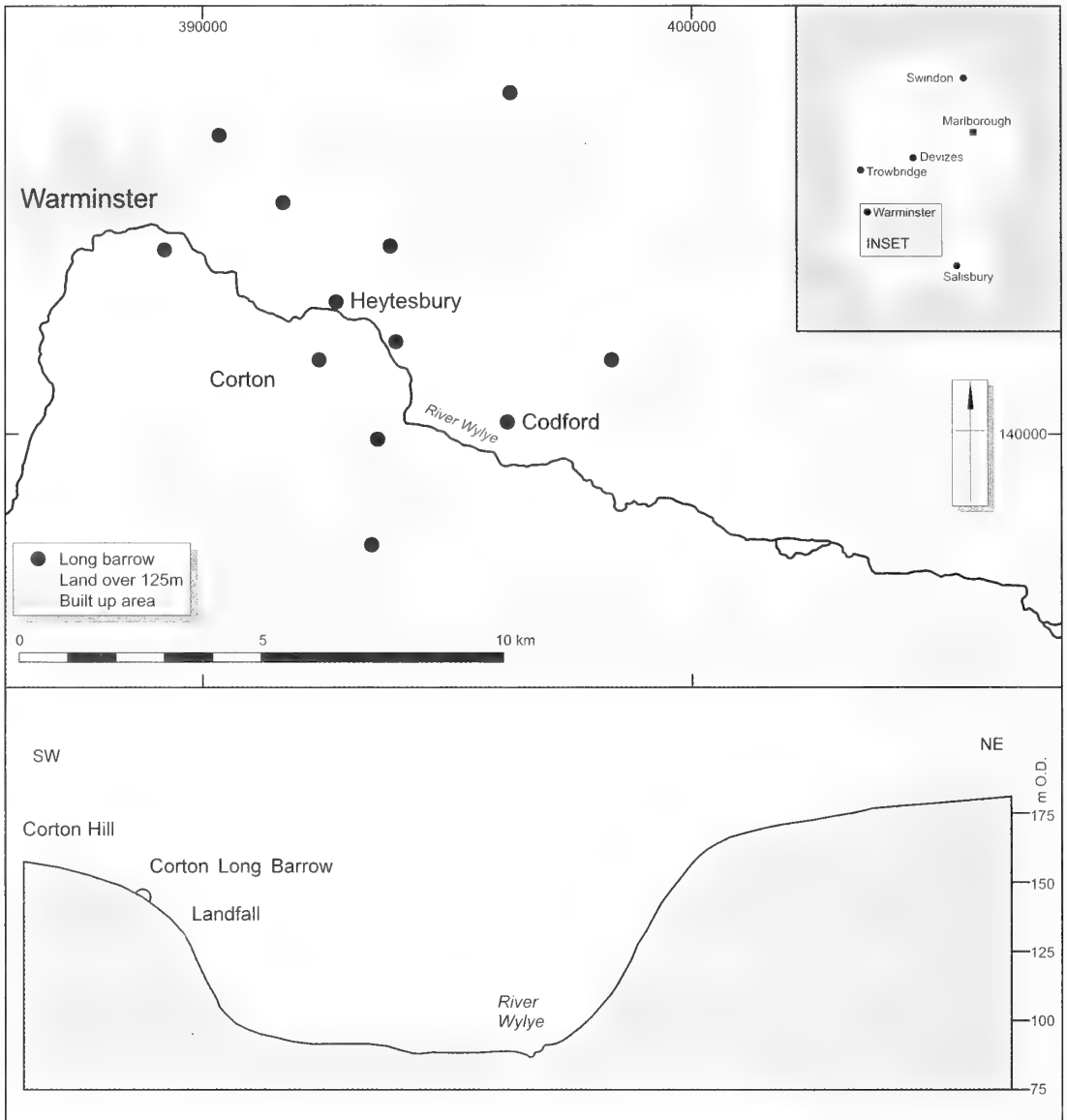


Fig. 1 Location plan and the Wyllye valley profile

SURVEY

When Wm Cunnington visited the barrow in 1804 he recorded it as being aligned exactly east-west but noted that it seemed to comprise two conical mounds which he initially thought to be two adjacent round barrows. His investigations in 1801 had found a 'rude urn, containing burnt human bones, on the west end marked A' (Figure 2a; Lambert 1806, plate xvi, fig. 4) which tended to confirm these suspicions. Cunnington surveyed the

barrow and, in a letter to Lambert (14 September 1804), who communicated it to the Society of Antiquaries on 7 February 1805 (Lambert 1806, 338-446), he records a long barrow 216 feet (c. 65.8 m) long and 25 ft (c. 7.6 m) wide at its east end, its highest elevation being 9 ft (c. 2.7 m) above the adjoining ground level. These measurements and, in fact, much of the content of Cunnington's letter to Lambert are repeated by Colt Hoare in *Ancient Wiltshire* (Hoare 1812, 102).

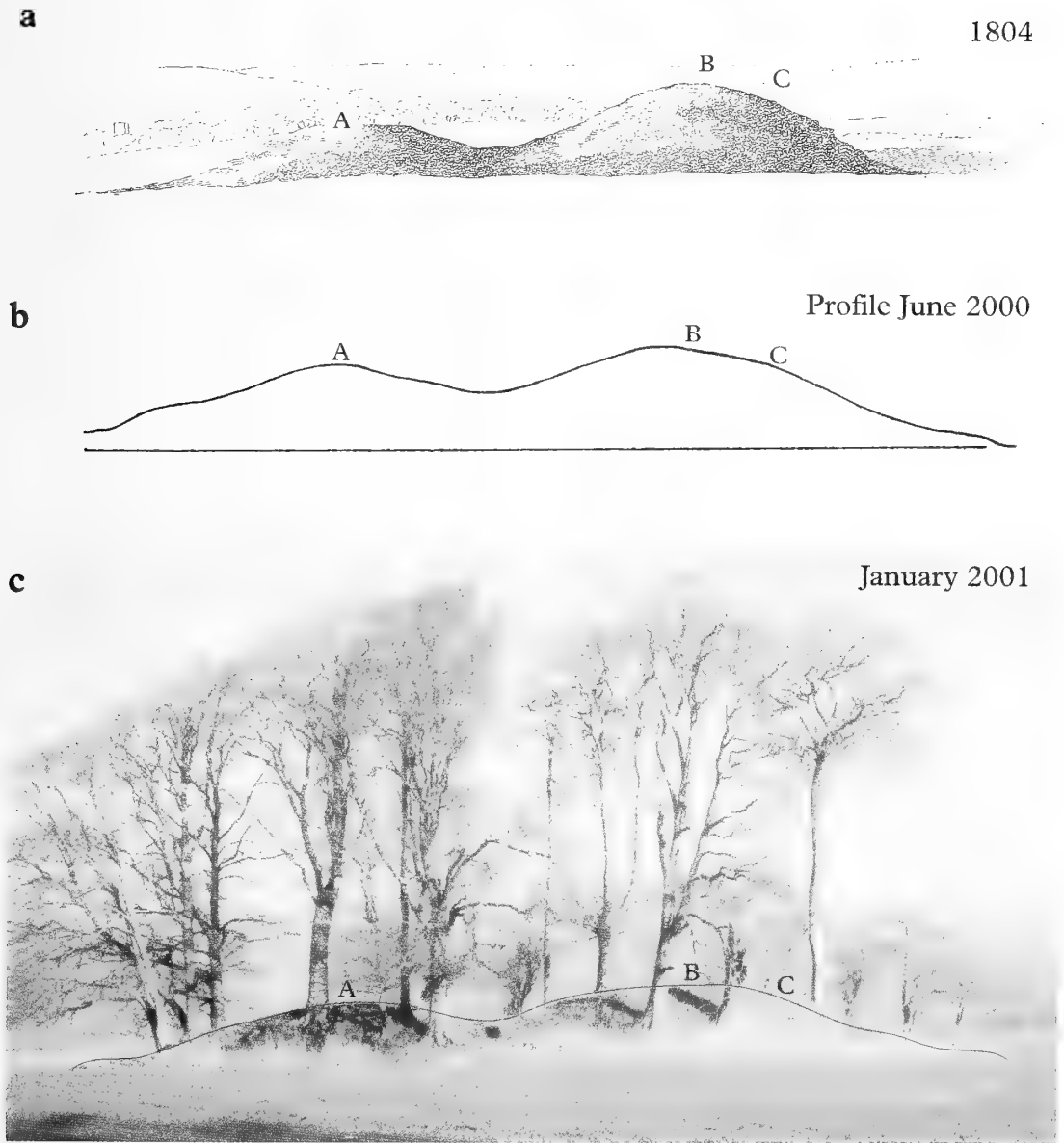


Fig. 2 a) Crocker's sketch of the barrow in 1804 for Colt Hoare from *Archaeologia* XV, plate xvi, fig. 4, b) barrow profile as surveyed 2000, and c) photograph of the barrow looking north across the Wyllye Valley. See text for explanation.

Even at that early date Colt Hoare stated that 'the plough has diminished its size on both sides, and at the east end'. Cunnington's record of its dimensions, reiterated by Colt Hoare, is now established in the archaeological literature (Ashbee 1970, 167; Kinnes 1992, 10; *VCH* 1957, 138; Wilts County SMR). However, in 1914, Maud Cunnington records the barrow as being only 120 ft (c. 36.6 m) long and attributes the loss of 100 ft in as many

years to ploughing (Cunnington 1914). It seems hard to reconcile an average loss of 1 ft (0.3 m) per year for 100 years as a result of non-mechanised, or even mechanised, ploughing, especially since the general shape of the barrow remains largely unchanged from Wm Cunnington's original sketch of 1804 to the present day (compare Figures 2a, b & c). Another change noted by Maud Cunnington was that, 'There are beech trees of considerable age

growing on the barrow' (1914, 386-7) whereas, the 1804 sketch (Figure 2a, Lambert 1806, 15, plate xvi, fig. 4) shows it treeless.

A re-survey of the barrow in June 2000 provides a plan and profile that matches William Cunnington's description and sketch but more accurately reflects the measurements taken by Maud Cunnington and published in 1913. Our survey (Figure 3) indicates that the barrow cannot have exceeded much more than 35 m in 1804, that is, about *one* hundred and sixteen feet. Recording a comparable width at the eastern end is more difficult as it is uncertain where the earlier measurements were likely to have been taken, and our survey records a width nearer 15 m (50 ft). The height of 9 ft (c. 2.7 m) recorded in 1804 is not far different from the 2.26 m (7½ feet) we measured in June 2000, 188 years later. From this we can only conclude that there was an error in the citation of William Cunnington's original work. Rather than suggesting an uncharacteristically inaccurate measurement on his part, it seems likely that either a transposition of the first two numbers (126 to 216 ft), or an incorrect reading of the field note as 216 rather than 116 ft occurred and went unnoticed.

The plan (Figure 3a; Eagles and Field forthcoming, fig. 4) shows an eroded ovoid barrow, probably formerly wedge-shaped (Eagles and Field forthcoming). Although field survey did not record flanking ditches, augering (see below) proved the existence of these previously unrecorded features. The ditches were however recorded by the RCHME/English Heritage survey, and these have been added to our plan (after Eagles and Field forthcoming, fig 4).

Our survey also demonstrates that the barrow is situated at the crest of the break in slope of a north-facing valley side (Figures 1 & 3b). Its location clearly faces the monument into the view of the Wylve Valley. On the southern side the natural chalk is exposed showing that the upslope side of the mound has, in antiquity, been eroded creating a bench, leaving the old land surface on this raised bench nearly 0.2 m above the present ground surface.

	W. Cunnington 1804		M. Cunnington 1914		Allen & Gardner 2000	
<i>width</i>	25ft	7.6m	-	-	50 ft	15.2m
<i>length</i>	216 ft	65.8m	120 ft	36.6m	116 ft	35.5m
<i>height</i>	9 ft	2.7m	-	-	7½ ft	2.26m

THE BARROW

The results of Cunnington's excavation in 1804 made him re-evaluate the monument, whereupon he concluded that it was a regular long barrow, its double-barrow form created by a division in the centre probably due to 'the removal of earth from that spot by farmers' (Hoare 1812, 102; Lambert 1806, 339). His excavation at the extreme eastern end of Corton Long Barrow revealed seven adults and one child lying on the 'floor of the barrow, between two excavations in the native soil, of an oval form' (Hoare 1812, 102). The oval pits were cut through the buried soil on which the skeletons lay and into the chalk. They were about 4 ft long (c. 1.2 m) and 2½ ft deep (c. 0.76 m). Both the oval gullies or pits and the burials were sealed beneath a cairn ('pyramid') of flints and stone 20 ft by 10 ft (6.1 m × 3 m) in extent which seems to have been capped by a large stone. The capping stone, presumably a sarsen, was so large it required three men to lift it out. There is no record of its whereabouts and it was presumably backfilled into the mound, or removed to Cunnington's residence in Heytesbury. Ashbee (1970, 52) considers this description to fit that of a, probably partially collapsed, mortuary enclosure.

THE MILLENNIUM VISIT

In March 2000 the present authors were invited by the parishioners of Boyton to lead an archaeology day as part of the parish's millennium celebrations. The day began with introductory talks on the archaeology of the Wylve Valley and the secrets and splendours of environmental archaeology and was followed by a visit to the Corton Long Barrow, today the most obvious prehistoric site in the neighbourhood. There we undertook some very limited fieldwork in order to demonstrate to the thirty or so good souls who had joined us the effectiveness of minimally intrusive augering in recovering and recording 'hidden' archaeological information and to emphasise the significance and fragility of one of the archaeological sites on their doorstep. Our primary *archaeological* aim was to record the presence and nature of the buried soil beneath the mound and to sample it for land snails and pollen. We hoped to be able to define something of the environmental history and also to gain some

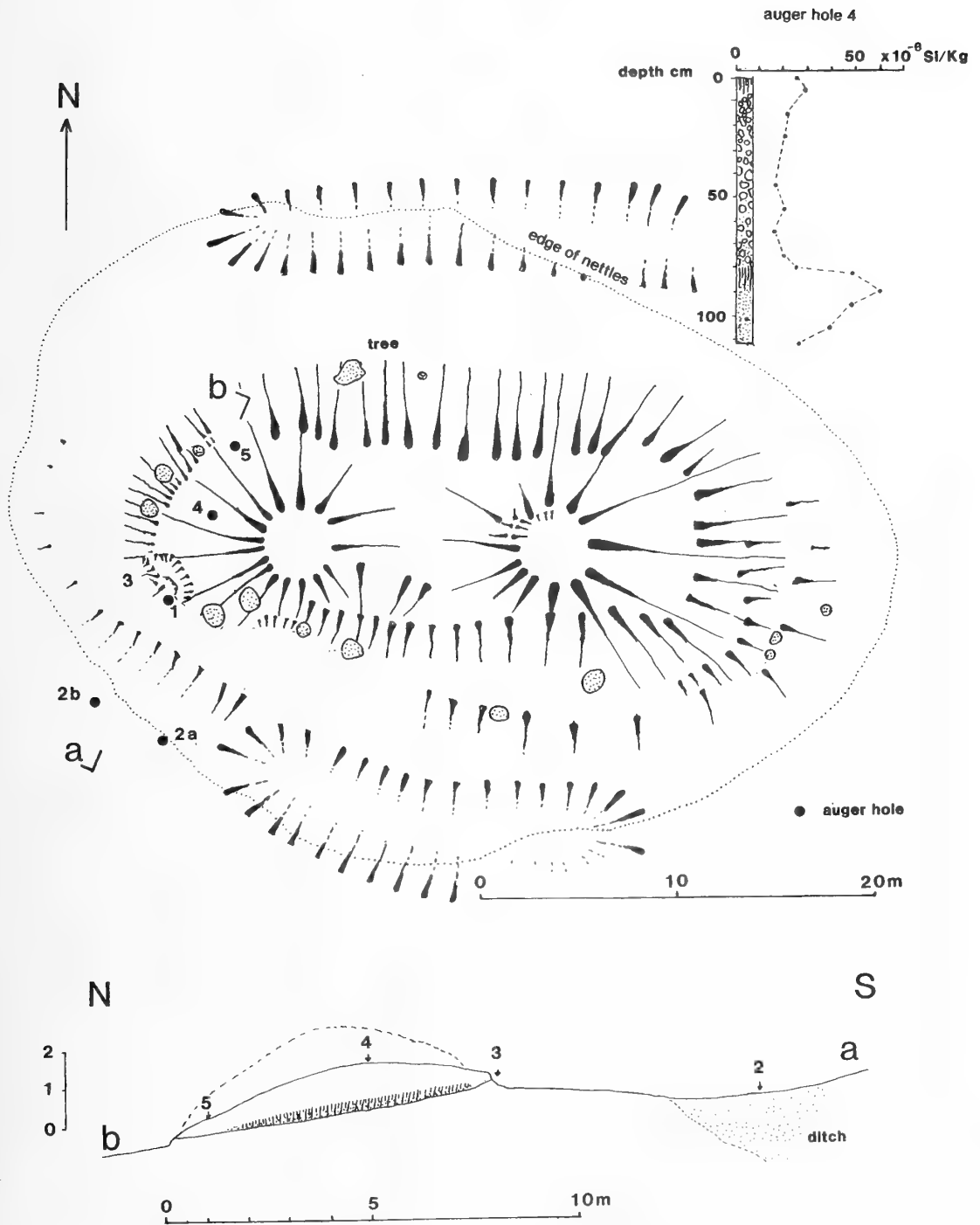


Fig. 3 a) Plan of the barrow showing auger locations and inset with the soil profile and magnetic susceptibility signature, note ditches added later from RCHME survey (Eagles and Field forthcoming, fig 4), and b) North-South profile of the mound

indication of the current state of preservation of the monument.

Augering

Very limited archaeological intervention (limited and pinpointed hand augering and excavation) into barrows in Cranborne Chase, by Dr French and ourselves (French *et al.* 2000), has proven to be of great value. Augering can determine the presence, depth, nature and extent of buried soils under such monuments and the presence of other features within and around the mounds. This information is of use in the interpretation of the construction sequences of monuments, in outlining their palaeo-environmental potential, and in providing information about the survival and integrity of various elements of the monuments to inform English Heritage and relevant curatorial bodies. On this basis, a small augering programme was conducted with a 25 mm diameter screw auger and a 40 mm diameter dutch soil auger. Five small auger holes and one natural exposure (Appendix 1) were examined (Figure 3).

Augering through the low, western end of the barrow revealed a well preserved chalk mound comprised of loose blocky chalk, obviously hewn from chalk quarry pits or ditches. There is no mention by William Cunnington, Colt Hoare, or other archaeologists later, of flanking ditches associated with this monument; indeed, Maud Cunnington (1914) specifically states that there was no trace of ditches and this is reiterated by Kinnes (1992, 10, 24).

Two auger holes were positioned close to a slight fall in the ground surface that appeared to mark the edge of the eroded mound. Surprisingly auger hole 2a (Figure 3) revealed deposits up to 0.75 m deep and a similar sequence, up to 1.45m deep, was recorded in auger hole 2b. These undoubtedly record the inner edge of the previously unrecorded flanking ditch of the long barrow. As the project aim was to examine the buried soil, rather than provide a profile of the ditch, no further augering was conducted at this point. Like Maud Cunnington in 1913, we could not see any real impression of flanking ditches around the monument. Recent survey by RCHME/English Heritage has, however, recorded flanking ditches and Eagles and Field say that 'side ditches are in part just visible and appear to curve slightly, though presumably have been curtailed at either end' (forthcoming). Our augering shows that they must

indeed curve and extend beyond the shallow surface features observable at present.

Attempts to locate the edge of the mound and the buried soil around its western edge (auger holes 1 and 5) failed. Examination of a small erosion hollow (see point 3, Figure 3) showed clean natural chalk at an altitude of nearly 0.5 m above the surrounding field surface. This indicated severe lowering of the surrounding chalk and that the buried soil was to be found on a perched and preserved chalk plateau. Consequently an attempt was made to auger through the chalk mound and penetrate the buried soil near the western extremity at a considerably higher level than we had originally anticipated. Augering was difficult though 0.8m of chalk rubble but this proved to lie directly on a rich, stonefree silty clay buried soil nearly 0.4m thick.

The buried soil

The buried soil was encountered 0.86 m below the surface of the mound (auger hole 4; Figure 3 inset and Figure 4). The lower 0.06 m of the chalk mound rubble contained patches of dark brown silty clay soil material, presumably portions of the buried soil which had been worm-worked into the mound (cf. Macphail 1995). The main buried soil was a very rich, dark brown plastic silty clay with no stones. It was not possible to determine from the augering the presence of a turf horizon, nor even of any horization. The lowest 30mm of the profile was soil and weathered chalk. Soil magnetic susceptibility measured with a Bartington MS2B meter coupled to a MS1B sensor coil calibrated for 10g of soil, showed a significant enhancement towards the surface of the silty clay typical of an upper, more humic, soil profile. The enhancement however, was not distinct enough to suggest conclusively that this represented the turf. We can consider this as a humic rendzina or possibly a brown earth soil.

80–86cm Blocky loose chalk rubble with patches of dark brown (10YR 4/3/3), stonefree silty clay. Post-depositional worm worked soil into base of chalk mound

86–22cm Dark brown (10YR 4/3) plastic silty clay with some chalk pieces (Ah) giving way to stonefree, plastic silty clay soil (A/B). No structure or differentiation noticed in augered soil. Buried old land surface

122–125cm Brown (10YR 5/3) plastic silty clay with some small and ?medium chalk pieces. Base of soil



Fig. 4 Land snail histogram

and top of weathered chalk
125+cm Chalk

This buried soil is considerably thicker (at 38 cm) than those recorded under a number of other long barrows in Wessex: West Kennet (25cm); South Street (27cm); Horslip (22cm); Waylands Smithy II (12cm) and this is a matter we return to later. With some difficulty five small samples of the soil were retrieved from the auger for analysis of land snails and pollen. No artefacts were recovered.

PALAEO-ENVIRONMENTAL ANALYSIS

The main profile through the barrow (auger 4) which cored the mound and old land surface was sampled for palaeo-environmental data. This enabled the recording and recovery of a series of small samples from the buried soil. Eight very small samples (20g) were taken from the topsoil and mound material for magnetic susceptibility, but efforts were concentrated on obtaining five larger samples from the buried soil for land snails which were subsampled for magnetic susceptibility and pollen analysis. Five small samples (average 275g) were extracted using a dutch auger from the base of the mound and through the old land surface. As much soil was removed as possible.

Magnetic Susceptibility

Samples were taken for magnetic susceptibility at 100mm intervals through the profile and at closer intervals, where possible through the old land surface, to enable the creation of a magnetic

susceptibility signature (Figure 3 inset, appendix 2 and Table 1). Samples were air dried and 10g <2mm was measured using a Bartington MS2B meter and recorded as SI units 10^{-8} SI/Kg.

The results show modern thin humic and calcareous topsoil under open 'woodland' (the barrow is covered with middle-aged beech trees and a variety of shrubs amongst a dense growth of 2 m high nettles) with a reading of only 16, below which the root-penetrated chalk mound gave very low results between 4 and 9 (ave 6.8). The base of the chalk mound, immediately above the buried soil showed a rise to 12, below which significantly enhanced readings of up to 58 were recorded in the buried soil. The buried soil showed typical enhancements in its upper profile, and the entire soil (except the soil and chalk at 80-85cm, and the weathered chalk below 122cm) averaged 38 SI 10^{-8} SI/Kg. This magnetic susceptibility profile tends to confirm the presence of a complete soil profile although not recognised as such from the auger records. The high levels in the upper surface (58 SI 10^{-8} SI/Kg) may be indicative of some burning on this surface.

Land Snails

The five small samples produced some shells from which a broad indication of the pre-monument landscape history could be gained. In general, relatively few shells were recovered, but when calculated as numbers per kilogram this was both acceptable and consistent with other buried soils.

Although shell numbers are very low (due to the small quantity of soil obtained), they show striking and significant changes. In contrast to assemblages from buried soils under a number of other long

Table 1. Land snail and magnetic susceptibility data from the buried soil (note: • = sample examined for pollen)

Context	Cw	A/B	A/B	Ah	mound
Depth (cm)	122-125	110-122	93-110	86-93	80- 85
Wt (g)	72	317	401	248	327
		•	•	•	•
MOLLUSCA					
<i>Pomatias elegans</i> (Müller)	1	+	2	+	2
<i>Carychium tridentatum</i> (Risso)	1	3	+	-	-
<i>Cochlicopa</i> spp.	-	2	1	3	-
<i>Vertigo pusilla</i> Müller	-	1	-	-	-
<i>Vertigo pygmaea</i> (Draparnaud)	-	-	1	3	1
<i>Vertigo</i> spp.	-	3	-	2	-
<i>Pupilla muscorum</i> (Linnaeus)	-	1	2	6	2
<i>Vallonia costata</i> (Müller)	1	4	2	3	-
<i>Vallonia excentrica</i> Sterki	-	-	-	4	3
<i>Vallonia</i> spp.	-	1	-	4	-
<i>Acanthinula aculeata</i> (Müller)	-	2	-	-	2
<i>Ena montana</i> (Draparnaud)	-	1	1	-	-
<i>Discus rotundatus</i> (Müller)	+	+	-	+	-
<i>Vitrea contracta</i> (Westerlund)	-	3	-	1	-
<i>Aegopinella nitidula</i> (Draparnaud)	-	6	2	4	-
<i>Oxychilus cellarius</i> (Müller)	-	3	-	3	-
Limacidae	-	1	-	1	-
<i>Euconulus fulvus</i> (Müller)	-	1	-	-	-
<i>Clausilia bidentata</i> (Ström)	1	3	+	-	+
<i>Helicella itala</i> (Linnaeus)	-	-	3	6	5
<i>Trichia hispida</i> (Linnaeus)	-	3	1	3	1
<i>Cepaea/Arianta</i> spp.	-	+	-	+	+
Taxa	3	14	9	11	7
TOTAL per kg	55	120	37	173	49
TOTAL	4	38	15	43	16
Magnetic susceptibility (SI 10 ⁻⁸ SI/Kg)	14	24	32	58	47

barrows in Wiltshire (Horslip, West Kennet and South Street, see Evans 1972, 261-4) the main horizon of the buried soil at Corton showed a marked change from assemblages dominated by shade-loving species (Table 1), including some relict ancient woodland species, to open country species (nearly 70%). This is, however, similar to that represented by the snail fauna (Rouse and Evans in Whittle *et al.* 1993, 211-217) in the shallow (8cm) humic rendzina (Macphail in Whittle *et al.* 1993, 218-219) at Easton Down, Wilts. The high percentages of shade-loving

species (50-61%) in the lower part of the soil at Corton, and the presence of *V. pusilla* and *Ena montana* indicate a former ancient, albeit open, woodland (Figure 4). Like many other assemblages of this type (cf. Evans 1972, 248-74), most of the shells in this portion of the soil were more heavily weathered and pitted indicating that they had been in the soil much longer than those in the assemblages above 93cm. In the upper mull humus and possible turfline (93-80cm) the assemblages are markedly different; although some shade-loving species persist, the assemblage has a

more open character with the *Vallonia* species, *Pupilla muscorum* and *Helicella itala* being important. This sequence suggests that an open and ancient woodland existed and, following clearance, open dry grassland developed.

This relatively long sequence and sharp break may indicate a well developed soil profile with some internal stratigraphy (see Carter 1990), but may also indicate the presence of a subsoil (?tree hollow) feature. The difficulty of extracting soil through 80cm of bank material and the nature of the augering made it difficult to discern any definite differences in the sampled context. An occurrence of a deeper feature cannot be confirmed from the limited augering conducted.

Soil Pollen, by Rob Scaife

Four subsamples taken from the snail samples were prepared for pollen analysis (see Table 1). These included samples from the soil worked into the mound (@83cm), the bAh horizon (@90cm) and the bB horizon (@100cm and 115cm).

Standard techniques were used for the extraction of the sub-fossil pollen and spores (Moore and Webb 1978; Moore *et al.* 1991) with the addition of micromesh sieving (10 μ). The soil was highly calcareous and as such represents a highly unsatisfactory context for pollen preservation. Consequently, a rigorous pollen extraction procedure was undertaken at the Department of Geography, University of Southampton, on relatively large samples of 6ml. Samples were decalcified with 10% HCL and deflocculated with 8% KOH. Coarse debris was removed through sieving at 150 μ and clay by micro-mesh (10 μ). Remaining silica was digested with 40% hydrofluoric acid. Erdtman's acetolysis was carried out for removal of cellulose and expanding the size of pollen after extended HF treatment.

Very little pollen and few spores were present in any of the samples, but surprisingly, the pollen samples contain a fair amount of humic material which remained on the microscope slide. There are a few spores of *Dryopteris* type (typical ferns), *Pteridium aquilinum* (bracken), and a single *Polypodium vulgare* (common polypody). These were far from abundant. In terms of pollen the very sporadic presence of *Corylus avellana* (hazel), a single *Alnus* (alder), a single Lactuceae (dandelion type) and a Poaceae (grass) were too few to record pollen counts.

Pollen preservation in chalk soils is very variable. For instance good preservation was found in the Mesolithic pits at Stonehenge (Scaife 1995), while richly humic ancient land surfaces and turves from Bronze Age round barrows on King Barrow Ridge contained none (Scaife in Cleal and Allen 1994). The poor preservation here may have been enhanced by biologically active woodland soils causing oxidation. Spores of ferns (esp. *Polypodium*) are often indicative of woodland but, of course, these represent the last vestiges of any pollen/spore preservation, and may be residual elements remaining in the soil for long periods.

Although this is a sparse assemblage, the lack of *Tilia* (lime), a robust pollen grain, is noteworthy in view of its widespread dominance over many areas during prehistory. Interestingly other sites such as the buried soil under the Easton Down Neolithic barrow also lacked *Tilia* (Cruse in Whittle *et al.* 1993, 219-221). The possible implications of this aspect will be discussed in a later paper (Allen, Gardiner and Scaife in prep.).

DISCUSSION

The Environment

We can tentatively suggest from albeit limited research that ancient woodland had been cleared from immediately around the barrow not long before construction. Nevertheless, the establishment of a mixed open country mollusc fauna indicates that clearance was probably not for this construction, and that woodland was not far away. The position of the barrow, with its clear views to and from the valley floor, would only have been meaningful with largely unwooded valley sides. If the augered profile represents a buried soil rather than a subsoil feature (and buried soil), then clearance may have occurred only a relatively short period (possibly decades/a century) before barrow construction. Details from John Evans's work on buried soils from other long barrows and in Wessex (West Kennet, Horslip, South Street, Beckhampton Road and Wayland's Smithy II) indicate the removal of woodland and of well-established open grassland or even arable (South Street) conditions locally prior to barrow construction. Only Easton Down indicates clearance of woodland locally, possibly for the barrow or immediate pre-barrow events (Whittle *et al.* 1993). The more localised and less intensively modified pre-barrow environment

Table 2. Viewsheds of Neolithic long barrows in the Corton environs and Wylve Valley

Fig. 5	Barrow	Location and Viewshed
<i>South of River Wylve</i>		
(1)	Sherrington 1 (ST 968 391) K	In the Wylve Valley, next to the river
(1)	Boyton 1 (ST 930 403) I	On low ridge looking into the Wylve Valley and on skyline from the valley
(1)	Sherrington 4 (ST 951 384) J	On the first ridge looking into the Wylve Valley and on skyline from the valley
(1)	Sutton Veny (ST 911 415) H	On low greensand/lower chalk bench looking into the Wylve Valley
(3)	Stockton Barrow (ST 965 376) L	On the higher ridge looking into dry valleys from which it is on the skyline
<i>North of River Wylve</i>		
(1)	King Barrow G (ST 897 444)	On low greensand/lower chalk bench looking into Wylve Valley
(3)	Norton Bavant 13 (ST 925 459) C	On Salisbury Plain false crested from the Wylve Valley and looking into Oxendean Bottom
(3)	Norton Bavant 14 (ST 918 459) B	On Salisbury Plain false crested from the Wylve Valley and looking into Oxendean Bottom
(3)	Heytesbury 4 (ST 924 441) E	On Salisbury Plain false crested from Heytesbury stream and looking into Oxendean Bottom
(3)	Knook Barrow (ST 956 446) F	On Salisbury Plain false crested from Heytesbury stream and looking into Oxendean Bottom
(2)	Warminster 6 (ST 903 471) A	High Salisbury Plain, overlooking Wylve but not clearly or obviously visible from it
(2)	Bowl's Barrow (ST 942 468) D	High Salisbury Plain, overlooking Wylve but not clearly or obviously visible from it
(2)	Knook 5 (ST 967 462)	High Salisbury Plain, away from Wylve and not visible from it

(1) barrows which look into, or are sited in, the Wylve Valley; (2) barrows on the higher Salisbury Plain that look over the Wylve in the distance, and (3) barrows which look into other dry valleys i.e. the Oxendean-Heytesbury valley through which an unnamed bourne runs and may look over, rather than into, the Wylve.

at Corton may be explained by the lack of the great Neolithic monument complexes such as at Avebury where other analyses have been conducted. We have to consider, however, that the lower section of the augered and sampled profile may represent a feature such as a treehollow, rather than a deep soil stratigraphy. Such possibilities cannot be resolved with the limited augering programme conducted.

The Barrow

A chalk and earthen mound at least 35m by 15m, quarried from two now completely infilled, and previously unrecorded, ditches was thrown over the eight human burials. The mound, running parallel to the axis of the slope, overlooked the Wylve Valley where the long barrow of Sherrington can readily be seen, and thus we can assume that much of this area was clear of woodland. The nature of the Wylve Valley is not known at this time but research by

John Evans at Stockton (Williams and Evans 2000, 43) indicates that the floodplain was not being alluviated at this time (Evans pers comm). Further archaeological investigation at the Sherrington long barrow, by the authors, similar to that conducted at Corton, is envisaged to test this, and will be the subject of another paper.

Siting of Neolithic Long Barrows in the Wylve Valley

The relationship of long barrows to river valleys on the Salisbury Plain is explored by McOmish *et al.* (2002), and in the Wylve Valley by Eagles and Field (forthcoming). It is a subject that will be more explicitly addressed in a later paper (Allen, Gardiner and Scaife in prep.). A relatively large number of long barrows exist along the Wylve Valley, while thirteen are recorded east of Warminster (Kinnes 1992, 10, fig. 1A.9). Many are sited in lowland and valley bench locations reflecting the significance of

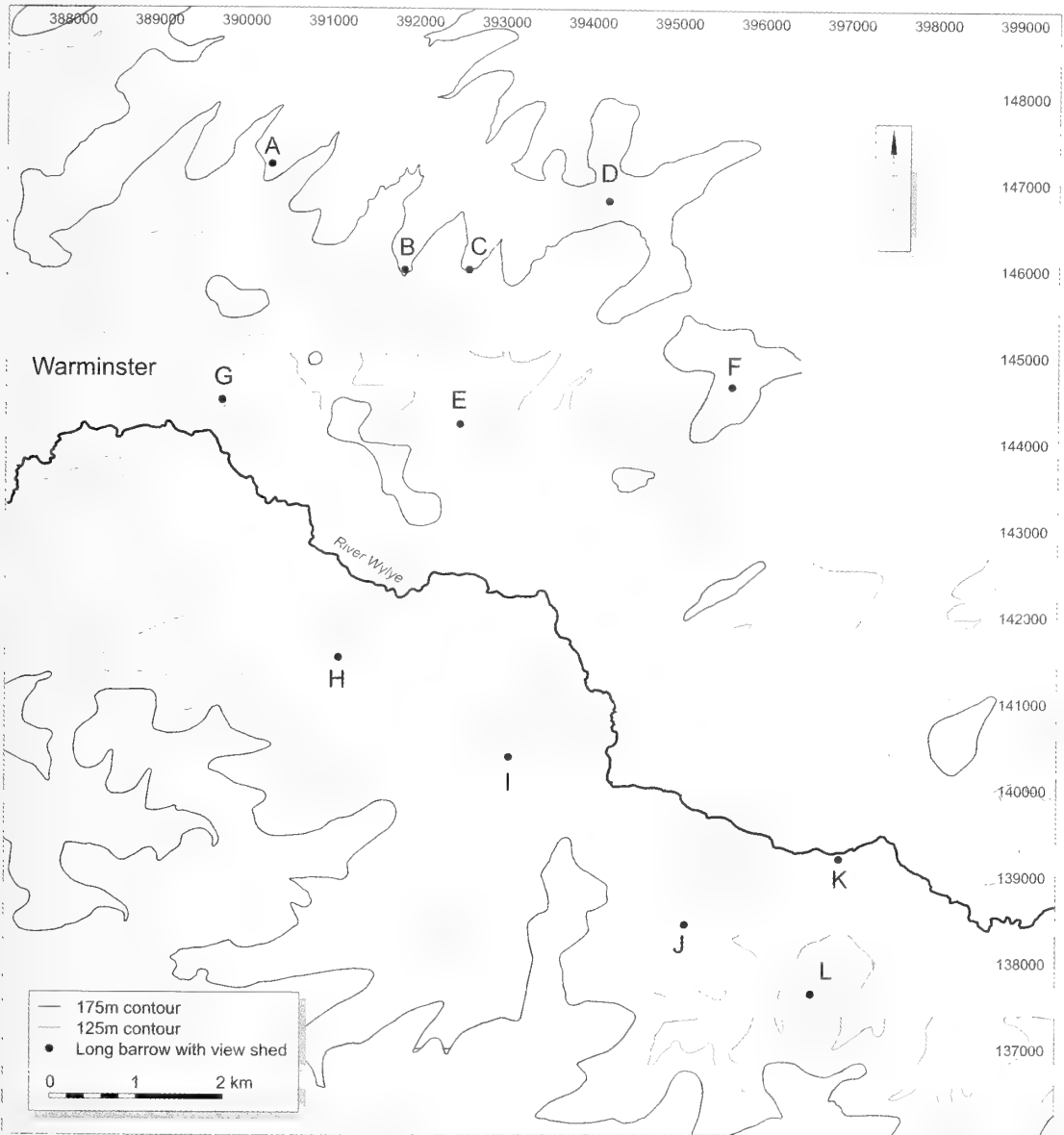


Fig. 5 Long barrow viewsheds in the Wylie Valley as determined by site visits and mapped contours at 1:25000. Long barrows are: A) Warminster 6, B) Norton Bavant 14, C) Norton Bavant 13, D) Bowl's (Bole's) Barrow, E) Heytesbury 4, F) Knook, G) King Barrow, H) Sutton Veny, I) Corton (Boyton 1), J) Sherrington 4, K) Sherrington 1, L) Stockton (see also Table 2)

the valley, presumably as a communication route and thus indicating its partially open nature. By examining the siting and viewsheds of these barrows (Figure 5) three groups can be defined;

- (1) those which look into, or are sited in, the Wylie Valley
- (2) those on the higher Salisbury Plain that look over

the Wylie from a distance, and

- (3) those which look into other dry valleys (i.e. the Oxendean-Heytesbury valley through which runs an unnamed bourne) and may look over, rather than into, the Wylie.

Thus, the viewsheds we define are not defined by intervisibility between the barrows (cf. Wheatley

1995), but by major topographical features to which views of the barrows are clearly oriented. Three barrows are specially sited to the south of the river to look into the valley; one is located in the valley (Sherrington 1); and only one (Stockton) on the higher chalk down has no significant view shed into the Wylde. Indeed its views are into two dry valleys. Those which look into the Wylde (Boyton 1, Sherrington 4 and Sutton Veny) are all false-crested from it. Similarly, to the north of the river we can see one barrow which looks into the Wylde (King Barrow), while a number, including Bowl's Barrow, are on the High Plain and most overlook the Valley, four are clearly sited to overlook the Oxendean valley from which they are false-crested. Thus over 75% of the large density of long barrows in this area reflect the significance of the Wylde Valley (Figure 5), of which over a third are specifically sited in it, or to view it (Table 2).

Other Activity of the Wylde Valley Environs

As is typical with the earlier Neolithic, there is little else to accompany these mortuary monuments. Isolated casual finds are recorded and both early Neolithic pottery and flints have been recovered from excavations such as beneath Bronze Age barrows on Lamb Down (Vatcher 1963, 431 and 418) and part of a Group 1 stone axe was found not far away (SMR ST93NE106). There are no causewayed enclosures confidently listed although the internal earthworks within Scatchbury to the west (Corney pers. com.) may be an unconfirmed example. The presence of relatively large numbers of long barrows in the environs of Corton, and particularly in the Wylde Valley (cf. Kinnes 1992) is a clear indication of well-established early Neolithic communities, and this paper shows the Wylde Valley as a focus of some of that activity/attention.

CONCLUSIONS

From limited and minimally intrusive archaeological investigation we offer the following conclusions:

1. The survey has shown the traditionally recorded length of the Corton long barrow (216 ft, 65.8 m; Lambert 1806; Hoare 1812, 102; Ashbee

1970, 167; Kinnes 1992, 10; *VCH* 1957, 138; Wilts County SMR) to be in error, and we now record a length of 35m (c. 115 ft), in keeping with that published by Maud Cunnington (1914, 386-7).

2. Despite the growth of trees over the barrow after 1804 (Figure 2a) which had become established by 1913 (Cunnington 1914, 386-7; Figure 2c) an ancient land surface was well preserved beneath the mound. The trees presently on the fringes of the barrow (Figure 3) provide shelter for cattle which are creating some surface damage to the edges of the mound. However, as this survey and augering has demonstrated, this 'damage' is largely superficial.

3. Augering has demonstrated, not surprisingly, the presence of flanking ditches, previously unrecorded.

4. Precision augering and sampling has demonstrated the presence of a well-preserved buried land surface of greater thickness than in many other recorded long barrows, from which the acquisition of environmental information (soils, snails and pollen) provides an indication of local clearance of the woodland around the barrow enabling views of the Wylde Valley.

5. These data were obtained from very limited study, rapid survey and minimally intrusive auger examination of the extant scheduled monument.

Acknowledgements

This research was conducted as part of the Corton and Boyton millennium archaeology day which received Millennium Fund grant aid through the Heritage for All scheme. We would like to thank the village millennium committee; especially Richard Witt, Robert and Maria Mayall, and Barbara Saunt for the invitation and their assistance. We would like to thank the landowners Thomas and Caroline Wheatley-Hubbard for allowing us, and the villagers of Corton and Boyton, to visit the site and undertake this investigation, and the folk of the two villages who joined us in our investigations.

Amanda Chadburn, English Heritage, was wholly supportive, providing guidance and permission to undertake the augering. During post-excavation, Duncan Coe of Wiltshire County Council provided detailed SMR information, and

Lorna Haycock and Bernard Nurse, librarians of Wiltshire Archaeological & Natural History Society and Society of Antiquaries respectively, sought out references for us and provided photocopies, as did Paul Robinson, curator, Wiltshire Heritage Museum, Devizes. John Evans provided information about his own research in the Wylve Valley. We thank David Field and Bruce Eagles for discussing their work with us, and allowing us to quote from their unpublished work, and for permitting us to use the survey of the Corton long barrow, carried out by the RCHME in 1991 as part of their South Wiltshire earthworks project. Our thanks also Karen Nichols for producing figures 1 and 5 from our scrappy originals and to Rob Scaife who analysed the pollen samples.

Archive

Copies of this report together with the paper archive are deposited in Salisbury and South Wiltshire Museum, and Wiltshire Archaeological and Natural History Society Museum in Devizes. Copies of this manuscript have also been presented to the Corton and Boyton Millennium Committee.

Bibliography

- ASHBEE, P., 1970. *The Earthen Long Barrow in Britain*. London: Dent
- CARTER, S.P., 1990. The stratification and taphonomy of shells in calcareous soils: implications for land snail analysis in archaeology, *Journal of Archaeological Science* 17, 495-507.
- CLEAL, R.M.J. and ALLEN, M.J., 1994. Investigation of Tree-Damaged Barrows on King Barrow Ridge and Luxenborough Planation, Amesbury, *WANHM*. 87, 54-8
- CUNNINGTON, M.E., 1914. List of long barrows in Wiltshire, *Wilts Archaeol. Mag* 38, 379-414
- CUNNINGTON, R.H., 1975. *From Antiquarian to Archaeologist*. Aylesbury: Shire Publications Ltd
- EAGLES, B. and FIELD, D., forthcoming. William Cunnington and the long barrows of the River Wylve, in Cleal, R.M.J. and Pollard, J. (eds). *Monuments and Material culture. Papers on the Neolithic and Bronze Age of Britain*
- EVANS, J.G., 1972. *Land Snails in Archaeology*. London: Seminar Press
- FRENCH, C.A.I., LEWIS, H., ALLEN, M.J., and SCAIFE, R., 2000. Palaeo-environmental and archaeological investigations on Wyke Down and in the upper Allen Valley, Cranborne Chase, *Proc. Dorset, Natr. Hist & Archaeol. Soc.* 122, 53-71
- HOARE, R. Colt, 1812. *The Ancient History of Wiltshire, vol 1*. London: William Miller
- GUIDO, M. and SMITH, I.F., 1982. Figsbury Rings: a reconsideration of the inner enclosure, *WANHM*. 76, 21-25
- KINNES, I., 1992. *Non-megalithic long barrows and allied structures in the British Neolithic*. London: British Museum Occasional Paper 52
- LAMBERT, A.B., 1806. Further account of tumuli opened in Wiltshire in a letter from Mr. William Cunnington FAS to Alymer Bourke Lambert, Esq, FRS, FAS and FLS, Heytesbury, Sept 14 1804, *Archaeologia* 15, 338-46
- MACPHAIL, R.I., 1995. Soils, in Wainwright G. and Davies, S., *Balksbury Camp, Hampshire, Excavations 1973 and 1981*. English Heritage Archaeol. Rep. 4, 101-104
- McOMISH, D., FIELD, D. and BROWN, G., 2002. *The field archaeology of Salisbury Plain Training Area*. Swindon: English Heritage
- MOORE, P.D. and WEBB, J.A., 1978. *An illustrated guide to pollen analysis*. London: Hodder and Stoughton
- MOORE, P.D., WEBB, J.A., and COLLINSON, M.E., 1991. *Pollen analysis* Second edition. Oxford: Blackwell Scientific
- SCAIFE, R.G., 1995. Boreal and Sub-boreal chalk landscape: pollen evidence, in Cleal R.M.J., Walker K.E., and Montague R., *Stonehenge in its landscape: Twentieth-century Excavations*. English Heritage Archaeol. Rep. 10, 51-55
- THURNAM, J., 1869. On Ancient British Barrows: part 1, long barrows, *Archaeologia* 42, 161-244
- VATCHER, F de M., 1963. The excavation of the barrows on Lamb Down, Codford St. Mary, *WANHM*. 58, 417-441
- VCH, 1957. *Victoria County Histories, a history of Wiltshire*, Page, R.B. and Crittall, E. (eds), vol 1, part 1, 138
- WHEATLEY, D., 1995 Cumulative viewshed analysis: a GIS-based method for investigating intervisibility, and its archaeological application, in Lock, G. and Stancic, Z., (eds), *Archaeology and GIS: a European perspective*. London: Taylor and Francis, 171-185
- WHITTLE, A., ROUSE, A.J. and EVANS, J.G., 1993. A Neolithic downland monument in its environment: excavations at Easton Down long barrow, Bishops Cannings, north Wiltshire, *Proc. Prehist. Soc.* 59, 197-239
- WILLIAMS, D. and EVANS, J.G., 2000. Past environments in river valley bottoms around Danebury, in Cunliffe, B., *The Danebury Environs Programme; the prehistory of a Wessex landscape, vol. 1*. Oxford University Committee for Archaeology Monograph 48, 43

APPENDIX 1: auger logs

Auger 1; plough removed mound

- 0-10cm Loose very dry humic and highly calcareous silty loam with some chalk pieces over chalk
shallow Ap Shallow former ploughsoil

Auger 2a; ditch

- 0-20cm Compact grey, dry calcareous silt loam with common chalk pieces. Ap
20-40cm Pale brown (10YR 6/3) calcareous silty loam, common chalk pieces, with larger and more frequent chalk pieces towards 40cm. Ploughwash (tertiary fill), probably medieval and post medieval
40-55cm Dark greyish brown (10YR 4/2) (reddish hue) moist silty clay, with common small chalk pieces. Secondary fill
c.55-60cm Lens of chalk rubble with many very small chalk pieces with matrix as above, giving way to a lens of medium chalk rubble containing visible charcoal pieces on auger. Chalk wash primary fill
60-70cm Medium and small chalk pieces in a soil matrix
75cm + Chalk rubble - hole terminated. Primary fill

Auger 2b; ditch

- 0-25cm Light brown silty ploughsoil with many small and some medium chalk pieces. Ap
25-35cm –as above but chalkier, possibly towards base of ploughzone
35-45cm Light buff silty calcareous fill with varying chalk content (?chalk lenses). ploughwash / tertiary fill
45-98cm Slightly darker silty clay with fewer small chalk pieces, but occasional medium chalk pieces and charcoal fragment at 87cm. secondary fill
98-145cm Becoming increasingly chalkier with depth possibly primary fill or eroded ditch sides
145cm Solid chalk

Exposure 3; eastern mound

- 0-2cm Thin brown humus and roots over
2-16cm Exposed weathered natural chalk

Auger 4; West end mound; sampled profile

- 0-8cm Loose dry silty calcareous humus, clear boundary Weakly formed humic horizon on chalk rubble. A
8-80cm Very blocky chalk -medium and large fresh chalk pieces- in a loose chalky fill. Exceptionally difficult to penetrate with the auger. Chalk mound
80-86cm Blocky chalk as above, but with patches of dark brown (10YR 4/3), stonefree silty clay [sample]. Post-depositional worm worked soil into base of chalk mound
86-122cm Dark brown (10YR 4/3) plastic silty clay with some chalk pieces giving way to stonefree, plastic silty clay soil. No structure or differentiation noticed in augered soil. Buried old land surface
122-5cm Brown (10YR 5/3) plastic silty clay with some small and ?medium chalk pieces. Base of soil and top of weathered chalk
125+cm Chalk

Auger 5

- 0-10cm Loose very dry humic and calcareous silty loam with some chalk pieces Shallow humic rendzina, shallow A
10-30cm Large and medium chalk rubble with some soil. Weathered and root disturbed natural chalk
Cw

APPENDIX 2: Magnetic susceptibility results of the full profile

Samples:	auger 4 - magnetic susceptibility (SI units 10^{-8} SI/Kg)		
@ 5cm	16		topsoil
@15cm	9)	
@25cm	8)	
@45cm	4)	
@55cm	7)	chalk mound
@65cm	4)	
@75cm	9)	
@80cm	12)	
80-85cm = @83cm	47)	
86-93cm = @90cm	58		Ah
93-110cm = @100cm	32)	
110-122cm = @115cm	24)	buried soil
122-125cm = @123cm	14)	
			chalk/natural



Watercolour by William Owen Pughe (1759-1835), whose verse and watercolours, evoking Druidic themes, drew inspiration from Iolo's ideas. Reproduced by kind permission of the National Library of Wales

A Welsh Bard in Wiltshire: Iolo Morganwg, Silbury and the Sarsens

by Jon Cannon¹ and Mary-Ann Constantine²

A letter written by the Welsh antiquary and Druidic enthusiast, Iolo Morganwg, about his visit to the Avebury region in 1777 is published and discussed. His views on Silbury Hill (excavated the year before) and on the nature and origin of sarsens and sarsen settings are placed in the context of antiquarian thought, and discussed alongside other Wiltshire references in his letters and published works.

In January 1777 a thirty-year-old Welsh stonemason wrote to a compatriot in London with a vivid account of his recent journey through Wiltshire. He was Edward Williams, better known as Iolo Morganwg, the man whose vision of Britain's Druidic past would have an enormous impact on Welsh life and letters, and whose obsessive revision of its medieval literature would both inspire and frustrate Welsh scholarship for well over a century.¹ Iolo's vision of a Bardic Institution and the patriarchal religion of the Druids owes much to antiquarian predecessors like William Stukeley and Henry Rowlands; it owes much too, to subsequent revolutionary politics, to Thomas Paine's *Rights of Man*, and to his own Unitarian convictions. And it owes something, no doubt, to the laudanum that he took from his mid-twenties 'for a troublesome cough', and to which he remained addicted throughout a long and busy life. But at the heart of the vision is a sense of place, of history rooted in physical remains, in buildings and in stones. In a letter from the archive of the National Library of Wales (NLW MS 1808Eii no. 1519) presented below, we have Iolo's response to two key sites in what can best be described as his 'historical mythology' of the early British past: and, thanks to a couple of crucial details, his observations have a particular interest for archaeologists of those sites today, as

well as throwing new light on seventeenth and eighteenth-century attitudes to ancient landscapes.

12 January 1777

My Dear Friend,

I should have wrote sooner to you, but for the ~~uncertain~~ uncertainty I was in whether I should stay here for two Days together during the late frost, which put a stop to our trade. On my way hither I was so lucky as to be two days sick on the road. I suppose you would not be sorry to have as good an account as I can give you of the opening of the Mountaineous *Tumulus* at *ABURY*. I passed by it, and had the good fortune to meet with an inteligent shepherd, who saw it open (for it is now shut up) the Gentleman who had it opened had the area of its base measured and found that it stood upon no less than eight acres of ground (which is but little less than that on which the largest Egyptian Pyramid stands.) it is high in proportion and is never taken by the uninformed traveller but for a large natural mountain, there were four coal miners from Kingswood Coalmines near Bristol, employed for some Months to make a hole down to the bottom, they found it to consist of chalk and gravel thrown together by the hands of men and no natural hill as some doubted it to be, there were many

¹ Hillside, Ogbourne St George, Marlborough SN8 1SU ² Iolo Morganwg Project, University of Wales Centre for Advanced Welsh and Celtic Studies, Aberystwyth SY23 3HH

cavities in it but for what purpose is unknown as nothing was found in them. – there are many hundreds of Druidical monuments within two Miles around *Abury* (on Marlborough Downs) and most of them very stupenduous, I have seen the Grey withers on these Downs, whence a late author asserts the stones of *stonehenge* were got, but with equal propriety he might have say'd that the grey withers were brought from *stone henge* for within 50 miles of this place there are no quarries of stone of any kind except those in the neighbourhood of Bath 30 miles off and that not in the least like those stones that are in such prodigious numbers all over these Downs and *Salisbury plain* . . .

the Grey Withers is a *Carnedd* so Stupenduous as to have been taken hitherto for a natural mountain of dry Stones. but is evidently thrown together by the hands of Men as they all lie on the face of the ground in a confused manner like all *carneddau*, whereas **rocks** Rocks are always found in regular beds. besides upon digging into the ground there are no stones of any kind whatever to be found. nor any thing but marl or chalk. about 1000 acres of land on the Downs next Marlborough are covered with these kind of stones mostly either in streight or in circular rows. and there must have been formerly much more of them for all the houses walls &c & even the large Town of Marlborough are built with these stones broken to pieces. whence such amazing numbers of such enormous stones were got, or how brought hither, is astonishing to think. there is nothing more evident to me than that this was the grand seat of the Druids before the Roman invasion, if you consider the situation of the Country you will find it the most convenient of any in Britain, both for the resorting of the British provinces, as not being secluded by any [?] great rivers, ranges of Mountains arms of the sea &c and for the convenience of the *Galic* Students who it is well known came over to Britain to be fully instructed in the misteries of Druidism, that the Druids might retire to *Anglesea* on the Roman invasion I can readily allow. and might make that Island the seat of their learning for some short time. this is all I can ever grant. my I heard when at *Anglesea* that M^r. Rowlands had never been farther than *Aberconwy* out of *Anglesea*. this I believe to be pretty true, otherwise he would never have laid such stress on the exceeding pitiful monuments of that Island as proofs of its being the chief seat of Druidism. M^r. Rowlands was certainly prejudiced in favour of *Anglesea*, if it was really the chief place of the Druids, what? in the name of reason was the use of these Stupenduous works of theirs on Salisbury

plains & Marlborough Downs, a single one of them being many hundreds of times larger than all their remains in *Anglesea* put together, consider farther that in *Anglesea* the materials were found on the spot, but here were brought from the prodigious distance of probably a hundred Miles if not farther for with all my enquiries I cannot find any quarries of such stones within that distance, but your patience is probably tired, and so no more of Druidism. –

If you will be kind enough to send my Box and tools, directed to me at M^r. Marsh Carver N^o. 23, Orchard street Bristol, I shall be highly obliged to you. I left the extract from the Six Months Tour thro' England and Wales in your house and and with it a little sheet Catalogue of Books, Mostly Architecture, of Taylor's Holborn: I should be glad if you could send them with the Box perhaps you could lift the cover up a little to put them under, or perhaps fasten them under the cord, or put them on the cover and tack a sheet of stiff paper over them. I shall soon take a trip to Wales and shall then have something to send you which, perhaps, you will be glad to have.

I am my Dear friend
your very humble Servant
and sincire well wisher
Edward Williams

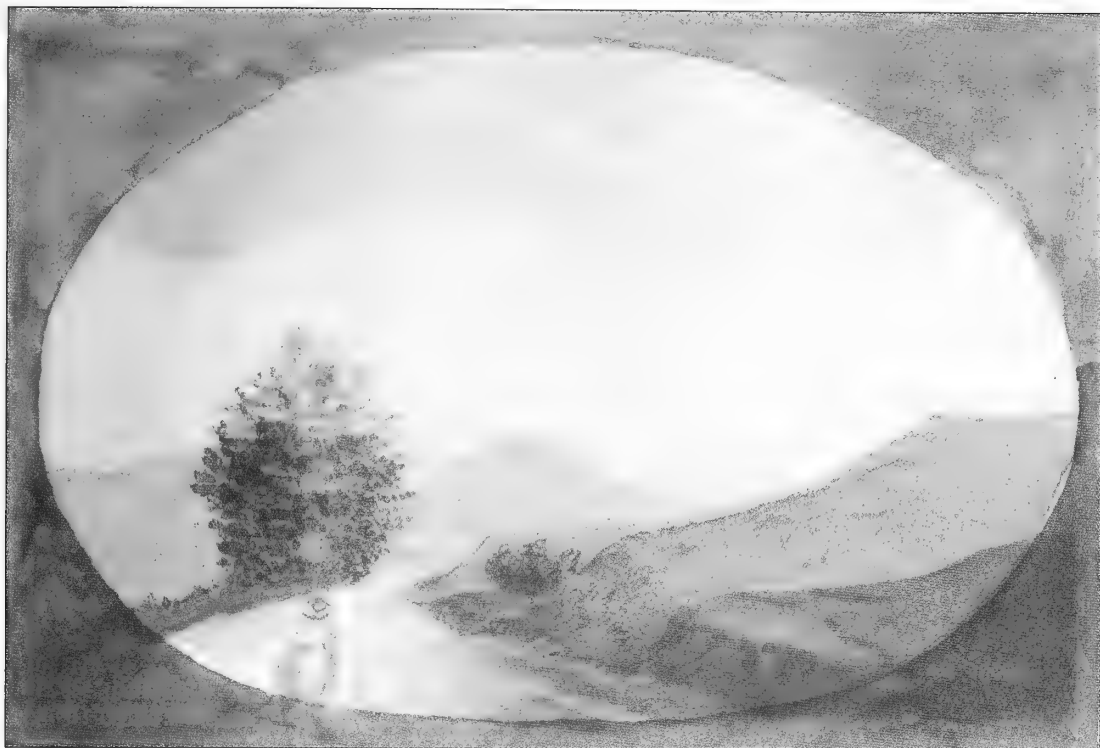
Bristol}
Jan^y. 12}
1777}

PS. my Sincire respects to Mess^{rs}. *Ceiriog Du, Alwen*, &c, &c, &c, &c, &c, and likewise to M^r. Fenton. direct your letter to me at M^r. Watkins in Baker's yard Back street Bristol.

SILBURY

Iolo's 'intelligent shepherd' was indeed a useful informant. The 'Mountaineous Tumulus' was Silbury Hill, and the excavation mentioned was that funded by the Duke of Northumberland, a prominent antiquary with local connections, who employed a number of miners to excavate the Hill at the end of October 1776. 'The Antiquarians promise to themselves wonders from the bowels of this mountain!' exclaimed the *Bristol Journal*; the hole itself was said to be eight feet square (2nd November 1776; cited in Field, Brown and Thomason 2002, 103).

In fact, this first known antiquarian intervention at Silbury Hill produced nothing but 'a thin slip of oak' (Field, Brown and Thomason



Watercolour by William Owen Pughe (1759-1835). Reproduced by kind permission of the National Library of Wales

2002).² The main significance of the excavation lies in the long-term side-effects attributed to poor or non-existent backfilling. This has until recently been assumed to be the cause of the structural problems which culminated in the major collapse at the Hill in May 2000.³ It is this collapse that lends relevance to any new information about the excavation, and thanks to Iolo and his shepherd there is now more that can be said. There was, for example, no known date for the end of the dig, which could conceivably have been extended over two seasons. The letter gives us a new *terminus ad quem* of 12 January 1777; Iolo's actual visit to the site could well have been a week or weeks before he wrote the letter – he implies, for example, that he has been delayed by frost – so the excavation must have taken place over November and December 1776. 'Some months' is not an unreasonable description of the time period involved.

We also have the suggestion that there were four, rather than the previously reported three, miners, which would make sense: David Field (pers. comm. 2002) has suggested that two were digging and two removing spoil. And, in 'Kingswood Coalmines' we have a new and persuasive point of origin to add to earlier claims

that they came from 'Cornwall' or 'the Mendips' (Field, Brown and Thomason, 2002, 16)⁴ In other areas Iolo provides new information about the activities that took place, which included measuring the base of the hill and examining how it was built: 'it was found to consist of chalk and gravel thrown together by the hands of men' – a reasonably accurate description, even if it does not do full justice to the complexity of the hill's internal engineering as it is now understood. But perhaps the most intriguing aspect of Iolo's report is the statement that 'there were many cavities in it but for what purpose is unknown as nothing was found in them'.

The suggestion that there might be ancient cavities in the hill raises old questions: from the earliest times, observers have wondered if the hill conceals a burial or other structure. Yet no evidence for anything of this nature has been found in the three hundred years of archaeological investigation at Silbury Hill; and all known cavities appear to be the result of poorly-consolidated excavation. Even the role of the 1776 excavation is currently open to question: all the cavities revealed in Cementation Skanska's seismic and geo-technical surveys in 2001, 2002 and 2003 seem either to be anomalies in

data or the result of poorly consolidated tunnelling by Atkinson, in 1968 (MacAvoy, pers. comm., 2002). Nevertheless, Iolo's observations are certainly worth taking into account in any future assessment of the issue.

Altogether, considering his notoriety in Welsh literary history as a forger of pasts and manipulator of truths, there is very little in this early letter that is demonstrably unreliable or romanticized: Iolo can be a good witness, as his observations of local customs in his native Glamorgan, or his later reports for the Board of Agriculture demonstrate (Williams 1956, 35-72, Jones 2001). The date and context of the letter are also encouraging for the historian. At this point in his career, though already keenly interested in the subjects that would come to form the keystones of his elaborate bardic vision, Iolo's antiquarianism is relatively receptive and fluid. Here, as for the majority of his contemporaries and intellectual predecessors, the stones and mounds of the Avebury–Stonehenge area are the acknowledged heartland of 'druidic' activity (he even takes a swipe at the Anglesey antiquary Henry Rowlands for his small-minded parochialism). Only later, as Iolo's centre of gravity shifted more

and more to his own beloved Glamorgan, would the importance of the great Wiltshire complex gradually fade.

At this point too, we can be fairly confident about his intentions in writing to the London farrier Owen Jones (also known as Owain Myfyr). As a literary-minded young Welshman in England (he had been working as a mason in London and Kent over the last three or four years), Iolo was attracted to the thriving London Welsh societies, whose activities in terms of the publication and promotion of Welsh literature were in fact considerably livelier than anything happening in Wales itself. Amongst the London Welsh, Owain Myfyr was a genial and generous supporter, not only of contemporary poetry (Iolo had sent him a draft poem for comment about a year earlier) but above all of attempts to copy, preserve and publish the neglected treasures of Wales's literary past. So the young stonecutter heading back to Wales in 1777 was also establishing literary contacts which would bear fruit for decades to come. As a poet, historian, antiquary, and, before long, the self-appointed preserver of Welsh (or rather Ancient British) tradition, Iolo had every reason to take an



The byway on the line of the Great Bath Road still goes through the heart of Fyfield Down; the Scheduled hollow ways where it climbs Overton Hill are visible in the background. © Jon Cannon 2003

interest in the stones and monuments he passed on his way home.

THE SARSENS

As the second half of the letter shows, Iolo had also visited the sarsen spreads centred on Fyfield Down, presumably (though not necessarily) at the same time as he passed Silbury Hill. Silbury was on the main coach road from London to Bristol and Bath (today's A4), roughly following the valley of the River Kennet. Fyfield Down could have been accessed from this road by going up one of the six side-roads shown on Ogilby's map of 1675, by walking up a sarsen-filled valley such as Piggledene, or by leaving the turnpike at Marlborough (which was set up in 1742-3: Crittall, 1959, 266-71). Whichever way he came up, Iolo would have joined the Old Bath Road, a route over the Downs from Marlborough which was for many years the major connection between London and Bristol (indeed, the hollow ways cut by the weight of traffic along it can still be seen on the side of Overton Hill).⁵ This higher road, which is still a bridleway, bisects Fyfield Down, and while coaches avoided it after the turnpiking of the valley road because of the many stones it remained popular with pedestrians (Watts, 1993; Chandler, 2001, 250; and Phillips, 1983); in fact, although turnpiking was the decisive moment for the valley road, both roads were probably used, depending on circumstances, for many years (Fowler, 2000, 22). Iolo is likely to have used both routes at different times: as turnpikes were free to those on foot, there was no reason for him to avoid the valley road past Silbury Hill, while the road across the Downs and through the sarsens remained formally open to all traffic until 1815.

The higher road had thus been travelled by many of the 'great and good' of society, and from the seventeenth century on, the sarsen stones appear in various letters and publications. Indeed they became something of an attraction: Camden mentions them in 1607, describing the Kennet as running 'through fields, all over which great stones like rocks rise out' (p. 93); John Ogilby's *Britannia* (1675), a gazetteer and guide to key routes, points out that *en route* from Marlborough to Bath, one can view the 'Multitude of Stones disperst' (p. 21). Over a century after Camden, Stukeley confirms that it was 'the topic of amusement for travellers, to observe the gray weathers on Marlborough downs',

(Stukeley 1776, p.14) while a 1792 guide to the Bath Road devotes several pages to the 'exceedingly hard' stones which 'lie scattered irregularly, along the sides of a valley on the right of the road', noting that some of these clusters are 'placed in semicircular forms' (Robertson 1792, 28 and 38-39).

Iolo's description is not dissimilar. Indeed, he gives the same paradoxical impression of both chaos and regularity, noting that the stones 'all lie on the face of the ground in a confused manner', and that 'about 1000 acres of land on the Downs next Marlborough are covered with these kind of stones mostly either in streight or in circular rows.' Anyone who knows Fyfield Down will recognise the aptness of this: the scattered sarsens do indeed sometimes form rows and arcs, partly because, as we now know, they were cleared to the edges of newly-made fields as early as the Bronze Age (Fowler 2000). It is this curious ambiguity of patterning, the blurring of the boundaries between the natural and artificial, which lies at the heart of the debate about the stones from the beginning of antiquarian interest in them.

In this letter, Iolo is firmly persuaded that the Greyweathers were 'evidently thrown together by the hands of Men', vividly describing them as 'a Carnedd so stupendous as to have been taken hitherto for a natural mountain of dry stones'. The 'confused manner' of their arrangement, far from indicating the random disposition of nature, is proof of their human design (his opinion that natural 'Rocks are always found in regular beds' is very much the observation of a stonemason, as is the knowledge he shows of the location of quarries in the area). Here, he is restating an idea that, in various forms, had been in existence for some time. Other observers held these strange, foreign-looking stones (they are said to be named after 'Saracens') to be artificial not only in their lay-out but in their very composition. As early as 1607, Camden says 'some [...] think these stones not natural or hewn from a quarry, but made of fine sand and some unctuos cement' (Camden 1607, 93).⁶ Robert Gay, in 1725, took issue with Inigo Jones's theory that they were the source or quarry for Stonehenge, declaring 'I am confident that they are *saxa factitia*, great artificial stons, made of many small naturall Stones' (cited in Legg 1986, 43). Childrey, in 1661, on the other hand, was 'clearly of the opinion that they are naturail stones', and a testimony to the wisdom of Nature, who would apparently consider it proper to ensure large amounts of stone were gathered together in any area which otherwise



The sarsens on Fyfield Down, many of which have been moved in the creation of prehistoric fields, have a curious ambiguity of patterning, blurring the boundaries between the natural and the artificial. © Jon Cannon 2003

lacked them (pp. 44 and 49). And if they were natural, opinion differed as to whether they were connected to the bedrock or lay loose on the surface. Sir Christopher Wren, discussing them with John Aubrey, suggested that 'they were cast up by a volcano' (Aubrey 1685, 44); for William Stukeley, writing in 1740, they were 'loose, detach'd from any rock, and doubtless lay there ever since the creation, being solid parts thrown out to the surface of the fluid globe, when its rotation was first impress'd' (Stukeley 1740, 16). Samuel Pepys, however, found it 'prodigious':

to see how full the Downes are of great stones; and all along the vallies, stones of considerable bigness, most of them growing certainly out of the ground so thick as to cover the ground (Pepys 1668).

In 1754 the geologist Edward Owen, reserving his own judgement on the origins of the stones, noted:

When I spoke with the People of the place concerning the singularity of such large masses of stone lying in so particular a manner, they gave it me as their opinion that they took their rise in the different places where I saw them lie, and the tops of

numbers of them, just shooting as it were healthy and strong out of the earth, as if they belonged to large masses growing up within it, seemed to confirm them in that opinion; but be that as it will, the oldest and most sensible part of the people assured me, it was their stedfast belief, that they had grown very considerably in their time (Owen 1754, 241).

But it was John Aubrey, writing between 1665 and 1697, and William Stukeley, published from 1740, who made the first systematic investigations of the landscape, establishing that the sarsens were natural and the source material for Avebury and Stonehenge, and for the first time proving the difference between these man-made monuments and the natural phenomenon of the sarsen spreads. It is worth remembering that the contrast between the different parts of the landscape was not nearly as great in their time as it is today. Most of the stones at Avebury were buried or recumbent, and the size and shape of the henge greatly obscured by orchards and field boundaries. There were also larger numbers of uncleared natural sarsens in the area than there are now (Field, forthcoming); and on Fyfield Down, along the Kennet Avenue and in

Avebury itself sarsens generally could be discerned lying in rings and rows. The achievements of Stukeley and Aubrey can be seen in their original context as acts of classification and analysis as much as of outright discovery, distinguishing the artificial from the natural in a landscape filled with stones set in apparent patterns.

Though these ideas had gained wide acceptance by the latter half of the eighteenth century, Iolo's perception of human design across the entire landscape is far from inexplicable or perverse, and he was certainly not alone in interpreting the sarsens of the Marlborough Downs as one vast ancient monument. Indeed, modern archaeology would not disagree with him: the known extent of the grid of fields laid out on the Downs in the Bronze Age, and the scale and variety of the monuments still being identified in the Avebury landscape, all tend to confirm his point of view. Given his belief that all the stones came from elsewhere ('whence such amazing numbers of stones were got, or how brought thither, is astonishing to think'), it becomes clearer why this letter, rather surprisingly, pays scant attention to Avebury itself. If the entire area is perceived as a major 'Druidical monument' or complex of monuments, then Avebury would appear correspondingly diminished. It may also be that its central importance is taken for granted, or, more simply, that Iolo did not have the time or opportunity for a proper visit.

Iolo's belief that the sarsens originate outside the area naturally leads him to reject the 'late author' who 'asserts the stones of stonehenge were got' from the Marlborough Downs. This idea was fairly widespread, appearing in the writings of Inigo Jones, Aubrey and Pepys, but it was most influentially put forward by William Stukeley (who died in 1765), and he is the likely target here. Elsewhere in Iolo's manuscripts the rejection of Stukeley is made explicit, though in a manner which seems curiously wilful, not to say unfair, since Iolo himself appears to have changed his mind about the origins of the sarsens, and is here much more in line with Stukeley's thinking:

These masses of Granite are to be found in abundance on Marlborough downs, where they are called the *Greyweathers*, in many places on the surface of Salisbury plains, and almost every where there at no great depth in the ground amongst that prodigious heap of volcanic or deluvian rubbish of which all that part of this Island for fifty miles at least

around, consists [...] Dr Stukely in his attempt to discover the quarry whence the materials of Stonehenge came had the misfortune to jabber a profusion of pedantic nonsense (NLW MS 13089, 172).

In another note he adds 'stones like those of Stonehenge are found in great numbers on the surface of the ground of various magnitudes perhaps since the Creation, especially about Abury, the Grey weathers etc' (NLW MS 13097B, 331). Since Stukeley explicitly claimed that 'All our Druid temples are built, where these sort of stones from the surface can be had at reasonable distances; for they are never taken from quarries' (Stukeley 1740, 5), it is hard to see what Iolo's quarrel with him is here. It may be that we lack some key piece of contextual information that would help us understand the nature of his disagreement.

FROM WILTSHIRE TO GLAMORGAN

Though Iolo walked the route from London to Bristol many times throughout his life, his manuscripts and correspondence reveal disappointingly little else on the Wiltshire sites: this early letter seems to be the fullest account of them to survive. Yet there is no doubting that the prehistoric monuments helped give shape to the various rituals of Iolo's bardic tradition, many of which crystallized during another period in London in the early 1790s. Iolo's bardism saturates the introduction to William Owen Pughe's *Heroic Elegies of Llywarc Hen* (1792), and inspired him to produce several watercolours on druidic themes; in the same year Iolo held the first *Gorsedd* or bardic ceremony on Primrose Hill. And when his own *Poems, Lyric and Pastoral* came out in 1794, its footnotes and essays were full of information about bards past and present, including this nicely scaled-down and portable version of the stone circle:

The *Welsh Bards* always meet in the open air whilst the Sun is above the horizon, where they form a *circle of stones*, according to the ancient custom; this circle they call *Cylch Cyngrair*, the *Circle of Concord*, or of *Confederation*. In these days, however, it is formed only of a few very small stones, or pebbles, such as may be carried to the spot in one man's pocket; but this would not have been deemed sufficient by those who formed the stupendous *Bardic Circle of Stonehenge* (Williams 1794, II, 39).

A series of letters from 1800-1801 reveals some tantalising glimpses of further interest in the subject. In January 1800 Iolo tells Owen Jones that he intends to:

come by way of Stone henge, not above 5 or 6 miles out of my way, to London; I want to notice the stone, I have often seen the place but not since I became a little acquainted Scientifically with the modern System of Mineralogy, which is necessary for a new acct. of Stone Henge. As for the places whence the stones were dug I have beyond the possibility of a doubt long ago discovered them (British Library Additional MSS 15024, f. 308-09).

This confidence is echoed in a letter to William Owen Pughe some months later: 'I will come by stone henge, not much out of my way, and take a proper account of it. I have lost what I once wrote on it, or have mislaid it, I am certain that I can give a better account of it than has yet appeared' (NLW MS 13221E, 77). But that 'proper account', like so many other schemes of Iolo's, either has not survived or was never written. In 1801, William Owen Pughe, busily mapping the place-names of early Welsh poetry onto a druidic landscape, asked Iolo:

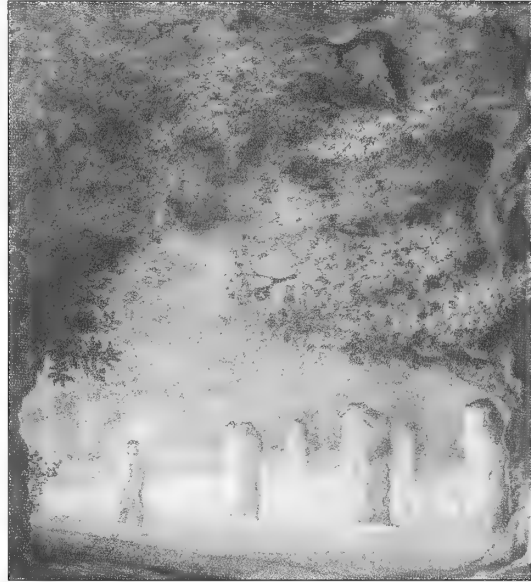
If, in your way up, you should come the Marlborough Road, try to stop to examine Avebury more minutely than I had time to do – I think, that there is no doubt of its being our grand national place of Meeting – It was (I say) the Gorsez Bryn Gwyzon – Bryn Gwyzon (Silbury hill) formed its meridional Index; for I think, you will find it to be exactly south from the centre of Avebury, or from some particular point in the circle – Cludair Cyvrangon, or the Mound of the Conventions was only another name for Bryn Gwyzon? (NLW MS 21282E, item 350).

Iolo in response promises 'to bestow one whole day on Avebury and Silbury', adding:

I have long wished to do so, and I now want to do so, and, were it possible, another day to examine Stone henge more minutely than I have hitherto done, of each of these curious objects I have never yet been able to do any thing more than to glance at them, or to take but very transient views of them, tho' I have several times passed by each of them. You think Avebury to be Gorsedd Bryn Gwyddon: I should not be very loath to swear it when I consider every circumstance (NLW MS 13221E, 116).

Those 'transient views' rather undermine earlier claims to have 'studied' the places at length,

and it is hard not to feel that Iolo never got round to giving the sites his full attention. This may partly be the effect of an increasing preoccupation with his native Glamorgan, neatly exemplified by the location of 'Bryn Gwyddon' (or, in William Owen Pughe's idiosyncratic orthography, 'Gwyzon'). This 'hill of knowledge' is referred to in a (probably spurious) Welsh triad (a medieval three-line verse-form that Iolo excelled at imitating) as the site of a bardic meeting or gorsedd, and though Iolo seems here to accept William Owen Pughe's identification with Silbury in 1801, he would ultimately locate Bryn Gwyddon at Ystradowen, near Cowbridge, where he spent much of his life (Williams 1956, xxxv; cf. NLW MS 13087E, 113). It is not without irony that the man who in 1777 accused Henry Rowlands of a local partiality to the 'exceeding pitiful monuments' of Anglesey should in turn



Two watercolours by William Owen Pughe (1759-1835).
Reproduced by kind permission of the National Library
of Wales

come to perceive his own county as the cradle of all the civilizing qualities of the bardic tradition. One can only regret that more of Iolo's ideas on the composition and origins of Avebury and Stonehenge, if they were ever committed to paper in the first place, have not survived. Though visionary interpretations of those famous sites are not, it is true, in short supply, the thoughts of this highly original stonemason-scholar would have been well worth reading.

What we have here is valuable nonetheless: on the one hand, a clarity of observation which provides reliable information on a key early intervention at Silbury Hill; and on the other, a response to the landscape which reminds us of the context of the work of Aubrey and Stukeley. It is something of a shock to realise that, in famously defining the major monuments around Avebury, these pioneers of archaeology actually diminished what, to observers from Camden to Iolo, was their 'true', much vaster, scale.

Notes

- ¹ The most detailed (though unfinished) biography of Iolo is in Welsh (Williams, 1956); for good short accounts in English see Morgan 1975 and Jenkins 1997. A major research project is underway at the University of Wales Centre for Advanced Welsh and Celtic Studies in Aberystwyth: we are especially grateful to Ffion Jones and David Ceri Jones, who are editing Iolo's correspondence, for making their work available. All citations from letters and manuscripts carry National Library of Wales numbers (hereafter NLW MS), and preserve original spellings.
- ² The citation is from the Rev James Douglas, *Nenia Britannica* (1793); Gough's notes to his edition of Camden's *Britannia*, however, gives the finds as 'a rotten post and rusty knife' (Camden and Gough, 1789 p. 110).
- ³ Collapses around this spot also occurred in 1925 and 1933. The spoil heap left by the miners may have still been visible in 1849, and indeed some of it may still be present today (Field, Brown and Thomason, *op cit* p 57.)
- ⁴ There is also another Kingswood in Gloucestershire, but it is not on a coalfield. The Kingswood Colliery, just east of Bristol and on the London-Bristol road, has a strong claim over all these.
- ⁵ For the name see Fowler 2000, 22: Fowler also cites the alternative names 'Old London Way' (1815, p.65) and 'Green Street' (early twentieth century, p. 115). The hollow ways are a Scheduled Ancient Monument and are listed in the Wiltshire SMR (no SU13327091); and by the NMR as no. SU17SW95, UID 221801. Many possible turnings and footpaths off the turnpike are

shown on Andrews and Dury (1773).

- ⁶ Gibson's notes in his translation of Camden (Camden and Gibson, 1695) go into further detail, suggesting (p. 94) that such 'cement' was used in ancient Rome (as indeed it was throughout the Roman world).

Bibliography

- ANDREWS, J., and DURY, A., 1773, *A Map of Wiltshire (taken from an actual survey)*. [reduced facsimile, WANHS Records Branch, vol. 8, 1952]
- ANON November 1776 to February 1777, *Felix Farley's Bristol Journal*. Bristol: Felix Farley
- AUBREY, J., 1685, *Memoires of Naturall Remarques in the County of Wilts: to which are annexed, observables of the same kind in the county of Surrey, and Flintshire*, in Britton, J., (ed) 1847, *The Natural History of Wiltshire*. London: Wiltshire Topographical Society
- AUBREY, J., 1980, *Monumenta Britannica*, Fowles, J. (ed). Sherborne: Dorset Publishing Company
- CAMDEN, W., 1607, and GOUGH, R., 1789, *Monumenta Britannia, or a chorographical description of the flourishing kingdoms of England, Scotland, and Ireland, and the islands adjacent; from the earliest antiquity* (expanded English edition). London: T. Payne
- CAMDEN, W., and GIBSON, E., 1695 *Camden's Britannia, newly translated into English: with large additions and improvements*. Edmund Gibson, Oxford: Queen's College
- CHADBURN, A. FIELD, D., and McAVOY, F., 2002 and 2003: e-mails to Jon Cannon. Bristol, Swindon and Portsmouth: English Heritage
- CHANDLER, J., 2001, *Wiltshire: a History of its Landscape and People. Vol I - Marlborough and Eastern Wiltshire*. Salisbury: Hobnob Press
- CHILDREY, J., 1661, *Britannia Baconica: or, the Natural Rarities of England, Scotland and Wales etc*. London: printed for the author
- CRITTALL, E., (ed), 1959, *The Victoria History of the Counties of England: A History of Wiltshire vol 4*. London: University of London Institute of Historical Research
- FIELD, D., with BROWN, G., and THOMASON, B., 2002, *An investigation and analytical survey of Silbury Hill*. Swindon: English Heritage Archaeological Investigation Report Series
- FIELD, D., forthcoming. 'Some Observations on Perception, Consolidation and Change in a Land of Stones' in Brown, G., Field, D., and McOmish, D., *The Avebury Landscape: field archaeology on the Marlborough Downs*, Oxford: Oxbow books
- FOWLER, P., 2000, *Landscape Plotted and Pieced: landscape history and local archaeology in Fyfield and Overton, Wiltshire*. London: Society of Antiquaries
- LEGG, R., (ed), 1986 *Stonehenge Antiquaries*, Sherborne: Dorset Publishing Company
- JENKINS, G.H., 1997. *Fact, Fantasy and Fiction: The*

- Historical Vision of Iolo Morganwg.* Aberystwyth: Centre for Advanced Welsh and Celtic Studies, 1997
- JONES, D. C., 'The Board of Agriculture, Walter Davies ('Gwallter Mechain') and Cardiganshire c. 1794-1815', *Ceredigion XIV* no 1 (2001) 79-100
- MORGAN, P., 1975. *Iolo Morganwg.* Cardiff: University of Wales Press, 1975
- OGILBY, J., 1675, *Britannia, volume the first: or, an Illustration of the Kingdom of England and Dominion of Wales by a Geographical and Historical Description of the Principal Roads.* London: J. Ogilby [reprinted Reading: Osprey, 1971]
- OWEN, E., 1754. *Observations on the Earths, Rocks, Stones and Minerals for some miles about Bristol and on the Nature of the Hot-well and the virtues of its Water.* London: W. Johnston
- PEPYS, S., June and July 1668 entries, in Wheatley, H. B., (ed), 1818 *The Diary of Samuel Pepys M.A., F.R.S.* World Wide Web: Project Gutenberg at <http://www.ibiblio.org>
- PHILLIPS, D., 1983, *The Great Road to Bath.* Newbury: Countryside Books
- ROBERTSON, A., 1792, *A Topographical Survey of the Great Road from London to Bath and Bristol. With historical and descriptive account etc,* Vol II. London: A. Robertson and R. Faulder
- STUKELEY, W., 1740, *Stonehenge: a Temple Restor'd to the British Druids.* London: Innys & Manby
- STUKELEY, W., 1743, *Abury: a Temple of the British Druids, with Some Others, Described* Vol II. London: printed for the author
- STUKELEY, W., 1776, *Itinerarium Curiosum.* London: Baker & Lee
- WATTS, K., 1993, *The Marlborough Downs.* Bradford on Avon: Ex Libris
- WILLIAMS, E., 1794. *Poems, Lyric and Pastoral,* 2 vols, London: J. Nichols
- WILLIAMS, G.J. 1956 *Iolo Morganwg: y Gyfrol Gyntaf.* Cardiff: Cardiff University Press

An Early Anglo-Saxon Cross-roads Burial from Broad Town, North Wiltshire

by Bob Clarke

A single unaccompanied burial located at a cross-roads at Broad Town, North Wiltshire, has recently been radiocarbon dated to the 6th-7th Century AD. Its excavation forms part of the ongoing investigation, by the University of Bath in Swindon, into settlement patterns in Kingsbridge Hundred, North Wiltshire. The results open up the possibilities of an earlier date than hitherto supposed both for the practice of cross-roads burial and for the burial of criminals near boundaries. The landscape context of the burial is further discussed, considering the potentially early date for what later became a hundred boundary marked by the Broad Town escarpment.

INTRODUCTION

Project Background

On Thursday 12 October 2000 Tony and Leigh Lucas discovered the partial remains of a human skeleton protruding from a bank overlooking the village of Broad Town, North Wiltshire. Broad Town Archaeological Project (BTAP) was informed by the County Archaeologist of the discovery and the site was visited by two members of BTAP who reported their findings to him. The County Archaeologist gave full support to excavation, which took place on 11-12 November 2000.

The burial site is located on the north-west facing chalk escarpment of the lower Marlborough Downs, overlooking the village of Broad Town, North Wiltshire (Figure 1), on the 175 m. contour line at NGR SU 0955 7765.

THE BURIAL: RESULTS

Prior to excavation, a record was made of the initially visible remains and other finds that had eroded out of the bank. That record forms the first part of this report.

Visible Remains in Section

The left side of the individual was exposed to the north due to a number of factors, primarily natural erosion and cattle interference. No grave cut was visible in the section, but there was a slight soil change immediately around the bones. The visible remains were exposed for a length of 72 cm. in the section. Depth from surface at the final visible thoracic vertebrae was 20cm., at the femoral head 25 cm.

Protruding from the naturally formed section were a number of bones, including seven articulated thoracic vertebrae and the left pelvic bone and femur, both articulated. Overlying the top of the femur were three bones from the left hand, probably metacarpals.

From the disposition of the bones in the section it was possible to suggest that the head of the burial would have lain to the south-west and that the burial was not made in a coffin.

The Excavation

The grave cut was extremely difficult to locate as it was not visible in the eroded section and only a

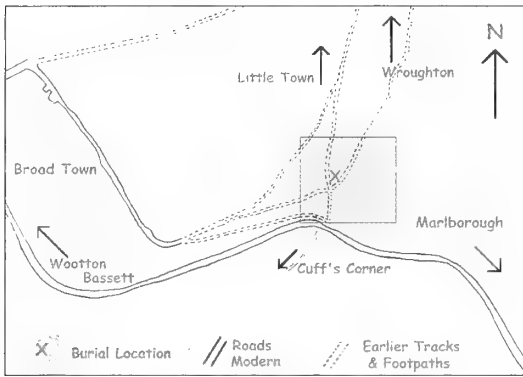


Fig 1. Burial location, with local routes and destinations

slight difference of soil matrix was noted in the deposit above the grave. That said, the grave was presumably rectangular in shape when first dug owing to the position of the remains. The grave was very shallow being on average 25 cm deep.

The Burial

The alignment of the grave was north-east to south-west with the head to the south-west. The body lay



Fig 2. Burial viewed from the north-east

supine, with the legs straight, and the arms flexed with the hands placed on the pelvis (Figure 2). The left arm (upper and lower), clavicle and ribcage were all missing, as were the cranium and mandible, all seven cervical vertebrae and the first four thoracic vertebrae (Figure 3). The individual has been estimated by Jacqueline McKinley of Wessex Archaeology as between 35–45 years old, 1.705 metres (5 ft. 7¼ in.) tall, and male.

Pathology

The spinal column shows the beginnings of osteoarthritis with slight lipping evident on the lumbar vertebrae and first three thoracic vertebrae. Slight bone nodules on the rear of the iliac crest and a pronounced linea aspersa on both left and right femurs suggest the individual may have spent a significant amount of time riding. Muscular damage to single bones in the left hand and the left foot also suggest horse-related injuries, perhaps from a fall (McKinley *pers com*).

CERAMIC FINDS

Six ceramic sherds were recovered during the excavation, three from the burial itself, the remainder from the subsoil; all were inspected by Rachael Seager-Smith of Wessex Archaeology. The sherds spanned the Mid/Late Iron Age up to the 4th Century AD, and their well rounded condition suggest that they were residual.

DATING

In response to the lack of reliable dating the University of Bath in Swindon funded a radiocarbon determination at the Research Laboratory for Archaeology and the History of Art, Oxford. A date of 1430+/-45 BP (OxA 11173) was obtained from the right femur, which calibrates to possible calendar date ranges of 595-665 cal AD at 68% probability or 540-680 cal AD at 95.4% probability.

DISCUSSION

The position of the Brood Town burial is important for a number of reasons. The site is visually prominent over a wide area. It is situated just a few



Fig 3. Detail of the burial showing the extent of erosion.

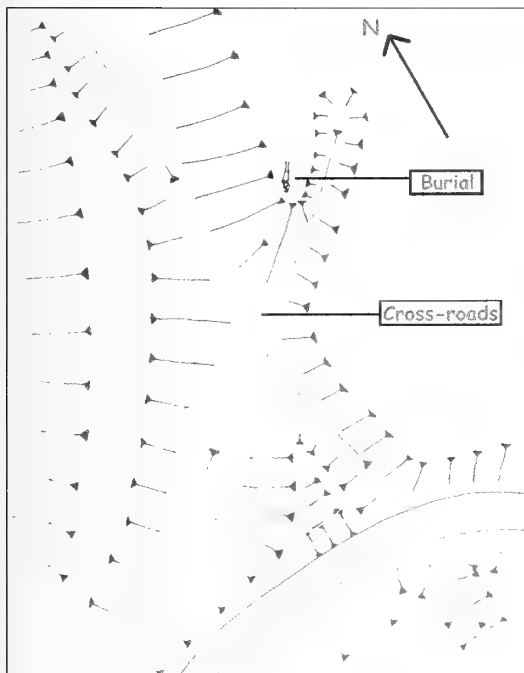


Fig 4. Burial location in relation to cross-roads.

hundred metres north of the boundary between Kingsbridge and Selkley Hundreds, while the spur of land on which the burial lay is described by two hollow ways crossing at the point where the remains were found (Figure 4). These factors suggest deliberate burial at a place both elevated and inter-visible between a number of routes, coupled with interment in unconsecrated ground (although the burial could well be pre-conversion) at the geographical limits of local territories. While no evidence of trauma was found on the skeletal remains, the incompleteness of the remains ensures that execution cannot be ruled out.

Andrew Reynolds has demonstrated that at least one of the cross-roads tracks is of mid to late Anglo-Saxon date (Pollard and Reynolds, 2002, 225). This track originates in Marlborough and traverses the Downs, past Mans Head, a possible Hundred meeting place (Reynolds *pers com.*) then down Hackpen Hill. From there it cuts across the lower chalk terrace, in a north-westerly direction, crossing the Kingsbridge–Selkley hundred boundary, then down the lower escarpment, past the burial site and on to Wootton Bassett. As the

track cuts the escarpment it is met by another holloway from the shrunken settlement of Little Town, forming the cross-roads element of the site. The possibility of this track also having a mid-Saxon date cannot be ruled out. If this is so and the burial is purposely situated on the cross-roads it makes, by later analogy, the possibility of execution all the more likely.

Beyond Broad Town

The Broad Town burial mirrors traits found at other Wessex sites, most notably that at Stonehenge. There an executed male in his early 30s was found, probably supine, in a shallow grave with no finds (Pitts *et al.* 2002, 134). This burial also benefits from a radiocarbon determination of 1359+38 BP (OxA-9361) & 1490+60 BP (OxA-9921), a weighted mean calibrates to a possible calendar date range of 600-690 cal AD (Bayliss, in Pitts *et al.* 2002,134). The grave is again situated at a prominent place, close to the hundred boundaries of Amesbury and Underditch (Reynolds and Semple, in Pitts *et al.* 2002,142).

Another pertinent site is known at Tan Hill, overlooking the Vale of Pewsey, where a single unaccompanied burial was discovered in a pre-historic ditch. It was suggested at the time of discovery that the hands were tied behind the back, but again no dating evidence was present (Anon, 1951, 228). This site is on a parish boundary, again in a very prominent position, and may well be Anglo-Saxon in date (Pollard and Reynolds, 2002, 175).

The discovery of a single unaccompanied burial at Gomeldon also potentially fits into this picture. Discovered in 1936, the individual was buried in a shallow grave, having the appearance of being thrown in and was suggested by J.F.S. Stone to be a possible hanging victim (Stone 1942,108). Again a prominent location appears important, with the individual interred close to the edge of the escarpment which overlooks the river Bourne. The burial is also just to the North-west of the original Winterbourne to Porton road and just under 200 m north of the parish boundary.

Beyond Wiltshire

Counties other than Wiltshire are beginning to present similar evidence. Reynolds has demonstrated that all known execution sites in Hampshire lie on hundred boundaries (1999, 108-9), while

Martin Carver's work at Sutton Hoo has shown that prominent sites of an earlier age became the focus of execution, during the formative phase of 'Christian Kingship' (1998, 142). The comparable dates of two of the burials described above suggest a trend in 7th-century Wessex. This would appear to underpin the evidence from Sutton Hoo where execution sites also seem to have started in the seventh century (Carver 1998, 142).

The Burial in its Landscape Context

A picture of continuity in the landscape is arguable if consideration is given to archaeological finds and sites in the immediate area of the Broad Town Burial (fig 5). Evidence suggests that the escarpment has been the focus of human activity since the

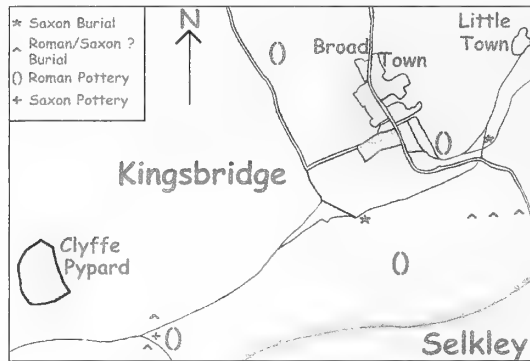


Fig 5. Findspots in relation to the Hundred boundary between Kingsbridge and Selkley

later prehistoric period. Ceramic finds include a carinated sherd similar to forms from All Cannings Cross (Goddard, 1919,353) of probable 5th century BC date. In addition, the Broad Town burial's grave fill (above) and excavations at Cuff's Corner (Clarke 2000) have produced sherds of Late Iron Age date. Substantial Romano-British sites are evidenced by ceramic scatters (Goddard, 1919,353, Clarke 2000), structures (Walters 2001,128,) and burials (Foster 2001,171).

Romano-British burials are known from two locations, three in Broad Town Field (Goddard, 1919,353), and nine 'scattered' near Cuff's Corner (Goddard, 1913,227); all lay under substantial sarsen stones. While the three reported in Broad Town Field may well be Roman in date it is not unusual to find material from that period in graves up to the 6/7th Century AD (White,1988,160). This

situation has also been recently addressed from an Anglo-Saxon perspective by Helen Geake (2002, 145). The SMR (SU07NE302) suggests a single site for all three interments, while the letter published by Goddard gives a regular spacing and orientation (1919,353). What is clear is that three individuals were buried underneath presumably visible sarsens, spaced about 200 yards apart in an east-west line, broadly following the later hundred boundary. Whatever their date they would seem to be a component of the boundary at this point.

It seems likely that a linear cemetery stretches from at least Cuff's Corner to within 200 metres of the Broad Town to Broad Hinton road, possibly indicating the early foundation of what was to become the Hundred boundary at this point. This argument can be underpinned further by the evidence of Saxon intervention. Chaff-tempered pottery was located at Cuffs Corner (Anon. 1975-6, 136). A secondary burial containing glassware, an iron spear and an amber and a glass bead was located in a prehistoric barrow at Thornhill lane (SMR SU07NE400), while in the 6th/7th century the Broad Town individual was buried on the cross-roads at the edge of the escarpment.

Based on the work of others, Ken Dark has suggested that hundreds in Cornwall, first recorded in the ninth century, may well have their origins in Romano-British territorial divisions (Dark, 2000, 151). That possibility has to be considered here. This is not to say that Selkley and Kingsbridge Hundreds have their origins in the Romano-British period, but that the archaeological components coupled with the topography of the locale may well indicate an early origin for the boundary at this point.

CONCLUSION

It seems likely that burials such as that from Broad Town performed a number of functions. Those at Broad Town (Figure 6) and Tan Hill are visible from c. 10 km. while Stonehenge is a striking landscape feature. The position of the Gomeldon burial adds a potential ford or river crossing to the equation. All four places lay on tracks; clearly this is an important component of such burials. Exclusion from settlement would also appear to have been a major aspect as was the role played by emerging Christianity. The chronological closeness of the two dated burials suggests a trend in seventh-century Wessex that can be recognised elsewhere.



Fig 6. View from the grave looking north-west illustrating the prominence of the site within the landscape.

It is also clear that elements of the Broad Town landscape exhibit a multi-period chronology. This realisation is not new in landscape studies; research, however, tends to rely on the monumental rather than discreet evidence. This small piece of Wiltshire landscape may go some way to help us understand that chronology. Ultimately the creation of boundaries that feature so heavily in our understanding of the development of the landscape may have been set out far earlier than generally thought (but cf. Bonney 1966), as appears to be the case at Broad Town. Clearly there is much more work to do.

Acknowledgements

This project would not have reached a conclusion without the guidance and input of Dr Andrew Reynolds. A very big thank you to him. Thanks also go to: Roy Canham, Wiltshire County Archaeologist; Rachael Seager-Smith and Jacqueline McKinley of Wessex Archaeology; Malcolm Holland and Tracey Stickler of Broad Town Archaeology; my colleagues Colin Kirby, Mark Brace, Mac McLellan, Brian Clarke, Barry Huntingford and John Bastin for their support; University of Bath in Swindon for funding the dating; Dr Bruce Eagles and Professor Martin Carver for their comments; Debie Edmonds of English Heritage for documentary work. Mr R. Horton gave permission to excavate while Leigh and Tony Lucas are to be thanked for reporting the initial discovery. Any errors are naturally my own.

References

- ANON, 1951. A Skeleton on Tan Hill. *WANHM*, 54, 228
- ANON, 1975-6. Wiltshire Archaeological Register for 1974-5. *WANHM*, 70/71, 132-8
- BONNEY, D.J., 1966. Pagan Saxon burials and boundaries in Wiltshire. *WANHM*, 61, 25-30
- CARVER, M., 1998, *Sutton Hoo: Burial Ground of Kings?*. London: British Museum Press
- CLARKE, B., 2000, *Fieldwalking Results Centred on SU08077643 Cuff's Corner, Clyffe Pypard and Watching Brief at 13 Broadacres*. Broad Town Archaeological Project, BTAP 5 & 6
- DARK, K., 2000, *Britain and the End of the Roman Empire*. Stroud: Tempus
- FOSTER, A., 2001. 'Romano-British Burials in Wiltshire', in P. Ellis (ed), *Roman Wiltshire and After: Papers in Honour of Ken Annable*, 165-77. Devizes: WANHS
- GEAKE, H., 2002, 'Persistent Problems in the Study of Conversion-Period Burials in England', in S. Lucy and A. Reynolds (eds), *Burial in Early Medieval England and Wales*, 145-55. London: Society for Medieval Archaeology Monograph 17
- GODDARD, E.H., 1913. A List of Prehistoric, Roman and Pagan Saxon Antiquities in the County of Wiltshire. *WANHM*, 38, 153-378
- GODDARD, E.H., 1919. Romano-British Interments at Broad Town. *WANHM*, 40, 353-4
- PITTS, M., *et al.* 2002. An Anglo-Saxon Decapitation and Burial at Stonehenge. *WANHM*, 95, 131-46
- POLLARD, J., and REYNOLDS, A. 2002, *Avebury: The Biography of a Landscape*, Stroud: Tempus
- REYNOLDS, A., 1999, *Late Anglo-Saxon England*, Stroud: Tempus
- REYNOLDS, A., 2002, 'Burials, Boundaries and Charters in Anglo-Saxon England: a Reassessment', in S. Lucy and A. Reynolds (eds), *Burial in Early Medieval England and Wales*, 171-195. London: Society for Medieval Archaeology Monograph 17
- STONE, J.F.S., 1942. A Skeleton at Gomeldon, Idmiston, South Wiltshire. *WANHM*, 50, 107-8
- WALTERS, B. 2001, 'A Perspective on the Social Order of Roman Villas', in P. Ellis (ed), *Roman Wiltshire and After: Papers in Honour of Ken Annable*, 127-46. Devizes: WANHS
- WHITE, R.H. 1988, *Roman and Celtic Objects from Anglo-Saxon Graves: A Catalogue and Interpretation of their use*. Oxford: British Archaeological Reports, British series 191

Arable Weed Survey of a Farm in South Wiltshire

by *Barbara Last*

An arable weed survey of field margins cultivated for greater biodiversity under the Countryside Stewardship Scheme has revealed the presence of rare plants, the seed of which had lain dormant in the ground for many years.

In Spring 2003 a farm in South Wiltshire applied for and was awarded a grant under the Countryside Stewardship Scheme to manage cultivated field margins to improve biodiversity. The specific objective was to enable any arable plants present to germinate and grow outside the cropped area without the threat of damage by herbicides or competition from more aggressive species encouraged by the application of fertilisers. The margin width was set at six metres and cultivation took place to a depth of 15 centimetres. To monitor the results a survey was made in July 2003 of selected 100 yard sections in each margin. It was agreed that if any margins revealed a particularly rich diversity of flora they would be left to re-seed themselves whereas others with poorer diversity would be grassed over.

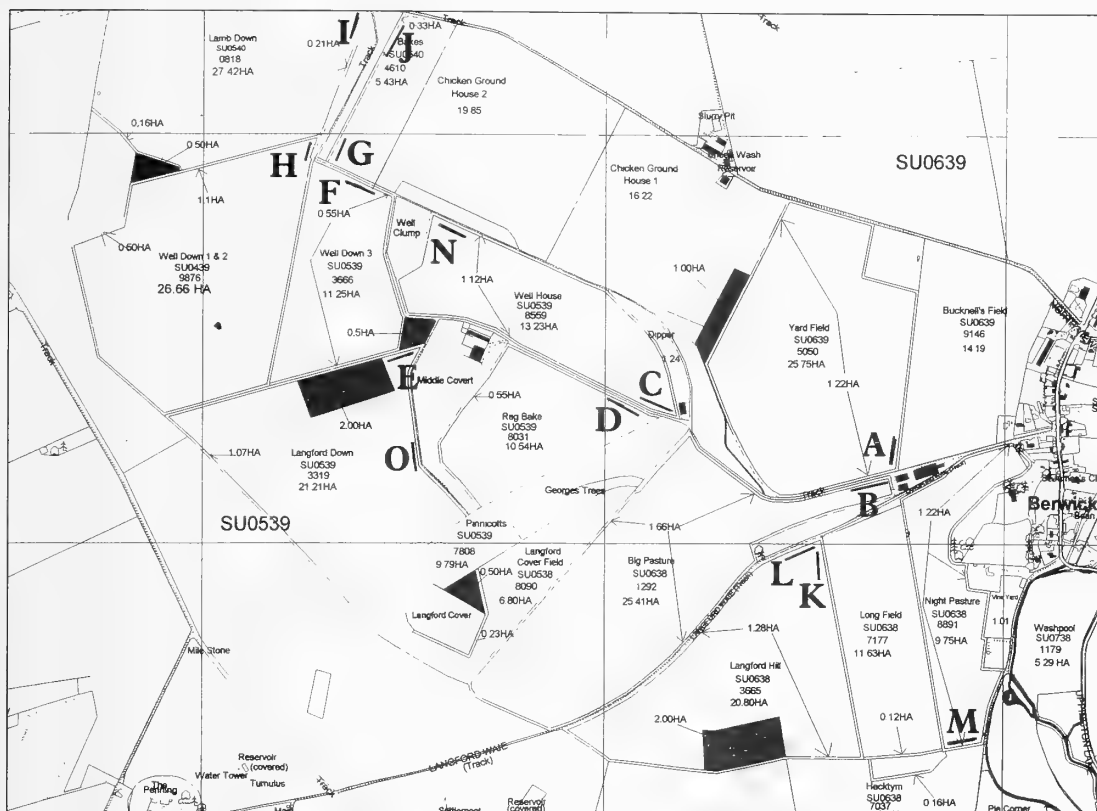
The soil on the farm, which may have been under cultivation for as long as 5000 years, is predominantly a light thin chalk, found especially on the north west fields and those at a slightly higher elevation. This is free draining and warm, with a high pH. (areas including margins C,D,E,F,G,H,I, J and N on the attached map) unlike those on the remaining fields lying adjacent to the river Till in the south east (margins A,B,K and L) which are of an alluvial nature.

An earlier botanical survey of the parish (made in 1999 and 2000), which included the farm,

recorded remarkably few arable weed species. This was expected given the landowner's policy of cultivating and spraying the fields to the margins producing a clean crop, occasionally interspersed with a grass ley. However, one notable plant found was Venus's Looking-glass (*Legousia hybrida*) six plants of which turned up on the north east corner of Well Down 1&2 (SU 052400).

It was anticipated in 2003 that if wild plants did survive in the field margins they would be likely to be relics of an ephemeral group evolved to germinate in disturbed soils arising from clearances in the wild wood resulting from fires and tree fall, or later from clearance by man, or from flash floods. Such circumstances give rise to short optimum periods with little competition from other vegetation and good light. Consequently, wild plants are enabled to survive by production of seed that has a long viability, good dispersal mechanisms, and which is produced in large quantities. Many self-pollinate, or are self-compatible and have a short germination to maturity time giving them a rapid life span in favourable conditions. Such plants are thus readily adapted to colonise clearances from the ploughing to which arable fields are typically subject annually or in rotation with grass leys.

Species (Notable Species marked *)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
<i>Aethusa cynapium</i>	Fool's Parsley	+	+	+		+	+	+	+		+	+	+	+	+	
<i>Agrostis stolonifera</i>	Creeping Bent													+		
<i>Anagallis arvensis</i>	Scarlet Pimpernel	+		+			+				+					
<i>Arenaria serpyllifolia</i>	Thyme-leaved sandwort									+						
<i>Anisantha sterilis</i>	Sterile Brome											+	+		+	
<i>Artemisia vulgaris</i>	Mugwort								+							
<i>Carduus nutans</i>	Musk Thistle							+	+	+					+	
<i>Capsella bursa-pastoris</i>	Shepherd's Purse		+	+	+	+	+	+	+	+	+	+	+	+	+	
* <i>Chaenorrhinum minus</i>	Small Toadflax	+						+								
<i>Chenopodium album</i>	Fat Hen	+	+	+	+	+	+	+	+	+				+	+	
<i>Chenopodium rubrum</i>	Red Goosefoot						+									
<i>Elymus repens</i>	Couch grass	+	+		+		+								+	
* <i>Erysimum cheiranthoides</i>	Treacle Mustard						+									
<i>Epilobium parviflorum</i>	Hoary Willowherb										+		+			
<i>Euphorbia helioscopia</i>	Sun Spurge	+	+		+		+		+							
<i>Fallopia convolvulus</i>	Black Bindweed	+	+	+	+	+	+	+	+	+	+		+	+	+	
<i>Fumaria officinalis</i>	Fumitory	+	+	+	+	+	+	+	+	+				+	+	
<i>Galium aparine</i>	Cleavers	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
<i>Geranium dissectum</i>	Cut-leaved Crane's bill						+								+	
<i>Geranium molle</i>	Dove's-foot Crane's bill						+		+	+					+	
* <i>Kickxia spuria</i>	Round-leaved fluellen					+										
* <i>Lamium amplexicaule</i>	Henbit	+				+		+		+					+	
<i>Lapsana communis</i>	Nipplewort				+	+	+	+	+				+	+	+	
* <i>Legousia hybrida</i>	Venus's Looking-glass							+	+		+					
<i>Linaria vulgaris</i>	Common Toadflax						+	+								
<i>Lolium pratense</i>	Rye grass	+					+								+	
<i>Matricaria matricarioides</i>	Pineapple weed	+	+	+		+	+	+	+		+	+	+	+	+	
<i>Medicago lupulina</i>	Black Medick	+														
<i>Myosotis arvensis</i>	Field Forget-me-not					+	+	+	+		+			+	+	
* <i>Papaver argemone</i>	Prickly Poppy									+						
<i>Papaver dubium</i>	Long-headed Poppy							+								
* <i>Papaver hybridum</i>	Rough headed Poppy					+		+	+	+			+			
<i>Papaver rhoeas</i>	Field Poppy	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
<i>Pastinaca sativa</i>	Wild Parsnip			+	+			+	+					+		
<i>Phleum pratense</i>	Timothy		+							+						
<i>Poa annua</i>	Annual Meadow grass					+		+		+	+	+				
<i>Poa trivialis</i>	Rough Meadow grass					+					+		+			
<i>Polygonum aviculare</i>	Knotweed	+	+			+	+		+							
<i>Polygonum lapathifolium</i>	Pale persicaria						+									
<i>Polygonum persicaria</i>	Redshank					+	+						+	+	+	
<i>Reseda lutea</i>	Mignonette			+		+	+	+	+	+	+					
<i>Senecio jacobea</i>	Ragwort					+							+			
<i>Senecio vulgaris</i>	Groundsel		+			+	+	+	+	+			+		+	
<i>Silene alba</i>	White Champion					+	+	+	+	+				+		
<i>Sinapis arvensis</i>	Charlock			+				+		+				+		
<i>Sisymbrium officinale</i>	Hedge mustard		+	+				+	+	+					+	
<i>Solanum nigrum</i>	Black nightshade	+				+	+	+	+							
<i>Sonchus arvensis</i>	Perennial Sow-thistle			+				+	+	+	+		+	+	+	
<i>Sonchus asper</i>	Prickly Sow Thistle	+	+	+	+	+	+	+	+	+	+		+	+	+	
<i>Sonchus oleraceus</i>	Smooth Sow thistle									+	+			+		
<i>Stellaria media</i>	Chickweed					+		+	+	+						
<i>Torilis japonica</i>	Upright Hedge-parsley							+								
<i>Tripleurospermum inodorum</i>	Scentless Mayweed		+	+		+	+	+	+	+	+	+		+	+	
<i>Veronica persica</i>	Field Speedwell	+		+		+	+	+	+		+			+	+	
<i>Viola arvensis</i>	Field Pansy	+	+	+	+	+	+	+	+	+	+	+	+		+	
TOTAL	55	19	17	20	12	27	27	32	28	18	24	18	10	18	22	23



Key

A- SU0639 Yardfield SE.

D- SU0539 Rag Bake. N.

G-SU0540 Bakes SW

J- SU0540 Bakes NW

M-SU0638 Night Pasture S.

B- SU0638 Big Pasture. NE.

E- SU0539. Well Down 3 SE

H-SU0439 Well Down 1-2 NE

K- SU0638 Langford Hill NE

N-SU0539 Well House NW

C- SU0539. Well House SE.

F- SU0539. Well Down NE

I- SU0540 Lamb Down NE

L- SU0638 Langford Hill N.

O- SU0539 Langford Down E

Comments on the survey findings

The most ubiquitous weeds (occurring in most of the 15 margins sampled) were Cleavers, (*Galium aparine*), Common Poppy (*Papaver rhoeas*), Field Pansy (*Viola arvensis*), Shepherd's purse (*Capsella bursa-pastoris*), Prickly Sow-thistle (*Sonchus asper*), Black Bindweed (*Fallopia convolvulus*), Fool's Parsley (*Aethusa cynapium*), Fat-hen (*Chenopodium album*) and Common Fumitory (*Fumaria officinalis*). All are abundant and successful having the attributes of the ephemeral group mentioned above, as well as resistance to herbicides.

Most species of this situation are annuals, but Wild Parsnip (*Pastinaca sativa*) and Perennial Sow-thistle (*Sonchus arvensis*) are perennial, propagating by means of small fragments of root regenerating when given the opportunity.

Among the more unusual species was one plant of Treacle Mustard (*Erysimum cheiranthoides*) of which there have been only four recent previous records in VC8, the nearest being from Winterbourne Stoke, 1986 (BG). The seeds of this species have only a low viability although a good plant may produce 15,000 seeds typically dispersed by cattle. (Salisbury 1963)

There was an abundance of Round-leaved Fluellen (*Kickxia spuria*) on one headland only on the north side of Well Down3. This occurs scattered on chalk fields in VC8 but is rapidly declining. It is self-fertile and self pollinates, but although it has the potential to produce 2,000 seeds per plant (Salisbury 1963), germination is poor and it is susceptible to herbicides.

Venus's Looking-glass (*Legousia hybrida*) occurs scattered on bare chalk and has notably declined. In

the Arable Weed Survey of South Wiltshire 1999, it was established that prior to 1999, there were 8 sites. After this 7 were re-surveyed and plants found on only 2, but 5 new sites had been noted. The seeds have a very long viability and the capsules produce about 80 seeds each resembling minute shiny mirrors.

The Small Toadflax (*Chaenorhinum minus*) also occurs in small numbers scattered on chalky fields and is again in decline.

There were two unusual poppies, Rough-headed poppy and Prickly poppy (*Papaver hybridum* and *P argemone*). Rough-headed poppy has a similar distribution to that recorded by Grose 1957, and the 1999 survey gave 8 sites, of which 6 were re-surveyed and plants found on only 2, but 4 new sites were noted. The prickly poppy is scarcer. In the 1999 survey, 6 sites were recorded, of which 4 were found not to contain the plant when re-surveyed in 1999, but 3 new sites were noted. What was most surprising was to find them growing together.

The survey revealed the presence of several aliens resistant to herbicides such as Pineapple weed (*Matricaria matricarioides*) which was only introduced into Wiltshire in 1925 and is now abundant. On the farm it was present in 13 of the 15 sites. This plant owes its success to vegetative propagation as the tiny particles carried on tractor wheels and boots can all germinate. Two other introductions found during the survey were Field Speedwell (*Veronica persica*), first recorded in 1859 and now abundant in Wiltshire, and the much more recently arrived Prickly Lettuce (*Lactuca serriola*) found on the edge of Well Down 3, which is spreading rapidly.

In regard to fauna it is worth noting that many insects attracted to the plants have also been given an opportunity to proliferate. In particular, there were innumerable hoverflies, *Episyrphus balteatus*, probably the result of an influx of migrants from Europe, although they do also breed here, nectaring on the Scentless Mayweed and the Sow-Thistle which have open flowers with easily accessible nectar. Three other species of hoverfly *Scaeva pyrastris*, another migrant, *Sphaerophoria scripta* and

Leucozona laternaria were also recorded. It was encouraging to see such large numbers of these aphid-consuming insects which would not have been attracted to the cereal crops in the adjacent fields.

Two areas were also sown with a wildlife seed mix including Quinoa, a *Chenopodium* that originated in Peru and is related to Fat-hen. This produces copious seed in autumn and will be left until March 15 to provide a food source for many farmland birds that are also in decline. Another area was cleared and left open to encourage Stone Curlew although none bred on the farm in 2003.

Conclusion

The success of the Countryside Stewardship Scheme, when applied to the creation of field margins to promote greater biodiversity, is proved on this farm. A remarkable number of rare and threatened arable plants, presumably propagated from long buried seed, were observed, some of which have not been recorded in Wiltshire for many years. Similarly, several plants that have been declining in recent years were also recorded, as were a variety of insects and birds. It is worth noting that many other habitat enhancements have also been recommended by DEFRA though not all were suitable for this farm.

References

- BANKS, J. 2002, Rare arable weeds in Wiltshire, *Journal of the Wiltshire Botanical Society*, no 5
- GILLAM, B., GREEN, D., and HUTCHISON, A. 1993, *The Flora of Wiltshire*. Newbury: Pisces
- GROSE, D. 1957 *The Flora of Wiltshire*. Devizes: WANHS
- LAST, B. 2000, The Flora of Berwick St. James, *Journal of the Wiltshire Botanical Society*, no 3
- LAST, B. 2001, Habitats of Berwick St. James, *Journal of the Wiltshire Botanical Society*, no 4
- SALISBURY, E. 1961, *Weeds and Aliens*. London: Collins.
- STACE, C. 1991, *New Flora of the British Isles*. Cambridge: Cambridge University Press

Lodowick Muggleton – Native of Chippenham?

by Kay S. Taylor

Nineteenth-century Wiltshire antiquarians Canon Jackson and Rev. Daniell both perpetuated a popular local myth that the religious radical Lodowick Muggleton was born in Chippenham. Baptismal evidence from London, however, is readily available to dismiss the local version as fantasy. This paper takes another look at the life of Muggleton and his relationship to co-religionist John Reeve, and considers how the myth might have originated.

In the best traditions of the nineteenth century, antiquarians in North Wiltshire were eager to provide biographical details of important or notorious figures with links to local towns and villages. One such renowned native who was claimed for Chippenham was the seventeenth-century religious radical, Lodowick Muggleton. Canon J.E. Jackson confidently asserted that this individual was a Wiltshire man, born 'of poor though honest parents in the town of Chippenham'.¹ He apparently based his statement on a 1676 chronicle about Muggleton, which was reprinted in the *Harleian Miscellany* in 1744,² entitled 'A Modest Account of the Wicked Life of That Grand Impostor Lodowicke Muggleton'. This work purported to prove his professed commission from God to curse or bless individuals 'to be but counterfeit and himself a cheat'.

Members of the early Wiltshire Archaeological & Natural History Society avidly acquired information about Muggleton, and the Society's collection includes a later copy of the forty-six page treatise by John Reeve and Lodowick Muggleton entitled, *A Transcendental Spiritual Treatise upon Several Heavenly Doctrines*.³ The Library's bound volumes of 'Wiltshire Tracts' contain 'An Account of the Prophet Muggleton's Sufferings in the year 1676 as related by our Friend, Mr POWELL, Who was an Eye-witness to the whole'. This twenty-four page account was printed in Southwark in 1808

under the cover title of 'A True Account of the Trial and Sufferings of Lodowick Muggleton One of the two last prophets and Witnesses of the Spirit, left by our Friend Powell'.⁴ In addition, a box in the library contains two 'notes on distinguished Chippenham natives' being compiled for a nineteenth-century article in *WANHM*, by unnamed authors.⁵ The first appears to be by Canon Jackson, and both sets of notes are unsympathetic to their subject, so it is unlikely that they would want to claim him as a 'distinguished Chippenham native' unless they felt sure of their facts. Unfortunately the sources used for their information are not recorded with these 'notes'.

Nearly forty years after Jackson's assertion the myth was given another airing by the Rev. J.J. Daniell, the rector of Langley Burrell, who stated categorically in his 1894 *History of Chippenham* that, 'Ludowic Muggleton, born in Chippenham in 1609 of poor though honest parents, was by trade a tailor'.⁶

Rev. Daniell admitted to using the collections of the late Canon Jackson to supplement his own researches. Only a few years later a correspondent to *Wiltshire Notes and Queries* challenged this claim by pointing out that Lodowick Muggleton appeared in the parish register of St Botolph's Bishopsgate, London, where he was baptised as the third child of John Muggleton. The register recorded the births of John's children as Margaret

on 23 June 1605, Ruth on 1 November 1607, and finally John on 30 July 1609.⁷ However, in his own version of his early life Muggleton stated that:

He [i. e. John Muggleton] had three Children by my Mother, two Sons and one Daughter, I was the youngest and my Mother lov'd me.⁸

So it would appear that his autobiographical information should be treated with some caution. The *Dictionary of National Biography (D.N.B.)* entry for Muggleton reiterated the information that he was born in Bishopsgate in 1609. However, the compiler was wary of the accuracy of some of the contemporary records he used for his research, warning particularly against placing any reliance on the so-called biography contained in the *Harleian Miscellany*.⁹ So who was Lodowick Muggleton? What did he do to earn the title of Grand Impostor? And why was he thought to hail from Chippenham?

Lodowick Muggleton gave his name to one of the most enduring but peculiar religious sects to be formed in England in the middle of the seventeenth century, which he founded with fellow tailor, John Reeve. The Muggletonians had no preachers and did not follow any of the usual forms of public worship, so their meetings were not included in the lists of the registrar general. The members called themselves 'believers in the third commission' in recognition of their two founders' 'commission from God' which they claimed to have received in 1652. The sect was still active in 1829 when they published the 'Divine Songs of the Muggletonians,' which the Rev. Daniell described as a curious collection of words to 'accompany the howlings of these wretched fanatics'.¹⁰ George Williamson talked of the Muggletonians and the Quakers as being the only small sects from the seventeenth century to survive into the twentieth century.¹¹ Daniell estimated that 'this extraordinary set of religionists' only had one place of worship in London and not three more in the whole of England at the end of the nineteenth century.¹² The last known member of the sect, a Philip Noakes of Matfield in Kent, died in 1979, although there may yet be other survivors.¹³ At its height in the later seventeenth century the sect claimed followers in many counties (Figure 1),¹⁴ although apparently none in Wiltshire, which makes the interest of Jackson and Daniell *et al* all the more intriguing.

Doctrinally Muggletonians held that God was one and eternal, with a material body; that the soul was mortal, rising with the body at the Resurrection; and that the world contained only



Fig. 1. Distribution of known Muggletonians, c. 1652 – 1700¹⁵

two races – the cursed and the blessed. The sect had no formal pattern of worship: not only did they have no preachers but they did not pray or read either. Members were only required to believe in Lodowick Muggleton. His detractors labelled him the 'Grand Impostor' for claiming such god-like powers. Outwardly the sect bore some similarities to the Quakers, calling their adherents Friends, and being opposed to war and the persecution of individuals for conscience sake. However Muggleton and his supporters scorned the Quaker doctrine of the inner light in all people and, in return, the Quakers distanced themselves from association with them. William Penn wrote of Muggleton as a 'false Prophet and Impostor, guilty of ungodly and blasphemous practices'.¹⁶ Muggleton retaliated by referring to Penn as,

an ignorant spatter-brained Quaker, who knows no more what the true GOD is, nor His secret decrees, than one of his coach-horses doth.

His condemnation of the Quakers was expressed in a number of published tracts,¹⁷ such as 'The Neck of the Quakers Broken', in 1663, and 'The Looking Glass for George Fox and other Quakers, wherein they may see themselves to be Right Devils', in 1668. His last published work was 'The Answer to William Penn', in 1673, in reply to Penn's *The New Witnesses Proved Old Heretics* of 1672.

In 1676 Muggleton was charged with writing 'a blasphemous, heretical and seditious book'.¹⁸ The case was heard at the Old Bailey on 17 January 1677, the main plank of his defence being that, as he had written nothing since 1673, the book in question was covered by the 1674 Act of Indemnity.¹⁹ Despite this the jury reluctantly obeyed the direction of the Lord Chief Justice, who described Muggleton as a 'villain who is a murderer of souls' and found him guilty.²⁰ He was sentenced to the pillory for three days, to have the hangman burn his books before his face, and to pay a £500 fine with surety for good behaviour for the rest of his life. He was incarcerated in Newgate Prison for non-payment of the fine. Thanks to the intervention of his ardent supporter Nathaniel Powell he was subsequently acquitted and discharged from Newgate on payment of £100 bail and surety for his future good behaviour. The arrest and trial encouraged both Muggleton's detractors and supporters into print, producing the hostile pamphlet 'A Modest Account of the Wicked Life of That Grand Impostor Lodowicke Muggleton', as well as Mr Powell's sympathetic account of his sufferings. Both accounts should be treated with caution because of their biased approaches to their subject. A revival of interest in the Muggletonians in the mid-eighteenth century prompted a reprint of the hostile article in the *Harleian Miscellany* of 1744, and of the 'Transcendental Spiritual Treatise upon Several Heavenly Doctrines' in 1756.

Canon Jackson provided a simplistic biography of the accredited founder of the sect, recounting that Muggleton, 'began his religious career as a Church of England man; exchanged for Independent; slipped off to Anabaptist; tasted Quakerism; and finally, as might be expected, subsided into no religion at all'.²¹ This derogatory attitude towards his life has frequently been repeated by later commentators, which led William Lamont to complain that Muggleton had been subjected to a bad press over the years.²² He has been variously described as 'a known mad-man'; 'verging on insanity'; 'a product of the religious culture of the London slums'; 'a mad tailor'; and even as 'an unstable and deeply troubled neurotic who sought release from his anxieties by acting the wild-eyed prophet'.

The *D.N.B.*, although now somewhat dated,²³ has provided a more rounded version of his life and family connections, and also contains an account of his co-religionist John Reeve. The compiler of both entries was Alexander Gordon, a nineteenth-century specialist on the Muggletonians, who had

written papers about the sect for the Liverpool Literary and Philosophical Society.²⁴ Most of the entry on Muggleton was concerned with his adult life, information for which he found mainly in the man's own written works and letters, together with a paper, 'The Prophet of Walnut Tree Yard', published by the Rev. Augustus Jessopp in 1884. He dismissed works on Muggleton and his sect by his [i.e. Gordon's] contemporaries, Scott and Macaulay, as misleading. Gordon included in his account the information that Muggleton and Reeve were cousins, providing a family connection for their association. It is probable that the source of this claim was Muggleton's own account, in *The Acts of the Witnesses*,²⁵ of the satisfaction that John Reeve's 'Revelation' gave him:

For, said he unto me at that time, *Cousin Lodowick*, now I am satisfied in my Mind, and know what Revelation is ...²⁶

Such familial references as 'cousin' or 'brother' were commonplace in the seventeenth century to denote a close religious, political or social colleague,²⁷ and do not necessarily imply any actual blood relationship. Thus, in this case, the term could well have been used to indicate that the two were closely connected by their common religious experience. However, despite the fact that he did not cite any documentary proof in support of a family relationship, Gordon seems to have taken the term literally and recorded a closer affiliation than the evidence merits. Reeve was a year older than Muggleton and they appear to have been adults in London when they first met, as Muggleton noted of John Reeve:

He was out of his Apprenticeship before I came acquainted with him, he was of an Honest, Just Nature, and Harmless.²⁸

Had they been related by blood they would probably have met, or at least been aware of each other, from an early age. In chapter III of *The Acts of the Witnesses* Muggleton provided some information 'of the Birth, Parentage, and Trade, of the two Witnesses', listing his own parents and siblings (although, as noted above, this should be treated with caution), as well Reeve's parentage. However, he made no mention of a family connection between them. As he had been employed by John's brother William, and in light of the other family details provided, it seems unlikely that he would have omitted such an important piece of information – had it existed.

Muggleton was only three years old when his mother Mary died in June 1612, and his father remarried. Gordon did not discover any more about his formative years, than Muggleton himself provided in *The Acts of the Witnesses*, in which he merely noted that after his mother died:

I being but young, my Father took another Wife, so I being young was Expos'd to live with Strangers in the Country, at a distance from all my Kindred... But it came to pass when I was grown to 15 or 16 Years of age, I was put Apprentice to one John Quick, a Taylor. . .²⁹

Thus he returned, as an apprentice, to the Bishopsgate area of London as a young man, and by 1631 he was working as a journeyman to William Reeve. He would doubtless have got to know John at this time, but the two do not seem to have formed a close bond for about another twenty years.

According to Muggleton's account the Reeve family came from Wiltshire, and the father, Walter Reeve, was described as a gentleman and 'clerk to a deputy of Ireland', of a good family that had fallen into decay. In the *D.N.B.* Gordon repeated the information that both William and John (1608-1658) were born in Wiltshire, again probably taking *The Acts of the Witnesses* as his source.³⁰ A search of the North Wiltshire baptismal records of the period has located numerous members of a Reeve's family in the parishes of Chippenham and Calne, including a John Henry Reeve who was baptised in St Andrew's Church, Chippenham in January 1607/8.³¹ This is tantalisingly close to the presumed facts of John Reeve's birth, but unfortunately this John's father was Henry not Walter, so either he was not Muggleton's associate or Muggleton is mistaken about the identity of John's father. As Muggleton's information on his siblings is questionable it begs the question, if John came from the Chippenham area and Walter was not his father, perhaps he or John embellished the Reeve parentage to impress their followers?

Like Lodowick, John had arrived from the country to be apprenticed to the tailoring trade, with his elder brother, in Bishopsgate, London, where Muggleton's father and siblings also lived. The brothers were said to be Puritans originally but 'fell away' to the Ranters around 1645. This was alleged to be the ruin of William, who apparently neglected his business, took to drink, and subsisted on charity. John came under the influence of the so-called Ranter's God John Robins, and became a universalist.³²

Spiritually Muggleton became a zealous Puritan, and remained so until the conditions of church life began to be remodelled. He refused to accept the new discipline of Presbyterianism, which Thomas Hobbes, Thomas Godwin and others were denouncing as engendering religious despondency.³³ In Hobbes's view Presbyterian ministers:

brought young men into despair and to think themselves damned because they could not (which no man can, and is contrary to the constitution of nature) behold a beautiful object without delight.³⁴

Neither could Muggleton accept the close fellowship of the Independents and in 1647 he withdrew from all worship to live 'an honest and natural life' as an agnostic. Many of his acquaintances were also coming to the conclusion that 'there is no God but nature only'.³⁵ By 1650 he had read translations of Jacob Boehme's works and been attracted by the teachings of the Ranter prophet John Robins and the fanatical Thomas Tany. For the next year or so he experienced scriptural revelations and, according to Gordon 'infected' John Reeve with his views (although Reeve had been exploring alternative religious notions since coming under the influence of Robins in 1645). In February 1651/2 Reeve announced that he too had received a personal communication from God, appointing him as the messenger of a new dispensation with Muggleton as his 'mouth'. The two identified themselves as the witnesses, foretold in the Book of Revelation, of a new system of faith with the authority to pronounce on the eternal fate of individuals, and their sect was born. They developed their beliefs along different lines from Robins and Tany to the extent that they passed a sentence of eternal damnation on Robins, in 1652, while he was imprisoned in the Bridewell at Clerkenwell.

Although they came to be known as the Muggletonians, there is still debate regarding the inspiration for the sect, and if it might have developed differently but for Reeve's early death in 1658. The pair did not entirely agree on their movement's place within the religious milieu, as Reeve sympathised with many of the tenets of Quakerism, a stance that Muggleton did not share. Some of his adherents kept aloof from Muggleton and were known as Reevites or Reevonians. Gordon's interpretation, in the *D.N.B.*, that it was Muggleton who had the earliest revelations and subsequently 'infected' Reeve, was based largely on

Muggleton's own accounts, written after Reeve's death. The possibility should not be discounted that Muggleton's version of events was skewed, taking for himself the pivotal role that led to the sect's foundation. William Braithwaite described Reeve as the Moses of the sect with Muggleton as his Aaron,³⁶ and Christopher Hill also disagreed with Gordon's view as, in his opinion, every significant doctrine of the Muggletonians was to be found in Reeve's writings. In his lifetime the books Reeve published were attributed only to him, and Muggleton's association with them only came later.³⁷ It was Reeve who formulated the six foundations of what was to become Muggletonian theory. According to Hill Muggleton's own original contributions to theology were 'puerile or non-existent'.³⁸ While agreeing with the need to respect Reeve's prime role as a co-founder of the sect William Lamont has taken issue with Hill's assessment of Muggleton's abilities. He emphasised the continuity of the doctrine after Reeve's death together with Muggleton's practical extensions of Reeve's 'six principles', as well as detailing Muggleton's written contributions to the religious debate.³⁹

Whatever the true origins of the sect's founding Reeve's death deprived Muggleton of his influence and left him to carry on their work alone. Thereafter, Muggleton believed that God had given him a special commission 'to curse or bless all to eternity,' and that once he had dispensed his curse or blessing there could be no remedy, no matter what. He continued to meet with his adherents and to publish his opinions for many years after Reeve's death. After his trial and imprisonment in 1677 Muggleton seems to have opted for a quieter life, perhaps in accordance with the terms of the sureties he gave on his release from Newgate. He died in London 'on 14 March 1697/8, at the age of 88 years 7 months and 14 days'.⁴⁰

Having identified who Lodowick Muggleton was, and why he was considered to be the 'Great Imposter,' the last and most puzzling question remains. Why was he thought to hail from Chippenham? The baptismal evidence immediately debunks the myth that he was born in the town, yet local tradition continues to link him with it. The early members of WANHS certainly took a proprietorial interest in his activities, even though the Muggletonian sect did not take root in the county. Raphael Samuel has pointed out that historians ignore oral traditions at their peril, as they can help to expose the silences and deficiency

of the written record.⁴¹ There seems to be no surviving documentary evidence to identify where young Lodowick passed his formative years apart from his own statement that he was sent to live with 'strangers in the country'. I have been at pains to question any actual family relationship with John Reeve, although I would not entirely dismiss the possibility. It is an admittedly tenuous link, but if Reeve did come from Wiltshire, and was the son of Walter, he might well have been related to the Reeve families found in the Chippenham and Calne area, and so perhaps he is the key to the local legend. Jackson's and Daniell's claims for a Chippenham connection for Muggleton, based on sources they failed to identify, would seem more plausible if a blood relationship existed with a Wiltshire born John Reeve. Despite the lack of corroborative evidence most twentieth-century historians seem to have accepted unquestioningly the 'fact' given in the *D.N.B.* that the co-founders of the Muggletonians were members of the same extended family.⁴² Alexander Gordon seems to have preferred to take the term 'cousin' at its face value rather than to ascertain its meaning in context in *The Acts of the*



Fig. 2 Lodowick Muggleton⁴³

Witnesses, an interpretation that has persisted to the present day. Jackson and Daniell would, doubtless, have believed in the family connection, which could be the origin of the presumed link with Chippenham. If John Reeve was related to Muggleton it would be tempting to cast a Chippenham branch of the Reeve family in the role of the ‘strangers in the country’ to whom the infant Lodowick was sent. The lack of documentary evidence means we can never be sure about where young Muggleton spent his early life, but can only speculate on possibilities tentatively based on local traditions. What is clear is that he did live somewhere ‘in the country’, and perhaps that somewhere was Chippenham.

Notes

- ¹ Jackson, Canon J. E. ‘On the History of Chippenham’ *WANHM* vol. iii, 1856-1857, p.46.
- ² ‘A Modest Account of the Wicked Life of That Grand Impostor Lodowicke Muggleton, 1676’ in the *Harleian Miscellany*, reprinted 1744 and 1810, vol. viii, p. 83.
- ³ This 1756 copy of *A Transcendental Spiritual Treatise upon Several Heavenly Doctrines*, by John Reeve and Lodowick Muggleton does not include the original date of publication, but includes an account, in sixteen chapters, of the commission they claim to have received from Jesus in February 1651/2.
- ⁴ Wiltshire Archaeological & Natural History Society (W.A.N.H.S.) Library, Devizes: Wiltshire Tracts, 48, A True Account of the Trial and Sufferings of Lodowick Muggleton *One of the two last prophets and Witnesses of the Spirit*, left by our Friend Powell.’ [Nathaniel Powell] (Printed for T. Fever 1808 by Morris and Reeves, 53 Red-Cross Street, Southwark.)
- ⁵ W.A.N.H.S. Library, MS Box 225, folder v.
- ⁶ Daniell, Rev. J. J. *The History of Chippenham*, (Houlston & Sons, London, 1894).
- ⁷ *Wiltshire Notes & Queries*, vol. ii, (Devizes, 1899), p. 585.
- ⁸ Underwood T.L (ed), *The Acts of the Witnesses: the Autobiography of Lodowick Muggleton and Other Early Muggletonian Writings*, (Oxford University Press, 1999), the first part, chapter III, p. 31.
- ⁹ *Dictionary of National Biography (D.N.B.)*, vol. xiii, (OUP, 1921, reprinted 1968), p.1164.
- ¹⁰ Daniell, *History of Chippenham*, p. 212.
- ¹¹ Braithwaite, William C. *The Second Period of Quakerism*, (1919, reprinted 1979, Sessions, York), p.671.
- ¹² Daniell, *History of Chippenham*, p. 212.
- ¹³ Hill, Christopher, Reay Barry, & Lamont William *The World of the Muggletonians*, (Temple Smith, London, 1983), frontispiece dedication, and Underwood, *The Acts of the Witnesses*, pp. 11-12.
- ¹⁴ Braithwaite, *The Second Period of Quakerism*, noted Muggleton had followers in Derbyshire, and the sect continued to meet into the early twentieth century, holding their Yearly Meeting at the Drury Lowe Arms in Derby.
- ¹⁵ Hill, et al, *The World of the Muggletonians*, map 1.
- ¹⁶ Penn, William *The New Witnesses Proved Old Heretics*, (London, 1672).
- ¹⁷ Smith, Joseph, *Bibliotheca Anti-Quakeriana*, (London, 1873, [revised by Alexander Gordon pre-1894]) contains a bibliography of Muggleton’s works.
- ¹⁸ Wiltshire Tracts, 48, ‘A True Account of the Trial and Sufferings of Lodowick Muggleton’ p. 3.
- ¹⁹ *D.N.B.* vol. xiii, p.1163, and Wiltshire Tracts, 48, p. 4.
- ²⁰ Wiltshire Tracts, 48, p.6.
- ²¹ Jackson, ‘On the History of Chippenham’, p.46.
- ²² Lamont, William ‘Lodowick Muggleton and “Immediate Notice”’, in Hill et al *The World of the Muggletonians*, p. 116.
- ²³ *The Dictionary of National Biography, from the Earliest Times to 1900*, was founded in 1882 and the introduction to the Oxford University reprint in 1967-1968 states that “it seemed best to leave the text unaltered.” Thus the entries by Alexander Gordon relating to Lodowick Muggleton in vol. xiii, and to John Reeve in vol. xvi, are as they were originally published in 1894.
- ²⁴ Gordon, Alexander, ‘The Origin of the Muggletonians,’ *Transactions of the Liverpool Literary and Philosophical Society*, 1869, and ‘Ancient and Modern Muggletonians,’ *Transactions of the Liverpool Literary and Philosophical Society*, 1870.
- ²⁵ Muggleton, Lodowick, *The Acts of the Witnesses of the Spirit*, an autobiographical account to 1677, was published posthumously in 1699.
- ²⁶ Underwood, T.L. (ed), *The Acts of the Witnesses*, the first part, chapter xv, p. 51, my italics.
- ²⁷ *Chambers Dictionary* (Chambers Harrap, Edinburgh, 1993) p. 392 defined ‘cousin’ as “a person belonging to a group related by common ancestry, interests etc; something kindred or related to another.”
- ²⁸ Underwood, *The Acts of the Witnesses*, the first part, chapter III, p. 31.
- ²⁹ *Ibid*, p. 31.
- ³⁰ *D.N.B.* vol. xvi, (OUP, 1921, reprinted 1968), p. 851.
- ³¹ W.S.R.O. 811/6: Chippenham St Andrew parish register 1578-1644; and Calne St Mary index of baptisms 1538-1637, marriages 1538-1837, and burials 1637-1725.
- ³² *D.N.B.* vol. xvi, p. 851
- ³³ Hill, Christopher, *The World Turned Upside Down*, (Penguin Books, Harmondsworth, 1975), p. 173.
- ³⁴ Hobbes, Thomas, *English Works*, VI, pp. 195-196, cited in Hill, *The World Turned Upside Down*, p. 173.
- ³⁵ Hill, *The World Turned Upside Down*, p. 173.
- ³⁶ Braithwaite, *The Second Period of Quakerism*, p.244.

³⁷ It is possible that *A Transcendental Spiritual Treatise upon Several Heavenly Doctrines* falls into this category, as it seems to imply (p. 40) support for all persecuted dissenters, including Quakers, which is unlikely to have been written by Muggleton.

³⁸ Hill, Christopher 'John Reeve and the Origins of the Muggletonians,' in Hill et al *The World of the Muggletonians*, p.91.

³⁹ Hill, Christopher and Lamont, William, 'The Muggletonians: Debate and Rejoinder,' *Past and*

Present, no. 104, 1984, p.160.

⁴⁰ *D.N.B.* vol. xiii, p.1164, and Boodle, R.W., *Wiltshire Scrapbook*, vol. 2, *A-D* (1901-2) held at WANHS Library, Devizes, p. 130.

⁴¹ Samuel, Raphael, 'Local History and Oral History,' *History Workshop*, no.1, Spring 1976.

⁴² For example Underwood repeats it in his editorial introduction to his transcription of Muggleton's autobiographical *The Acts of the Witnesses*, p. 7.

⁴³ Boodle, R. W. *Wiltshire Scrapbook*, p. 130.

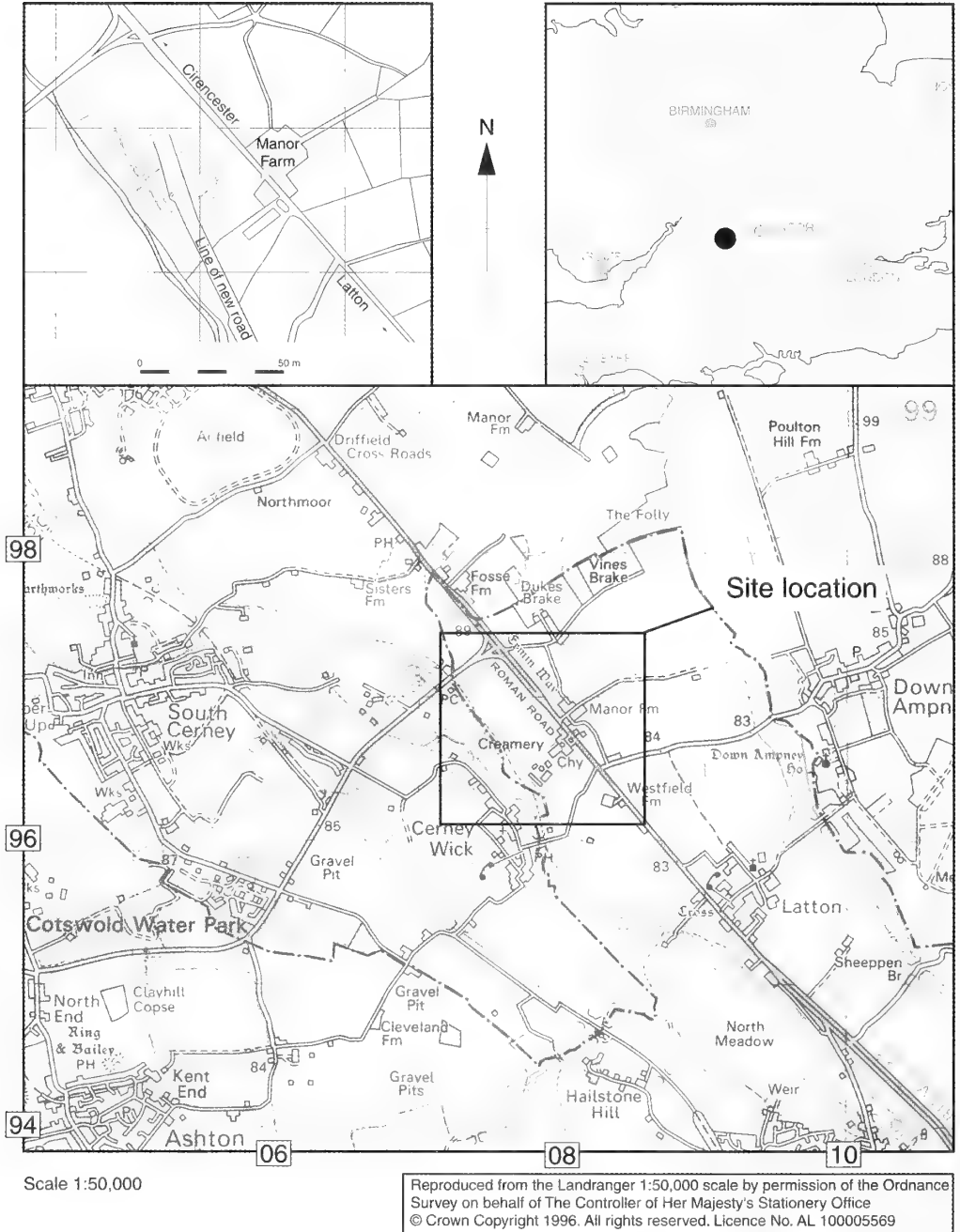


Fig. 1 Site Location

Prehistoric Settlement and Medieval to Post-Medieval Field Systems at Latton Lands

by *Dan Stansbie and Granville Laws*

with contributions by *Alistair Barclay, Julie Hamilton, Elizabeth Huckerby, Hugo Lamdin-Whymark, Ruth Shaffrey, Elizabeth Stafford, Maisie Taylor, Jane Timby and Annsofie Witkin*

Work in advance of gravel extraction by Oxford Archaeology allowed the excavation of Prehistoric and medieval remains. A ring ditch of probable early Bronze Age date was identified but not excavated. Two linear ditches lying at right-angles to one another, with a waterhole between, defined an area of middle Bronze Age settlement, including several post-built roundhouses and pits. A wooden bowl came from the basal fills of the waterhole and sherds of Deverel-Rimbury urns came from the fills of the ditch termini. An adult female burial of later Bronze Age date lay just to the north of the settlement and several pits, also of later Bronze Age date, were discovered during a watching brief to the south of the middle Bronze Age activity. One pit contained some disarticulated human remains. Several pits of Iron Age date were also revealed during the course of the excavation. Ridge and furrow and ditches of medieval and Post-medieval date overlay the Prehistoric activity.

LOCATION AND GEOLOGY

Oxford Archaeology undertook excavations north-west of the village of Latton, which lies on the A419 to the north-west of Cricklade (Figure 1). The study area comprised a parcel of land approximately 750 m x 450 m centred on NGR SP 07559695, lying to the south-east of the B4696 and to the north-west of the former Latton Creamery; it was bisected by the route of the new A419. Lying close to the course of the River Churn, the underlying geology is First Terrace river gravels forming a very flat topography, descending from about 84 m OD to 80 m OD.

ARCHAEOLOGICAL BACKGROUND

Archaeological evidence from the environs of Latton indicates occupation and activity from the

Neolithic period to the present day. Although there is no certain evidence of activity prior to the Neolithic, a few, possibly Mesolithic, flints were found in the Creamery Field, north-east of Cerney Wick and Beggars Field, east of Cerney Wick (CAT 1991a, 69). Neolithic monuments and evidence for settlement in the form of flint scatters are concentrated in the uplands of the Cotswold region and are rare in the valley bottoms until the late Neolithic (Darvill 1987, 46). However, an oval enclosure south-west of Westfield Farm is provisionally dated to the late Neolithic/early Bronze Age (CAT 1991b, 44-5). A similar enclosure lay to the south-east of Latton within Scheduled Ancient Monument 900 and a Neolithic pit was found in the same field (Mudd *et al.* 1999, 7). There is no evidence for Bronze Age activity in the immediate environs of Latton apart from that revealed by the recent phase of work carried out by Oxford Archaeology. However, at Cotswold

Community to the west were a ring-ditch, three Beaker burials and a number of round houses, all dating to the Bronze Age (Dennis and Laws forthcoming). Iron Age settlement within the Latton environs is relatively common and includes a sub-rectangular enclosure (Wilts. SMR SU09NE201) and pottery from evaluation trenches in the area (CAT 1991b, 74-5). Late Iron Age settlement was found at Neigh Bridge to the west and there is Iron Age settlement in the area of Ashton Keynes, also to the west of Latton. There is an extensive Roman settlement to the west of Latton (Scheduled Ancient Monument 899), as well as a settlement at Field Barn within Latton and a settlement at Neigh Bridge. Further afield, Roman material was recovered from Weavers Bridge near Cricklade, although the status of this site is uncertain. To the north, there is settlement at Witpit Copse, Preston and Worms Farm, Siddington. The former line of the A419, that bounded the study area to the north-east, followed the route of Ermin Street, which linked the local settlements to Cirencester (Mudd *et al.* 1999, 7-9). There is little evidence of early medieval activity in the area, although a few sherds of Saxon pottery were found north-west of Latton (Mudd *et al.* 1999, 9) and at Ashton Keynes (Coe *et al.* 1991). The later medieval settlement pattern was similar to that of today, although a possible deserted settlement lies between Preston and Witpit Copse to the north of Latton. At Latton itself there is cartographic evidence for houses lying to the west of Ermin Street with plots running back as far as the River Churn (Mudd *et al.* 1999, 9). Additionally pottery of 12th- to 15th-century date has been recovered from the area. Part of the infilled Thames and Severn canal bounded the study area to the south-west, but there are no other post-medieval features of great significance.

EXCAVATION METHODOLOGY

The whole area was stripped of soil cover using a mechanical excavator and the exposed gravel was then hand cleaned. All visible features were planned and recorded and a sample of features excavated (Figure 2). Gravel extraction to the south and north of the main area of middle Bronze Age activity was monitored by watching brief and all features were planned where they were visible. In some cases features were not planned, as they were only visible in section. At the time of publication,

plans relating to the watching brief phase of the work are missing and consequently several features containing finds, which are discussed in the following reports, do not appear in the stratigraphic narrative.

LOCATION OF THE ARCHIVE

The archive will be deposited with Swindon Museum and Art Gallery, accession no. B1997/4.

ARCHAEOLOGICAL DESCRIPTION

Middle Bronze Age Features

Enclosure 785 (Figures 2 and 3)

Two ditches (783 & 784) lying at an approximate right-angle to one another formed two sides of a possible enclosure measuring approximately 70 m by 70 m, with an internal area of about 4900 m². The ends of the ditches lay 20 m apart leaving a substantial north-east facing entrance which was partially blocked by a waterhole and several pits.

Ditch 783

Ditch 783 was linear, 69.2 m in length and orientated east-west. It curved around to the south at its eastern end. It was 1.2 m wide and averaged 0.7 m in depth. In profile the ditch was generally U-shaped, although in places the base narrowed forming a V-shape. The ditch terminals at both ends were squared off. There were at least four recuts. The fills were predominately of silty clay, although there were some sandy silts. Middle Bronze Age pottery was found in the fills, concentrating particularly in the terminals (Figures 16.1-16.5). Two environmental samples (sample nos. 6 and 15) were taken from the lower fills of the eastern terminal (Figure 4 and Table 3) and three fragments of burnt bone came from fills 373 and 381. A large fragment of cylindrical fired clay loomweight (sf 121, Figure 19) came from fill 373, a small piece of amorphous fired clay came from fill 585 and a small amount of burnt stone came from fill 573.

Ditch 784

Ditch 784 was linear, 53 m in length and orientated north-south. It curved round to the west at its

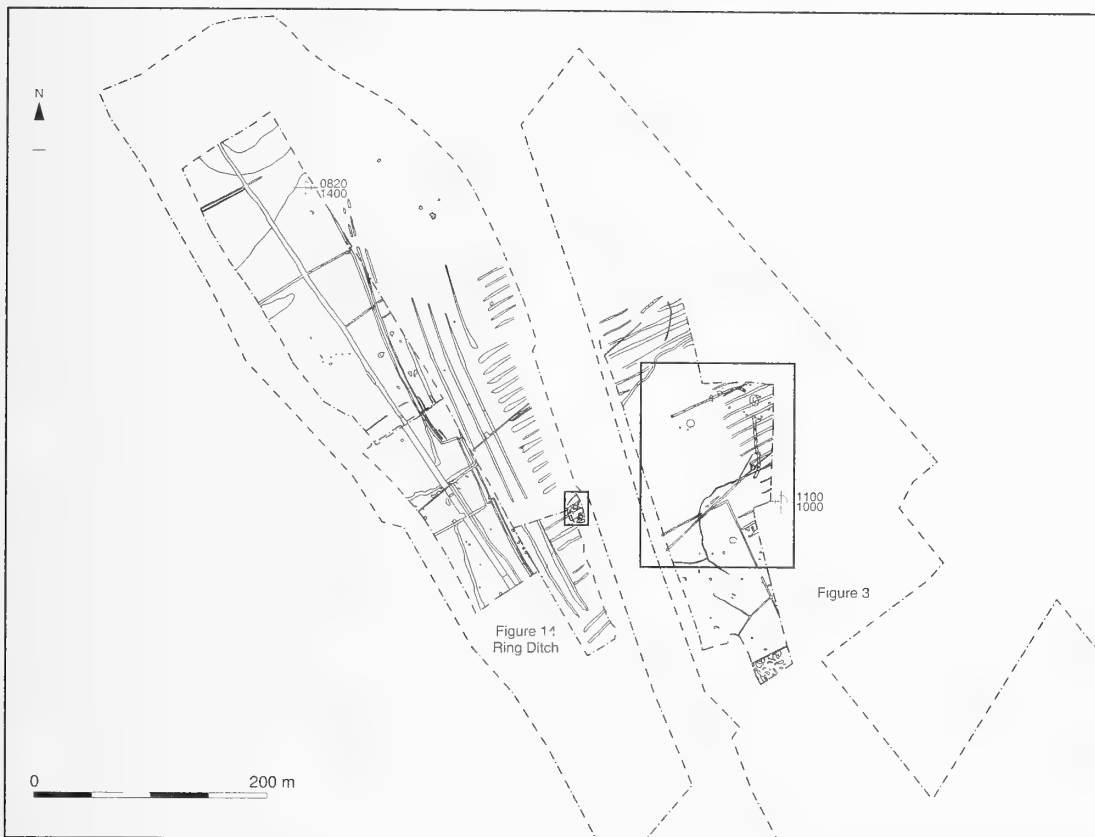


Fig. 2 Area of Excavation and Watching Brief

southern end. It was 1.2 m wide and averaged 0.9 m in depth. In profile it was generally U-shaped, although the base narrowed to form a V-shape in places. There were at least four recuts. The ditch terminals were rounded. The fills were predominantly silty clays or clay silts with some silty sands. Middle Bronze Age pottery was recovered (Figures 16.6-16.7), with concentrations in the terminals, along with fragments of burnt limestone rubble. Five environmental samples (sample nos. 5, 17, 18, 19 and 20) were taken from the fills (Figure 4 and Table 3). Animal bone, (including cattle bone and the mandible of a dog from the northern ditch terminal), was recovered from the fills.

Waterhole 421 (Figures 3 and 5)

Waterhole 421 was oval in plan and asymmetric in profile, having a steeply sloping eastern side and a more gradual western side. It was orientated north-south and measured 9.5 m in length by 7 m in width and 1.26 m in depth. The waterhole was

filled predominantly with silty clays interspersed with lenses of sand and sandy clay. The basal fill (420) was a sterile sandy gravel with lenses of clay. Overlying this were layers of silty clay (481 and 480) containing much organic material, interspersed with a layer of sand (504). The upper half of the waterhole was filled with layers of sandy clay (419, 418) overlain by a deposit of silty clay (417), all containing burnt limestone rubble. All the fills contained sherds of middle Bronze Age pottery (see Figures 17.9-17.13 for an illustrated selection). Fragments of a distinctive round-based wooden bowl (Figure 19) as well as some unworked wood (yielding radio-carbon dates of 1440-1210 BC and 1440-1130 BC at two sigma) came from layer 481, which overlay the basal gravel. A pollen sample (sample 9) was taken from the lower fills (Figures 5 and 20). Animal bone, including cattle, horse, pig, sheep/goat, red-deer and dog, was spread throughout the fills. Three fragments of worked red deer antler came from fills 418 and 480.

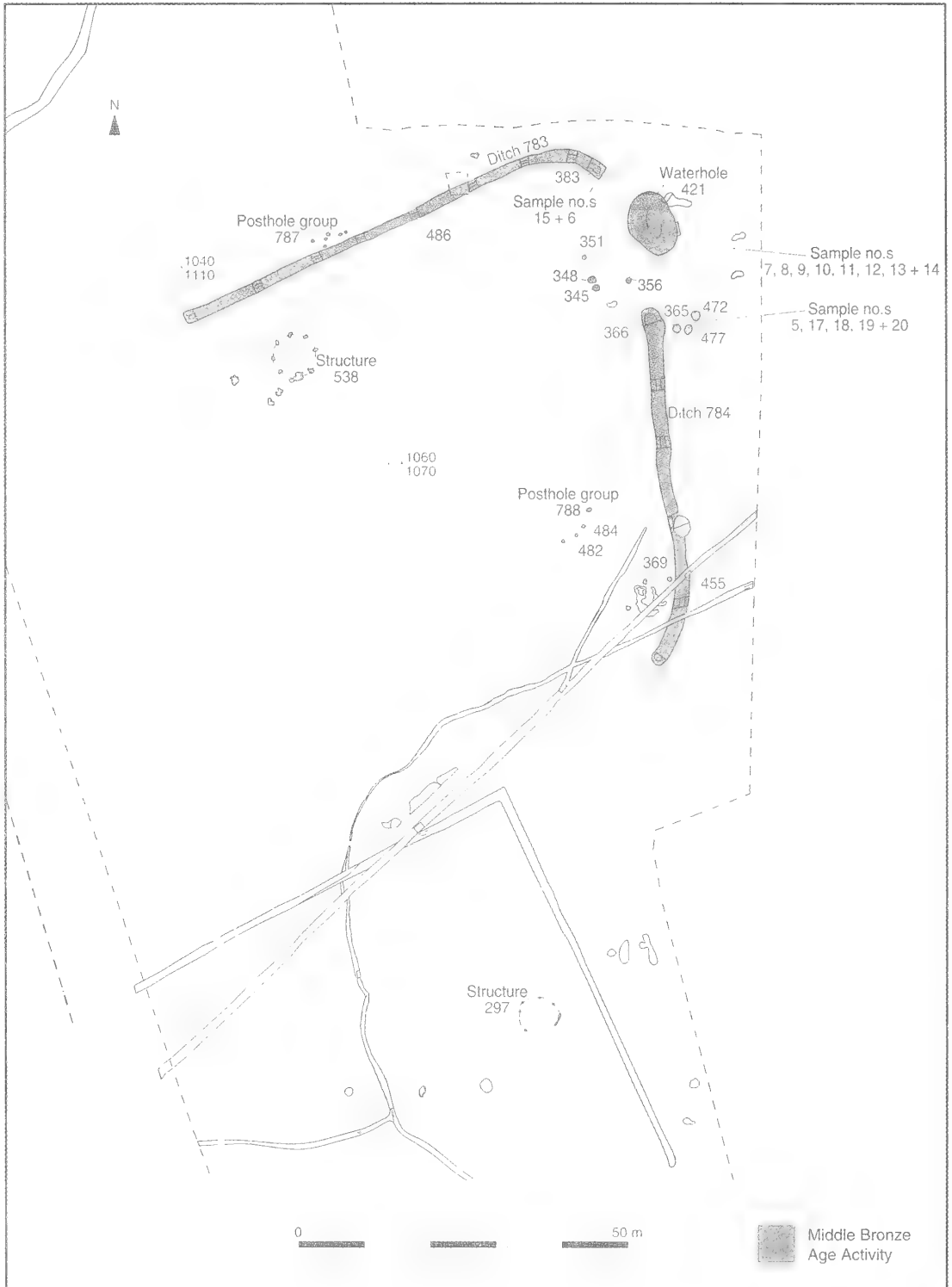


Fig. 3 The Middle Bronze Age Settlement

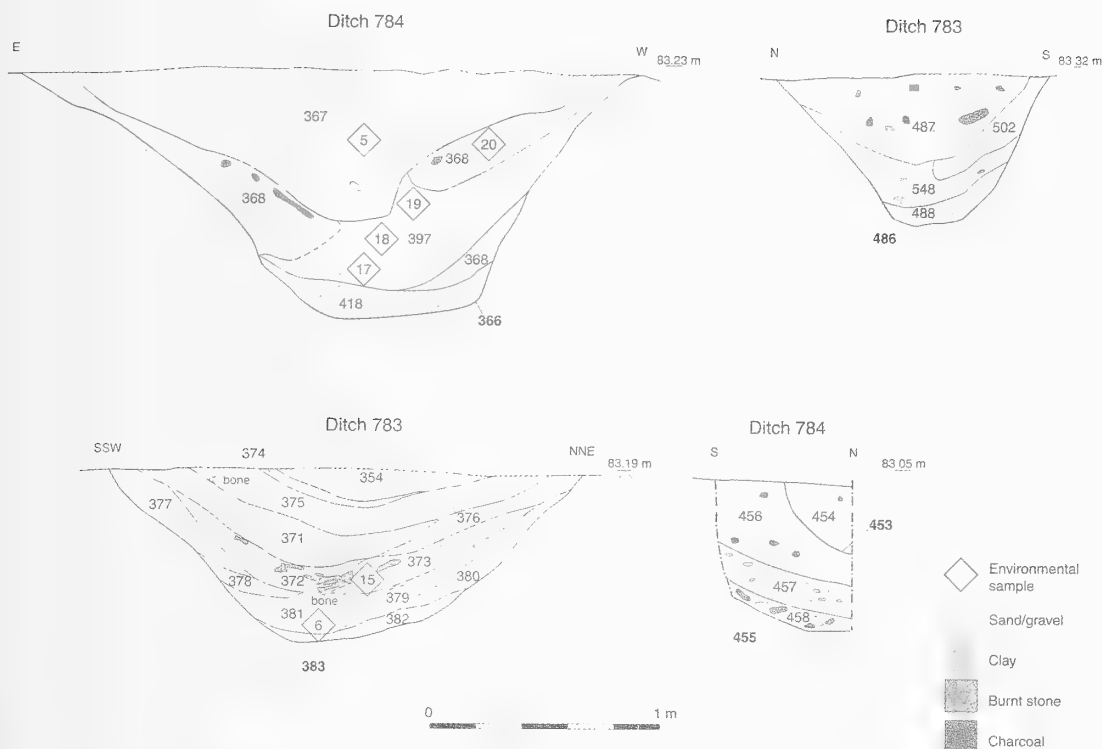


Fig. 4 Middle Bronze Age Ditch Sections

Circular Structures/Roundhouses

Two circular structures, interpreted as roundhouses, were identified: structure 538, 8 m to the south of ditch 783 and about 10 m from its western terminal and structure 297, 90 m to the south of ditch 783. No associated occupation levels or deposits were preserved.

Structure 538 comprised a ring of nine postholes (515, 517, 537, 523, 525, 535, 446, 444, 442) forming a circle 7.2 m in diameter (Figure 6). The postholes, some of which were oval and some of which were circular, averaged 0.54 m in length, 0.5 m in width and 0.11 m in depth. A 2.6 m wide gap in the south-east of the post-ring is interpreted as an entrance. Three postholes (519, 521, 528), forming a triangle, lay immediately to the south-west of the structure and may have been associated with it. They averaged 0.48 m in length, 0.43 m in width and 0.12 m in depth. No pottery was recovered from the posthole fills which were mostly clay silts with little stone or gravel.

Structure 297 comprised a ring of nine postholes (287-95 inclusive) forming a circle 6.5 m in diameter (Figure 7). The postholes averaged 0.25 m in diameter and 0.07 m in depth. There was a 4 m gap in the south of the post-ring, but this seems too

large for an entrance gap and indicates that some postholes did not survive. There were no other obvious gaps to indicate an entrance. The postholes were filled with a brown silty clay loam containing occasional charcoal flecks and occasional gravel; none contained artefacts.

Posthole groups

Posthole group 787 (Figure 3) was a randomly spaced group of six postholes, situated immediately to the north of ditch 783, about 26 m from its western terminal. The postholes were generally circular in plan and U-shaped in profile. They averaged 0.33 m in diameter by 0.13 m in depth and were filled with a grey-brown silty clay with some sand. No artefacts were recovered.

Posthole group 788 (Figure 3) was a curvilinear arc of four postholes approximately 16 m in length, orientated north-south. Of the four postholes only two (482 and 484) were excavated. One of the excavated postholes was oval in plan, the other was circular; both were U-shaped in profile. The two unexcavated postholes were circular in plan. The excavated postholes averaged 0.36 m in diameter and 0.16 m in depth, and were filled with a mid grey-brown silty clay containing

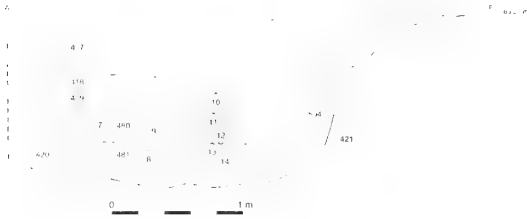


Fig. 5 Section Through the Middle Bronze Age Waterhole

some gravel and charcoal. No artefacts were recovered.

Pits

There were eight large pits, seven of which clustered on either side of the gap between the ditches to the south of waterhole 421; the eighth lay 0.6 m to the west of ditch 784 and 32 m from its northern terminal (Figures 3 and 9). The pits were broadly similar but differed in details of dimension and profile. Recuts were fairly common, but more often than not these took the form of shallow scoops rather than full scale clean outs. Although infill deposits differed, a relatively simple sequence of fills indicates infilling by natural erosion and weathering rather than through deliberate backfilling. Only pit 369 contained middle Bronze Age pottery, although all lay within the area of the middle Bronze Age enclosure and respected the enclosure ditches and the waterhole, suggesting broad contemporaneity.

Pit 345 (Figure 9) was circular in plan and bowl-shaped in profile, having a flat base and steep slightly convex sides. It measured 0.75 m in diameter and 0.2 m in depth. The pit was filled by a mid brown silty clay (345) containing occasional

pieces of gravel and moderate amounts of sand. A bowl-shaped recut 0.57 m in diameter by 0.1 m in depth cut the fill, and was filled by a light grey silty clay (343) containing occasional pieces of rounded gravel. Neither fill contained artefacts.

Pit 348 was circular in plan and bowl-shaped in profile, having a flat base and steeply sloping slightly convex sides (Figure 9). It measured 0.75 m in diameter by 0.2 m in depth. The pit was filled by a mid brown silty clay (347) containing moderate amounts of gravel and a little sand. A bowl-shaped recut 0.45 m in diameter by 0.1m in depth cut the fill, and was filled by a light grey silty clay (346) containing occasional pieces of rounded gravel and burnt limestone rubble.

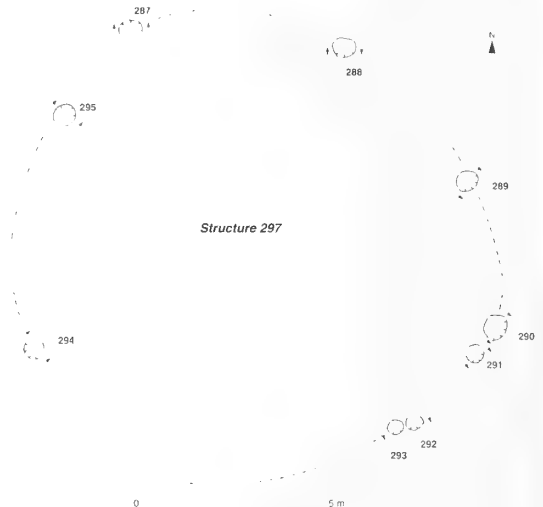


Fig. 7 Structure 297

Pit 351 was circular in plan and bowl-shaped in profile, with a flat base and steeply sloping sides (Figure 9). It measured 0.55 m in diameter by 0.16 m in depth. The pit was filled by a mid brown silty clay containing moderate amounts of gravel (350). A bowl-shaped recut 0.42 m in diameter and 0.12 m in depth cut the fill; it was filled by a light grey silty-clay containing occasional rounded gravel (349). Neither fill contained artefacts.

Pit 356 was oval in plan and saucer-shaped in profile, having a flat base and shallow steeply sloping sides (Figure 9). It measured 0.7 m in length by 0.55 m in width and 0.05 m in depth. It was filled by a grey-brown silt (355) containing some gravel and sand. No artefacts were recovered from the fill.

Pit 365 was circular in plan and U-shaped in profile, having a flat base and near vertical sides

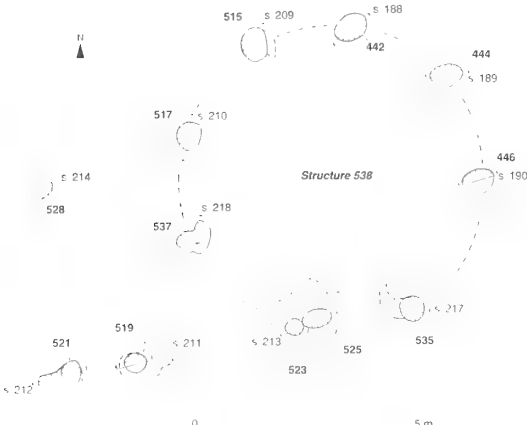


Fig. 6 Structure 538

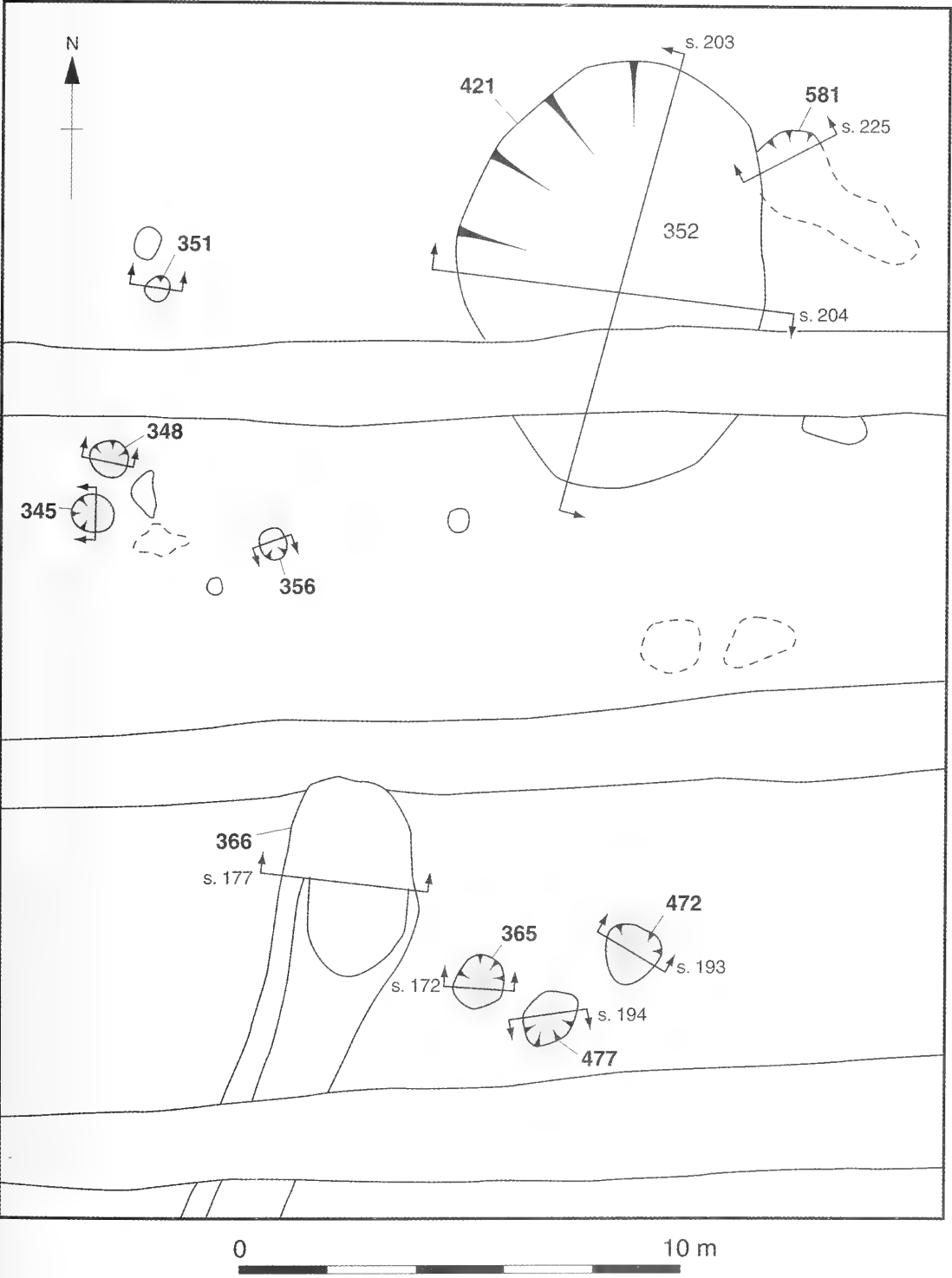


Fig. 8 The Middle Bronze Age Pit Group

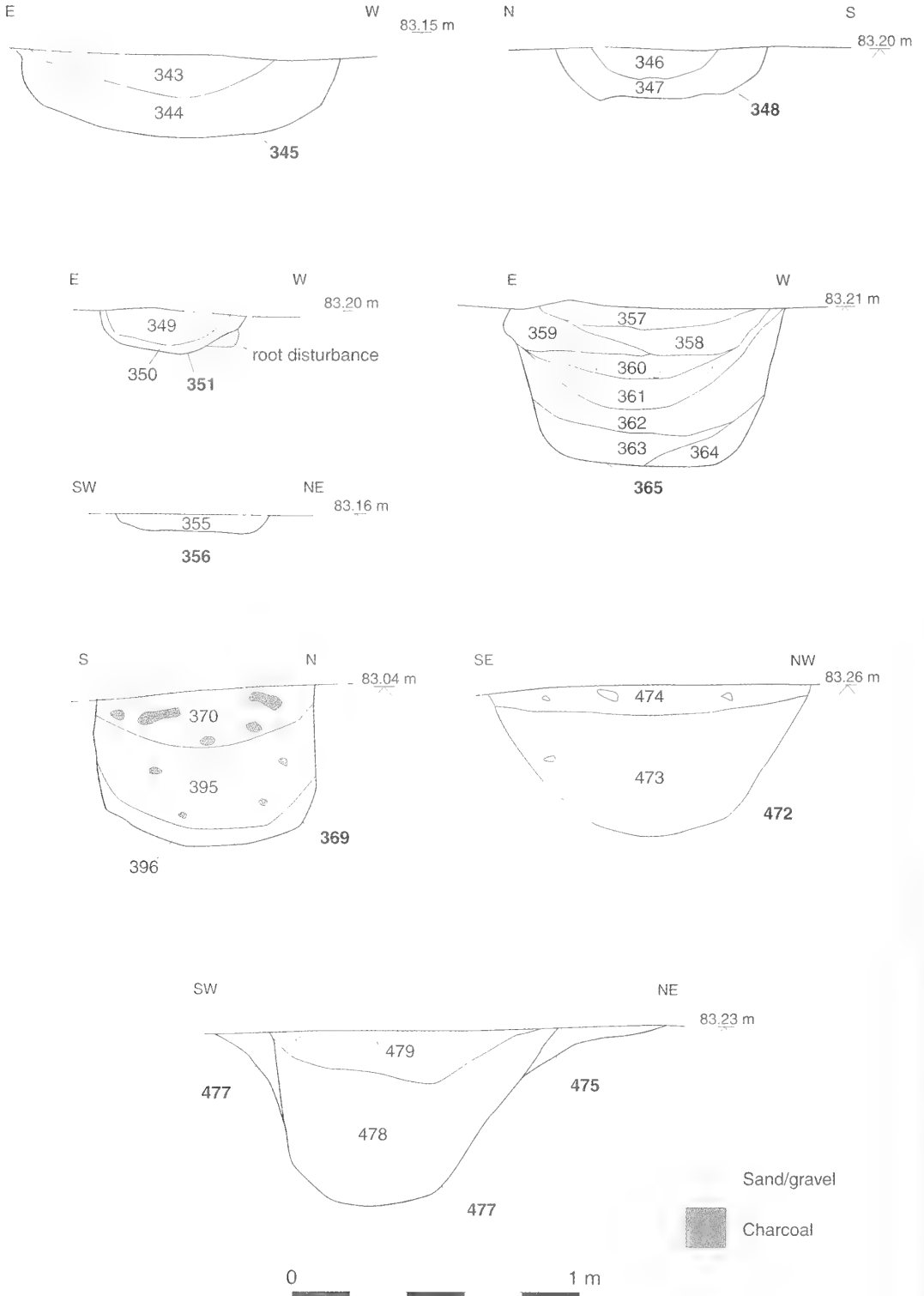


Fig. 9 Sections Through the Middle Bronze Age Pits

(Figure 9). It measured 0.95 m in diameter by 0.55 m in depth. With the exception of a single layer of clay (357) at the top, the pit was filled by numerous layers of silty clay. Within these deposits there were five distinct discontinuities indicating hiatuses within the infilling process, including two recuts. The primary fill (364) occupied the bottom western corner and displayed a steep inclination down from the western edge of the pit. Above this were two layers of light brown silty clay with sand and gravel (363 and 362) lying horizontally. A bowl-shaped recut measuring 0.95 m in diameter by 0.36 m in depth cut the upper of these two fills. It was filled by three layers (359 – 361 inclusive) of grey-brown silty clay containing flecks of charcoal, sand and gravel. A second bowl-shaped recut measuring 0.84 m in diameter by 0.16 m in depth cut the upper of these three fills. Two layers (358 and 357), the lower of which was a silty clay containing occasional gravel 0.14 m in depth, filled it. Overlying this was a grey blue clay (357) 0.08 m in depth and containing burnt limestone rubble. Pit fill 363 contained large animal long-bones of indeterminate species.

Pit 369 was circular in plan and U-shaped in profile, having a rounded base and near vertical sides (Figure 9). It was 0.75 m in diameter and 0.58 m in depth. With the exception of a single layer of sandy clay at the base, the pit was filled with layers of silty clay. The primary fill (396) occupied the lower 0.08 m of the pit and comprised a grey-yellow sandy clay. Overlying this was 0.29 m of dark yellow-grey silty clay (395) with charcoal flecks and some sand. The upper 0.21 m of the pit was occupied by dark grey-brown silty clay containing some charcoal and burnt clay (370). All three layers contained middle Bronze Age pottery.

Pit 472 was oval in plan and bowl-shaped in profile, having a rounded base and steeply sloping sides (Figure 9). It was 1.6 m in length by 1 m in width and 0.56 m in depth. The lower 0.43 m of the pit was filled with a dark brown silty clay loam (473), containing occasional flecks of charcoal and pieces of gravel, but no finds. Overlying this was a very dark greyish-brown silty clay (474) 0.06 m thick, with occasional charcoal flecks and pieces of gravel. Much burnt stone was recovered from this upper fill.

Pit 477 was oval in plan and U-shaped in profile, having a rounded base and steeply sloping sides (Figure 9). It measured 1.3 m in length by 1 m in width and 0.65 m in depth. The pit was filled with layers of silty clay with a single recut. The lower 0.46 m of the pit was filled with a dark brown

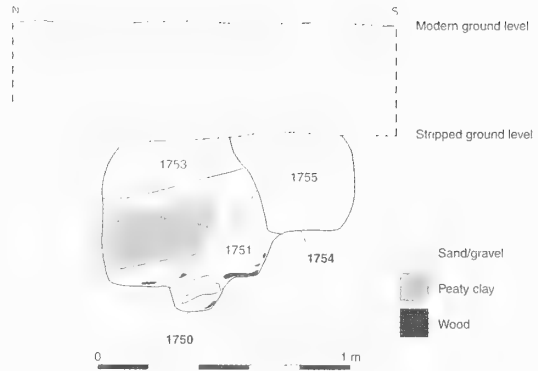


Fig. 10 Section Through the Late Bronze Age Pits

silty clay (478) containing charcoal flecks, pieces of gravel and limestone fragments. An irregular recut 0.94 m in width by 0.18 m deep cut this fill. The recut was filled with a dark greyish-brown silty clay (479) containing charcoal flecks, gravel and burnt stone.

Pits 1750 & 1754 (Figure 10)

To the south of the middle Bronze Age enclosure two more pits were observed in section during the watching brief but not in plan due to the similarity of their fills to the surrounding natural. Neither of these pits contained dating evidence, although one (1750) contained some disarticulated human remains of possible middle or late Bronze Age date.

Pit 1750 measured 0.68 m in width by 0.68 m in depth, and was U-shaped in profile with a narrow central sump approximately 0.20 m in width by 0.12 m in depth. The lower 0.22 m of the pit was filled by a mid brown-grey sandy clay (1751). Overlying this was 0.28 m of dark brown slightly peaty clay (1752). The upper 0.18 m was filled by a mid-blackish grey silty clay (1753). All fills contained organic material. A human cranium and femur came from fill 1751 (Table 15), along with a polishing stone.

Pit 1754 measured 0.46 m in width by 0.41 m in depth, and was flat based with steep sides, one slightly concave the other slightly convex. The pit was filled by a light-grey sandy clay (1755) containing some gravel and charcoal.

Burials (Figure 11)

Burial 651 could not be located on the overall site plan as it was recorded under salvage conditions

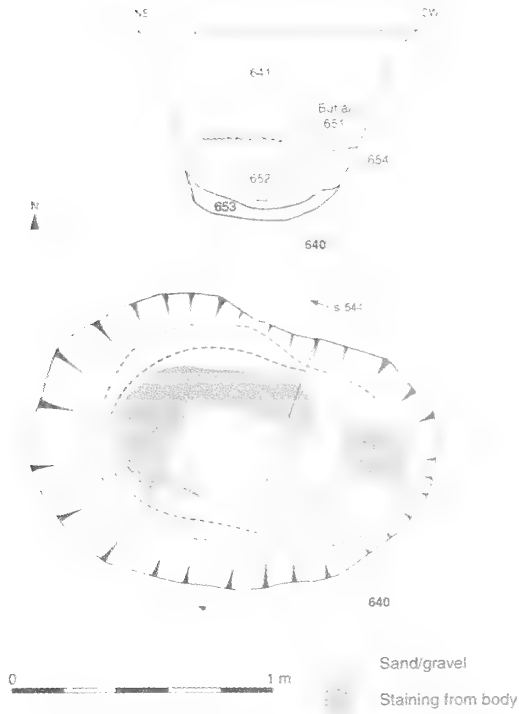


Fig. 11 Section Through the Late Bronze Age Inhumation

during the watching brief; no dating evidence was recovered from the fills. The burial comprised a crouched inhumation of a female aged 25 – 35, lying on the right side in an oval pit (640) with a U-shaped profile, measuring 1.44 m in length by 1 m in width and 0.78 m in depth. The lower 0.04 m of the pit was filled by a light brown sandy gravel (653), overlain by 0.26 m of dark reddish-brown silty clay (652) containing gravel and burnt limestone fragments. Overlying this was a thin (0.03 m) layer of dirty sandy gravel with lenses of dark grey silt (654). The upper 0.45 m of the pit was filled by a greyish brown silty clay loam (641) containing charcoal flecks, gravel and fragments of burnt limestone. No pottery was recovered from the fills.

Other Features

A number of amorphous pits, scoops and postholes clustered along the edges of the ditches and in the area defined by them. Although unexcavated and therefore undated, their relationship to the ditches and other middle Bronze Age features suggests that they were contemporary.

Iron Age Features

A number of features including pits and ditches lay to the north and east of the middle Bronze Age enclosure, and many of them may be Iron Age in date. These included pit 428 to the north-east of ditch 783 (Figure 12).

Pits

Pit 428 was sub-circular in plan and U-shaped in profile, having a rounded base and steeply sloping sides (Figures 12 and 13). It was 1.2 m in length by 0.9 m in width and 0.6 m in depth. With the exception of a layer of silty gravel at the base, the pit was filled by layers of silty clay. The primary fill (429) was a mid grey-brown silty gravel 0.43 m thick, displaying a steep inclination down from the western edge of the pit. Overlying this was a 0.30 m thick mid greyish brown silty clay (430) containing some gravel, displaying a steep inclination down from the eastern edge of the pit. Overlying this was a mid brownish-grey silty clay (431) 0.44 m thick, from which 26 sherds of Iron Age pottery were recovered.

Undated Features

Ring Ditch (Figure 14)

Part of a ring ditch was found in a small trench on the western side of the footprint for the new A419, about 160 m from the middle Bronze Age enclosure. This feature was associated with a dense scatter of amorphous pits. It was decided to preserve these features *in situ* and they were therefore left unexcavated.

Pits (Figure 12)

Miscellaneous pits, some quite irregular, were found in all areas of the site. Some may have been tree-throw holes. A substantial pit (406) was cut by ditch 784 making it earlier than the middle Bronze Age settlement enclosure, although it contained middle Bronze Age pottery and is therefore described in detail below.

Pit 406 (Figures 12 and 13) was sub-circular in plan and U-shaped in profile, having a rounded base and steep slightly convex sides. It was 2.55 m in length by 1.1 m wide and 1.1 m in depth. With the exception of a single layer of silty sand at the base, the pit was filled by layers of silty clay, with two recuts. The primary fill (407) was of light brown

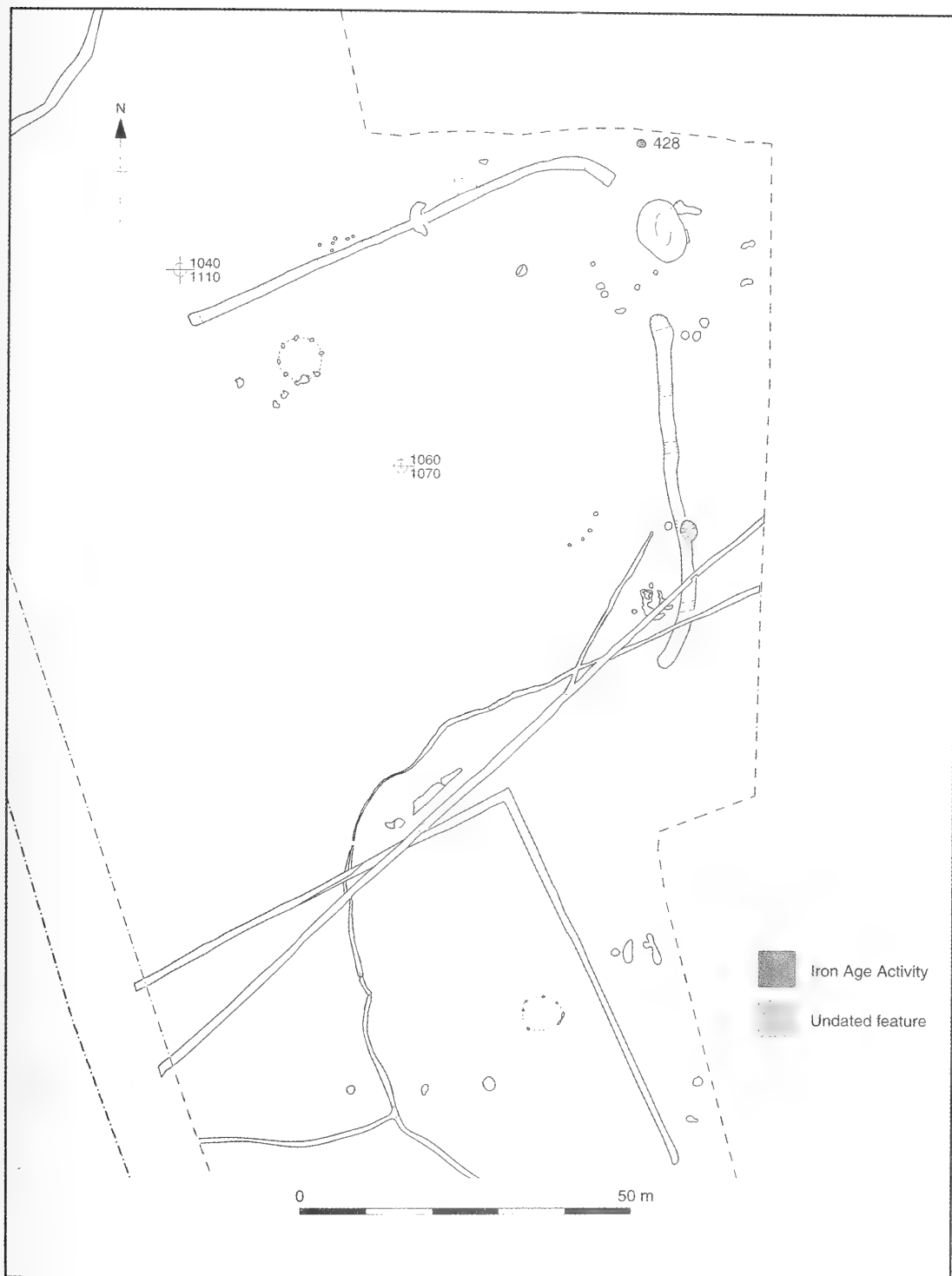


Fig. 12 Iron Age Activity and Undated Features

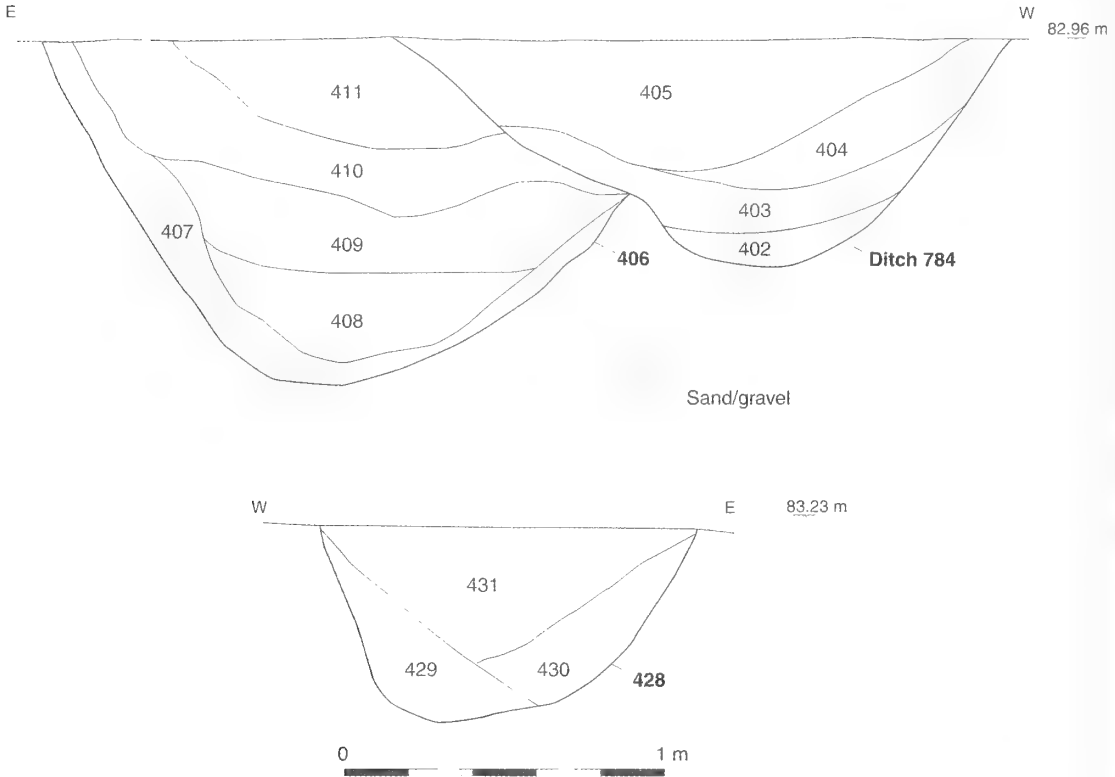


Fig. 13 Sections Through the Iron Age Pits



Fig. 14 The Ring Ditch

silty sand with frequent inclusions of gravel 0.07-0.1 m thick. A U-shaped recut measuring 1m in width by 1 m in depth truncated this fill. Three layers (408-410) of dark greyish-brown silty clay with inclusions of charcoal flecks and small amounts of gravel and sand filled this recut. Layer 409 contained two sherds of middle Bronze Age pottery (which may have been intrusive from ditch 784) and two fragments of cattle bone. A second recut, this time bowl-shaped and measuring 0.7 m in width by 0.34 m in depth, cut the upper of the three fills. This was filled by a single layer (411) of dark-brown silty clay containing patches of gravel and charcoal, and a quantity of burnt limestone rubble.

Miscellaneous Features

A number of features including pits and ditches lay to the north east and south of the middle Bronze Age enclosure. These were observed during the watching brief phase of the work.

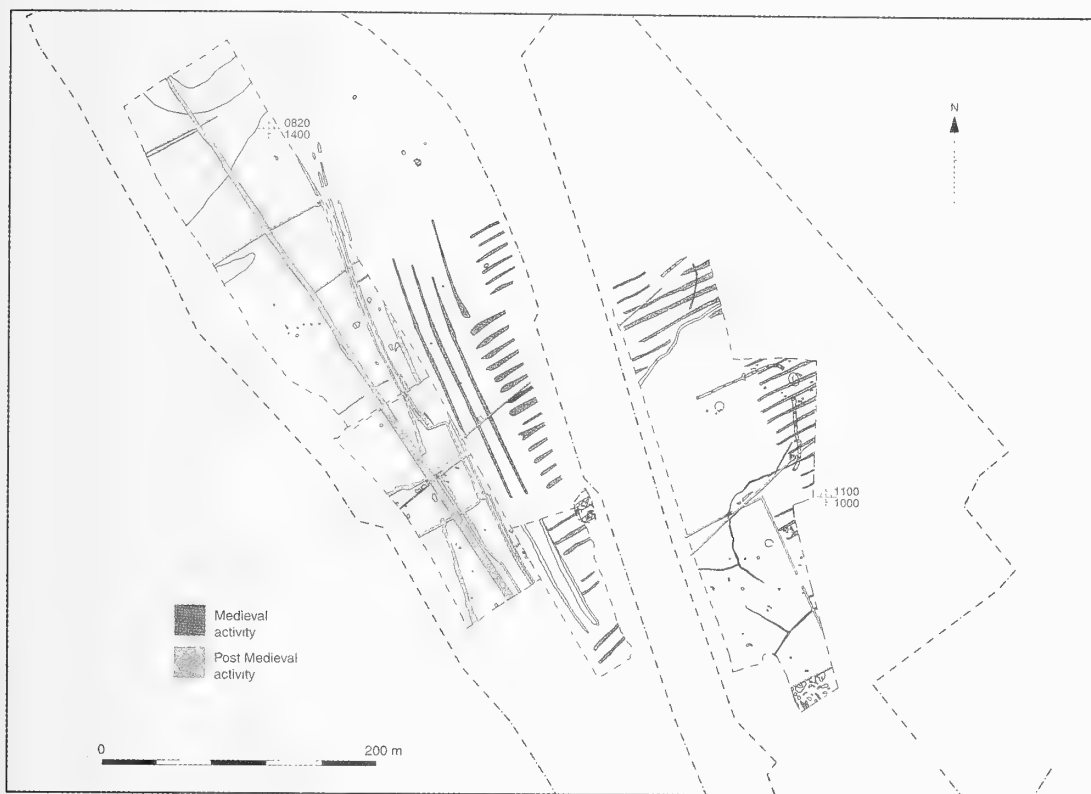


Fig. 15 Medieval Field Systems and Post medieval Features

Medieval Activity (Figure 15)

Ridge and furrow was found over the entire site, running both north-east/south-west and north-west/south-east. Two irregular ditches approximately 60 m apart lay to the south of the middle Bronze Age enclosure. These both ran NE-SW and the space which they enclosed may have formed some kind of stock enclosure. These may be related to further linear ditches, possibly defining enclosures to the west of the ridge and furrow.

Post-Medieval Activity (Figure 15)

A rectangular enclosure measuring approximately 120 m by 60 m overlay the more irregular medieval field boundaries. To the west of this feature, defining the western limit of the ridge and furrow, was a series of north-west/south-east orientated ditches, that in places appeared to define a trackway running along the edge of the medieval field system. Despite this, its fills produced more Post-medieval than medieval pottery. A substantial stone

lined drainage culvert orientated north-west/south-east lay to the west of these ditches.

THE FINDS

The Pottery

by Jane Timby

Introduction

An assemblage of some 1158 sherds of pottery weighing 10.1 kg was recovered. Whilst the bulk of the assemblage, some 963 sherds, 83% by count, dates to the middle Bronze Age, sherds of Iron Age, medieval and Post-medieval date are also present. The pottery is of variable condition; substantial parts of vessels were present alongside isolated sherds but the nature of the fabrics has led to considerable fragmentation. Certain contexts produced just small crumbs.

Methodology

The assemblage was sorted into fabrics on the basis of macroscopically visible inclusions present in the

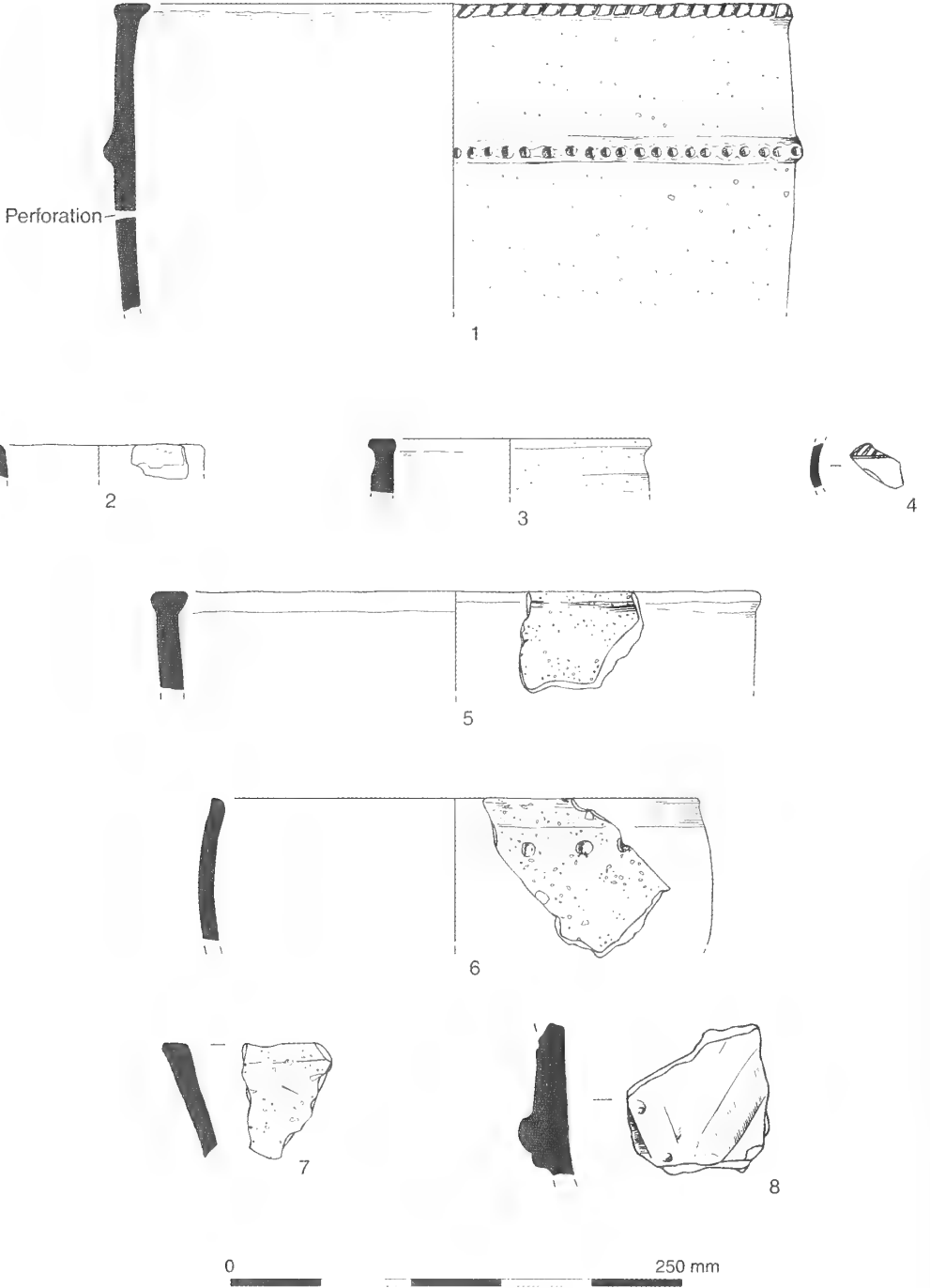


Fig. 16 Deverel-Rimbury Pottery (Sherds 1-8)

clay following the recommended guidelines for analysing prehistoric pottery (PCRG 1992). Further subdivision was made on the size and frequency of the aplastic inclusions. The sherds were quantified by sherd count and weight for each excavated context. The resulting data was entered onto an Excel spreadsheet, a copy of which is deposited with the site archive. Fabrics were assigned to periods mainly on the basis of the occurrence of diagnostic sherds or by the association of fabrics where such sherds were absent or inconclusive.

Middle Bronze Age

A total of 963 sherds can be assigned to the middle Bronze Age Deverel-Rimbury tradition. The greatest concentration of sherds came from the northern enclosure ditch (783), 522 sherds (6615 g), although over 75% of these came from just two urns. The eastern enclosure ditch (784) produced 78 sherds (394 g), whilst the waterhole (421) yielded 154 sherds (1572 g).

Description of fabrics and associated forms

SHELL1: Dense fossil shell-tempered ware. A generally reddish-orange to brown exterior with a dark grey black interior and core. The paste contains a common frequency of fossil shell mainly aligned to the vessel walls and up to 5 mm in size. The shell has a clean, fresh appearance, quite white in colour. At x20 magnification a rare frequency of limestone oololiths and other fossiliferous detritus (coral, foraminifera) is visible.

This is the commonest of the middle Bronze Age fabrics with at least 322 sherds (1338 g). Amongst the sherds are both thick-walled urn-like material (10 mm), medium walled sherds (7-10 mm) and thinner-walled sherds (6 mm and less). Featured sherds include those from bucket-shaped urns with expanded rims, either plain (Fig. 16.5) or externally slashed (Fig. 17.14), a smaller jar or urn with a finger groove below a flat-topped expanded rim (Fig. 16.3) and an everted rim jar with internal finger tipping (Fig. 17.15). A bodysherd from waterhole 421 has diagonal slashed decoration (Fig. 17.11). A simple jar rim from waterhole 421 has finger-tipped decoration on the exterior, whilst a carinated bodysherd from the same context has finger-tip depressions below the carination. One rimsherd from (367) appears to belong to a vessel with splayed walls (Fig 16.7).

This ware was distributed across a large number of features with the main concentrations

coming from the waterhole, 421, which produced 48 sherds, the terminal of the eastern enclosure ditch, 321, with 26 sherds, the northern enclosure ditch, sections 383 and 412, yielded 68 sherds, pit 369 contained 61 thin-walled sherds and pit 688 produced 21 sherds. It is associated with fabrics GRSH, SHELL2-3, and FLINT.

SHELL2: Shell and limestone-tempered ware. A black fabric with a sandy texture, but very friable. The paste contains a common frequency of fossil shell mixed with discrete oololiths and other fossiliferous matter. These are more frequent in occurrence compared to SHELL1. Occasional shell fragments up to 8 mm in size but mainly finer.

Vessels include a plain-walled jar with a slightly internally bevelled rim (Fig. 17.10) and a large curved wall jar with a line of finger-tipped impression below the rim (16.6). Not a common fabric with only 26 sherds recorded from just three contexts, two from the eastern enclosure ditch (366 and 450) and waterhole 421. It is associated with fabrics SHELL1, GROG, GRSH and SHELL 3.

SHELL3: Fossil-shell tempered ware. A moderately thick-walled ware with an orange exterior and outer core and black interior and inner core. The paste contains a sparse to moderate frequency of fine fossil shell up to 1 mm in size mixed in with occasional bryozoa and occasional discrete limestone oololiths. A moderately rare fabric represented by just nine unfeatured sherds from the eastern enclosure ditch (784).

SHELL6: shelly ware. An orange-brown ware with a dark grey core. Moderately hard fabric with occasional voids and a sparse frequency of coarse fossil shell up to 8mm across. The ware has a laminar, hackley fracture. A total of 24 unfeatured sherds were recovered from the northern enclosure ditch (783) suggesting this is a middle Bronze Age fabric.

GROG: Grog-tempered ware. A moderately hard, orange-brown ware with a black interior surface and inner core. The slightly sandy textured paste contains a common frequency of sub-angular grog, up to 7 mm in size. At x20 magnification the matrix contains very fine sand and fine mica.

Vessels include at least two bucket-shaped urns with expanded rims from the northern enclosure ditch, 783, and waterhole 421. The urn from 421, represented by at least 85 sherds, has finger-pressed decoration on the outer rim edge and a finger-pressed cordon around the body. In addition, the waterhole produced two decorated bodysherds, one with a vertical applied rib, the other with two

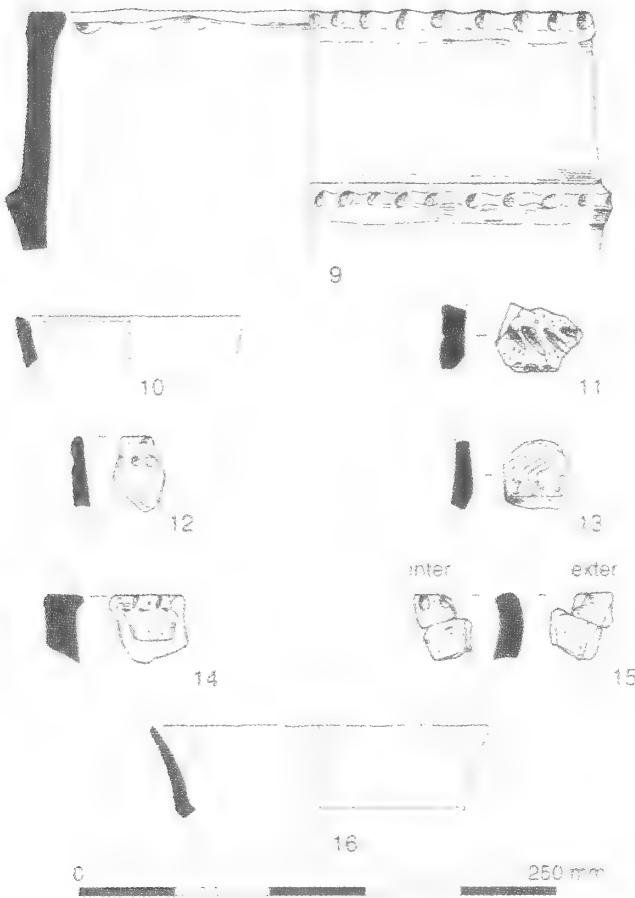


Fig. 17 Deverel-Rimbury Pottery (Sherds 9-16)

opposed diagonal ribs below a step in the profile (Fig. 16.8). A similar fabric was used for a small vessel with a plain undifferentiated rim from ditch terminal 383 (Fig. 16.2).

GRSH: Grog and fossil shell-tempered ware. An orange-brown ware containing a sparse frequency of fossil-shell up to 2 mm in size. At x20 magnification the paste shows a light scatter of rounded quartz and red iron along with a sparse frequency of clay pellets or grog. The latter is sub-rounded in shape with pieces up to 3 mm in size.

A total of eight sherds were recovered in this fabric of which only one was featured, a thin-walled vessel with a plain, slightly flattened undifferentiated rim from 783. Other sherds were recovered from both the enclosure ditches, sections 366, 383 and 512 and pit 609.

FLINT1: Coarse flint-tempered ware. A patchy black, mid brown to orange-brown surface with a

dark grey-black core. The paste contains a common frequency of angular, white, calcined flint of variable size, the larger fragments up to 5 mm across. The ware, although hard, has a friable, hackley fracture. At x20 magnification very fine sparse white mica flecks, sparse fine rounded quartz sand and rare red iron grains are visible.

Diagnostic forms include the substantial part of a cordoned bucket urn with a slash decorated rim and a finger-pressed cordon (Fig. 16.1) from ditch 783. The vessel has fragmented into some 398 sherds (5928 g) distributed across contexts (371-3). Approximately 67% of the rim is present. This shows a slightly expanded form particularly on the internal face. The vessel has been perforated before firing at least three times, one hole being above the cordon, one below but in a different area of the pot and one uncertain.

Further single flint-tempered sherds of similar character came from ditches 397, 412 and 427. These sherds were of medium thickness, that is around 8mm, thus falling slightly below that exhibited by the urn sherds.

FLINT2: Fine flint-tempered ware. A moderately hard dark brown to black ware. The paste contains a moderate frequency of fine calcined, angular flint, up to 1 mm in size but mainly finer. The surfaces are relatively smooth and show finer inclusions, suggesting the vessel walls have been wet smoothed.

Represented by a single thin-walled sherd with faint traces of lightly tooled decoration (Fig 16.4) from ditch 783. The association of this sherd with a sizeable collection of middle Bronze Age shelly and coarse flint-tempered ware suggests that it should be seen as contemporary, perhaps from a Decorated Globular urn.

Discussion

At least six fabrics have been distinguished with definite middle Bronze Age associations, four shelly wares (SHELL1-3, 6), one grog-tempered ware (GROG) and one flint-tempered ware (FLINT). To these can probably be added the grog and shell-tempered ware GRSH, although the chronology of this is less clear, and the single fine flint-tempered sherd (FLINT2). In total these

account for some 963 sherds (8987 g). Many of the sherds appear to derive from single vessels, in particular with 348 sherds from one flint-tempered urn and 85 sherds from a grog-tempered urn, both deposited in the northern enclosure ditch (783).

The wall thicknesses suggest a range of vessel types are present ranging from bucket-shaped cordoned urn to smaller jars while several vessels show evidence of decoration. The jars mainly have simple undifferentiated rims although one is everted (Fig. 17.15). At least one of the thinner walled vessels is carinated. Although no complete profiles have been drawn there is probably at least one reconstructable urn from the eastern terminal of the northern enclosure ditch (783).

Several typological parallels exist for the urn material with its distinctively expanded rim form. Bucket-shaped vessels occur in the classic Deverel-Rimbury assemblages of central Wessex, such as Thorny Down, Wiltshire (Stone 1941) and the Dorset area (Calkin 1964), Cranborne Chase (Barrett 1991) as well as in the Thames Valley (Barrett 1974). At least one of the urns from Bevan's Quarry, Gloucestershire round barrow assemblage had a similarly expanded rim form to the Latton examples (O'Neil 1967, fig 3.5). The presence of pre-firing perforations is also a recurrent feature seen elsewhere, for example at Bray (Cleal 1995, fig. 18. p8-9, p17), Sunbury (Barrett 1974, figs 2.19, 22, 26) and Acton (*op. cit.* fig 4).

The use of finger-tip decoration on non-urn material is well documented elsewhere, for example, pottery from the Cranborne Chase middle Bronze Age settlement enclosures (Barrett 1991). A parallel for the splayed wall vessel from (367) (Fig. 16.7) can be found amongst the middle Bronze Age material published for Bray near Maidenhead (Cleal 1995, P13). The Bray group also contained bucket-shaped urn and a small number of carinated sherds. Although a possible late Bronze Age date for the latter was considered, it was concluded that the carinated sherds, although not typical, were contemporary with the middle Bronze Age assemblage (*ibid* 29).

Globular Urn is also present in the assemblage represented by the decorated fine flint-tempered sherd and possibly some of the thinner-walled carinated sherds. Comparable material with lightly tooled decoration is recorded from the Bournemouth area (Calkin 1964, fig 10) and Kimpton, Hampshire (Ellison 1981). Traditionally such material has a distinctive Wessex association, but the presence of Globular Urn is now documented from the Thames

Valley, for example at Bray, Maidenhead (Cleal 1995), Newbury (Timby pers comm), Yarnnton (Barclay pers comm), Horcott (Lamdin-Whymark forthcoming) and Abingdon (Avery 1982, 26-32).

The juxtaposition of three fabric types at Latton perhaps reflects the location of the site in the Thames Valley between the Cotswolds to the north-west and the Marlborough Downs to the south-east. The shelly wares suggest a Jurassic source in the Cotswold region and a similar fabric was used to form the cordoned urns recovered from Bevan's Quarry round barrow, Temple Guiting (O'Neil 1967, fig. 3). The flint-tempered tradition is perhaps more typical of the south and this is the main component of the middle Bronze Age vessels recovered from the Thorny Down settlement, Wiltshire (Stone 1941) and the Cranborne Chase sites (Barrett *et al.* 1978).

Components of the assemblage were thus apparently being imported and few, if any, of the vessels support a source from the immediate locality. Few other settlement assemblages from the immediate area compare with the Latton assemblage although the juxtaposition of large urn and smaller plain and decorated vessels is seen at other domestic sites such as South Lodge, Dorset (Barrett 1991) and Thorny Down. Analysis of pottery from middle Bronze Age sites on Cranborne Chase highlighted Martin Down as having a different ceramic pattern to some of its contemporary sites. It showed a wider range of sources and has other elements such as size and the presence of metal-working which sets it apart. Like Martin Down (Barrett *et al* 1978), Latton appears to lie at the meeting point of different ceramic zones.

Iron Age

A small collection of material appears to be more typical of the Iron Age in the area. Difficulty was encountered in discriminating between certain of the shelly based wares that could be of Bronze Age or Iron Age date.

Description of fabrics

SHELL 4: Shelly ware. A thinner-walled ware with a dark orange to orange-brown exterior and a brown core and interior surface. Inclusions are commonly leached out leaving a vesicular fabric. The paste contains a moderate frequency of fossil shell up to 5-6mm in size with a sparse scatter of coarser shell, occasional discrete ooliths and other fossiliferous matter including bryozoa. In total 153 sherds of this ware was noted, the only

featured sherd being a small rimsherd of indeterminate overall form. Most of the sherds, (42) came from pit 613 with further examples from pits 609, 428, 655 and 751. The association of the material with a carinated bowl (see SHELL 5 below) in pit 613 would suggest that this is an early Iron Age fabric.

SHELL5: Shelly ware. An orange-brown ware with a brown core, similar to SHELL4 but with a sparser distribution of inclusions. The paste contains an ill-sorted sparse to common frequency of shell, some fragments up to 8 mm with occasional rounded red iron. A small group of 12 sherds was found, of which six derive from a flared wall, carinated bowl (Fig. 17.14). All the sherds came from pit 613. Typologically the bowl would fit into the early Iron Age period.

SALI1: Sandy with limestone. A black sandy ware of fine to medium texture with a sparkling appearance. At x20 magnification the paste shows a moderately well-sorted, common frequency of rounded to sub-angular quartz and a sparse frequency of ill-sorted limestone. The latter comprises small fragments of oolitic conglomerate up to 5mm in size, discrete ooliths, fine grained limestone rock and occasional fossiliferous matter. Represented by a single small rimsherd from pit 613 and thus associated with the carinated bowl noted above.

SALI2: Sandy with limestone. A black, moderately hard ware with a sandy texture. At x20 magnification the paste shows a sparse scatter of rounded quartz (less than 0.5 mm) rare flint and occasional fine limestone and shell or voids, generally less than 2 mm in size. Represented by just two bodysherds with an external burnish from posthole 718.

Medieval and Later

A small collection of nine medieval and eleven Post-medieval sherds was recovered. The medieval sherds, all Minety ware, were unstratified or from the plough furrows. The Post-medieval-Modern sherds came from the ditches bounding the plough and furrow to the west and from contexts (601) and (315).

Catalogue of illustrated sherds

From the ditched enclosure (northern ditch)

1. Bucket-shaped, cordoned urn. The cordon has finger-depressed decoration whilst the external rim is marked with diagonal slashes. The vessel wall has

been perforated at least three times, with one hole above the cordon, one below and one uncertain. Fabric: FLINT1. Ditch segment 383 (372/373).

2. Small vessel with plain walls and a simple undifferentiated rim. Mid brown in colour with a dark grey interior/core. Fabric: GROG. Ditch 383 (373).

3. Bucket-shaped urn with expanded, flat-topped rim. Fabric: SHELL1. Ditch segment 387 (393)

4. Small thin-walled bodysherd with faint traces of tooled decoration. Probably from a Globular Urn. Fabric: FLINT2. Ditch segment 387 (389).

5. Small urn or jar with an expanded rim defined with a thumb groove at the junction of the rim and wall. Diameter uncertain. Black in colour with a brown core/interior. Fabric: SHELL1. Ditch segment 387 (393).

From the ditched enclosure (eastern ditch)

6. Thinner walled vessel with curving walls, black in colour throughout. The exterior rim surface has been finger smoothed and the upper wall is decorated with spaced finger depressions. Fabric: SHELL2. Ditch segment 366 (368).

7. Vessel with a slightly splayed wall and squared off rim. Angle slightly uncertain. Orange-brown in colour with a dark grey core. Fabric SHELL1. Ditch segment 366 (367).

From Waterhole 421

8. Bodysherd from an urn decorated with diagonally applied strips. Fabric: GROG. (481).

9. Bucket-shaped cordoned urn with finger-pressed decoration on the cordon and external rim edge. The rim is internally expanded. The vessel is brownish-black to orange-brown in colour. Fabric: GROG. (419).

10. Small jar with a simple undifferentiated rim, slightly bevelled. Brown in colour with a dark grey interior and core. Fabric: SHELL2. (419).

11. Thick-walled bodysherd with diagonal slashed decoration with a possible hint of finger-tipped decoration below. Dark brown black in colour, fabric SHELL1. (418).

12. Vertically walled vessel with a simple undifferentiated rim. Decorated with a single horizontal line of finger depressions below the rim. Black in colour. Fabric: SHELL1. (418).

13. Bodysherd with a slight carination decorated with finger depressions? above the carination (orientation uncertain). Dark grey-black in colour. Fabric: SHELL1. (418).

Other

14. Thick-walled urn with an internally expanded rim decorated with slashes on the exterior face. Black in colour throughout. Fabric: SHELL1. Pit 688 (691).

15. Everted rim jar with finger tipped decoration on the interior of the rim. Fabric: SHELL1. (353).

Early Iron Age

16. Flared wall carinated bowl, patchy red-brown to grey in colour with a dark grey core. Fabric SHELL5. Pit 613 (616).

The Flint

by *Hugo Lamdin-Whymark*

A total of 18 flints and a single piece of burnt unworked flint was recovered from the excavation (Table 1). The flintwork is in reasonable condition, but a few pieces exhibit post-depositional edge damage. The majority of flints exhibit a heavy white cortication and one piece is iron-stained orange; a side scraper exhibits different levels of white cortication on the flake surface and retouch scars, suggesting reworking. A few flints exhibit thick, unabraded, white cortex, indicating that the raw material is chalk flint.

The flint flakes and cores recovered all exhibit platform edge abrasion and appear to have been relatively carefully removed. The lack of diagnostic artefacts hinders dating, but the technological traits suggest a Neolithic or early Bronze Age date for the majority of pieces; one fine snapped blade may date from the Mesolithic. The majority of flints were recovered from middle

Bronze Age features, indicating that the flintwork was probably residual.

The Stone

by *Ruth Shaffrey*

The worked stone is unremarkable, consisting of only a probable weight and a polished pebble. The weight is limestone (681) pierced by a hole measuring 10 mm in diameter. The quartzite pebble was found in a Bronze Age pit (1750) along with a human cranium and femur and has been used as a polishing stone resulting in one very smoothed and curved surface. A large quantity of burnt, unworked limestone rubble was also retained (Table 2) and is fully listed by context and weight in the archive report. This material was friable suggesting that it had not been used for cooking and the majority of it came from miscellaneous undated pits lying to the north and east of the middle Bronze age enclosure, although some material was found in the fills of the enclosure ditches and the waterhole.

Table 2. Burnt unworked limestone rubble from Middle Bronze Age contexts

Context	Lithology	Descrip	Total weight (g)
346	Limestone	Burnt rubble	90
357	Limestone	Burnt rubble	364
367	Limestone	Burnt rubble	42
417	Limestone	Burnt rubble	39
418	Limestone	Burnt rubble	172
419	Limestone	Burnt rubble	5
573	Limestone	Burnt rubble	30

Table 1. The flint assemblage by context

CATEGORY TYPE	Context									Grand Total
	370	395	396	397	426	448	487	503	534	
Flake	2	1	1			1	2		1	8
Blade	2						1			3
Multiplatform flake core		1								1
Core on a flake				1						1
Side scraper					1					1
Other scraper		1						1		2
Spurred piece	1									1
Backed knife								1		1
Grand Total	5	3	1	1	1	1	3	2	1	18

The Fired Clay

by *Alistair Barclay*

The excavations produced a large fragment of a cylindrical weight (sf 121) and two small pieces of amorphous fired clay (contexts 585 and 621). The weight provides probable evidence of textile manufacture on the site. Similar weights have been found on a number of later Bronze Age sites in the Upper Thames valley (e.g. Wallingford, Yarnton and Eynsham: Barclay 2001, 139). A similar weight was found at a late Bronze Age site at Shorncote some 5 km to the west (Morris 1994, 43-4 and fig 13:2).

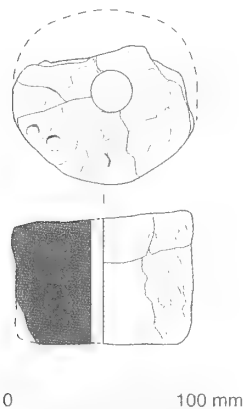


Fig. 18 The Loomweight

Catalogue (Fig. 18)

Sf 121, context 372. Clay loomweight (453 g). Approx. 50% complete, dia. 100 mm, ht. 67 mm. Manufactured from unmodified silty clay.

The Wooden Bowl

by *Maisie Taylor*

The wooden bowl recovered from waterhole 421 was quite fragmentary but it was possible to reconstruct virtually the complete profile (Figure 19). The bowl is carved from a single piece of fine grained, diffuse porous wood, probably a log of alder. The vessel appears to be round-based, although the base is thickened for strength and stability. The sides and rim are well carved and so well finished that there is very little evidence for how the vessel was worked.

No precise parallels of similar date have been found for the bowl from Latton Lands, but then Prehistoric wooden vessels are very rare in England. This is possibly because the ideal

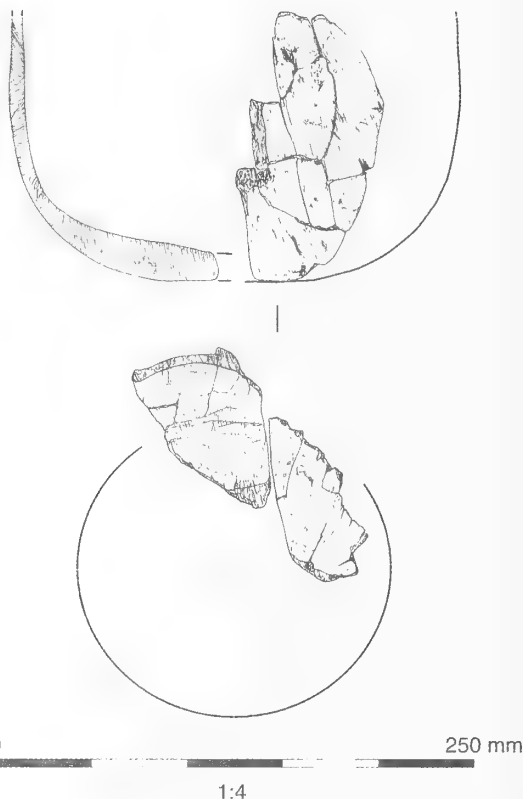


Fig. 19 The Middle Bronze Age Bowl

conditions for preservation are equally rare, but may also be due to the difficulties of recognising this kind of material *in situ*.

One of the Neolithic bowls from Etton, Cambridgeshire is very similar in profile (Taylor 1998, fig 168), but the one from Latton Lands is much finer, with thinner walls. When discussing the Neolithic wooden bowls from Etton, it was apparent that there were similarities with contemporary pottery forms. This is not the case at Latton, however, and may strengthen the argument that the shapes of wooden bowls were determined by the character and grain of the wood, rather than borrowing predetermined shapes derived from pottery.

The Molluscs

by *Elizabeth Stafford*

Introduction

Six samples were submitted for analysis of molluscan remains from the lower fills of the two middle Bronze Age ditch termini, 366 and 383 (Figures 3 and 4).

Methodology and results

One kilogram of sediment was floated in water on to 0.5 mm mesh and the flots dried. Residues were also sieved to 0.5 mm and dried. Flots were scanned under a binocular microscope at magnifications of x10 and x20. Residues were also checked for shells, although the flotation was generally found to have given adequate shell recovery. The abundance of taxa was recorded on a scale of + (present, 1-2 individuals), ++ (some, 3-10 individuals) and +++ (many, 11+ individuals). An estimate was also made of the total number of individuals in each flot excluding *Cecilioidea acicula*. This species was excluded because it burrows deeply and provides no useful information on conditions as a sediment or soil formed. *C. acicula* can be extremely numerous and its inclusion in the total tends to obscure the results from the other species. The results are presented in Table 3. Nomenclature follows (Kerney and Cameron 1979). Overall the preservation and species diversity was moderate to poor. Identification to species level proved difficult with *Lymnaea* sp and *Vallonia* sp. due to the fragmentary nature of the shells (See Figure 3 for the location of the samples).

Interpretation

Ditch terminus 366: The two lowermost samples <17> and <18>, of the tertiary fill (397) were

dominated by freshwater species *Anisus leucostoma* and to a lesser extent *Lymnaea* sp. The identification of *Lymnaea* was difficult since the shells were fragile with only a few examples of the tips of the apices surviving. Terrestrial molluscs were present, albeit in very low numbers. *A. Leucostoma* is considered to be a slum species, tolerant of poor water conditions, inhabiting ponds and ditches subject to drying or stagnation. Of the terrestrial molluscs, *Cochlicopa* sp., *Cepaea* sp. and *Trichia hispida* fall into the intermediate group, none of which are particularly diagnostic of either shaded or open habitats. The presence, however, of *Vallonia* sp. may suggest open ground/grassland nearby. In addition, although *Carychium tridentatum* is classed as a shade-loving species, it also commonly inhabits the base of the leaves of grasses in ungrazed grassland.

Assemblages from the upper tertiary (397)/<19>, and secondary fill (368)/<20>, show a decrease in the number of freshwater molluscs suggesting silting and drying of the ditch. The addition of *Oxychilus cellarius* and *Aegopinella nitidula* may suggest a slightly more shaded environment, although this may be local to the vegetation around the ditch.

Molluscan preservation was very low in ditch terminus 383. The assemblage from fill (381)/<6> contained a few freshwater molluscs; cf. *Lymnaea* sp. suggesting wet conditions. There was, however, a

Table 3. Molluscs

Cut	366	366	366	366	383	383
Fill	397	397	397	368	381	373
Sample	17	18	19	20	6	15
Taxa						
<i>Cochlicopa</i> sp.				+		+
<i>Trichia hispida</i> .	+		++	++	++	++
<i>Cepaea</i> sp.	+		+		++	+
<i>Vallonia excentrica</i>		+		+		
<i>Vallonia</i> sp.	+	+	++	+	+	
<i>Carychium tridentatum</i> .	+					
<i>Aegopinella nitidula</i>				+	+	
<i>Oxychilus cellarius</i>			+			
<i>Lymnaea</i> sp.	+	++	+	+	++	
<i>Anisus leucostoma</i>	+++	+++				
Total number of individuals	35	40	10	11	16	7
<i>Cecilioidea acicula</i>				+++	+	+

marked absence of *A. leucostoma*. This may be related to the shallower profile of ditch terminus 388 compared with ditch terminus 366. The terrestrial assemblage was similar to ditch terminus 366. The molluscs within fill (373) <15> consisted entirely of intermediate species.

The Animal Bone

by *Julie Hamilton*

Introduction

A total of 1776 (c. 28 kg) fragments of bone was recovered by hand from 30 middle Bronze Age contexts. Surface condition varied from feature to feature and was generally poorest in ditches, best in the waterhole. The overall average score was around 3 (extensive surface damage, 35-65% of surface obscure). Poor preservation significantly affected identification and other information obtainable, and it was not possible to draw strong conclusions on species proportions, management regimes, or taphonomy. About 30% by number (80% by weight) of fragments were identified.

Most of the 535 (20256g) identified fragments were from cattle, with sheep/goat (no positive goat), pig, dog, horse and red deer also present. Three fragments of burnt bone were unidentifiable and may have been human or animal. The animal bone seems representative of a mixed farming economy involving the common domestic animals, probably with an emphasis on cattle. There is little evidence for extensive use of wild resources.

The cattle were shorthorned, 110-115 cm withers height. There was evidence for processing of all parts of the carcass and disposal on site. This was also probable for sheep and pig. Pig were apparently slaughtered young to provide meat. Red deer was represented by both antler and limb fragments.

Methodology

All the hand-retrieved animal bone was examined, identified as far as possible and recorded. Analysis focuses on species present and species proportions, with some consideration of population and taphonomic data as available.

Bones and teeth were identified using a comparative collection and standard references such as Schmid (1972) and Hillson (1992). The assemblage was recorded on an Excel spreadsheet allowing details of context, species, element, side, completeness (Dobney and Rielly 1988), age/sex

data, pathology, measurements, alteration and condition to be recorded for each fragment; numbers of unidentified fragments and weights per context were also recorded. Total fragment numbers and, where useful, minimum numbers of individuals (based on the commonest element, with side taken into account and fusion state for long bones), were calculated from these records. Ageing of domestic animals followed Silver (1969), Payne (1973; 1987), Grant (1982) and Levine (1982), sheep and goat bones were distinguished according to Boessneck (1969) and cattle horn cores classified following Armitage and Clutton-Brock (1976), and Armitage (1982). Where no goat was positively identified, sheep/goat is referred to as sheep. Measurements followed Von Den Driesch (1976). Withers heights were estimated according to Von Den Driesch and Boessneck (1974). Condition was scored using a scale of 1 (bone surface totally removed/obscured) to 5 (bone surface in pristine condition), as surface condition will affect identifiability and the quality of taphonomic information.

Condition, identifiability, and variation by context type
Altogether 1766 fragments (c.28 kg) of bone were analysed. Of these 75% came from the waterhole (421), with 16% from pits and 9% from ditches (783 and 784, Table 4).

The condition of bone affects its identifiability and the amount of additional information which can be obtained from the assemblage. Differences in preservation between context types may also affect comparisons between them, because smaller fragments and hence those from smaller and/or younger animals, will tend to be disproportionately lost.

Various indicators of condition showed the same general pattern. Mean fragment size was similar for ditches and pits (11g), but larger for the waterhole (17g). Surface condition score was generally worst in ditches at around 2, better in pits and best in the waterhole at around 3 (Table 5). The overall average score was around 3 (extensive surface damage, 35-65% of surface obscured).

The 535 fragments (c. 21 kg) identified to species, only account for about 30% of the bone assemblage (number of identified fragments, NIF; Table 6), reflecting medium to poor preservation. The percentage of fragments identified in different context types varied in line with fragment size, from 23% for pits to 32% for the waterhole. By weight, nearly 80% of fragments were identified

(similar for all context types): thus, the unidentified fragments were generally the smaller ones, often the result of post-depositional breakage.

The overall condition of the collection is not good, with low identification rates and mediocre surface preservation. Evidence of breakage, butchery, gnawing, and other surface alteration has thus been lost. Most bones were fragmentary, so very few measurements were possible. It is also likely that more fragile elements and smaller/younger animals are under-represented, so species proportions, skeletal representation and age data will be affected.

Species present and species proportions

Species present were domestic cattle, sheep (no positive goat was found), pig, horse, dog and (wild)

red deer. Cattle were overwhelmingly dominant in all context types, although the proportion was noticeably lower in ditches (Table 7). However, there were only 38 identified bones from ditches, which is insufficient to make firm conclusions. Nevertheless, poorer preservation in ditches, as demonstrated above, would tend to reduce the ratio of sheep to cattle, i.e. operate in the opposite

Table 4. Percentage of identified fragments by context type

Context type	Fragment numbers		Fragment weights	
	Total	%	Total	%
Ditch	164	9.3	1800	6.5
Pit	285	16.1	3044	11.0
Waterhole	1315	74.5	22902	82.5
Other	2	0.1	1	0
Total	1766	100	27747	100.0

Table 5. Fragment condition by context type

NIF in context type	Condition*					Average condition	No. of contexts
	1	2	3	4	5		
Ditch	17	10	10	3	3	2.2	16
Pit	14	30	43	21	1	2.7	7
Waterhole	27	148	195	140	61	3.1	6

Table 6. Percentages of fragments identified for different context types

Context type	Fragment numbers			Fragment weights		
	Total	NIF	% Identified	Total	WIF	% Identified
Ditch	164	38	23.2	1800	1366	75.9
Pit	285	74	26.0	3044	2342	76.9
Waterhole	1315	423	32.2	22902	17658	77.1
Total	1764	535	30.3	27747	21366	77.0

Table 7. NIF (%) for different context types

Context type	Cattle	Sheep	Pig	Equid	Dog	RedD
Ditch	76.3	15.8	2.6	0.0	0.0	5.3
Pit	90.5	4.1	4.1	0.0	1.4	0.0
Waterhole	90.3	4.3	2.8	0.5	0.5	1.7
Totals	89.3	5.0	3.0	0.4	0.6	1.7

Table 8. Species proportions by NIF (number of identified fragments), WIF (weight of identified fragments) and MNI (minimum number of individuals)

	NIF	%	WIF	%	MNI	%
Cattle	478	89.3	20256	94.8	13	54.2
Sheep	27	5.0	200	0.9	4	16.7
Pig	16	3.0	202	0.9	3	12.5
Horse	2	0.4	56	0.3	1	4.2
Dog	3	0.6	44	0.2	1	4.2
Red deer	9	1.7	608	2.8	2	8.3
Total	535		21366		24	

direction, so it would be unwise to assume that the overall proportion of sheep was really as low as it appears - if most sheep bones were discarded in ditches they may have mostly been lost from the record.

Less than 10% of fragments came from pits and species percentages were similar in ditches and the waterhole, so it seems reasonable to combine data from all features for further analysis (Table 5).

Other methods of quantification, weight and minimum number of individuals (MNI) confirm the dominance of cattle, though the MNI method probably reduces some of the preservational bias against smaller species and so may give more realistic proportions of sheep and pig. There are too few fragments, however, to take this aspect further.

The animal bone seems representative of a mixed farming economy involving the common domestic animals, probably with an emphasis on cattle. There is little evidence for extensive use of wild resources. The red deer bone included five antler fragments which could have come from shed antler, but also four metatarsal fragments, suggesting that red deer were present in the area.

Species descriptions

Cattle

Horncores were of the short-horned type. There were few measurable elements, but withers heights were estimated from a radius (114 cm) and a metacarpal (110 cm) (Table 9).

Nine mandibles with teeth could be used to estimate an age-at-death profile: these indicated that no more than a third of the cattle had died by stage 35 (about 3 years, Table 10). According to epiphyseal fusion data (combined for all elements, Table 11), about 15% of cattle had died by the age of 3-4 years. Both of these methods are likely to underestimate mortality of younger animals because poorer preservation of juvenile elements is likely to be significant at this site. There were in fact several unerupted teeth among the loose teeth and one neonatal metacarpal. Among the measurable horncores one was classified as male, one male/castrate and one unknown (all age class 3,

young adult), while six of eight classifiable innominates were classed as female (these could not be aged). This would make sense if surplus males were killed young for meat but females killed older, after breeding: the 'female' characteristics of innominates become more marked with age and are thus more likely to be recognised. In all likelihood the cattle remains represent a breeding herd, but data are too few to draw conclusions about cattle management.

Table 10. Cattle age data (mandibles, method after Grant 1982)

MWS	definite	attributed
	<i>n</i>	<i>n</i>
11-15	1	
16-20		
21-30		1
26-30		1
31-35		
36-40	2	1
41-45	0	2
45-50	1	
total n	4	5

One innominate fragment (of 13) showed exostosis of the ischium near the acetabulum. One metatarsal fragment (of 31) showed exostosis and remodelling of the proximal joint surface. Such pathology may be linked to the use of cattle as draught animals. One lower third molar (of 13) lacked the 3rd cusp.

Table 12 shows the numbers of fragments of different elements (skeletal representation) and the distribution of butchery marks over the skeleton. The MNI as calculated for each element is included to allow for the effects of fragmentation - for instance, 21 fragments of scapula can be accounted for by 4 animals, but 21 fragments of metacarpal must represent at least 9 - scapula is thus more fragmented. Clearly, all parts of the skeleton are represented, with the more robust and earlier fusing parts surviving best. There may also be an effect of recognisability - many longbone fragments

Table 9. Measurements of cattle bones

Radius	GL (cm) 26.6	Bp 76	BFp 66	SD 35	Bd 65	BFd 51
Metacarpal 367	GL (cm) 17.5	Bp 47		SD 27	Bd 50	

Table 11. Cattle age data (epiphysal fusion)

Element/fusion age	Unfused	Fused	%Fused
7-10 m			
Scapula D	1	5	83.3
12-16 m			
Humerus D	0	4	100.0
Radius P	0	15	100.0
Phalanx 1 P	0	4	100.0
TOTAL/AVERAGE	1	28	100.0
2-3 y			
Tibia D	1	14	93.3
Metacarpal D	1	1	50.0
Metatarsal D	1	1	50.0
TOTAL/AVERAGE	3	16	84.2
3.5-4 y			
Humerus P	0	3	100.0
Radius D	0	4	100.0
Femur P	0	3	100.0
Femur D	0	1	100.0
Tibia P	1	2	66.7
Calcaneum P	1	0	0.0
TOTAL/AVERAGE	2	13	86.7
Total no	6	57	63

Table 12. MNI, NIF and butchery marks on different cattle elements

Element	MNI		NIF	
	MNI	NIF	n +butchery	% +butchery
horncore	3	14	3	21.4
skull fragment		33		
mandible	13	121	8	6.6
hyoid		1		
vertebra		3		
scapula	4	21	2	9.5
humerus	8	20		
radius	8	26	2	7.7
ulna	5	13		
carpal		1		
metacarpal	10	21	1	4.8
innomin	3	12	1	8.3
femur	3	10		
tibia	9	34	2	5.9
tarsal		6		
metatarsal	5	26	2	7.7
metapodial		18		
phalanx 1	1	4		
loose teeth	9	94		
TOTAL		478	21	5.5

lack definitive features and were classified as 'large longbone' (included with unidentified). Butchery marks are common on horncores, due to removal of the horn sheath and sometimes chopping of the core from the skull, and on mandibles where cheek meat and/or tongue have been removed. They also occur on axial elements (scapula and innominate) and are commoner towards the limb extremities (radius, tibia and metapodials). Both chops and cuts were noted, generally around joints where meat had been stripped off: one scapula had been chopped through the spine. Overall butchery marks were seen on 5% of cattle fragments (excluding teeth), and this is certainly an underestimate because of the poor surface condition of many fragments. Less easy to quantify are bones fractured for marrow, which relies on analysis of breakage patterns and is particularly difficult where there is considerable post-depositional breakage, as here. Fracture patterns and bone splinters were noted that could have resulted from such deliberate breakage, but these were not rigorously quantified. The cattle bones can be interpreted as food remains, with killing, butchery and other processing, and waste discard taking place on site.

Cattle probably accounted for a major proportion of meat eaten, though it is not possible to estimate the overall proportion of meat in the diet. Evidence for other uses of cattle - manuring, traction, milk, carcase products other than horn such as fat and hides - and their place in the agricultural and social system is more elusive, though the occurrence of hip/hindlimb pathologies may indicate their use for traction.

Sheep

Only 27 fragments (200 g) are identified as sheep/goat (no positive goat), so conclusions are limited. There were no measurable bones or recordable mandibles - of the 2 lower 3rd molars, one was unworn and one was in wear stage g (Grant 1982). The commonest element was tibia, which is both robust and recognisable, followed by loose teeth (Table 13). Butchery was noted on one femur, as a series of short cuts where meat had been stripped.

We can only assume that sheep played their usual role in the economy, providing manure, meat and other carcase products, wool and possibly milk. In a mixed farming economy sheep would thrive on

different pastures from cattle, enabling wider resource use.

Table 13. MNI and NIF per element for sheep and pig

Species Element	Sheep/ goat		Pig	
	MNI	NIF	MNI	NIF
mandible			3	5
vertebra		1		
scapula			1	1
humerus	1	1	1	2
radius	1	2		
ulna			1	1
metacarpal	1	1	1	1
innomin	1	1		
femur	1	1		
tibia	4	11	1	2
metatarsal	1	1		
metapodial				1
loose teeth	2	8		3
TOTAL	4	27	3	16

Pigs

Only 16 fragments (202 g) are identified as pig with no evidence for wild boar. There were no measurable bones or recordable mandibles, but from the limited evidence available there was a high proportion of young animals, evidenced by three unfused distal epiphyses (two metapodials and a tibia) out of only seven limb bone fragments and one unerupted lower third molar (of one). One canine was from a male. The commonest element was the robust mandible. No butchery or pathology was seen.

This conforms with the usual pattern where pigs are managed primarily for meat and carcass products and are generally slaughtered young. They were probably 'extensively' managed, exploiting woodland environments for example, where they could be fattened on mast in the autumn, so broadening the resource base.

Other domestic animals

One tibia fragment and one first phalanx of horse were found, demonstrating the presence of this species at the site.

Dog was represented by one mandible fragment with heavily worn teeth from context 368 (an upper fill of middle Bronze Age ditch terminal 366),

another mandible fragment from context 417 and a scapula fragment from context 481, both fills of middle Bronze Age waterhole 421. Again, this does little more than demonstrate the presence of dog during the middle Bronze Age, suggesting a canine origin for most or all gnawing noted on bones (see Taphonomy below).

Red deer

Red deer was represented by five antler fragments, three of which had been sawn and four metatarsal fragments (one complete). The antler fragments, mainly tine tips, were probably waste from antler working. One also had traces of chewing, possibly by deer, suggesting that it was collected as shed antler. The presence of limb bone (metatarsal) suggests that deer were present locally. It is possible that some of the unidentified long bone is also from red deer, since it can be difficult to distinguish fragmentary red deer from cattle bone (Bourdillon and Coy 1980).

Red deer prefer woodland environments. While they probably contributed little to the overall meat diet, antler was an important raw material and hunting may have been a prestige activity (possibly also involving dogs and horses).

Taphonomy

Poor surface preservation (Table 5) has already been discussed. Other traces of alteration (butchery, burning, gnawing) will be obscured as a result. For instance, 90% of fragments with butchery marks (26/29) and 82% (14/17) of gnawed fragments were from the waterhole, though only 75% of fragments overall were from this feature. This is as likely to reflect better surface preservation as differential distribution of gnawed or butchered bone.

There was a variable amount of dark staining on the bone fragments and the more of this there was, the better the surface condition per context (correlation coefficient $r=0.711$, $n=25$). Staining could reflect preservation of bone in waterlogged conditions, such as in the waterhole (421). Indeed, most fragments recorded as stained 'dark brown' were from the waterhole and both surface condition score and proportion of 'dark brown' fragments were higher in lower contexts ($r=0.894$, $n=6$).

Burning was seen on one cattle fragment and four unidentified fragments. Surface discoloration might well have obscured traces of burning on bone from the waterhole.

Gnawing (by dogs) was seen on 16/478 cattle fragments and 1/1043 unidentified fragments. The

amount of gnawing recorded varied from feature to feature, but this could just as well be accounted for by variation in surface preservation.

Comparative material

There is a paucity of published bone material from sites of this period. What there is suggests that a relatively high proportion of cattle is usual (Tinsley and Grigson 1981, 210-49), though Jones notes a high proportion of sheep at Roughground Farm, Lechlade (Jones 1993, 34).

Conclusions

Post-depositional damage and destruction of the bone assemblage has affected interpretation in terms of both animal numbers/proportions and taphonomy. The general picture is one of mixed animal husbandry able to exploit a range of environments from wet to dry grassland, scrub to woodland. There is little evidence for exploitation of wild resources, so it is likely that food supply was based on the established farming system. Cattle appear to have been the major source of meat, but it is not possible to establish details of their exploitation, or the proportions of the other major domestic species. The site could have been self-sufficient in animal resources, with breeding, management, slaughter, processing and disposal all based there, though this would not rule out exchanges and connections with other sites.

The Human Skeletal Remains

by *Annsófie Witkin*

Introduction

The human skeletal remains consist of an articulated skeleton (651) and two disarticulated fragments of femur shaft and cranial vault. The articulated skeleton lay in an oval pit (640, Figure 11) in a crouched position orientated west-east. The disarticulated bones were located in the secondary fill (1752) of pit 1750 (Figure 10) containing waterlogged material. The human remains are of uncertain date, but may belong to the middle or late Bronze Age.

Quantification

Pit (1750) was 0.68 m deep and 0.68 m wide, and the layer in which the disarticulated bones lay was waterlogged and contained animal bones and a polishing stone. Another organically rich layer (1753) overlay that containing the human remains.

The pit was sealed with redeposited clean natural gravel, making the pit invisible in plan view. Skeleton (651) was buried in a pit 640, resting upon three fills (653, 652 and 654) and overlain by a fourth (641). Three fragments of unidentifiable burnt bone from the western terminal of a middle Bronze Age curvilinear enclosure ditch (783, Figure 3) were also examined.

Methodology

Completeness of skeletal remains was scored using four categories: poor (0 - 25%), fair (26-50%), good (51-75%), excellent (76-100%). The inventory of each skeleton was recorded by shading in the present skeletal elements on a pictorial representation. In addition, the skeletal components of each individual were recorded in tabular form as present or absent. Dental inventory was recorded following the Zsigmondy system (Buikstra and Ubelaker 1994). Dental notation was recorded using universally accepted recording standards and terminology (after Brothwell 1981). Eight cranial features were used for sexing, chosen from Standards (Buikstra and Ubelaker 1994) and Workshop (1980). Each observable feature on the cranium was scored on a five point scale (probable female, female, probable male, male and unknown). The overall score from the observed features provided the basis for the assigned sex. Due to the fragmentary nature of the remains, the only methods which could be applied for the assessment of age were the pattern of suture closure (Meindl and Lovejoy 1985) and dental attrition (Miles 1962). The remains were examined for abnormalities of shape and surface texture. When observed, pathological conditions were fully described and recorded following accepted standards.

Articulated Skeleton 651

Preservation and completeness: the bones present were well preserved with no degradation of outer cortical surfaces of the bones. Multiple post-mortem breaks on the long bones and cranium were, however, present. The lower arms, left tibia and parts of the other surviving long bones were also badly fragmented. The cranium had ancient post-mortem breaks caused by soil pressure.

The completeness of the skeleton was poor. All smaller bones apart from six metacarpals and five phalanges were completely degraded and only fragments from the pelvis and scapulae were present. Of the long bones, only the shafts were present. None of the joint surfaces or spinal

Table 14. Dental inventory

8	7	6	5	4	3	2	1	2	3	4	5	6	7	8
		6	5	4	3	2	1	2	3	4	5	6		8

Key: The numbers represent the teeth present

elements had survived. Most teeth were present but all were loose. It was not possible to ascertain if missing teeth had been lost ante or post mortem.

Age and Sex

This individual was possibly female aged between 25 and 35 years. Five sites on the cranium assessed for the determination of sex provided an even mix of male and female scores and one indeterminate. Morphology of the long bones, however, suggested a female, since they are quite small and slender, with weak muscle attachment sites.

Pathology

No skeletal or dental pathological lesions were observed.

The disarticulated human remains

Preservation of these bones was very good, due to the waterlogged nature of the fill in which they lay. Neither bone was complete and the breaks had occurred before deposition. After processing the femur shaft developed longitudinal fractures likely to have been caused by shrinkage as the bone dried out. Analysis of the bones is summarised in Table 15.

The burnt bones

Three small fragments of unidentifiable burnt bone, between 8 and 2 mm with a combined weight of 1 g, came from two fills (373 and 381) of the western terminal of ditch 783.

Discussion

Between the middle and late Bronze Age, a shift in funerary practices took place. Cremation burials became less common and from the late Bronze Age

into the Iron Age, the dead are, to a large extent, archeologically invisible. Within specific contexts associated with settlements, however, human remains are frequently uncovered, commonly disarticulated cranial fragments and long bones. Articulated limbs and complete skeletons have also been found though these are not as common (Brück 1995). The majority of sites yielding such bones are concentrated in central southern Britain. Sites in the Middle and Upper Thames Valley with similar features and deposits include Green Park (Brossler *et al.* 2003), Watkins Farm (Allen 1990) and Shorncliffe Quarry (Brossler *et al.* 2002).

The deposition of disarticulated bones in pits is likely to be associated with exposure of the dead and secondary manipulation, which is thought to be the main burial ritual in southern Britain during the early and middle Iron Age (Carr and Knüsel 1997) and possibly the middle and later Bronze Age. This practice involved excarnation through exposure away from the settlement, with the subsequent retrieval of selected bones (commonly long bones and crania) or articulating limbs after an intermediate period of time when the body decayed. Bones would then have been ritually incorporated into deposits such as pits. This process accounts for the absence of small bones and flesh-bearing bones lost during exposure and animal scavenging during the excarnation process.

The deposition of human bones, articulated skeletons or isolated bones during the late Bronze Age seems to have occurred when waterholes or pits no longer served their original function and may have been used as rubbish pits. The majority of waterholes and pits are situated at the edge of

Table 15. The disarticulated remains

Context number	Element	Side	Age	Sex	Comments
1752	Femur	Right	Adult	Female?	No pathology present. Size and shape of the bone suggests a female individual.
1752	Cranial vault	-	25-35	Female	Multiple lambdoid ossicles. No pathology present.

settlements (Brossler and Boyle 2001). These deposits may be seen as purely functional but are likely to have had a symbolic and/or a ritual meaning. Wet places may have been seen as liminal zones in a ritual, religious or political sense: possibly even as a meeting point between this world and the other. On the other hand, ancestral bones may have been used to legitimise a claim or mark out a settlement or region as belonging to a specific group of people (Brück 1995, 260).

The Pollen

by *Elizabeth Huckerby*

Introduction

Pollen analysis of fill (481) of the Bronze Age waterhole 421 provided an insight into the environment of the settlement when the fills of the waterhole were accumulating.

Methods

A monolith (0.50 m) was taken through part of fill 419 and the entire depths of fills (480) and (481) from waterhole 421. The top of the monolith was 0.66 m below the present surface (see Figure 5).

Sediments were recorded in the laboratory and are described below. Initially six individual subsamples were taken for the assessment from the following depths, 0.66-0.665 m, 0.855-0.86 m, 0.955-0.96 m and 1.055-1.06 m below the present surface. An additional seven subsamples were taken from between 0.96 and 1.16 m. Subsamples were prepared chemically for pollen analysis using standard techniques of hydrochloric acid, sodium hydroxide or potassium hydroxide, followed by sieving, hydrofluoric acid and acetolysis (Faegri *et al.* 1989). Samples were then mounted in silicone oil and examined with an Olympus BH-2 microscope using x400 magnification routinely and x1000 for critical grains. Counting continued until a sum of at least 300-500 grains of land pollen had been reached on two or more slides. This was done to reduce the possible effects of differential dispersal under the coverslips (Brooks and Thomas 1967). Pollen identification was carried out using the standard keys of Faegri *et al.* (1989) and Moore *et al.* (1991) and a limited reference collection. Cereal-type grains were defined using the criteria of Andersen (1979); indeterminate grains were recorded using groups based on those of Birks (1973). Charcoal particles greater than 5 μm were also recorded

following the procedures of Peglar (1993). Plant nomenclature follows Stace (1991).

Analysis and storage of the data were accomplished using the tillia/tilliagraph software (Grimm 1991) to categorise data and aid its interpretation. The results are presented as a percentage pollen diagram of selected taxa. The pollen sum, on which the percentages are calculated, includes all land pollen and bracken spores. There are no obvious differences in the pollen assemblages and therefore the diagram has not been divided into local pollen assemblage zones.

Results

All depths quoted are given from below the present ground surface.

Stratigraphy

The sediment was predominately a silty clay with bone fragments above 0.96 m, pebbles between 0.82-1.02 m, and wood fragments below 1.13 m. Sediments below 1.135 m were very crumbly and as a consequence lost when the monolith was unwrapped. All samples were calcareous and needed initial treatment of heating with 10% hydrochloric acid. Charcoal fragments, plant remains including wood fragments, bryophytes, sedge nutlets (*Carex*) and undifferentiated plant material, and insect remains increased in fill (481).

Pollen (Figure 20)

The pollen assemblages show little variation at the different depths except at 1.0575 m when grass (Poaceae) pollen falls sharply and dandelion-type (*Liguliflorae*), and Chenopodiaceae pollen, and bracken spores increase. However, at this depth the value of indeterminate grains rises and the concentration of identifiable pollen declines, resulting in a smaller pollen sum. Bracken spores and dandelion-type grains are more resistant to deterioration than other taxa, and may therefore indicate a skewed data set at this depth rather than a change in the local environment. The earlier assessment (LUAU 2001) highlighted that there was a high percentage of corroded or crumpled grains at 0.66 m to 0.65 m.

Pollen from herbaceous taxa dominated the pollen assemblage throughout the profile, with a maximum of 90% of total land pollen. Tree and shrub pollen was less than 25% of total land pollen and bracken spores. The major components of the tree and shrub pollen are alder (*Alnus glutinosa*) and

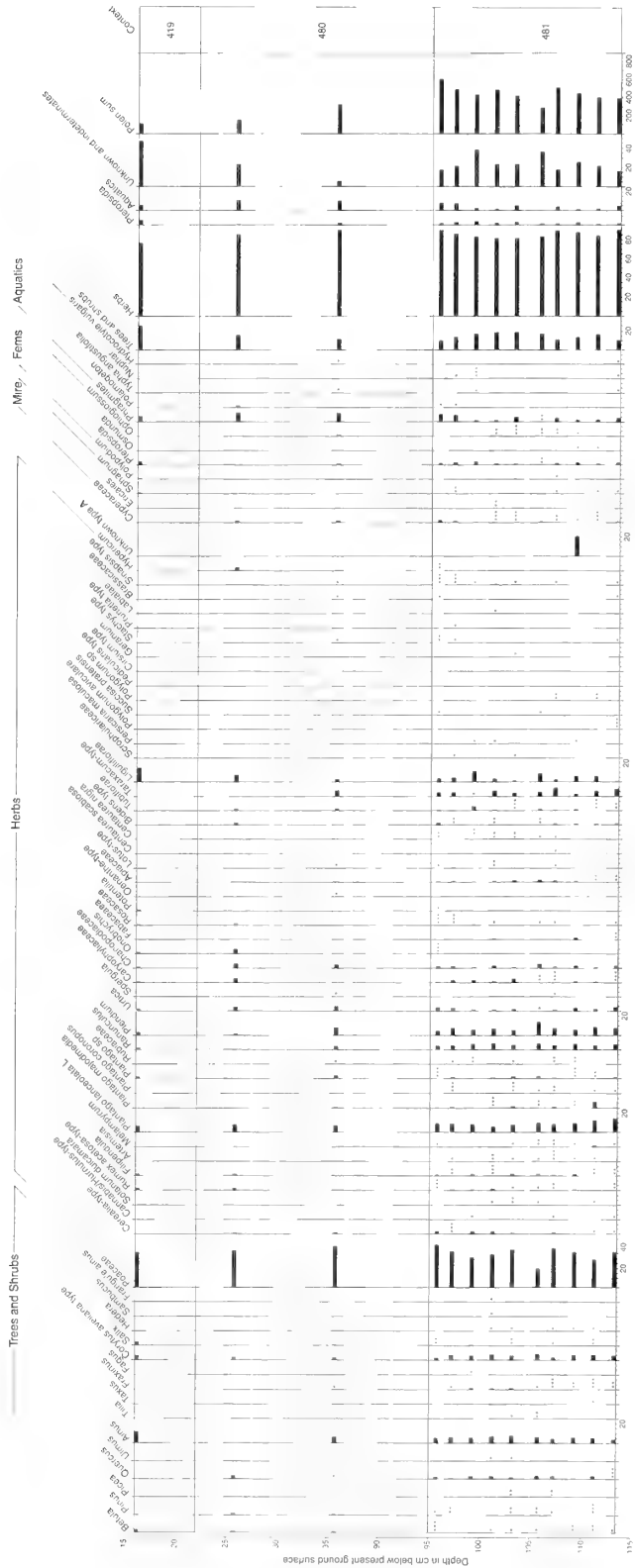


Fig. 20 Percentage Pollen Diagram of Selected Taxa from the Fills of the Waterhole

hazel-type (*Corylus avellana*-type) with some oak (*Quercus*), and ash (*Fraxinus*), and sporadic occurrences of other taxa including birch (*Betula*), pine (*Pinus*), and lime (*Tilia*).

The assemblage of herbaceous pollen suggests that several plant communities are represented. Cereal-type pollen was recorded at low levels through most of the pollen profile with arable weeds including corn spurrey-type, (*Spergula*-type), Chenopodiaceae, knotgrass (*Polygonum aviculare*) and redshank (*Persicaria maculosa*) recorded (Behre 1981). The majority of the herbaceous taxa, for example grasses, ribwort plantain (*Plantago lanceolata*), buttercup-type and *Ranunculus*-type, suggest that the settlement and immediate environs supported a grassland or ruderal-type community.

Occasional grains of hemp/hop-type (*Cannabis*/*Humulus*-type) pollen were recorded at 0.995 m, 1.0725 m and 1.1325 m. Hemp and hop pollen are extremely difficult to distinguish from one another and no firm identification was made. Hops, although now cultivated, are a native plant growing in hedgerows, scrub and fen-carr, whereas hemp is thought to have been introduced and cultivated for fibres.

The frequency of aquatic taxa, in particular common reed (*Phragmites australis*), increases above 0.98 m at the transition between contexts 481 and 480 and suggest that the waterhole was starting to silt up and possibly fall into disuse.

Discussion

The origin of the pollen is of direct relevance in the interpretation of pollen diagrams and in general the smaller the size of the basin the more local the pollen recorded in the sediments (Jacobson and Bradshaw 1981). Conversely, the larger the catchment basin the more regional the picture of vegetational change it gives. The diameter of the waterhole at Latton Lands is relatively small and therefore likely to provide a more local record of the vegetation than a larger natural waterbody or mire. The pollen data at any site are composed of two components, one originating from regional vegetation, the other more locally; the proportions of these components vary with the size of the basin. It is usually assumed that tree and shrub pollen is derived from more regional vegetation, whilst herbaceous plants represent local plant communities, although there are exceptions to both. The direction of prevailing winds would influence the source of the regional component of the pollen rain. In addition to problems associated

with the interpretation of the pollen source of a natural catchment basin there are additional ones that relate to an archaeological feature such as the waterhole at Latton Lands. Pollen identified from such deposits can include material that has been thrown into the feature and also pollen from imported plants or parts of plants that are therefore not representative of the local vegetation (Faegri *et al.* 1989).

The results of palynological analysis of the fills of the waterhole (421) confirm that the landscape had been cleared of trees (LUAU 2001). Before the palynological assessment it was thought that the settlement enclosure was possibly delimited by trees on the two sides, where no ditches were identified, but the analysis suggests that this is unlikely. The low values of tree pollen indicate that few if any trees were growing close to the site. The only significant values of tree pollen are of alder and hazel-type pollen with low values of oak and sporadic occurrences of other taxa, for example lime and elm. Hazel-type, alder, oak and birch are all prolific pollen producers (Andersen 1970).

By contrast, at the nearby site of Latton 'Roman Pond' pollen analysis of organic sediments suggested that woodland was still relatively important in the late Bronze Age (Scaife 1999, 510-12). Pollen analysis by Scaife (*ibid.*) of an organic deposit in a shallow depression in the basal Devensian gravels demonstrated the presence of oak, lime and hazel woodland on the drier soils with some evidence of carr-woodland on the wetter areas some way from the site. The short pollen profile (0.20m) from Latton 'Roman Pond' demonstrated evidence of the *Tilia* decline in the late Bronze Age, a date of 1258-1020 cal BC (2943±63BP; NZA-8579, R24151/9) from waterlogged seeds at the base of these deposits dating it to the Late Bronze Age (Robinson 1999, 499 and Scaife 1999, 512). Further woodland clearance is noted towards the top of the Latton 'Roman Pond' sequence. Analysis of the silty clay fills of the Latton Lands waterhole (421), however, suggests that woodland had already been cleared from the environs of the settlement in the Bronze Age. Robinson (1999, 499) considers that fen peat began to develop at Latton 'Roman Pond' in tree throw holes after clearance as the water table rose. Pollen analysis from the lower fills of waterhole (421) suggests that the landscape was probably being used for both pastoral and arable farming. Low but consistent values of cereal pollen suggest cereal crops close to the waterhole. Cereal-type

ATM20 14c OxCal v2 18 cub r 4 sd:12 prob[chron]

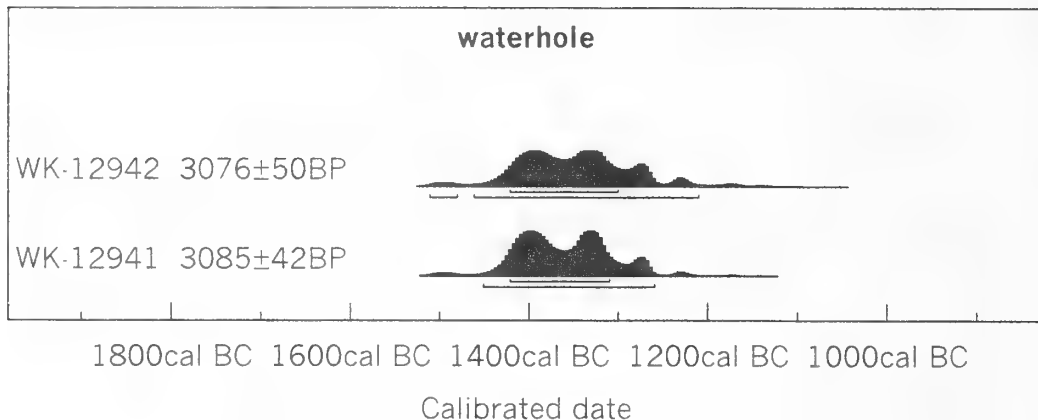


Fig. 21 Radiocarbon Determinations

pollen, however, is known to be under-represented in palynological records and investigations in north Germany have suggested that cereal pollen may not be recorded in deposits at distances greater than one kilometre from a site and even by 500 m little is recorded (Behre and Kucan 1986).

Aquatic plants

The absence of substantial evidence for aquatic plants or organisms in the pollen profile suggests that when the sediments were forming the waterhole was kept clean of vegetation, or utilised in such away as to prevent the water becoming stagnant and plants such as waterlilies or pondweeds colonising.

The later use of the waterhole

A high percentage of pollen grains in the sample from 0.66-0.665 m are crumpled or badly corroded precluding identification. A high percentage of dandelion-type pollen, which is resistant to corrosion and easily identified, however poor the pollen preservation, indicates that some of the pollen may be derived from secondary deposition. The likelihood of material either washed or thrown into the waterhole, supports the possibility that the fill 419 results from the disposal of rubbish.

Conclusions

In conclusion, this analysis has indicated that the settlement at Latton Lands was not delimited on two of its four sides by trees, and that woodland was less important to the local environment in comparison with Latton 'Roman Pond'.

RADIOCARBON DATING

Two samples, both of waterlogged wood, were submitted to the Radiocarbon Dating Laboratory at the University of Waikato, New Zealand. The results are summarised in Table 16 below. Sample no.8 was recovered from layer 481 (an organic rich deposit associated with further waterlogged wood including part of a wooden bowl) within waterhole 421 (Figure. 5) and was also associated with Deverel-Rimbury style pottery .

The aim of the dating programme was to establish the date of the waterhole in relation to the middle Bronze Age (1500-1150 cal BC) sequence, and to provide an associated date for the wooden bowl (SF109) and for the lower part of the pollen sequence (Sample 9). Figure 21 and Table 16 demonstrate that the two radiocarbon results obtained are virtually indistinguishable at the two sigma range and confirm the date of the waterhole

Table 16: Radiocarbon results

Laboratory number	Sample reference	Material	Radiocarbon age (BP)	•13C (‰)	One sigma	Two sigma
WK-12941		Wood (maloideae)	3085 ± 42	-27.7	1410-1260 BC	1440-1210 BC
WK-12942		Wood (silicaceae)	3076 ± 50	-28.4	1410-1260 BC	1440-1130 BC

as falling between 1440-1130 cal BC, approximating to the middle Bronze Age period (Needham 1996, 133-4 and fig. 1).

DISCUSSION

The Middle Bronze Age

Settlement Structure

The archaeology suggests a domestic settlement situated on the river valley floor and probably overlooking a fertile agricultural landscape. The most prominent features would have been the two substantial linear ditches, 53 m and 69.2 m in length respectively that defined a settlement space open to the south-west with a north-east facing entrance. The area has clearly been subject to ploughing both in the medieval and Post-medieval period and the archaeology was somewhat truncated. It is therefore likely that the ditches were originally flanked by substantial internal banks and that they were deeper than the 0.5 m that survived at the time of excavation. Situated at a mid-way point between the north-eastern ditch terminals was a large waterhole, indicating that stock was kept either within the enclosure or nearby. Storage pits clustered to the south-west of the waterhole in and around the north-east facing entrance. Groups of postholes, both within the enclosure and immediately to the north of the northern ditch, may be the remains of internal fences, or an external palisade predating the ditches. None of these postholes formed coherent patterns and it must be assumed that some have been lost to ploughing. Only one of the two roundhouses found lay within the enclosure area; the other lay to the south-east. This rather low density of buildings may be a function of truncation.

British middle Bronze Age settlements with discontinuous ditches are fairly common and some adopt an L-shaped pattern similar to the Latton example. At Thorny Down in south Wiltshire an L-shaped bank defined a settlement to the south and west, while a ditch delimited the north-western extent of activity (Stone 1941, 115). At Down Farm in Dorset a middle Bronze Age settlement was flanked to the south-east by a bank and ditch that curved round to the north-west at both ends, but did not encircle the settlement (Barrett *et al.* 1991, 183-214). Similarly at Shearplace Hill, Dorset (Rahtz 1962) and Cock Hill in Sussex (Barrett *et al.*

1991, 209), middle Bronze Age settlements were partially enclosed by banks and ditches. The Angle Ditch in Dorset was an L-shaped ditch defining a settlement to its south-east (Barrett *et al.* 1991, 206; Rahtz 1962, 190). Many of these sites also contained roundhouses, ponds and waterholes similar to the ones uncovered at Latton. It is also notable that many of these sites lay close to early Bronze Age round barrows, which subsequently became the focus for middle Bronze Age cemeteries. The ring ditch at Down Farm was the focus for eight cremations and five inhumations of middle Bronze Age date (Barrett *et al.* 1991, 183 - 214). The ring ditch and series of pits uncovered to the south-west of the Latton enclosure may have seen similar activity in the middle Bronze Age, although this remains no more than an intriguing possibility. All of these sites were upland settlements, which accounts for the frequent preservation of their banks. The Latton Settlement remains unusual in the context of the Churn valley and the upper Thames region.

Settlement Character and Chronology

Environmental, artefactual and structural evidence points to a farmstead possibly practising a mixed farming regime and dating to the middle Bronze Age, as confirmed by the two radiocarbon determinations. The animal bone assemblage from the ditches and the waterhole is dominated by cattle, probably the main source of meat, with little evidence for consumption of wild animals. Small amounts of horse and dog bone demonstrate their presence, but with no indication of how they were exploited. Molluscan evidence from the terminal of ditch 784 points to open grassland nearby indicating that animals were grazed in the area. Environmental samples from the lower fills of the waterhole contained cereal pollen which, along with the presence of storage pits, indicates that arable crops were being produced and consumed. A loomweight from one of the ditch fills may be taken to suggest that the site was engaged in textile production. The possible presence of hemp pollen from the waterhole may be seen to back up this contention.

Concentrations of burnt limestone from the fills of the pits, ditches and the waterhole present interpretative difficulties, as their function is not immediately obvious, either from their form, or their context. Such concentrations are relatively common on late Bronze Age sites in the Upper Thames valley, such as Shorcote (Brossler *et al.*

2002; Hearne and Heaton 1994; Hearne and Adam 1999) and Eight Acre Field (Mudd 1995) where they are interpreted variously as pot boilers (Brossler *et al.* 2002) and as debris from metalworking (Hearne and Heaton 1994; Hearne and Adam 1999). At Eight Acre Field the burnt stone formed a metalised surface and was interpreted as a cooking area (Mudd 1995, 57). Whilst the assemblage of burnt stone from Latton is smaller than the assemblages from these sites, it does exhibit similarities, especially in distribution. The pottery assemblage from the ditches, particularly the north-eastern ditch terminals, and from the waterhole, includes imported material and has few components from a source in the immediate vicinity of the site. This may suggest that the site was of high status although a lack of metalwork and metalworking debris does not support this view. Similar sites, such as Thorny Down (Stone 1941), often produce fine metalwork. Concentrations of pottery sherds, wooden artefacts, burnt stone and animal bone in the fills of the ditch terminals and the waterhole, including at least two Deverel-Rimbury bucket-shaped urns, a wooden bowl, a dog mandible and three fragments of worked antler is suggestive of structured deposition. There may have been some textile production and the inhabitants may have engaged in feasting activity that involved deposition of pottery, burnt stone and animal bone in the ditch fills.

Environmental and artefactual evidence from Latton tallies with evidence from many of the sites discussed above, where similar assemblages of pottery were found, although several of these sites revealed metalwork including a double looped spearhead from Thorny Down (Hawkes 1941), while others had better evidence of textile production. The overall impression is that the settlement at Latton was broadly equivalent to sites such as Down Farm, Thorny Down and South Lodge.

Settlement Context

Given the evidence, it is difficult to say whether the enclosure existed in a densely settled landscape or was relatively isolated. The nearest known Bronze Age activity is at Cotswold Community to the west (Granville Laws pers. comm.). A ring ditch to the south-west of the enclosure suggests early Bronze Age settlement in the area, while the gravel terraces and flood plain of the Churn valley would have made prime agricultural land. It would not be surprising

therefore if future excavation revealed further evidence of middle Bronze Age settlement.

The position of this distinctive kind of middle Bronze Age enclosure on the gravel terrace of a tributary of the Thames may be seen as unusual, given that the distribution of such sites is generally restricted to the uplands of Wessex, although this pattern may be due to differential preservation. Its situation may also be seen as interesting, since Bradley has argued for distinctive differences between the settlement patterns of the river gravels and those of the uplands (Bradley 1984). Ultimately, the middle Bronze Age was a time of agricultural and settlement intensification and in this sense the Latton Lands enclosure is not out of place.

The Later Prehistoric Activity

An unaccompanied crouched inhumation and two pits one of which contained human remains were tentatively assigned to this phase. The pits could belong to the middle or late Bronze Age, although neither contained datable artefacts. One of the pits contained a femur shaft and a cranial vault, both from an adult female. In the absence of clear dating evidence the inhumation can be seen as later prehistoric, but is not more closely dated.

The Iron Age

Scatters of pits and ditches lying predominantly to the north and north-west of the middle Bronze Age enclosure may have been of Iron Age date, which indicates the continuation of settlement and/or agricultural activity on the gravel terrace.

The Medieval Period

Field boundaries, possibly representing a series of paddocks, lay to the south of the middle Bronze Age enclosure, while ridge and furrow was present over the whole of the excavated area. Clearly the area was subject to intensive agricultural use during the medieval period. It seems likely that this activity is related to the medieval settlement of Latton.

The Post-Medieval Period

A rectangular ditched enclosure overlay the medieval field system and to the west of this a

ditched trackway seemed to define the edge of the medieval ridge and furrow. To the west of the trackway was a stone lined culvert. These features seem to represent continuation of agricultural activity in the area related to the settlement at Latton. The fact that the trackway seemed to define the limit of the ridge and furrow may indicate that it followed the line of an earlier route present during medieval times.

ACKNOWLEDGEMENTS

Oxford Archaeology is grateful to Cotswold Aggregates, who funded the archaeological investigations, analysis and publication and facilitated access, and to John Wheeler and Andrew Liddle for their co-operation and help on site. Elizabeth Huckerby would like to thank the Department of Biology, University of Lancaster for the use of laboratory facilities. Thanks are also due to the OA staff for their hard work during the excavations including Jim Mumford who supervised the watching brief phase of the work. The authors are grateful to all their colleagues at OA, particularly Gill Hey who managed the excavations and Jane Timby who oversaw the post-excavation phase of the work. Alistair Barclay read and commented on the final draft of the text, Matt Bradley helped out with the digital plans, Dana Challinor oversaw the environmental processing and Claire Sampson processed the environmental samples. The authors would particularly like to thank Amy Tucker and Lucy Martin for preparing the illustrations and Sarah Lucas for drawing the wooden bowl.

Bibliography

- ALLEN, T. G., 1990, *An Iron Age and Romano-British Enclosed Settlement at Watkins Farm Northmoor, Oxon.* Oxford: University Committee for Archaeology
- ALLEN, T.G., DARVILL, T.C., GREEN, L.S., and JONES, M.U., 1993, *Excavations at Roughground Farm, Lechlade, Gloucestershire.* Oxford: Oxford Archaeological Unit
- ANDERSEN, S. T. 1970. The relative pollen productivity and pollen representation of north European trees, and correction factors for tree pollen spectra. *Danmarks Geoliske Undersogelse Series 1*, 196, 99
- ANDERSEN, S. T. 1979. Identification of wild grass and cereal pollen. *Danmarks Geoliske Undersogelse Arbog*, 1978, 69-92.
- ARMITAGE, P.L., 1982, 'A system for ageing and sexing the horn cores of cattle from British post-medieval sites', in B.Wilson, C. Grigson and S. Payne, *Ageing and Sexing Animal Bones from Archaeological Sites*, 37-54. Oxford: British Archaeological Report British Series 109
- ARMITAGE, P.L. and CLUTTON-BROCK, J. 1976. A system for classification and description of the horn cores of cattle from archaeological sites. *Journal of Archaeological Science* 3, 329-48
- AVERY, M., 1982, 'Pottery', in H. J. Case and A. W. R. Whittle, 26-32
- BARCLAY, A., 2001, 'Fired clay loomweight', in A.Barclay, A.Boyle and G.D. Keevil, *A Prehistoric Enclosure at Eynsham Abbey, Oxfordshire, Oxoniensia* 66, 139-40, and *passim*
- BARNES, I., BOSIMIER, W. A., CLEAL, R. M. J., FITZPATRICK, A. P., and ROBERTS, M.R., 1995, *Early settlement in Berkshire. Mesolithic-Roman occupation in the Thames and Kennet Valleys.* Salisbury: Wessex Archaeology Rep no 6
- BARRETT, J. C. 1974. Four Bronze Age cremation cemeteries from Middlesex. *Transactions of the London & Middlesex Archaeological Society* 24, 111-34
- BARRETT, J. C., 1991, 'Bronze Age pottery and the problem of classification', in J. Barrett, R. Bradley and M. Hall (eds), *Papers on the Prehistoric Archaeology of Cranborne Chase*, 201-30. Oxford: Oxbow Monograph 11
- BARRETT, J. BRADLEY, R. CLEAL, R. and PIKE, H. 1978. Characterisation of Deverel-Rimbury pottery from Cranborne Chase. *Proceedings of the Prehistoric Society* 44, 135-42
- BARRETT, J. C., BRADLEY, R., and GREEN, M., 1991, *Landscape, monuments and society. The prehistory of Cranborne Chase.* Cambridge: Cambridge University Press
- BEHRE, K. E. 1981. The interpretation of anthropogenic indicators in pollen diagrams. *Pollen et Spores* 23, 225-245
- BEHRE, K. E., and KUCAN, D., 1986, 'Die Reflektion archäologisch bekannter Siedlungen in Pollendiagrammen verschiedener Enterntungs-Beispizle aus der Siedlungskammer Flögen, Nordwestdeutschland', in K. E. Behre (ed) *Anthropogenic Indicators in pollen diagrams*, 95-115. Rotterdam, Boston: A.A. Balkema
- BIRKS, H. J. B., 1973, *Past and present vegetation of the Isle of Skye: a palaeoecological study.* Cambridge: Cambridge University Press
- BOESSNECK, J., 1969, 'Osteological differences between sheep and goat', in D.R. Brothwell and E.S. Higgs (eds), *Science in Archaeology.* London: Thames and Hudson
- BOURDILLON, J., and COY, J., 1980, 'The animal remains', in P Holdsworth, *Excavations at Melbourne Street, Southampton, 1971-76*, 79-121. London: Council for British Archaeology Research Report 33

- BRADLEY, R., 1984, *The social foundations of prehistoric Britain*. London: Longman
- BROOKS, D. and THOMAS, K. W. 1967. The distribution of pollen grains on microscope slides. 1. The non randomness of the distribution. *Pollen et Spores* 9, 621-29
- BROSSLER, A., and BOYLE, A., 2001, *Fonts of knowledge or just old rubbish? A study of artefactual evidence in the identification of late Bronze Age waterholes in the Middle and Upper Thames Valley*. Unpublished
- BROSSLER, A. GOCHER, M. LAWS, G. and ROBERTS, M. 2002. Shorncliffe Quarry: Excavations of a late prehistoric landscape in the upper Thames Valley, 1997 and 1998. *Transactions of the Bristol and Gloucestershire Archaeological Society* 120, 37-87
- BROSSLER, A., EARLY, R., and ALLEN, C., 2003, *Green Park (Reading Business Park) Phase 2 Excavations 1995: Neolithic and Bronze Age Sites*. Oxford: Oxford Archaeological Unit
- BROTHWELL, D. R., 1981, *Digging up bones*. 3rd edn, London: British Museum, Oxford University Press
- BROTHWELL, D.R., AND HIGGS, E.S., 1969, *Science in Archaeology*. London: Thames and Hudson
- BRÜCK, J. 1995. A place for the dead: the role of human remains in Late Bronze Age Britain. *Proceedings of the Prehistoric Society* 61, 245-77
- BUIKSTRA, J.E., and UBELAKER, D.H., 1994, *Standards for data collection from human skeletal remains*. Arkansas Archaeological Survey
- CALKIN, J. B. 1964. The Bournemouth area in the middle and Late Bronze Age with the 'Deverel-Rimbury' problem reconsidered. *Archaeological Journal* 119, 1-65
- CARR, G., and KNÜSEL, C., 1997, 'The ritual framework of excarnation by exposure as the mortuary practice of the early and middle Iron Ages of central southern Britain', in A. Gwilt and C. Haselgrove (eds), *Reconstructing Iron Age societies*, 167-173. Oxford: Oxbow Monograph 71
- CASE, H. J., AND WHITTLE, A.W.R., (eds), 1982, *Settlement Patterns in the Oxford Region; Excavations at the Abingdon Causewayed Enclosure and Other Sites*. Oxford: Council for British Archaeology Research Report 44
- CAT, 1991a, *A419/417 Cirencester and Stratton bypass Gloucestershire: Stage 2 archaeological evaluation*. Unpublished
- CAT, 1991b, *A419 Latton Bypass: Archaeological survey report*. Unpublished
- CLEAL, R.M. J., 1995, 'Pottery', in I. Barnes and R.M.J. Cleal, 'Neolithic and Bronze Age settlement at Weir Bank Stud Farm, Bray', in I. Barnes, W. A Bosimier, R. M. J. Cleal, A. P. Fitzpatrick and M.R. Roberts *Early settlement in Berkshire. Mesolithic-Roman occupation in the Thames and Kennet Valleys*. Salisbury: Wessex Archaeology Rep no 6
- COE, D. JENKINS, V. and RICHARDS, J. 1991. Cleveland Farm, Ashton Keynes: second interim report: investigations May-August 1989. *WANHM* 84, 40-50
- DACRE, M. and ELLISON, A. 1981. A Bronze Age Urn cemetery at Kimpton, Hampshire. *Proceedings of the Prehistoric Society* 47, 147-203
- DARVILL, T. C., 1987, *Prehistoric Gloucestershire*. Gloucester: County Library Services
- DENNIS, C. and LAWS, G. (Forthcoming) *Excavations at Cotswold Community, Gloucestershire*
- DOBNEY, K. and RIELLY, K. 1988. A method for recording archaeological animal bones: the use of diagnostic zones. *Circaea* 5, 79-96
- ELLISON, A., 1981, 'The Middle Bronze Age Pottery', in M. Dacre, and A. Ellison, 173-85
- EVANS, J.G., 1972, *Land Snails in Archaeology*. London and New York: Seminar Press
- FAEGRI, K., and IVERSEN, J., 1989, *Textbook of modern pollen analysis*, 4th edn. (Rev K Faegri, P E Kaaland, and K Krzywinski), Chichester: Wiley
- GRANT, A., 1982, 'The use of tooth wear as a guide to the age of domestic animals', in B. Wilson, C. Grigson, and S. Payne, *Ageing and Sexing Animal Bones from Archaeological Sites*, 91-108. Oxford: British Archaeological Reports 109
- GRIMM, E., 1991, *Tilia and Tiliagraph*. Illinois
- HAWKES, C.F.C. 1941. 'The looped and leaf-shaped bronze spearhead (Greenwell Brewis class IV)', in J.F.S. Stone, 128-31
- HEARNE, C. M. and ADAM, N. 1999. Excavation of an Extensive Late Bronze Age Settlement at Shorncliffe Quarry, Near Cirencester, 1995-6. *Transactions of the Bristol and Gloucestershire Archaeological Society* 117, 35-73
- HEARNE, C. M. and HEATON, M. J. 1994. Excavations at a Late Bronze Age Settlement in the Upper Thames Valley at Shorncliffe Quarry Near Cirencester, 1992. *Transactions of the Bristol and Gloucestershire Society* 112, 17-57
- HILLSON, S., 1992, *Mammal Bones and Teeth*. London: Institute of Archaeology
- JACOBSON, G. L. and BRADSHAW, R. H. W. 1981, The selection of sites for palaeovegetational studies. *Quaternary Research* 16, 80-96
- JONES, G. 1993. 'Animal Bones', in Allen *et al.*, 34-5
- KERNEY, M. P., and CAMERON, R.A.D., 1979, *A Field Guide to the Land Snails of North-west Europe*. London: Collins
- LAMDIN-WHYMARK, H. (Forthcoming) Excavation of a Neolithic to Roman Landscape at Horcott Pit, Fairford, Gloucestershire, 2003. *Transactions of the Bristol and Gloucester Archaeological Society*
- LEVINE, M.A., 1982, 'The use of crown height measurements and eruption-wear sequences to age horse teeth', in B. Wilson, C. Grigson, and S. Payne, *Ageing and Sexing Animal Bones from Archaeological Sites*, 223-50. Oxford: British Archaeological Reports 109
- LUAU., 2001, *Latton Lands, Wiltshire*. Unpublished Report

- MACAN, T.T., 1960, *A key to the British fresh- and brackish-water gastropods*. Ambleside Cumbria: Scientific publication 13, Freshwater Biological Association
- MEINDL, R.S. and LOVEJOY, C.O. 1985. Ectocranial suture closure: A revised method for the determination of skeletal age at death based on the lateral-anterior sutures. *American Journal of Physical Anthropology* 68, 29-45
- MILES, A. 1962. Assessment of age of a population of Anglo-Saxons from their dentition. *Proceedings of the Royal Society of Medicine* 55, 881-86
- MOORE, P. D., WEBB, J. A., and COLLINSON, M.E., 1991, *Pollen analysis, 2nd edn*. Oxford: Blackwell Scientific Publications
- MORRIS, E. L. 1994. 'Fired and Burnt clay', in C. M. Hearne and M. J. Heaton, Excavations at a Late Bronze Age Settlement in the Upper Thames Valley at Shornote Quarry Near Cirencester, 1992. *Transactions of the Bristol and Gloucestershire Archaeological Society* 112, 43-4
- MUDD, A. 1995. The Excavation of a Late Bronze Age/Early Iron Age Site at Eight Acre Field, Radley. *Oxoniensia* 60, 21-65
- MUDD, A., WILLIAMS, R. J., and LUPTON, A., 1999, *Excavations alongside Roman Ermin Street, Gloucestershire and Wiltshire: The archaeology of the A419/A417 Swindon to Gloucester Road Scheme*. Oxford: Oxford Archaeological Unit
- NEEDHAM, S.P. 1996. Chronology and periodisation in the British Bronze Age. *Acta Archaeologica* 67, 121-40
- O'NEIL, H.E. 1967. Bevan's Quarry Round Barrow, Temple Guiting, Gloucestershire, 1964. *Transactions of the Bristol & Gloucestershire Archaeological Society* 86, 16-41
- PAYNE, S. 1973. Kill-off patterns in sheep and goats: the mandibles from Asvan Kale. *Anatolian Studies* 23, 281-303
- PAYNE, S. 1987. Reference codes for wear states in the mandibular cheek teeth of sheep and goats. *Journal of Archaeological Science* 14, 609-14
- PEGLAR, S. M. 1993. The mid Holocene Ulmus decline at Diss Mere, Norfolk, UK: a year-by-year pollen stratigraphy from annual laminations. *Holocene* 3(1), 1-13
- PREHISTORIC CERAMIC RESEARCH GROUP 1992, *The Study of Later Prehistoric Pottery: Guidelines for Analysis and Publication*. Oxford: Occasional Paper No 2
- RAHTZ, P. 1962. Excavations at Shearplace hill, Sydling St. Nicholas Dorset, England. *Proceedings of the Prehistoric Society*, 28, 289-327
- ROBINSON, M., 1999, 'Land and Freshwater Mollusca', in A. Mudd, R. J. Williams and A. Lupton (eds), 494-500
- SCAIFE, R., 1999, 'Pollen from Latton 'Roman Pond' in A. Mudd, R. J. Williams and A. Lupton (eds), 510-12
- SCHMID, E., 1972, *Knochenatlas für Prähistoriker, Archäologen und Quartärgeologen* Amsterdam: Elsevier
- SILVER, I.A., 1969, 'The ageing of domestic animals', in D.R. Brothwell and E.S. Higgs (eds), *Science in Archaeology*, 283-302. London: Thames and Hudson
- SIMMONS, I.G., and TOOLEY, M.J., 1981, *The Environment in British Prehistory*. London: Duckworth
- STACE, C., 1991, *New Flora of the British Isles*. Cambridge: Cambridge University Press
- STONE, J. F. S. 1941. The Deverel-Rimbury Settlement on Thorny Down, Winterbourne Gunner, S. Wilts. *Proceedings of the Prehistoric Society* 7, 114-33
- TAYLOR, M., 1998, 'Wood and bark from the Enclosure Ditch', in F. Pryor, *Etton -Excavations at a Neolithic causewayed enclosure near Maxey, Cambs, 1982 - 7, 115-60*. London: English Heritage Report 18
- TINSLEY, H.M., and GRIGSON, C., 1981, 'The Bronze Age' in I.G. Simmons and M.J. Tooley, 210-49
- VON DEN DRIESCH, A. and BOESSNECK, J.A. 1974. Kritische Anmerkungen zur Widoeristheberechnung aus Laengemessungen vor- und fruehgeschichtlicher Tierknochen. *Saegetierkundliche Mitteilungen* 22, 325-48
- VON DEN DRIESCH, A., 1976, *A Guide to the Measurement of Animal Bones from Archaeological Sites*. Harvard University: Peabody Museum Bulletin 1
- WORKSHOP OF EUROPEAN ANTHROPOLOGISTS. 1980. Recommendations for age and sex diagnoses of skeletons. *Journal of Human Evolution* 9, 517-49

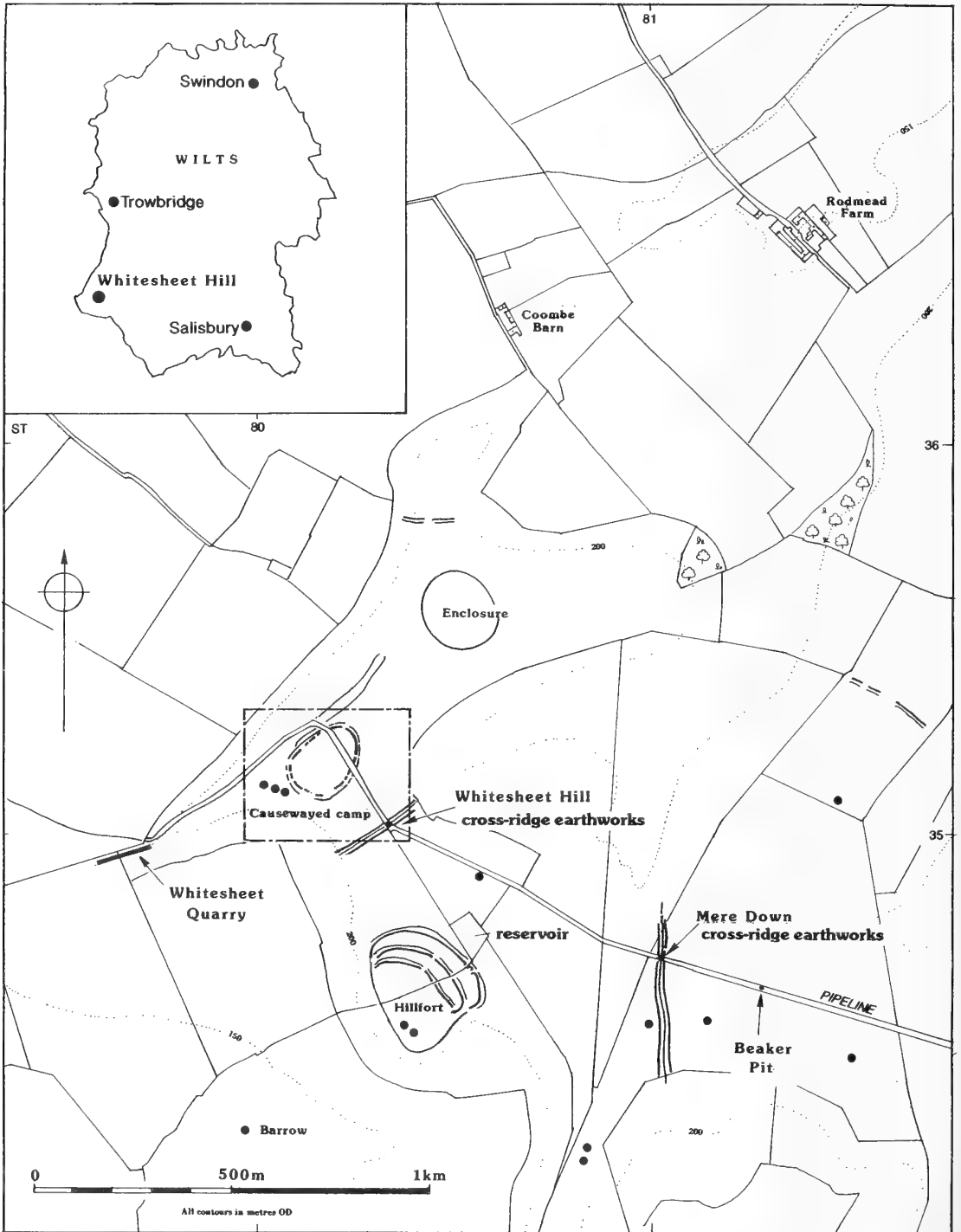


Fig. 1 Whitesheet Hill: Location of the sites excavated

Investigation of the Whitesheet Down Environs 1989–90: Neolithic Causewayed Enclosure and Iron Age Settlement

by Mick Rawlings,¹ Michael J. Allen¹ and Frances Healy²

with contributions by Rosamund M. J. Cleal, M. Corney, Rowena Gale, Pat Hinton, D. McOmish, J.M. Maltby, Elaine L. Morris and Robert G. Scaife

The construction of a water pipeline across part of Wiltshire and Somerset enabled the investigation of a transect through the causewayed enclosure at Whitesheet Hill, sectioning the enclosure ditch and revealing several internal features. Other sites on and around Whitesheet Hill were also investigated including a Beaker period pit, two cross-ridge earthworks and an enclosed settlement of the Middle Iron Age.

The earlier Neolithic date of the enclosure ditch was confirmed and a number of internal features were recorded. These included solution and tree hollows but also probable contemporary archaeological features. The ceramic assemblage indicated that the causewayed enclosure at Whitesheet Hill had a greater affinity with areas to the south and west (Hembury) than to the north and east (Windmill Hill) and an important molluscan sequence was recovered from the ditch which provides some comparisons with similar sites on Hambledon Hill and Maiden Castle.

In the winter of 1989–90 Wessex Water plc constructed a 700mm underground pipeline from Codford, Wiltshire (ST 954400) to Ilchester, Somerset (ST 523223), a total distance of 61.5km. A continuous archaeological watching brief was maintained during construction and several sites were identified and recorded (Rawlings 1992; 1995).

Whitesheet Down is a small Middle Chalk downland block lying on the western scarp of Salisbury Plain (Figure 1). The Down is sited immediately north of the Vale of Wardour and the scarp slope overlooks the lower land of the Lias and Purbeck Beds/Oxford Clays to the west. At the local scale it is separated from the Salisbury Plain to the east by a deep, bifurcated dry valley. The Iron Age hillfort below the summit of Whitesheet Hill has views to the west over the clay vale. In contrast the Neolithic causewayed enclosure on the edge of the

escarpment has views over the clay vale but it is sited at the head of a dry valley with views to the east down its axis. Colt Hoare noted that the causewayed enclosure, unlike the hillfort, is conspicuous from either west or east (Colt Hoare 1812, 41).

The hillfort on Whitesheet Hill forms part of a largely uninvestigated complex of monuments situated on a plateau of Middle Chalk (Figures 1 and 2; see Corney and McOmish below). In crossing Whitesheet Hill the pipeline cut through three Scheduled Monuments: the earlier Neolithic causewayed enclosure on the western spur of Whitesheet Hill, and two linear cross-ridge earthworks, the Whitesheet Hill Linear and the Mere Down Linear (Figure 2). A Beaker pit was discovered to the east of the Mere Down Linear during this work, and an Iron Age site in Whitesheet Quarry (Figure 1).

¹ Wessex Archaeology, Portway House, Old Sarum Park, Salisbury SP4 6EB ² 20 The Green, Charlbury OX7 3QA

PART 1: THE ARCHAEOLOGY OF THE WHITESHEET DOWN HILLTOP

SURVEY

by *M. Corney and D. McOmish*

The earthworks on Whitesheet Hill occupy the extreme south-west tip of the chalk massif which covers much of southern Wiltshire. Extensive views of the Blackmoor Vale are afforded to the south, whilst to the north and north-east much of the high chalk downland of west Wiltshire is visible, including the concentration of Neolithic, Bronze Age and later monuments on Cold Kitchen Hill. Much of the study area is now downland pasture, although there are clear traces of prehistoric and later cultivation.

The Whitesheet Hill complex (Figure 2) comprises three large enclosures, two univallate and one multivallate. Divisions of the landscape are represented by three substantial cross-ridge earthworks and funereal activity marked by at least eleven round barrows. This note is confined to the description of the two univallate enclosures (Figures 3 and 4) and related features. Both sites were surveyed at a scale of 1:1000 using a Wild TC2000 Total Station survey package with additional measurements made by taped offsets.

Enclosure 1 (Neolithic causewayed enclosure)

Enclosure 1 (Figure 3) is an ovoid medium-sized circuit (Oswald *et al.* 2001, 75), defined by at least 23 ditch segments, with an internal bank enclosing an area of 2.3ha (5.7 acres). First noted by Colt Hoare (1812, 42), the true nature of the site was only recognised in 1950 by Grinsell, with confirmation of the date provided by Piggott and Stone in 1951 (Piggott 1952; VCH 1957). The enclosure is best defined to the north-east of the modern track which cuts across the site. Here the ditch is visible as a series of elongated hollows up to 0.5m deep. The bank is correspondingly well-preserved and survives to a height of 0.7m above present ground level. It is generally continuous although there are also locally raised sections which, in part, relate to

the deeper portions of the ditch. Some offsetting of the alignments between ditch and bank causeways is evident. Later mutilation has occurred on the north-eastern arc where hollow-ways associated with the former Stourhead to Salisbury coach road cross the line of the enclosure.

To the south-west of the modern track the enclosure is less substantial with the bank formed by a series of dumps, 10–15m in length and up to 0.4m high. These dumps tend to occur opposite ditch segments which, in this area, are more irregular and slighter than on the north-east. Recent chalk quarrying has destroyed 60m of the ditch on the north-western arc.

One potential entrance was noted 35m west of the large bowl barrow (Wilts SMR ST83NW 649) which impinges upon the ditch circuit. The putative entrance consists of a slightly offset 10m wide gap in the circuit approached by a double lynchet terrace. A noticeable misalignment of approximately one-third of the circuit of the enclosure occurs 70m north of barrow 648 with a further offset some 170m to the north-east (Figure 3). This may indicate a longer period of development of the site than previously assumed. It is possible that, initially, the north-west side, on the edge of the steep escarpment, was not defined by a bank and ditch but only further excavation could resolve the matter.

Three bowl barrows were recorded beyond the south-western arc of the enclosure (Wilts SMR ST83NW 646, 647, and 648). No. 646 is now eroding into an abandoned quarry. A slight rectangular, embanked feature was recorded between barrows 646 and 647; it is of unknown date or function. The narrow chalk plateau is cut 130m south-east of the causewayed enclosure, by a cross-ridge earthwork formed by a single ditch up to 1.0m deep with a bank on each side. Severe mutilation and damage has occurred where hollow-ways associated with the former coach road cross the earthwork.

Enclosure 2 (undated univallate enclosure)

An oval enclosure (Figure 4) of *c.* 3ha (7.4 acres), 300m north-east of the causewayed enclosure, was first noted by the Ordnance Survey in 1953. Defined by a scarp up to 0.4m high with an external ditch, the circuit has been much reduced by ploughing. There are traces of possible ditch interruptions on the south-eastern arc and a probable entrance, 14m

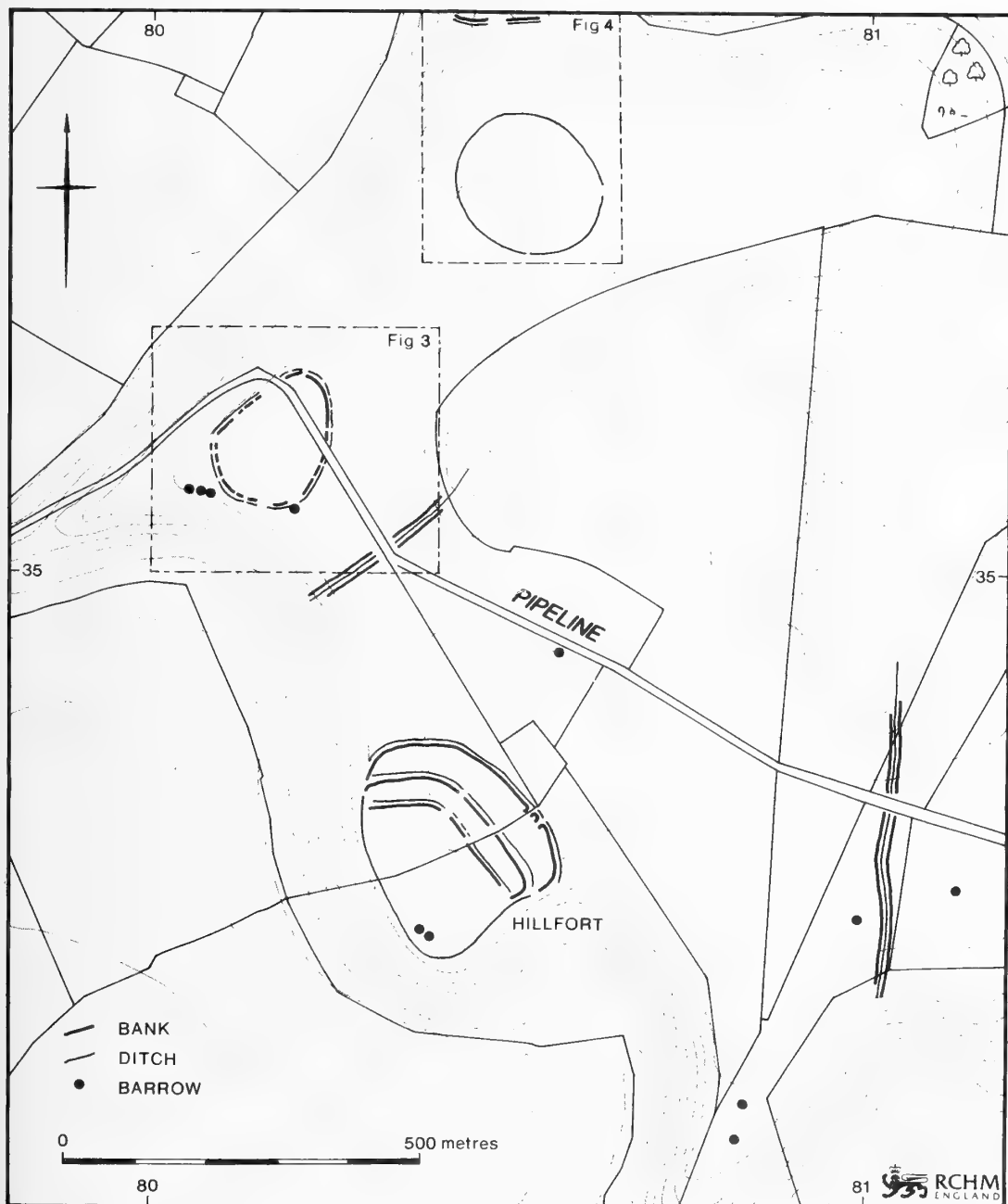


Fig. 2 Whitesheet Hill: Location of major monuments

wide, on the east. Within the enclosure are very slight circular depressions which may indicate the positions of former structures. To the north and west of the enclosure are the mutilated remains of a field system of probable prehistoric or Romano-British date. At 140m north of the enclosure is a damaged, partly bivallate, cross-ridge earthwork.

Traces of ridge and furrow cultivation were noted between enclosures 1 and 2.

The Whitesheet Hill complex is a remarkable prehistoric landscape survival. Although undated, enclosure 2 has certain traits (notably the traces of ditch causeways on the south-eastern arc) which may indicate a Neolithic origin and the detailed

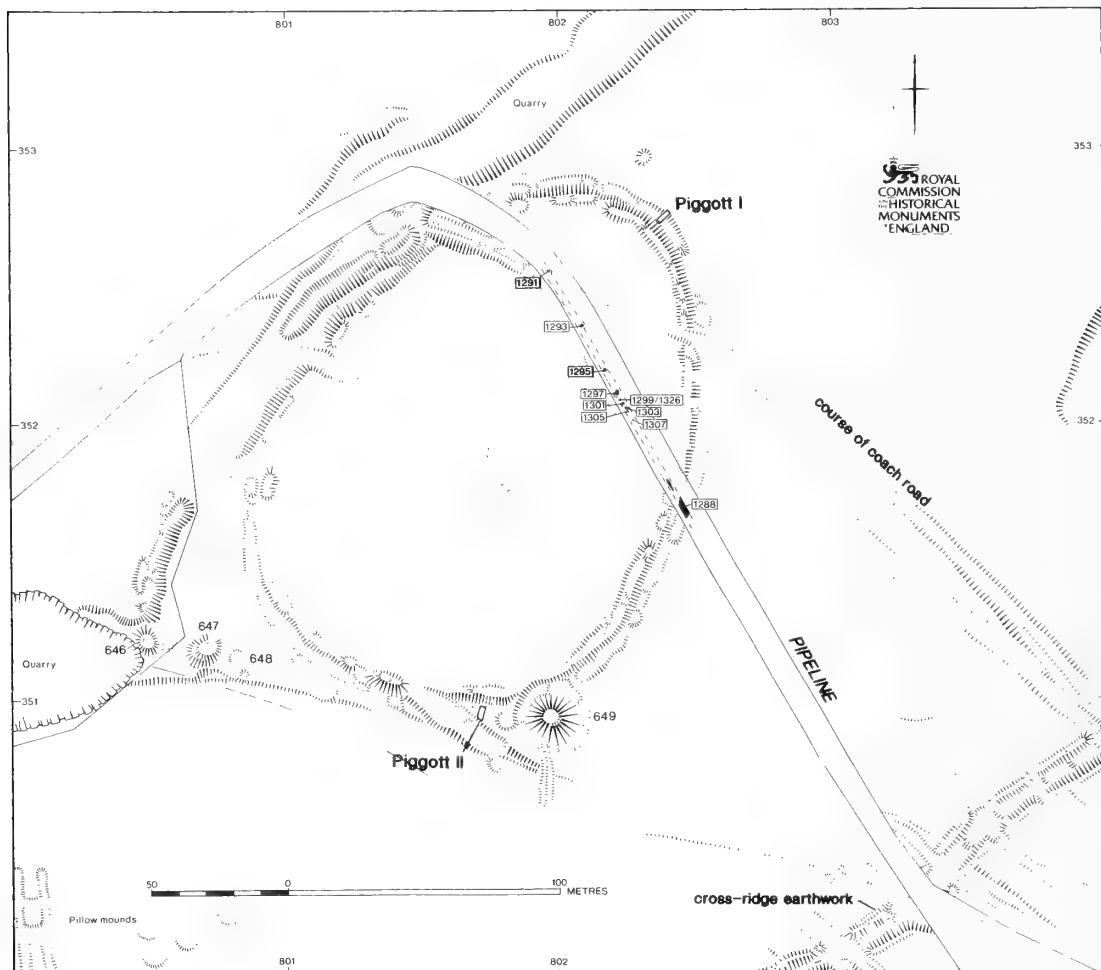


Fig. 3 The Causewayed Enclosure: Hachured plan of monument and location of excavated features

survey of the hillfort (not shown here) identified traces of a possible underlying ditch circuit. If this should prove to be of Neolithic date, then Whitesheet Hill could be seen as another Hambledon Hill type complex (Mercer 1980). The field survey evidence is promising, but only an extensive excavation programme could provide confirmation.

THE CAUSEWAYED ENCLOSURE

Previous Excavation

Earlier excavation through the enclosure ditch (Figure 3) showed that it was of irregular depth and

profile (Piggott 1952). In one of the sections the ditch was 1.35m deep while, in a second, it was only 0.65m deep. Small sherds of Windmill Hill style earlier Neolithic pottery were found in the primary silts of the deeper ditch section along with flint flakes and a scraper.

Excavations in 1990

The pipeline was routed along the centre of the existing, relatively deeply incised, access track as it was thought that all archaeology would have been removed from this strip both by wear and during laying of the track surface. Nevertheless, this enabled examination of the enclosure ditch in the south-east, and of some internal features. The track is the former coach road from Stourhead to Salisbury and has deeply cut into the enclosure

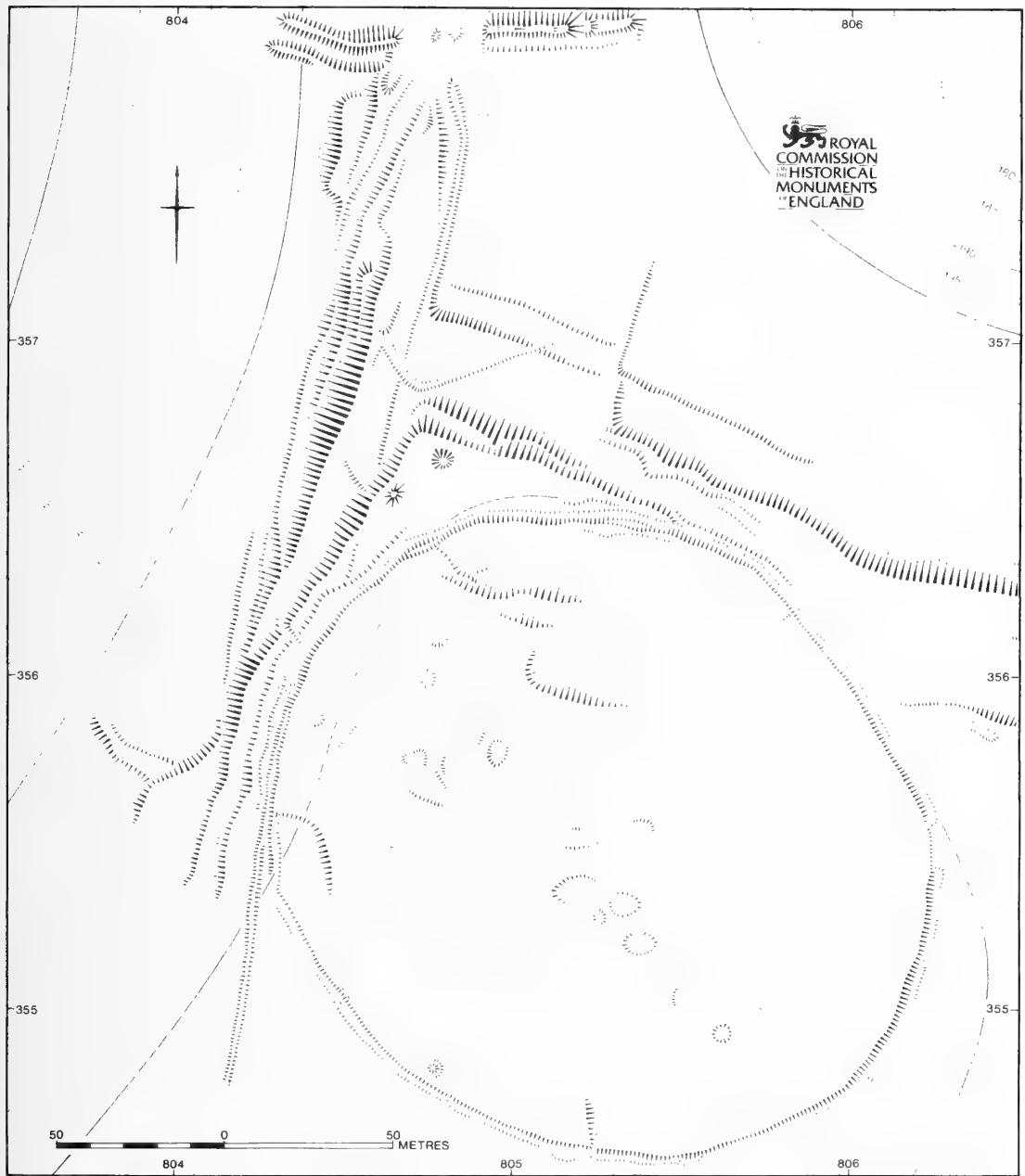


Fig. 4 Enclosure 2

earthworks in the north-western arc (Figure 3). A previous, limited, evaluation (Wessex Archaeology 1986) had indicated extensive disturbance. Geophysical survey of the interior of the enclosure adjacent to the track suggested the presence of a few small features, possibly pits.

The track make-up lay directly on top of the eroded/truncated chalk bedrock and a 2m wide

strip was removed by machine. Within the interior of the enclosure this strip was 120m long comprising 1% of the total enclosed area. It revealed nine discrete features or feature groups within the enclosure and sectioned the circumferential ditch on the south-eastern arc.

The ditch was not present within the stripped area on the north-western arc of the enclosure. It

Ditch 1288

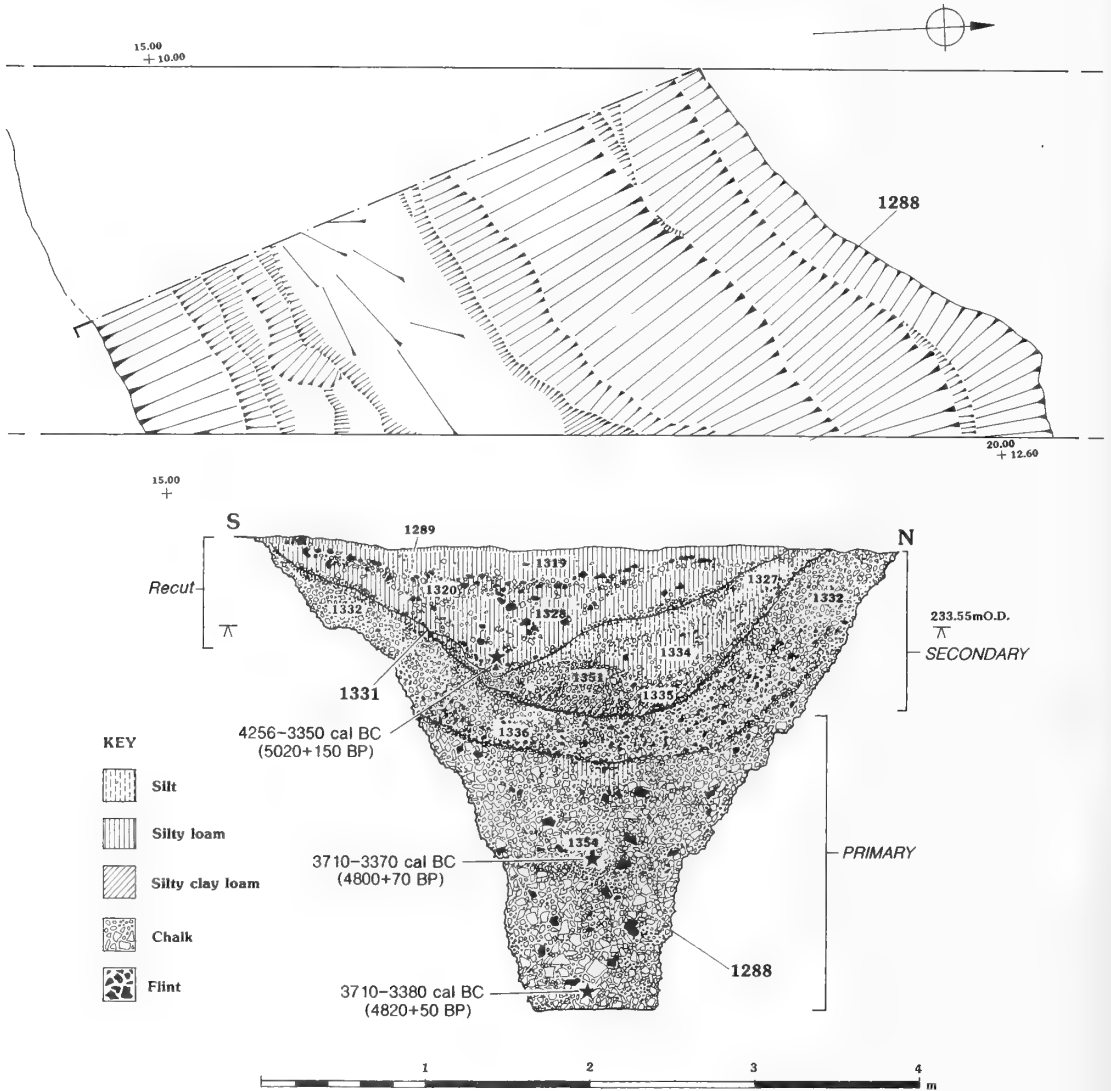


Fig. 5 The causewayed enclosure: ditch section and plan

had either been completely removed by the very pronounced hollow-way, or the 2m wide stripped area coincided with a wide causeway.

The causewayed ditch

The excavated ditch section was 4m wide at the surface and 2.8m deep with a flat base (Figure 5). The sides were steep until a point *c.* 0.9m above the base at which they became almost vertical. The chalk through which the ditch was excavated was poorly structured and no tool-marks were observed

on the sides or the base. Narrow and intermittent seams of tabular flint were recorded at irregular intervals through the chalk. Artefacts were retrieved by hand and the ditch fills were sampled for molluscs. A recut was also sampled for pollen.

The primary fills of the ditch comprised loose chalk rubble nearly 1.75m deep with occasional nodules of flint (1354) and a series of layers of vacuous chalk rubble (1336, 1332) and loose chalky soil (1335). Two radiocarbon dates (Table 1) from bones in the lower fill, one from pig bone and the

Table 1. Whitesheet Hill: Radiocarbon results

Location	Material	Lab No	Result BP	C ¹³ ‰	calibrated range 95%
enclosure ditch					
base of ditch recut (1328)	pig scapula	BM-2783	5020±150	-19.5	4250-3350
primary fill (1354)	pig radius + femur	BM-2784	4800±70	-19.3	3710-3370
primary fill (1354)	cow lower limb	BM-2785	4820±50	-21.3	3710-3380
interior pits					
Pit 1295, basal fill (1322)	pig long bones	BM-2821	4750±90	-20.6	3720-3330
Pit 1295, basal fill (1322)	hazelnuts	BM-2823	4740±35	est -25	3640-3370
Pit 1303, fill 1346	hazelnuts	BM-2822	4790±50	-23.9	3690-2270

Calibrated using OxCal ver 2.15

other from cattle, provided determinations of 4800±70 BP (BM-2784) and 4820±50 BP (BM-2785) respectively. Two large pieces of gabbroic pottery were recovered from the basal fill (1354) along with other sherds of earlier Neolithic date.

The secondary fill was a much more compact layer (1334). A considerable amount of worked flint was recovered and a small deposit of burnt material (1351) was contained within it. This material comprised burnt chalk along with some ash, burnt flint and burnt bone and represents a dump of material into the partially filled ditch rather than an episode of *in situ* burning. A thin greyish layer (1333) served to indicate a gradual change from the compact secondary fill (1334) below to a darker brown soil above (1327).

The ditch fill sequence was truncated by a recut at least 0.75m deep and *c.* 3.1m wide at the surface. This recut had a broad V-shaped profile although the sides were quite irregular and varied considerably within the excavated section. An homogeneous lower fill of stony dark silty loam (1328) contained a single sherd of Mortlake-style Peterborough ware and a pig bone provided a radiocarbon determination of 5020±150 BP (BM-2783). This fill was sealed by a thin, slightly lighter-coloured deposit (1320) containing a substantial quantity of large flint nodules, which formed the lower horizon of a stabilisation or soil. The upper part of the this soil was a very distinct layer of compact dark silty loam with well-developed small blocky structure (1319).

The bank

This is still visible on the interior side of the ditch around much of the enclosure circuit but it is no longer extant adjacent to the excavated ditch section, presumably as a result of the long use of the coach road. No ancient land surface was present, although a distinct linear band of unweathered

chalk 3m wide adjacent to and parallel with the inner edge of the ditch (Figure 3) provided evidence for the position of the bank.

The interior

The strip across the interior of the enclosure was 120m long but the nine features or groups of features were within the central 60m (Figure 3). All of these were totally excavated and in each case the whole fill sequence was retained and subsequently sieved in order to maximise artefact recovery. It was a surprise that features existed along the heavily eroded route of the trackway, and those that survive must originally have been considerably deeper. The track had removed at least the upper 0.5m of some features (see Figure 8, section of pit 1291).

A number of solution pipes and features were recognised, some with cylindrical smooth-sided shafts penetrating the chalk below features. All contained a clean dark reddish-brown clay with occasional manganese nodules. On excavation these appeared to be postholes within the pit, though they could not be clearly defined within the general feature fills, and at least one feature also contained several large stones, interpreted at the time as packing stones. A number of pits revealed complicated indurated bases where they had cut into solution features.

Pit 1303 (Figure 6) was a sub-rectangular pit 1.1m long, 0.8m wide and 0.5m deep, with irregular, slightly undercut sides and a flat base. The basal fill (1346) contained a considerable quantity of charcoal and burnt flint along with more than a hundred sherds of pottery of earlier Neolithic date. Carbonised hazelnuts from this deposit provided a radiocarbon determination of 4790±50 BP (BM-2822). There was no indication on the sides or base of the pit of *in situ* burning and it is assumed that the deposit represents a dump of burnt material that originated elsewhere.

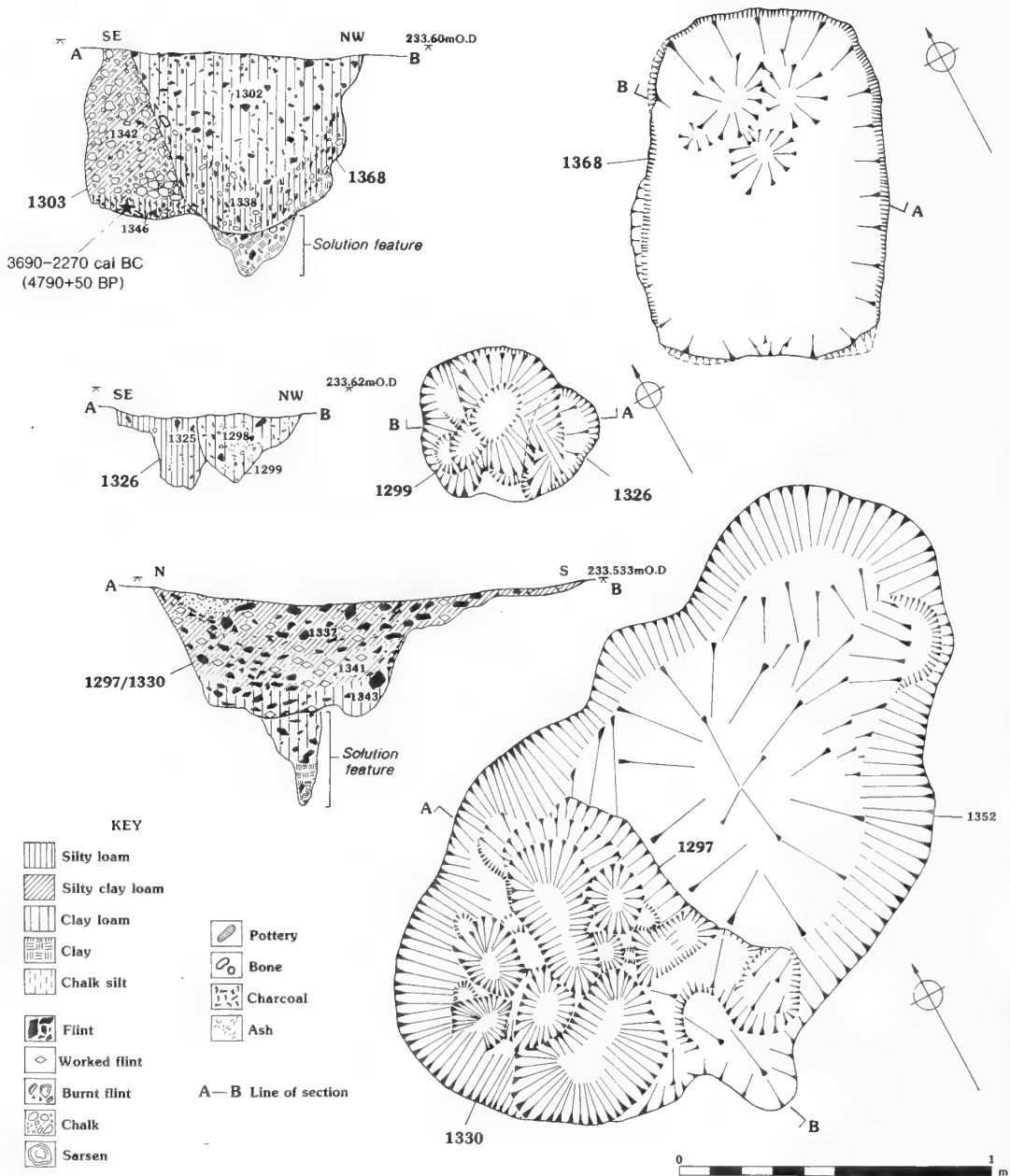


Fig. 6 Feature groups 1303/1368, 1326/1299, 1352/1330/1297

In the base of the pit were three or four sub-circular, steep, straight-sided solution hollows up to 0.9m deep. They were filled with typical dark reddish-brown clays with occasional flint fragments. The pit was recut (1368), the base of which cut through the pit fill and into the solution hollows (Figure 6). A single fragment of sarsen

quernstone was recovered from the lower fill of the recut (1338) and two other pieces were found in the upper fill (1302).

Pit 1295 (Figure 7), was 1.0m in diameter with steep sides and a flat base. The basal fill contained pieces of chalk and ashy material, and a couple of small sarsen blocks. A series of solution hollows

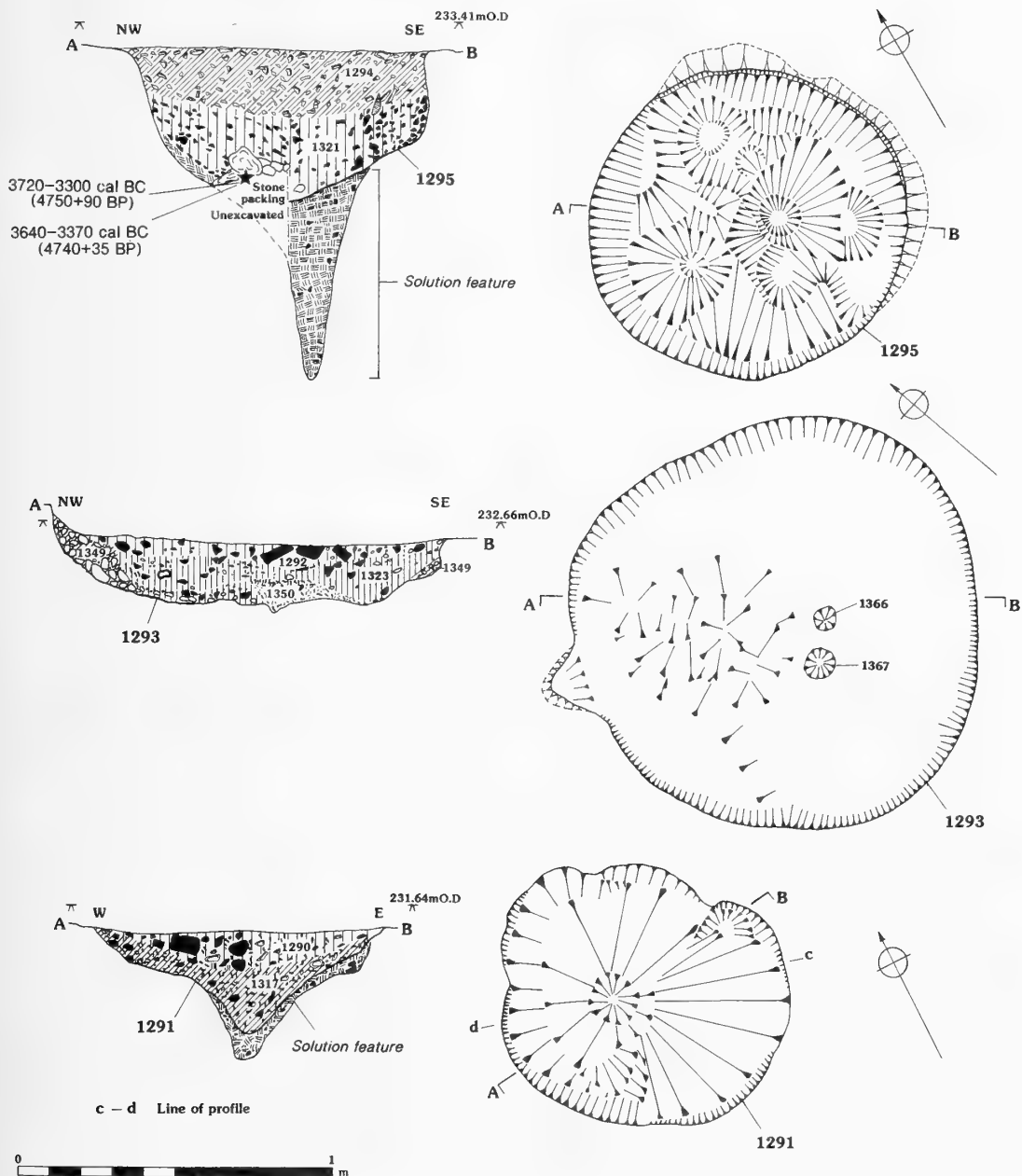


Fig. 7 Features 1295, 1293, 1291

and pipes was present in its base, four of which ended on a piece of level tabular flint. A pig bone from the basal fill of pit 1295 yielded a radiocarbon determination of 4750±90 BP (BM-2821) and a determination of 4740±35 BP (BM-2823) was obtained from charred hazelnuts found in the same layer. Sherds of earlier Neolithic pottery were found

in the fills of this pit whilst the upper part of the fill sequence of the feature group contained several fragments of sarsen.

A shallow sub-circular, saucer-shaped pit (1293; Figure 7), 1.2m in diameter and c. 0.2m deep with a flat base, contained two small sub-circular possible cuts in the central part that may represent

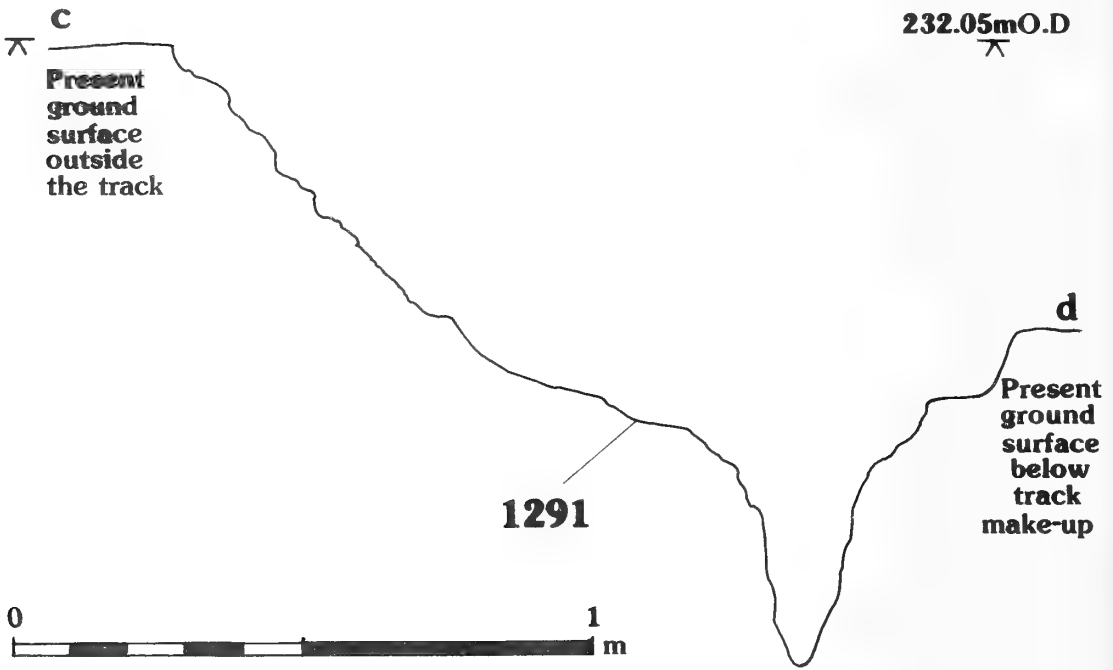


Fig. 8 Profiles of features 1303, 1330, 1295, 1291

the bases of postholes destroyed by pit 1293. This was the shallowest feature recorded within the enclosure, possibly because of its location downslope on the north-east side of the enclosure. The fill sequence contained a considerable amount of burnt material, almost certainly dumped from elsewhere. Artefacts included sherds of earlier Neolithic date.

Feature 1352 (Figure 6) was an irregular elongated feature, probably a tree hollow or possibly a solution feature. It contained a number (between 9 and 13) of clay-filled, steep-sided, intercutting solution hollows and possible root holes in its eastern end (1297), the deepest of which was 0.75m. Occasional large pieces of flint and chalk were present in the dark fills along with a small quantity of earlier Neolithic pottery. Various parts of the feature were labelled as definite features (e.g. 1330), but during post-excavation it became clear that they were natural solution and root hole features.

A sub-circular feature (1291; Figures 7 and 8) with a wider upper part and a central steep-sided cut, produced a quantity of very small sherds of probable later prehistoric/Romano-British pottery which may have been intrusive within the upper fills. The remaining features comprised similarly disturbed, shallow features and possible postholes.

Demonstrably Neolithic postholes are rare in enclosures, and none have been recorded, for example, in the interior at Hambleton Hill (Mercer and Healy in prep.).

Radiocarbon dates (Table 1)

Six radiocarbon dates were supplied by Janet Ambers of the British Museum and the results form a coherent group. Three were from the enclosure ditch; two from the primary fill (1354) and one from the basal fill (1328) of the ditch recut. The two determinations from the primary fill, although vertically more than 0.3m apart, were statistically indistinguishable at the 95% confidence level (Ward and Wilson 1978). They give a date for construction and the start of infilling of 3710–3380 cal BC, that is, typical of construction dates for other causewayed enclosures in Wessex.

The results from a slightly gnawed pig scapula in the base of the recut gave a result that was older than both the result from the fills beneath it, and all of the interior pits. The result (BM-2783; 5020±150 BP) was associated with Peterborough Ware but gave a calibrated date of 4150–3350 cal BC which is far too early for such an association. The bone sample was very small, heavily weathered and probably residual.

Table 2. Whitesheet Hill: Pottery totals by fabric group and feature (weight in grammes)

	CI-3	C99	DI-5	D99	E1	F1-2	F99	Q1-3	Q99	Q100-2	SI-2	S99	V1	X1
	no/wt	no/wt	no/wt	no/wt	no/wt	no/wt	no/wt	no/wt	no/wt	no/wt	no/wt	no/wt	no/wt	no/wt
Ditch	24/90	-	-	-	2/90	50/181	-	-	1/2	-	7/64	-	-	-
Recut	3/5	-	4/11	-	-	7/55	-	-	-	-	-	-	-	-
1305	21/48	-	35/63	12/4	-	-	-	-	-	4/4	-	-	7/3	-
1303	1/1	-	106/103	13/3	-	13/15	-	-	-	3/8	66/299	-	1/5	344/93
1301	-	-	3/6	34/13	-	-	-	-	-	-	2/2	6/4	-	58/10
1326	-	-	-	-	-	-	-	-	-	-	-	-	-	137/25
1299	-	-	-	-	-	-	-	-	-	-	-	-	-	60/10
1330	-	-	-	-	-	-	-	-	-	-	-	-	-	63/13
1297	-	-	10/19	1/1	-	-	-	-	1/1	-	-	-	-	16/3
1295	-	3/2	19/80	3/2	-	22/35	34/10	10/11	-	1/2	1/1	-	-	1063/194
1293	9/11	-	26/28	4/1	-	44/238	4/2	12/18	4/3	-	3/8	-	-	171/62
1291	-	-	-	-	-	-	5/3	1/1	-	94/88	-	-	-	-

The second series of three results was from the fills of pits within the interior of the enclosure. Two were from different material (animal bone and hazelnuts) from the basal fill (context 1322) of pit 1295. These results (3720-3330 cal BC and 3640-3370 cal BC) are statistically indistinguishable, and form a coherent group with that obtained on charred hazel nut from pit 1303. This series of dates indicates that activity within the enclosure was contemporary with, rather than earlier than, the construction of the bank and ditch enclosure circuit.

POTTERY

by Rosamund M. J. Cleal

In total, 625 sherds (1540g) of Neolithic pottery and 102 sherds (102g) of Late Iron Age or Romano-British pottery were recovered manually from the ditch and from internal features. A further 1917 fragments (1540g) were recovered from sieved samples; where these could not be assigned to fabric they are recorded as fabric X1 (Table 2). Fragments assignable to fabric are included with the manually recovered material. The Neolithic pottery includes a small amount of Peterborough Ware from the ditch recut, but is mainly earlier Neolithic in date.

Earlier Neolithic

On the basis of rim sherds, decorated sherds and fabrics, it is estimated that at least 16 vessels are represented, all of which are illustrated (Figure 9). A further three may be represented by fabrics in which only body sherds occur but which are likely to be of Neolithic date (fabrics C2, Q1 and S2).

Sherds were assigned to fabrics on the basis of type, frequency and size of inclusions, using the standard Wessex Archaeology recording system (Morris 1992). A series of type sherds was established and the remainder assigned to these fabrics. Abbreviated descriptions of the fabrics are given below, full descriptions are in the archive. Petrological analysis was carried out on samples of most fabrics by David Williams (archive) and the results of that analysis are incorporated within the fabric descriptions.

The calcareous fabrics (C, D and S) form an heterogeneous group which may represent vessels from several different sources. The subdivisions include fabrics with 'beef' calcite, non-beef calcite, and shell. In addition, all but one (V1) of the fabrics

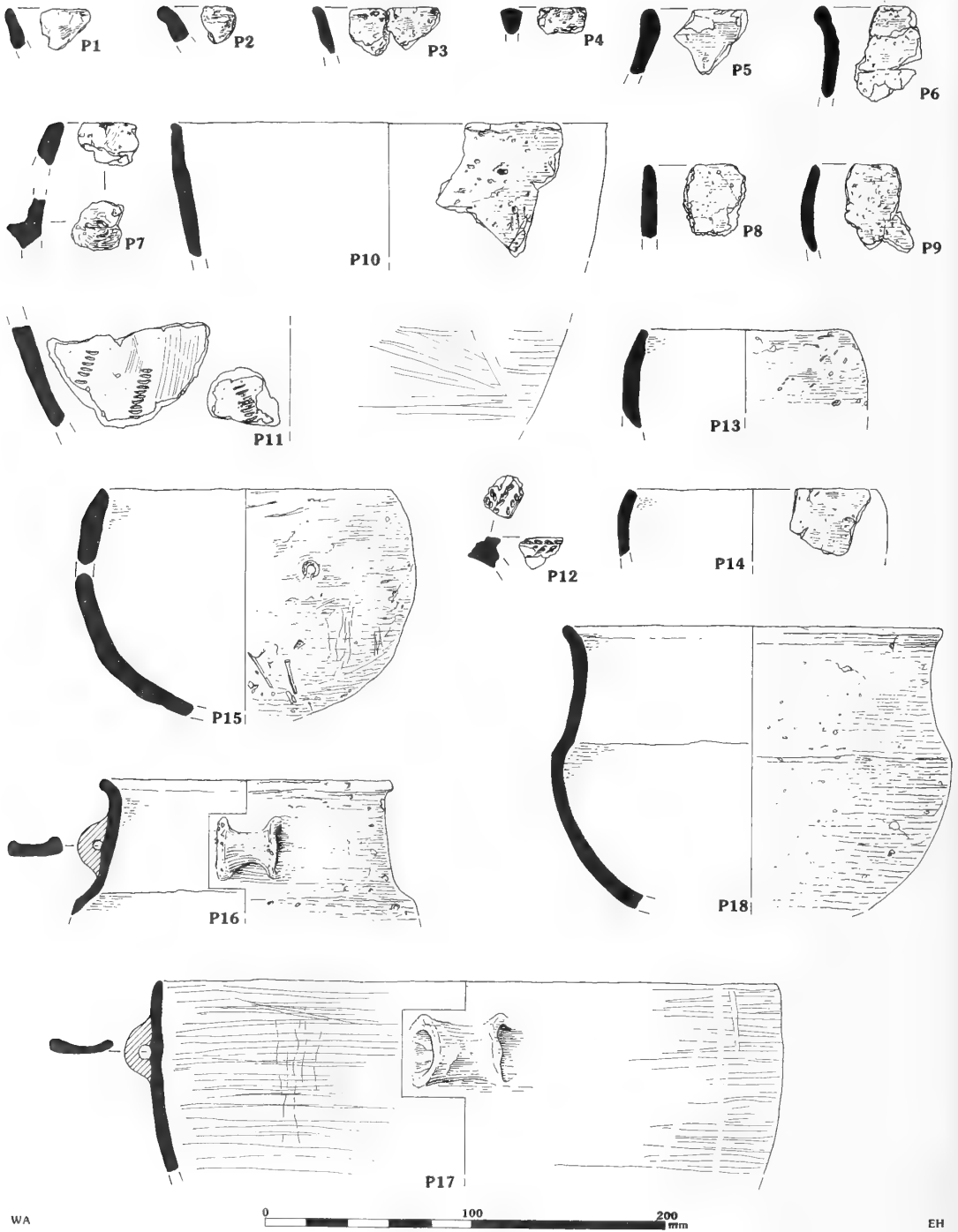


Fig. 9 Pottery from the causewayed enclosure

with voids are likely to also belong to this group, the voids apparently representing shell, calcite, ooliths, and possibly chalk or limestone, which have been leached out. The local soil conditions are not naturally acidic, thus the survival of calcareous inclusions in some sherds and not in others, even from within the same features (Table 2), indicates that this leaching occurred before the pottery entered the features rather than after deposition in the excavated contexts.

Most of the inclusions, including the ooliths and the beef calcite, can be found within 20km of the site, and may occur naturally in clay deposits. Beef calcite occurs in the Purbeck Beds, in particular in the Middle and Upper Beds which are exposed c. 15–20km east of the site. Limestones of the Great and Inferior Oolite Series outcrop c. 7km to the west. It is possible that some of the voids in the fabrics represent chalk and such fabrics could therefore be very local to the site, but none were noted *in situ*.

The shell inclusions in the shelly fabrics S1 and S2 is fossiliferous (archive) and a local source is likely, probably one of the Jurassic formations in the area. The black grains noted macroscopically in S2 were identified as glauconite and a derivation from the Greensand is suggested. Only two fabrics (F1, F2) contained flint, in both of these it is likely to be an added rather than a natural inclusion. F2 shows slightly greater attention to temper preparation than F1, as the size of the inclusions is more closely controlled, and it also contains a greater proportion of sand than F1. Of the three fabrics (Q1, Q2, Q3) which contained only quartz sand, Q1 appears to contain such infrequent and fine grains that they seem likely to be natural inclusions in the clay whilst the other two may contain added sand. No dark grains likely to be glauconite were noted macroscopically or at x20 magnification.

Only one vessel was recovered in a gabbroic fabric (E1). The identification has not been confirmed by petrological analysis due to the certainty of the macroscopic identification. In addition to the characteristic appearance of the fabric along the break, the surfaces show the black, burnished finish also characteristic of much gabbroic ware. This has been interpreted as paint (Smith 1981, 170), but may be the result of 'smudging', in which the atmosphere of firing is made carbon-rich, generally towards the end of the process, resulting in very dark grey to black surfaces (Rice 1987, 158). The source of this fabric

is thought to be the Lizard Peninsula in Cornwall, 250km south-west of the site (Peacock 1969).

A single sherd (fabric V1) certainly contained organic inclusions represented by linear and irregular voids. This fabric also included voids which likely to represent leached out calcareous material, and a single seed impression of *Triticum dicoccum* (emmer wheat).

Abbreviated fabric descriptions (all Neolithic unless otherwise stated; p = petrological analysis):

- C1. Soft fabric with beef calcite, quartz sand and iron oxides (p).
- C2. Hard fabric with beef and non-beef calcite, quartz sand and flint (p).
- C3. Hard fabric with beef and non-beef calcite, shell and quartz sand (p).
- C99. Calcareous inclusions, fabric unidentifiable.
- D1. Soft fabric with voids (probably ooliths) and quartz sand (p).
- D2. Soft fabric with voids (possibly calcite) and mica (p).
- D3. Soft fabric with voids (probably shell) and quartz sand (p).
- D4. Soft fabric with voids (possibly mixed: shell, calcite, ooliths?) and glauconite (p). Peterborough Ware.
- D5. Soft fabric with voids (sub-angular) and quartz sand. Indeterminate prehistoric.
- D99. Voided, fabric unidentifiable.
- E1. Gabbroic ware.
- F1. Soft fabric with flint, quartz sand, iron oxides and mica (p).
- F2. Soft fabric with flint, quartz sand and mica.
- F99. Flint-tempered, fabric unidentifiable.
- Q1. Soft fabric with some quartz sand.
- Q2. Hard fabric with quartz sand.
- Q3. Hard fabric with quartz sand (intermediate in sandiness between Q1 and Q2).
- Q99. Sand-tempered, fabric unidentifiable.
- S1. Soft fabric with shell and calcite (p).
- S2. Hard fabric with shell, quartz sand, glauconite and iron oxides (p).
- S99. Shell-tempered, fabric unidentifiable.
- V1. Soft fabric with voids (probably organic material).

Fabrics Q100, Q101 and Q102 are considered to be Late Iron Age/ Romano-British in date.

Using a division based on that of Whittle (1977), and the presence or absence of carination, the following types have been identified: carinated closed bowls (Figure 9, P16, P18), uncarinated closed bowls (P13, P9, P10, P14), and a neutral

uncarinated bowl (P17). To take the analysis of shape further, the closed vessels could be subdivided into Composite Dependent Restricted (P18) and Composite Independent Restricted (probably P16), based on the relationship between the carination and the equator of the vessel. In the former the carination is at the maximum diameter point (i.e. 'dependent' on the equator), and in the latter the carination is above the point of maximum diameter (i.e. 'independent' of it; the terms are more fully described in Shepard 1954; Rice 1987, 217-19; Cleal 1992).

The fragmentary nature of the material means that it is not possible to be certain that other forms are not present, and the occurrence of a burnished finish and decoration on the internal surface of the sherds of P11 strongly suggests that it was an open, probably shallow, form. Two vessels, one in gabbroic ware (P17), and one in which the voids present probably represent calcite (P16), also possess trumpet lugs which in both cases are pierced horizontally.

The absence of any certainly open forms and the apparent preference for closed forms is unusual, although the small size of the assemblage may be in part responsible for this. On the basis of published vessels only it is possible to suggest that closed vessels with carinations do vary in popularity within the earlier Neolithic ceramic traditions of southern and eastern England. The Windmill Hill assemblage included several examples of small Dependent Restricted vessels (Cleal 1992, table 21.4; Smith 1965), but they appeared to be mainly decorated, in contrast to the plain example from Whitesheet (P18). The application of trumpet lugs to a closed vessel is also unusual, as it is not certainly attested at Windmill Hill, or Carn Brea (Smith 1965; 1981).

Although the trumpet lugs on vessels P17 and P16 are presumably in part functional features, intended to facilitate suspension, the trumpet form is an elaboration which is particularly characteristic of the south-west, and is a diagnostic feature for the South-Western (or Hembury) Style (Whittle 1977; Smith 1974). The lug on the gabbroic ware vessel P17 is entirely typical, and there is little doubt that this vessel was made in Cornwall, but the fabric of vessel P6 indicates that it must be a local copy of the type. That on vessel P16 is well made, and again typical of the form. Vessel P7 appears to have a simple lug, dished on the upper surface, which may have been pulled up from the surface of the vessel rather than applied.

Similar lugs occur at Maiden Castle (Cleal 1991, fig. 145: 14).

The only purely decorative feature on any of the vessels is the fingernail-impressed motif on vessel P11, from the enclosure ditch. This motif is rare and the columns appear to be formed of opposed fingernail impressions which are not pinched (archive). No published occurrences of this type of decoration on the interior of a vessel are known to the writer, but a sherd from Hambledon Hill appears to have very similar decoration on the exterior (I.F. Smith pers. comm.). Similarly, there is a published example of exterior decoration of this type on a small carinated closed bowl from Remenham, Wokingham (Holgate and Start 1985, fig. 4, 1-4). This vessel shows sinuous columns of impression which run down the neck and onto the body, crossing the carinated shoulder. Not all of the impressions are fingernail and the authors suggest that the others were created with a thorn or similar object.

Four sherds have carbonised residues on their interior surfaces, and sixteen have exterior sooting; these totals include one of the decorated sherds of P11 which has both. The gabbroic ware bowl P17 and the shelly bowl P18 have extensive sooting on the exterior. On P17 the soot is concentrated around the lug, although there are also traces lower down the body, while on P18 it occurs both above and below the shoulder carination. The presence of soot on the gabbroic ware is interesting as it indicates that such vessels were used as cooking pots, either on or suspended above a fire. The latter is more likely, as placing the vessel directly in the embers would cause the loss of the black finish (because of the oxidising effect of the fire and atmosphere). All but one of the plain body sherds possessing sooting or carbonised residues could belong to P11 or P18; the exception is a single sherd in fabric D3.

Volume was calculated for three vessels: P17 (gabbroic ware: c. 9300 cc on surviving part of pot only: 6200 cc), P18 (shelly: c. 2400 cc), and P15 (flint-tempered: c. 1200 cc). The lower part of P17 has been extrapolated from the upper and the calculation must be regarded as less certain than for the other two. However, even on the part of the profile that survives the estimated volume is more than twice that of the next largest vessel.

Illustrated sherds (Figure 9)

Each illustrated sherd or group of sherds was counted as a separate vessel for the estimate of

vessel numbers. For the manually recovered material each sherd was assigned a Pottery Record Number (PRN).

- P1: Fabric Q3, context 1309, cleaning of pit 1293, PRN 70260.
 P2: Fabric Q2, context 1321, feature 1295, PRN 70262.
 P3: Fabric D2, context 1338, feature 1368, PRN 70018, 19.
 P4: Fabric D3, context 1294, feature 1295, PRN 70049.
 P5: Fabric Q101, context 1317, feature 1291, PRN 70177 (Iron Age/Romano-British).
 P6: Fabric D1, context 1302, feature 1368, PRN 70041.
 P7: Fabric C1, context 1333, feature 1288, PRN 70284, 85.
 P8: Fabric C3, context 1342, feature 1303, PRN 70251, 52.
 P9: Fabric D2, context 1342, feature 1303, PRN 70250.
 P10: Fabric D2, context 1322, feature 1295, PRN 70040.
 P11: Fabric F2, context 1354, feature 1288, PRN 70029, 30; context 1328, feature 1331, PRN 70162.
 P12: Fabric D4, context 1328, feature 1331, PRN 70038.
 P13: Fabric F1, context 1333, feature 1288, PRN 70179–217.
 P14: Fabric S1, context 1360, feature 1293, PRN 70108.
 P15: Fabric F1, contexts 1323 and 1350, feature 1293, PRN 70062, 80, 81, 92, 123.
 P16: Fabric D3, context 1346, feature 1368, PRN 70163–65, 173.
 P17: Fabric E1, context 1354, feature 1288, PRN 70032, 33.
 P18: Fabric S1, context 1342, feature 1303, PRN 70026, 75–79, 127–140.

Peterborough Ware

A single rim sherd of the Mortlake sub-style and three plain body sherds possibly belonging to the same vessel were recovered from the recut of the enclosure ditch. Peterborough Ware is known from similar contexts elsewhere (e.g. Maiden Castle; Cleal 1991, 181).

Late Iron Age – Romano-British

A small amount of later pottery was recovered (fabrics Q100–Q102). Small fragments recovered from sieving occurred in considerable numbers in feature 1291 (Table 2). Clearly some small-scale activity is represented by this material, but feature 1291 is not considered to be of Late Iron Age or Romano-British date and all this later material could be intrusive.

Discussion

Although small, this assemblage is distinctive enough to merit comment. The ceramics can give us some insight into two main areas of inquiry: the external relations of the users of the causewayed enclosure, and the internal organisation and use of the enclosure. As a result of the extremely restricted nature of the excavations, more can be gained from the former than the latter.

In both fabrics and style there appear to be more links with the south and west than with the north and east. Apart from two sherds with heavy rims found earlier (Piggott 1952, fig. 3), there are no rim types typical of the Windmill Hill or Decorated Style (Whittle 1977). The only decorated sherds are from the bowl with interior fingernail impressions (Figure 9, P11) and even in this case, the fact that the impressions are on the interior, and that this is also burnished, suggests that the vessel is likely to have been an open (and possibly shallow) form, one atypical of the Decorated or Windmill Hill style.

In comparison with the lack of heavy rim forms and paucity of decoration there are more features directly comparable with the South-Western or Hembury style (Whittle 1977). The gabbroic ware vessel P17 is made of clay from the Lizard Peninsula, and is comparable to vessels from Cornwall. Similar vessels occur at Maiden Castle and Hambledon Hill (Dorset), Hembury (Devon) and elsewhere in the south-west (Peacock 1969; 1988).

Trumpet lugs are typical of this pottery, but at Whitesheet Hill only P17 is in a Cornish fabric, P16 almost certainly having been produced within a few kilometres of the site. This copying of South-Western style features occurs elsewhere: at Maiden Castle only two out of nine trumpet lugs were in gabbroic ware (Cleal 1991, table 61). However, it is usual for the form of the vessels with this characteristic to also reflect the forms of South-Western style vessels, and this is certainly not the case with P16. In the classification recently proposed by the writer this vessel can be termed a Closed Composite Independent Restricted vessel (Cleal 1992, fig. 21.2), and is a rare form which occurs in widely spaced assemblages, including Broome Heath, Norfolk (Wainwright 1972, fig. 21, P166), and at Staines, Middlesex (Healey and Robertson-Mackay 1987, P79?). No examples of lugs attached to this form have been noted by the writer (Cleal 1992, fig. 21.5).

All vessels except P17 may have been produced within 15–20km of the site and therefore may be

termed locally-produced. The presence of P11, however, with its unusual decoration paralleled at Hambledon Hill, and of P16, with its unusual form paralleled much further afield, all point to the possibility of contacts over a wider area.

As so little of the interior of the causewayed enclosure was excavated there is little opportunity to comment on patterns of ceramic deposition. It is perhaps worth noting, however, that the deposition of large pieces of gabbroic ware pottery deep in causewayed enclosure ditches may be a recurrent feature, as large sherds were found at Maiden Castle in a similar deposit to that in which P17 occurred. The question of whether the pottery was, like much of the lithics and other material, burnt before deposition must remain unresolved. Due to the fact that colour does seem to leach out of buried sherds (Rice 1987, 345), the observation that the colour of broken edges is sometimes the same as the surfaces cannot be taken as an indication of refiring.

FLINT

by *Frances Healy*

The entire fills of all possible features in the interior of the causewayed enclosure were bagged and subsequently wet-sieved, the residues being washed through a nest of sieves (9.5mm, 5.6mm, 2.0mm and 1.0mm) and sorted. Artefacts were sorted only from the 9.5mm and 5.6mm residues, the 2.0mm and 1mm residues being retained unsorted, except in the case of a few residues of low bulk which were washed directly through a 2mm sieve. The 5.6mm residues contributed almost all of the chips (pieces with an area of less than 100 sq mm). Artefacts were recovered manually from the causewayed enclosure ditch.

The difference between the two modes of recovery is reflected in a low frequency of chips (Table 3) and a generally larger flake size among material from the ditch. Material from the features in the interior is thus not directly comparable with most published industries since the latter were recovered manually.

Distribution and condition

Struck flint was overwhelmingly concentrated in the internal features (Table 3), where a high proportion of it was burnt, reaching a maximum of 82% in feature 1293. This also contained the largest quantity of unworked burnt flint which was concentrated in features towards the north-west side of the enclosure (Figure 12).

Burnt flint, worked and unworked, is fire-cracked with frequent small pot-lid fractures, the spalls from which are present in large numbers. There is some brown to red discolouration, it has the appearance of having been exposed to intense dry heat and differs markedly in appearance from crazed, bluish-white 'pot-boilers' which were not recovered from the site. Unburnt flint from the same features is in sharp, fresh condition and only lightly corticated. Almost 90% of the chips from these features were burnt or fragmentary, or both. The remainder were complete small flakes.

The relatively small quantity of struck flint thinly scattered through the primary fills of the causewayed enclosure ditch is sharp and fresh and is heavily corticated. Its condition contrasts with that of the equally corticated material from the ditch recut, which is dulled and abraded, often with discoloured cortex. There was very little burnt flint in the ditch, the only concentration lying in layer 1351 towards the top of the primary fill.

Raw material

There is no evidence for the working of the tabular flint observed *in situ* in the Middle Chalk during excavation. All the worked flint seems to have been produced from small, often irregular, nodules with pronounced surface convolutions. The cortex can be 15mm or more thick, composed of a porous outer layer and a denser, rather chert-like, inner one. The flint is dark grey to black in fracture and is much flawed, with frequent thermal fractures and cherty inclusions as well as fossils and internal voids. Such flint does not seem to occur in the Middle Chalk within the immediate area, although inspection of further local exposures would be necessary to confirm this. However, it corresponds closely to the flint which abounds in the Upper Chalk some 300m to the south-east.

Flakes from ground implements (Table 3) indicate that these were treated as raw material, perhaps after they had broken. Dorsal scars on the largest flake (Figure 10, L13) suggest that the axe from which it came was systematically flaked down. It and the other flakes retaining areas of grinding stand out from the assemblage by their generally lighter colour. Axes may have been brought to the site as finished implements, especially as the only evidence for biface manufacture is a single possible thinning flake from feature 1295.

Table 3. Whitesheet Hill: Composition and incidence of flint

	1	2	3	4	5	6	7	8	Burnt	Broken	Burnt <i>Unworked</i>
Primary ditch	-	-	9	1	507	20	1	3	15	221	384g
Ditch recut	4	3	6	-	718	27	-	13	10	329	371g
Internal features	116	248	161	4298	12599	1389	16	131	6805	7706	50545g

1 = Irregular Waste

2 = Cores

3 = Core Rejuvenation Flakes

4 = Chips

5 = Flakes

6 = Blades

7 = Flakes from Ground

Implements

8 = Retouched Forms

Flint-working

Salient features of the material include the relatively low level of blade production (Table 3) and the high proportion of cores which are unclassifiable or fragmentary (125 out of 251, i.e., 50%). The latter is due to the frequency of burning (Figure 12) and to the frequency with which cores split along thermal fractures while being worked.

Samples of chips, flakes and blades were selected for attribute analysis from contexts providing adequate numbers of complete, unbroken and unburnt artefacts with the aim of detecting technological variation between industries from: 1; the primary fill and the recut of the causewayed enclosure ditch (n=341), and 2; features located in different parts of the interior (n=900). A similar methodology was applied to 1303, to examine the assemblages from what appeared to be earlier and later cuts in a single sequence of features. The results for the features in the interior showed little variation, either horizontal or vertical.

There is only one complete blade core (Figure 10, L4), although others are represented among the fragments and L9 may have been crested in preparation for blade production. Sixty single platform and 42 multiplatform flake cores were recovered as well as five keeled, non-discoidal forms. Cores were normally worked from platforms prepared by flaking off the rounded end of a nodule although thermal fractures also served as platforms. Plain, non-cortical butts are consequently dominant (archive). Many cores, like L7, seem to have been used to produce a few flakes and then abandoned and 17 examples may be considered to be no more than tested nodules. The extensive flaking of L5 is rare. Platforms were, however, sometimes rejuvenated by the removal of rather irregular core tablets such as L10 or flakes like L11 struck along the junction of platform and core face. Core faces often exhibit a mass of hinge fractures,

with problems in flaking caused by cherty inclusions in the flint and by the thick, dense lower layer of cortex. Flakes such as L12 may have resulted from the deliberate removal of an intractable core face. The mean weight of cores is 84g for cores from the ditch and 111g for cores from other contexts.

A single regular, subspherical flint hammerstone was recovered from the primary fill of the enclosure ditch. Some 10%–15% of flakes from the primary fill of the ditch and some 30–40% of flakes from the interior features may have been soft hammer struck (archive), on the evidence of features such as diffuse bulbs, unfocused points of percussion, indistinct conchoidal fractures and occasionally lipped butts (Ohnuma and Bergman 1982, 169). Such features may, however, be produced by soft stone hammers including cortical flint ones. Areas of battering on the cortex of some cores and tested nodules, among them L6, indicate that they did indeed serve as hammers. Cortical flint pebbles seem to have been similarly used at the Etton causewayed enclosure in Cambridgeshire (Middleton 1989, 45).

Blades and blade-like flakes are concentrated in the middle size-range of removals, although some bladelets are present. They are more frequent among the material from the features of the interior than among that from the primary ditch fill, and are marked by relatively frequent platform edge abrasion and low extents of dorsal cortex (archive).

The rarity of blades is not simply a reflection of the recovery of numerous, predominantly squat, small flakes by sieving, since visually distinguished blades form only 4% of the manually retrieved material from the primary ditch fill but 7% of the sieved material from the interior features (Table 3). In metrical terms, when removals less than 20mm long are excluded, as is usual in the presentation of breadth:length ratios, only 7% of the removals from the primary ditch fill and 13% of those from the

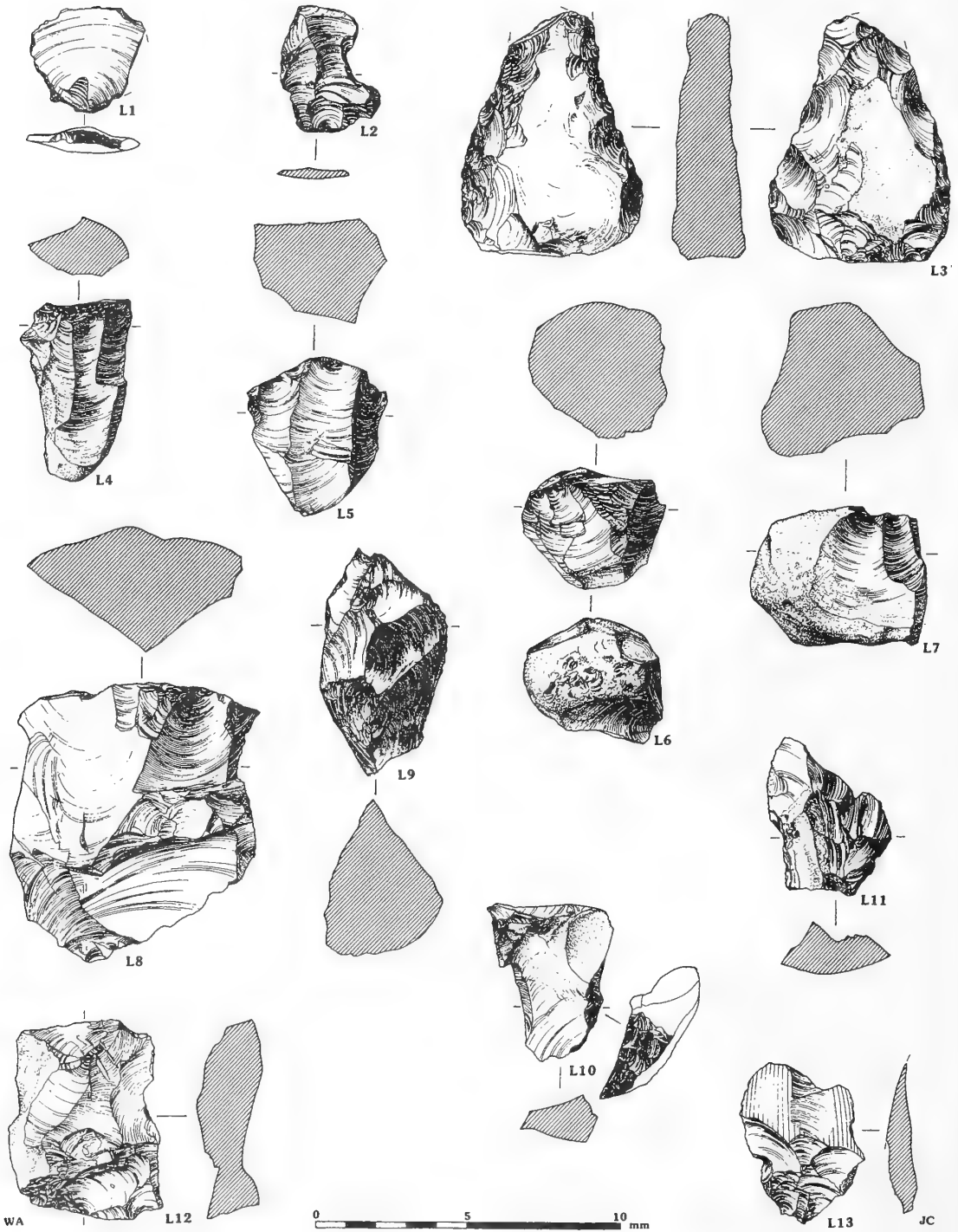


Fig. 10 Flints from the causewayed enclosure L1-L13

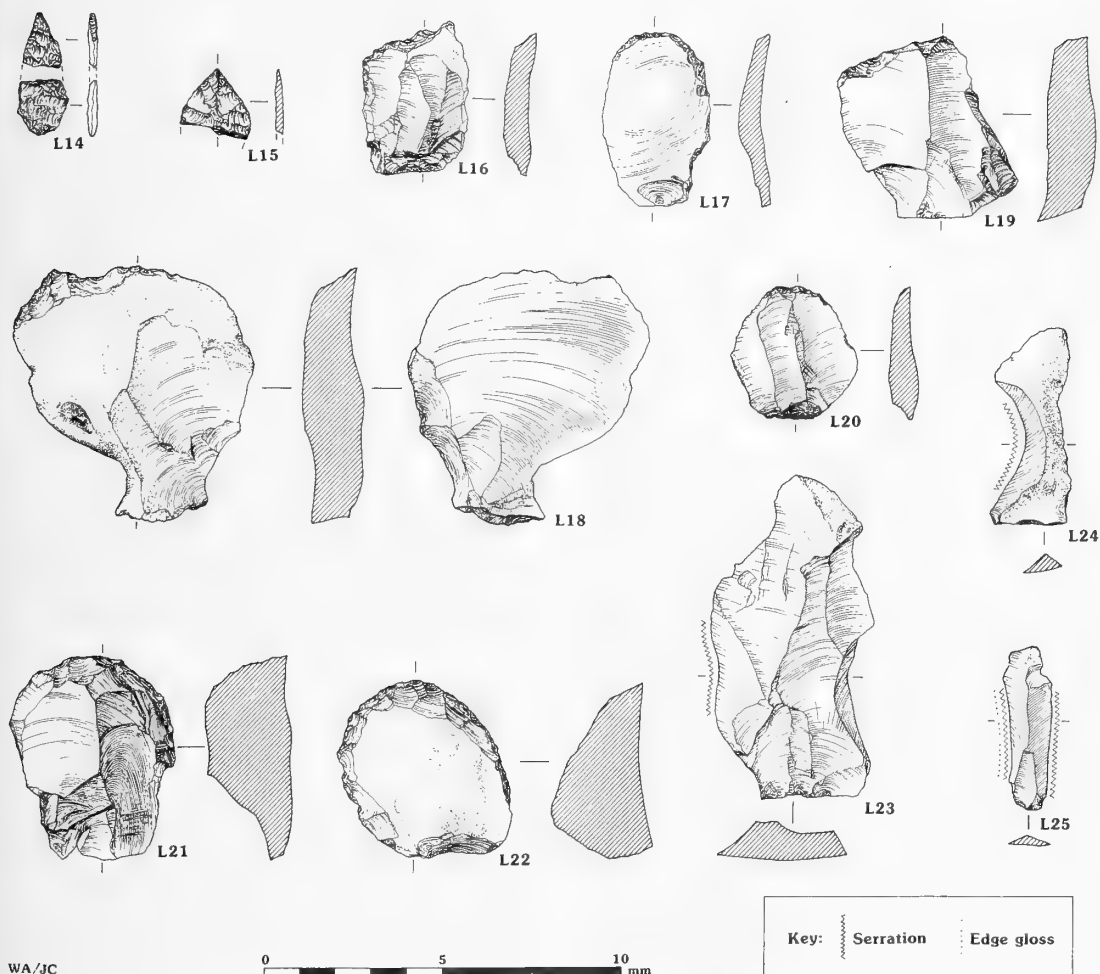


Fig. 11 Flints from the causewayed enclosure L14-L25

interior features have breadth:length ratios of less than 2:5, the most frequent ranges being respectively 3:5-4:5 and 2:5-3:5 (archive).

Among complete chips, the most frequent diagnostic forms are core front chips, characterised by an elongated form, central ridge, small butt, feathered edges and straightish profile (Newcomer and Karlin 1987, 33-34). Their presence corresponds to the regular removal of overhang from core platforms by platform edge abrasion (Figure 10, L4). The near absence of faceting chips matches the rarity of platform faceting, which was recorded on 1% of the flakes in the samples (listed in archive). Retouch chips are scarce, corresponding to the low proportion of retouched forms. A few bulbar scar chips are present, translucently thin, with feather terminations and with bulbs of percussion on both faces. Complete chips are

generally fan-shaped, broader than they are long and non-cortical. Most lack a complex sequence of dorsal scars and many end in hinge fractures.

Retouched forms

The composition and incidence of retouched forms are summarised in Table 4 and detailed in archive. Like the low frequency of blades, the low percentage of retouched forms, 0.7% overall (Table 3), cannot be attributed solely to large-scale sieving, since retouched forms amount to only 0.6% and 1.7% of the manually recovered material from the primary fill and recut of the causewayed enclosure ditch, proportions comparable with the 0.7% from the interior features. If the small fraction is discounted, retouched forms still account for only 1% of the material from these contexts.

Table 4. Whitesheet Hill: Retouched forms

	1	2	3	4	5	6	7	8	9	10
Primary ditch	-	2	-	-	-	-	-	-	-	1
Ditch recut	-	1	1	1	1	1	-	6	2	-
Internal features	3	23	6	-	87	-	1	11	-	-

1 = Leaf Arrowheads

2 = Flake Scrapers

3 = Scrapers on Thermally Fractured Fragments

4 = Borers

5 = Serrated Pieces

6 = Notch

7 = Tanged Flake

8 = Miscellaneous Retouched

9 = Heavy Implements

10 = Hammerstone

The two commonest forms, scrapers and serrated pieces, were made on some of the larger flakes from the assemblage. Four scrapers are elongated, including L17 (Figure 11). Four, including L16 and L19 have oblique or squared ends. Apart from overall size, the main criterion employed in the selection of scraper blanks seems to have been thickness. Some seem to have been made on the distal ends of plunging flakes and others, like L21, have near-vertical retouched edges. This feature is particularly marked in the seven scrapers made on non-flake blanks, most of them, like L22, on thermally fractured fragments.

While many serrated pieces are made on thin, elongated, straight-edged blades or flakes like L25, almost half are made on squat, even irregular flakes, some with sinuous or concave edges like L23 or L24. Variations in flint type among flakes retaining areas of grinding suggest that at least two axes were present, although no refits have been found. One may be represented by L13 (Figure 10) and a smaller flake, both from successive layers of feature 1291. Another, with squared sides, by four small flakes of banded flint from separate layers of feature sequence 1297/1330/1352. The recut of the enclosure ditch contained forms not represented in the earlier contexts: a spurred flake (Figure 10, L1), a notch (L2), an indeterminate biface (L3) and a thermally fractured fragment bifacially flaked along one edge.

Use

The teeth of many serrated pieces seem to have been worn down by use and at least six examples, all blade-like, have edge-gloss, generally ventral, as on L25 (Figure 11). At least 20 blades or blade-like flakes have worn, sometimes glossed, straight edges and appear to be heavily used serrated pieces. The total for this form given in Table 4 is thus an under-

estimate. Macroscopically visible wear can otherwise be identified confidently only on two other pieces. One edge of a flake from pit 1303 has a series of small, irregular, contiguous scars exhibiting the same degree of cortication as the flake itself. A flake from feature 1301 has the regular blunting described by Smith (1965, 92) as class *a* utilisation and by Whittle (1977, 38) as bevelling.

Discussion

The fresh, sharp condition of the small assemblage from the primary rubble fills of the causewayed enclosure ditch indicates that it was contemporary with those fills. The technological similarity of this assemblage to the material from the ditch recut (archive) combines with the generally more abraded condition of the latter to suggest that much of it may have been derived from earlier deposits or from the surface, rather than contemporary with the small quantity of Peterborough Ware also present.

The recut did, however, contain implement forms, among them L1-L3 (Figure 10), not recovered from the primary fills or the interior features and generally rare in earlier or middle Neolithic industries. L1, for example, is comparable with spurred flakes found in the upper levels and on the surface at Windmill Hill, but not in the primary levels (Smith 1965, 105). Some, although perhaps a minority, of the material from the recut is likely to be of later Neolithic date.

Distinctions between assemblages from the primary ditch fill and the interior features are unlikely to be due entirely to differential recovery. When only those flakes with areas greater than 400mm² are compared, to exclude the bias introduced by sieving the fills of the interior features, those from the ditch remain generally

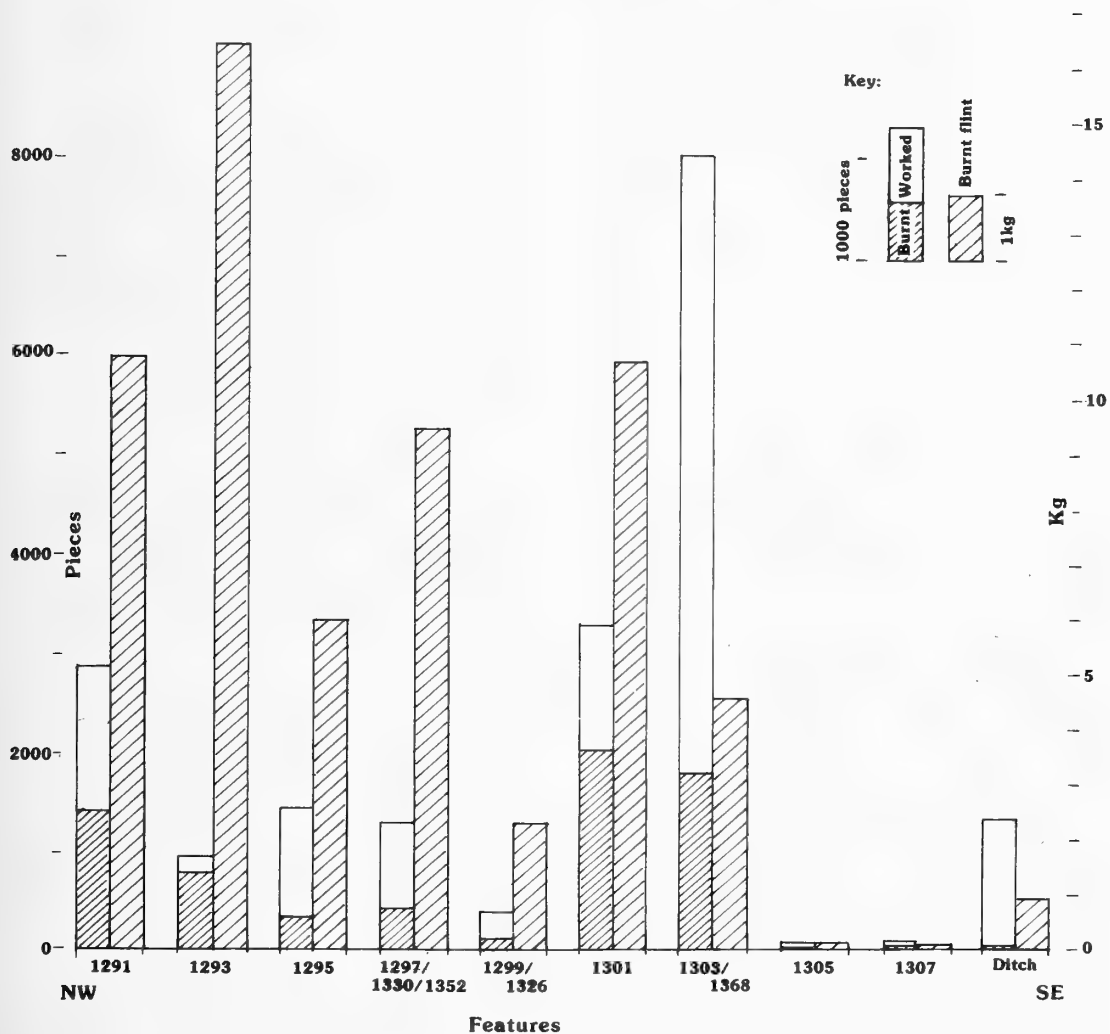


Fig. 12 Distribution of worked and burnt flint

larger and less blade-like than those from the interior, with less frequent platform edge abrasion and more frequent hinge fractures and linear or punctiform butts. The assemblage from the primary ditch fill is distinguished by its technology as well as by the near-absence from it of burnt material.

While more blade-like than those of the ditch, the flake proportions of the material from the interior features still fall at the broader end of the range for earlier or middle Neolithic industries (Healey and Robertson-Mackay 1983, table 11). There is a marked contrast with, for example, the dominance of blade and narrow flake production in the industry from the inner ditch of the Maiden Castle causewayed enclosure (Edmonds and Bellamy 1991). While the reasons for this may have

been partly functional, the heavily-flawed raw material used at Whitesheet Hill may have been partly responsible.

The high frequency of serrated pieces among the retouched forms is matched in other broadly contemporary industries (Healey and Robertson-Mackay 1983, table 9). The wide range of blanks on which they were made, exemplified by L23-L25 (Figure 11), is rarely so. In most industries serrated pieces were made on straight-edged blades or blade-like flakes, a choice of blank which has prompted the suggestion that they were mounted serially as elements of composite knives or sickles. This would scarcely be possible with such pieces as L23-L24.

It is noteworthy that in the Whitesheet collection edge gloss, a frequent feature of serrated

pieces elsewhere, is confined to the more blade-like examples, such as L25, and to worn blades or blade-like flakes which were probably once serrated. While the more regular serrated pieces may have formed part of sickles or knives, the less regular ones are likely to have had other uses.

The distinctive raw material of the seventeen flakes from ground implements reinforces the impression that the ground axes of middle Neolithic industries are often made of different flint from that of the assemblages in which they occur. This observation has been made in relation to the industries of Windmill Hill (Smith 1965, 86), Carn Brea, Cornwall (Saville 1981, 138), Staines (Healey and Robertson-Mackay 1987, 95) and Spong Hill, Norfolk (Healy 1988, 33) among others. In some cases this may reflect informed, highly selective use of local resources whilst in others it must reflect transport of objects or raw material. Both indicate the value attached to the axes themselves.

The common condition, technology, typology and composition of the material from the interior features, even between layers of successive cuts 1303 and 1368, strongly suggests that it was deposited within a short space of time and from a common source, an impression heightened by the presence of joining fragments of the same sarsen rubber in feature 1291 and feature 1293 (see below).

Its composition, encompassing knapping debris, used implements and broken grinding equipment, suggests that it resulted from a range of domestic activities. A large part of it was furthermore burnt with other material including unworked flint, animal bone, wood and nutshells. Once this was done, the combined assemblage, burnt and unburnt, must have been pushed or shovelled into the features or transported to them in containers. It is otherwise difficult to see how so many minute chips and spalls could have been deposited there.

The seat of the fire is likely to have been closest to feature 1293, where burnt material was most frequent, falling off towards the south-east (Figure 12). The near-absence of burnt material from the ditch may be an extension of this fall-off, reflecting the 30m which separated the ditch from the nearest feature. It is impossible to tell whether the deposition of burnt material in layer 1351, towards the top of the primary ditch fills, represents the same event as the deposition of massive amounts of burnt material in the interior features.

GROUND STONE

by *Frances Healy*

Seven fragments of utilised stone were found within the interior features, comprising two conjoining pieces of a ferruginous sandstone rubber, four pieces of sarsen saddle quern and a sarsen maul or hammerstone. No detailed petrological identifications have been carried out, those given here are provisional. Quantities of small burnt and unburnt sarsen fragments were extracted from a number of samples taken from the interior features and it is possible that further utilised pieces remain to be identified.

The two pieces of sandstone rubber were found in adjacent fills of feature 1291, two of the quern fragments were also found in this feature although there was no evidence that they had been used as packing stones. A third fragment was found in 1368 and a fourth in the basal fill of feature 1330. The sarsen pounder was recovered from the shallow feature 1293.

Pebbles of ferruginous sandstone and sarsens are found on and within the Upper Greensand which lies immediately to the west of Whitesheet Hill, at the base of the chalk escarpment. However, the transport of such artefacts over longer distances was indicated at Hambleton Hill, Dorset, where sandstone rubbers found within pits in the main causewayed enclosure (Mercer 1980, 23) may well have been extracted from deposits close to Exeter (*ibid.* 62).

Sarsen saddle querns have been found at other causewayed enclosures. A fragment of one was found within the fills of the enclosure ditch during the most recent excavations at Maiden Castle, Dorset (Laws 1991, 230 and fiche M7:E7) and another one was found in a Neolithic pit at the same site (Patchett 1943, 322).

ENVIRONMENTAL DATA

During the excavation animal bones were recovered by both hand and sieving to provide information about the function and economy of the enclosure. These data were augmented by a controlled programme of bulk sampling for charred plant and charcoal remains. Information about land-use and the nature of the landscape was obtained from combined samples of land snails and pollen.

Economy

Animal bones, by J.M. Malby

All bone fragments from manual recovery were recorded in detail and unidentified fragments were recorded where feasible into size categories (large mammal; sheep-sized mammal; rodent, etc.). Details of butchery, tooth eruption, pathology and measurements were all recorded and are retained in the archive. Identified fragments from sieved samples were also recorded in full, whereas unidentified fragments were not placed in size categories.

The causewayed enclosure ditch fills

A total of 226 well-preserved fragments of animal bone was recovered. Gnawing damage is slight and surface erosion on the bones was uncommon, suggesting that much of the material was buried soon after disposal. Of the bones 132 came from the basal fill of the ditch (1354; Table 5a). These include 49 bones of an immature sheep of between six and ten months old. There is no evidence of butchery and it is assumed that this skeleton was dumped in an articulated state. Most of the skeleton was recovered except the carpals, tarsals and phalanges. The absence of these small bones may result from recovery bias or poor preservation and it is possible that the sheep was originally dumped as a complete carcass.

Thirty-four cattle bones, mostly from the lower limbs and including 20 phalanges, were found in the basal ditch fill. Several of the phalanges have unfused proximal epiphyses and probably belong to cattle under 18 months old (Silver 1969). Others are fused and belong to at least one older animal. Some appear to be from the same skeleton and it is conceivable that two metatarsals, a metacarpal (from an immature animal) and two tarsals belonged to another individual.

Most of the 18 pig bones appear to have been deposited together and it is feasible that the bones belonged mainly to one or two animals. Two fairly substantial sections of red deer antler were also recovered from the basal fill, perhaps from picks used to dig the ditch.

Very little of the material from the secondary fills could be identified, but includes parts of a skull with the pedicle of an unshed antler and the tip of an antler of red deer. One context (1336) produced 16 bones representing both short-tailed (*Microtus*

agrestis) and bank vole (*Clethrionomys glareolus*) which may have been trapped in the ditch during a period when it lay open. Few bones were recovered from the tertiary fills, amongst these a red deer antler tine and a cattle tooth are the only remains from 1334.

The recut of the ditch (1331) produced just eight fragments of animal bone including three pig bones (in 1328) and one cattle and two sheep/goat teeth (1320).

Feature Group 1303

A total of 366 fragments was recovered from manual excavation, of which 192 were identified (Table 5b). Bones sieved from artefact samples contributed a further 456 fragments, of which 61 were identified. The faunal assemblage in all contexts is dominated by pig bones with cattle and sheep/goat fragments identified only in small numbers. The earlier lower fills (1346, 1342) of pit 1303 produced similar assemblages with pig providing 85% of the identified fragments. All parts of the body are represented and there is no apparent bias towards any particular areas of the carcass. A few bones form a number of small associated groups, mostly of feet.

Although most of the pig bones in these fills could have belonged to two immature animals, more individuals than this are represented. At least two immature and one adult pig are represented by mandibles. Five very porous bones probably belong to foetal (or possibly neonatal) skeletons. Nine pig bones bear evidence for butchery and a number of the bones are broken, indicating that processing of at least some of the carcasses had taken place.

Generally cattle bones were poorly represented but at least three cattle are represented by humeri, all with butchery marks (from 1342 and 1346); 39 unidentified large mammal fragments probably also belong to cattle. The small number of ovicaprid bones include the distal end of a sheep metatarsal that has been made into a tool. Sieving produced no further species excepting one rodent femur.

Only 45 fragments were found in re-cut 1368 from manual retrieval (Table 5b). Of these, 31 are pig, including fragments of three thoracic vertebrae and three ribs probably from the same animal. Most of the remaining fragments are from the head and feet. From sieving, a further 56 pig bones were recovered with small loose teeth, metapodials and phalanges well represented. 42% of the pig sample from manual retrieval consists of loose teeth and

Table 5 Whitesheet Hill: animal bones

a) Animal bones from the enclosure ditch (manual retrieval)

	----- Enclosure ditch -----							Recut ditch	
	1354	Primary		----- Secondary -----			Tertiary	1328	1320
		1336	1332	1335	1351	1333	1334		
Cattle	34	-	-	-	3	12	1	-	1
Sheep/goat	52	-	-	-	-	-	-	-	2
Pig	18	-	-	-	1	4	-	3	-
Red deer	2	-	2	-	-	-	1	-	-
Unid. large mammal	6	-	-	-	11	10	-	1	1
Sheep-sized mammal	12	-	-	1	-	5	-	-	-
Unid. mammal	8	-	-	-	19	-	-	-	-
Short-tailed vole	-	6	-	-	-	-	-	-	-
Bank vole	-	5	-	-	-	-	-	-	-
Unid. vole	-	5	-	-	-	-	-	-	-
Eroded gnawed	10	-	1	-	-	11	1	-	-
Loose teeth	-	-	-	-	-	2	-	1	-
Burnt	1	-	-	-	26	1	-	-	-

b) Animal bones from features 1303/1368 and 1293 (manual retrieval)

Feature	- recut 1368		----- 1303 -----		----- 1293 -----					
	1302	1338	1342	1346	1329	1292	1323	1350	1360	1324
Cattle	1	-	9	9	-	-	5	1	2	1
Sheep/goat	-	-	4	2	-	-	1	-	2	-
Pig	9	22	68	68	-	-	4	-	-	-
Red deer	-	-	-	-	-	-	3	2	1	-
Unid. large mammal	3	4	25	14	-	3	20	-	2	-
Sheep-sized mammal	2	-	47	35	-	-	8	1	-	-
Unid. mammal	3	1	26	14	1	4	12	-	4	-
Eroded	1	2	6	14	-	4	7	-	1	1
Gnawed	-	-	1	1	-	-	1	-	-	-
Loose teeth	4	3	6	3	-	-	-	-	-	-
Burnt	-	-	4	6	1	-	27	4	7	-

c). Animal bones from other interior features, manual retrieval

Feature	1301	1297	----- 1295 -----				----- 1291 -----		
	1300	1296	1294	1321	1322	1359	1290	1317	1318
Cattle	7	-	1	2	1	3	-	-	-
Sheep/goat	-	-	-	1	-	-	-	-	-
Pig	1	-	-	4	4	1	-	5	-
Unid. large mammal	8	1	-	8	4	-	-	2	-
Sheep-sized mammal	2	-	-	1	1	2	2	1	4
Unid. mammal	3	-	-	-	2	-	1	-	-
Eroded	13	1	-	4	1	-	1	1	-
Gnawed	-	-	1	-	-	1	-	-	-
Loose teeth	-	-	-	1	-	-	-	-	-
Burnt	3	-	-	4	1	-	1	2	-

d) Summary of identified bones from the causewayed enclosure

	-- Enclosure ditch --		--- 1303/1368 ---		1293	Others
	Overall	Ex. assoc.	Overall	Ex. assoc.	Overall	Overall
<i>Manual retrieval</i>						
Cattle	56	25	19	19	9	14
Sheep/goat	54	5	6	6	3	1
Pig	26	22	167	156	4	15
Red deer	5	5	-	-	6	-
<i>Sieved retrieval</i>						
Cattle	-	-	-	-	3	2
Sheep/goat	-	-	5	5	5	3
Pig	-	-	56	56	21	26
Red deer	-	-	-	-	4	3

Ex. assoc = Excluding associated bones

bones of the feet compared with 68% from sieved samples (archive). Sieving confirmed the dominance of pig bones in this feature group.

A butchered cattle radius from 1302 is the only bone identified to another species from manual excavation while sieving produced a fragment of sheep/goat humerus from 1338.

Pit 1293

Only 77 fragments were recovered by manual retrieval methods from this shallow pit of which 53 were from context 1323 (Table 5b). Overall, 38 were burnt and only 22 could be identified to species, of which cattle is the most common. Six antler fragments, probably all of red deer, were recovered, one of these had not been cast from the skull. Pig and sheep/goat are the only other species identified. Large mammal outnumbered sheep-sized fragments amongst the unidentified material.

Sieving confirmed the presence of large numbers of very fragmentary burnt bones, with more than 1300 fragments from six sieved samples, over 1200 from 1323. A total of 843 (61%) of the sieved bones were burnt. Only 33 fragments could be identified to species, of which 21 are pig, perhaps suggesting that manual recovery in this case had been biased towards the retrieval of larger bones and cattle in particular. Loose pig teeth and foot bones are again well represented in the sieved samples. Sheep/goat and cattle bones and red deer antler fragments were also recovered from the sieved samples in small numbers.

Other interior features

Four other features produced small assemblages of animal bones (Table 5c) and these were supplemented by the retrieval of larger numbers of

fragments from sieving. The number of identified fragments in these assemblages was small. Cattle and pig were again the most common with a few sheep/goat bones and red deer antler fragments. Multiple feature 1301 produced a small group of associated cattle bones. Only a few burnt bone fragments were found in this feature in contrast with the large numbers of burnt flint in this context.

Discussion

The limited extent of the excavation did not produce a large faunal sample capable of answering detailed questions about the pastoral economy of those who used the causewayed enclosure nor about the patterns of disposal of the bones. However, there were some interesting aspects of the assemblage that merit further discussion.

The presence of partial and complete carcasses of domestic stock in the basal fills of the causewayed ditch may represent structured deposition. Only a small section of the ditch was excavated, but a sheep skeleton and the feet of two cattle had been discarded in it. The cattle feet may represent skinning or butchery waste. However, there is no evidence for butchery on the sheep skeleton. Similar deposits have been observed at Hambleton Hill (Legge 1981, 173) and Windmill Hill (Jope 1965; Whittle 1990, 107; Grigson 1999). Several other small groups of associated bones of cattle and pig were found in the interior features at Whitesheet Hill. The antlers may also have been symbolic depositions.

Only the pig assemblage produced a sample large enough for detailed analysis (archive). Sieved samples consistently produced more small bones of the feet and loose teeth than normal retrieval.

However, there was no clear evidence for spatial patterning in the disposal of different parts of the carcase.

The cattle assemblage also shows no major bias towards any particular areas of the body, although most of the metapodials and phalanges were found in discrete associated groups and several small groups of vertebrae were also discovered. In contrast to the assemblage from Hambleton Hill (Legge 1981), there is no indication from this small sample that cattle skull and mandible fragments are under-represented.

Pigs of under one year to over three years of age are represented (tooth eruption and epiphysal fusion data archive). A small number of very porous bones indicate the presence of foetal or neonatal pigs. The samples of cattle and sheep/goat are too small to permit comment on mortality rates other than that both immature and adult animals are represented.

Most of the 38 fragments which bear butchery evidence (archive) consist of fine cuts but in one or two cases a heavier implement has produced chop marks. Of 12 butchered cattle bones, five humeri have cuts associated with the disjuncting of the distal end from the radius and ulna and one radius bears corresponding marks near its proximal end. Twelve pig bones also bear butchery marks associated either with disjuncting or filleting.

Table 5d summarises the total number of identified fragments from the causewayed enclosure. Limited numbers of species are represented and only domestic cattle, sheep and pig were definitely exploited for meat. No goat bones have been positively identified, whereas sheep is present, in addition to the skeleton found in the basal fill of the ditch. Red deer is only represented by antlers and their skull attachments. No bones of roe deer (*Capreolus capreolus*) have been identified and none of the pig or bovine bones is of a size to suggest that wild boar (*Sus scrofa*) or aurochs (*Bos primigenius*) are represented.

The lack of wild mammal bones may simply be a factor of small sample size. They may also have been butchered at the kill site and their bones not brought to the causewayed enclosure. Larger assemblages from other causewayed camps have produced small numbers of deer and other wild mammal bones.

Interpretation of the relative abundance of the domestic species is difficult because of the small sample sizes, and the presence of associated bones, and variations between features. Excluding

associated bones, cattle and pig are broadly equal in the ditch fills with sheep/goat relatively poorly represented (Table 5d). Sieved samples from interior features, however, indicate that the smaller pig bones and teeth are under-represented in manually retrieved samples.

Pit 1303 and recut 1368 contained very high percentages of pig (Table 5b). The comparatively large proportion of butchery marks suggests that most of the pig carcasses were processed. Manual retrieval from other internal features produced small samples that, overall, are not significantly different in species representation from the ditch assemblage. Combining the total fragment counts from normal retrieval and sieving from internal features, pig (54%) comfortably outnumbers cattle (23%), with red deer (11%) and sheep/goat (10%) less common.

Excavations of other causewayed enclosures have produced more bones of cattle than other species (Grigson 1981; 1982), for example the Hambleton and Stepleton enclosures (Legge 1981), Windmill Hill (Jope 1965; Grigson 1965; 1999) and Maiden Castle (Armour-Chelu 1991). Several suggestions could be put forward to explain why pig bones were more abundant in the Whitesheet Hill deposits:

- a) *The assemblage from Whitesheet Hill is not a representative sample from the causewayed enclosure.* Certainly, the full range of variability is unlikely to have been encountered in the small section of ditch excavated and the sample could have been biased by the unusual concentration of pig bones in pit 1303 and recut 1368. However, other internal features also produced higher percentages of pig bones than recorded at other excavated causewayed enclosures.
- b) *The sample was too small to give statistically significant results.* Comparisons were made with the results from the primary fills of the enclosure ditches at Windmill Hill (Grigson 1965; 1999). The relative abundance of cattle, sheep/goat and pig is significantly different from those recovered by hand excavation from all features at Whitesheet Hill. It is clear that similar significant differences also exist between the Whitesheet Hill assemblage and those from Hambleton Hill and Maiden Castle.
- c) *Pig bones were better represented because of the sieving programme.* This can be demonstrated from the interior features at Whitesheet Hill but even the unsieved samples produced relatively more pig bones than the other sites.
- d) *Relatively more pigs were exploited at Whitesheet Hill*

because local vegetation provided a more suitable habitat.

Although a greater percentage of woodland may be indicated by the high proportion of pigs represented and the correspondingly low levels of sheep, which prefer open conditions for grazing, the environmental evidence (below) does not confirm this, although woodland products (pigs, hazelnuts, and possibly pignut tubers) are abundant in some of the interior features in particular. Exploitation of woodland and/or woodland clearances is certainly reflected at Whitesheet Hill.

- e) *The differences might be due to socio-cultural factors.* The Whitesheet Hill assemblage provides further evidence that not all earlier Neolithic assemblages are dominated by cattle bones, as Grigson (1981; 1982) originally suggested. This may reflect greater importance of pigs, not simply in the relative numbers consumed but also in the activities incorporating the deposition episodes at Whitesheet Hill. It has been noted that although several associated groups of cattle bones were deposited in the ditch, such groups were not as common as at Windmill Hill. Grigson (1999, 237), however, has demonstrated that structured deposition of domestic mammals did vary in different ditch sections and it may be that other ditch sections at Whitesheet Hill contain relatively more cattle depositions than evidenced here.

Environment

Land Snails

by Michael J. Allen

The methods of mollusc analysis were those outlined by Evans (1972) and detailed elsewhere (Allen 1989a; 1989b). The Shannon species diversity index (Magurran 1988) was calculated as this provides some indication of assemblage composition and complexity and is applicable to subfossil assemblages rather than total faunal collections (Evans and Smith 1983; Evans and Williams 1991).

The causewayed ditch

A full sequence of 26 samples was taken from the chalky primary ditch fills and the more humic fills of the ditch recut (Figures 5 and 13). Shell numbers were very low throughout the primary chalk rubble fill of the ditch (Table 6). The mollusc assemblages from the basal fills do not seem to represent primary woodland, but indicate an environment with some shade.

Numbers of shells are higher in the secondary fills (contexts 1335, 1334 and 1333) sufficient to make some palaeo-environmental interpretations. Shade-loving species (Evans 1972, 194-5) predominate throughout these fills, primarily *Carychium* and *Discus*. A possible stabilisation horizon (1335) at the bottom of the secondary fills, although dominated by the Zonitids and *Discus*, also contained more open country elements such as *Vertigo pygmaea*, *Pupilla muscorum* and *Vallonia costata*. Some open environments are therefore indicated and although these might be the weathered ditch sides, it is more likely that tall herbaceous grassland, possibly with some scrub, prevailed. A decline in the open country species, and corresponding rise in *C. tridentatum* in particular, probably indicates later grassland succession habitats and more mesic environs of dank grass and shrubs such as hawthorn and hazel. A reduction in *Pomatias elegans* may indicate more stable conditions, perhaps vegetational cover of the ditch sides and fills. The continued presence of shade-loving elements and restricted open country fauna is indicative of shady environments beyond the immediate ditch vicinity.

The ditch recut

The base of the recut (1328) produced a mixed assemblage, notable for the absence of open country species. It is likely that in the period immediately preceding the recut of the ditch, a tall herbaceous vegetation community existed in which some shrubs (eg. hazel, hawthorn etc) were present. As the ditch filled with mildly calcareous humic silt loams, presumably largely derived from the local soil, shell numbers dropped dramatically alongside a significant change in the taxa present. The species present are almost exclusively open country and only a single non-apical fragment of any of the shade-loving species occurs. This indicates a major change in the local environment and probably can be seen as the reduction of shrubs and sward height due to more intensive grazing regimes resulting in a stable grassland. Thus the ditch recut can be seen to correspond to an increase in local land-use, particularly grazing.

Internal features

Two spot samples from pits 1295 and 1303 were analysed. Although molluscs from pit contexts are notoriously difficult to interpret (Thomas 1977; Allen 1995), the main aim here was not detailed palaeo-environmental interpretation, but

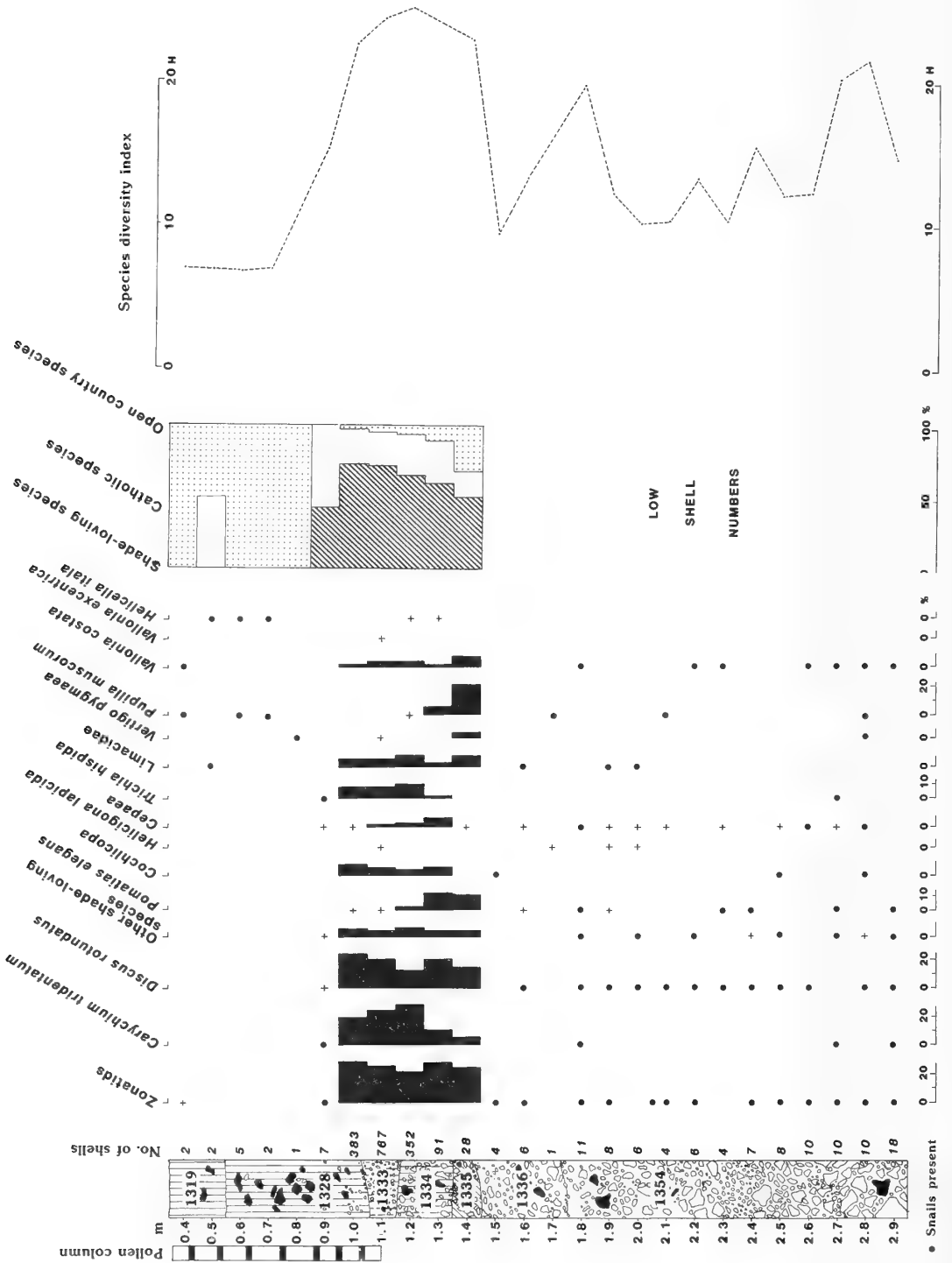


Fig. 13 Mollusc histogram from the causewayed enclosure ditch

Table 6. Whitesheet Hill. Molluscs from the causewayed enclosure

Feature type Feature	Neolithic causeway ditch												Pits																
	1364				1288				1333																				
Context Sample	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	1319		
Depth (cm)	285-	275-	265-	255-	245-	235-	225-	215-	205-	195-	185-	175-	165-	155-	145-	135-	125-	115-	105-	95-	85-	75-	65-	55-	45-	35-	1674	1683	
Wt (g)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	1902	1752	1000	1000
LAND	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
<i>Pomatias elegans</i> (Müller)																													
<i>Actiula fusca</i> (Montagu)																													
<i>Carychium tridentatum</i> (Risso)																													
<i>Carychium</i> spp.																													
<i>Cochlicopa lubrica</i> (Müller)																													
<i>Cochlicopa</i> spp.																													
<i>Vertigo pygmaea</i> (Draparnaud)																													
<i>Vertigo</i> spp.																													
<i>Papilla muscorum</i> (Linnaeus)																													
<i>Valonia costata</i> (Müller)																													
<i>Valonia excentrica</i> Steeki																													
<i>Acanthinula aculeata</i> (Müller)																													
<i>Era obscura</i> (Müller)																													
<i>Punctum pygmaeum</i> (Draparnaud)																													
<i>Discus rotundatus</i> (Müller)																													
<i>Vitrina pellucida</i> (Müller)																													
<i>Vitrina crystallina</i> (Müller)																													
<i>Vitrina contracta</i> (Westerlund)																													
<i>Nasobirena hammonis</i> (Ström)																													
<i>Argopelta pura</i> (Aldar)																													
<i>Argopelta nitidula</i> (Draparnaud)																													
<i>Oxychilus cellarius</i> (Müller)																													
Limacidae																													
<i>Eucosula fulvus</i> (Müller)																													
<i>Cochlodina laminiata</i> (Montagu)																													
<i>Macrogaster rolfhusi</i> (Turton)																													
<i>Classilia bideniata</i> (Ström)																													
Clausiliidae																													
<i>Helicella tiata</i> (Linnaeus)																													
<i>Ajfordia granulata</i> (Alder)																													
<i>Trichia hispida</i> (Linnaeus)																													
<i>Helicogona lapicida</i> (Linnaeus)																													
<i>Cepaea horreensis</i> (Müller)																													
<i>Cepaea</i> spp.																													
<i>Ceapae/Aranta</i> spp.																													
Taxa	7	9	8	5	4	5	3	4	3	4	3	4	8	1	4	3	12	16	22	24	16	4	1	2	2	2	12	14	
TOTAL	18	10	10	10	10	10	10	10	10	10	10	10	11	1	6	4	28	91	352	767	383	7	1	2	5	2	2	149	215

Shannon Index

comparison with assemblages from the ditch sequence.

Both pits produced similar assemblages dominated by shade-loving species and almost completely devoid of open country taxa. The assemblages can be compared, not unfavourably, with the impoverished assemblages from the primary fill of the causewayed ditch, and some elements represent rock-rubble habitats (cf. Evans and Jones 1973). The pit assemblages are more typical of local woodland, or at least leaf litter as at Hambledon Hill (see Bell *et al.* in prep.). The only open country species of significance is *Vallonia costata*. Although known from open woodland habitats (Evans 1972), it is also a pioneering species to be expected in recently cleared woodland.

Discussion

Whether the woodland that evidently existed in the area prior to the construction of the causewayed enclosure and excavation of the pits was primeval or secondary woodland could not be ascertained with certainty. Nevertheless, soon after the construction of the causewayed enclosure there are hints that some regeneration of the woodland did occur but shell numbers are low and it is possible that they reflect an influx of species colonising the micro-environments created by the deep ditch. Woodland regeneration is recurrent in many other causewayed enclosures (Evans and Rouse 1991; Thomas 1982).

It is evident that there was reuse of the area before the ditch was recut. The local woodland or

shrubby habitat was again cleared enabling the establishment of a tall herbaceous vegetation, possibly lightly grazed rough pasture with some shrubs. It was into this environment that the ditch was recut, perhaps associated with a phase of more intensive (?sheep) grazed grassland producing a short dry downland turf.

Charcoal

by Rowena Gale

Charcoal was examined from contexts within seven of the interior feature groups in order to establish the nature of the woody vegetation in the surrounding environment and provide any indication of its exploitation. Identification and methodology follow Gale and Cutler (2000). Although only fragments larger than 2mm were selected for detailed examination, some were still too small to assess whether they arose from stem material or from more mature wood. Any possible distinction is indicated in Table 7.

The identifications show a uniformity of genera throughout the features. Whilst the number of fragments identified from each feature is variable, the overall picture is one of a predominance of hazel, with ash and the Pomoideae group also frequently present, and oak and *Prunus* noticeably less common. Many of the fragments were stem or twiggy pieces. The abundance of hazel wood conforms to the plentiful deposits of hazel nut shells in every pit and a sample from one feature (1299) was made up exclusively from hazel nut fragments.

Table 7. Whitesheet Hill: Charcoal Identification

Feature	Context	Species identified				
		<i>Corylus</i>	<i>Fraxinus</i>	<i>Quercus</i>	<i>Pomoideae</i>	<i>Prunus</i>
pit 1295	1294	21*	7*	-	10	7
	1321	18	10*	2	24	7
	1322	3	5	-	2	-
pit 1303	1346	34*	8	-	4	-
	recut 1368	1302	58*	8*	1	8
saucer pit 1293	1338	61*	8*	-	18	-
	1323	29	1	-	17*	-
	1350	1	-	-	6*	-
posthole 1326	1325	-	1	-	-	-
	natural feature 1297	1337	48	9*	6	9
feature 1299	1343	2	-	-	2	-
	1298	-	-	-	-	-
feature 1301	1300	1	-	-	2	-
?RB feature 1291	1325	?1	1	-	-	-
	1290	4	-	-	2	1

NOTE: * indicates stem material.

In most features the upper layers contained the greatest abundance of charred wood and the widest range of genera, while neither oak nor *Prunus* occurred at the base of the sampled features. The paucity of these two genera must, however, be balanced with the relatively small overall quantities of charcoal recovered from the lower feature fills.

Land clearance prior to construction of the causewayed enclosure may have extended into the immediate vicinity, allowing for early secondary regrowth. The numerous deposits of hazel nut shells indicate that shrubby, fruiting forms of this species were plentiful, suggesting an open aspect perhaps not far from the site. At least one member of the Pomoideae family was relatively abundant, possibly growing as scrubby hawthorn recolonising some of the cleared areas and/or as whitebeam. Blackthorn may also have been competing in this situation. Clearance may have involved the felling of oak/ash woodland. Regeneration from the stumps of immature trees would have occurred unless they had been removed or killed. Such regrowth would have produced numerous shoots that if regularly cut would have resulted in coppice stools. Hazel also coppices easily and would have fruited well in this situation, especially if managed on a cycle of more than six or seven years.

Stem material of ash and hazel was present in several of the pits, lending support to the potential for coppice woodlands. Oak, however, was very poorly represented in the charred samples examined, suggesting that it was either not available or deliberately not selected. While oak, and indeed ash, may not have survived on the downlands around the enclosure, it would be likely to have grown on the clay soils at the base of the hill.

Pollen analysis

by Robert G. Scaife

A sequence of 31 samples was taken from the fill of the recut enclosure ditch (1331) to elucidate the character of the vegetation and land-use during the second phase of the monument. Pollen preservation is always marginal in alkaline soils of rendzina type, especially on chalk. Initial assessment showed that pollen was preserved, although not as well as that of other sites studied elsewhere in southern England (Scaife 1984; 1995; Scaife in Cleal and Allen 1994, 79). Samples were thus selected for analysis.

Seven samples were selected for pollen analysis with standard techniques used for extracting pollen

and spores (Moore and Webb 1978). Because of the low absolute pollen frequencies encountered, relatively large sample sizes of up to 10ml were used. In addition to 'normal' chemical procedures, micromesh (10 μ m) sieving techniques were also used for removal of inorganic fractions. Pollen identification and counting was carried out under normal and phase contrast illumination at magnifications of x400 and x1000 using an Olympus biological research microscope.

Pollen preservation in calcareous soils

It is a common misconception that pollen is not preserved in the highly alkaline and oxidising environments encountered on archaeological sites on chalk. Pollen preservation is usually poor but it has been proven that valuable information regarding palaeoecology of chalklands can be obtained (Scaife 1984; 1995; Dumbleby and Evans 1974; Dumbleby 1978). Such analyses have to take into account the poor preservation of the pollen and the possibility of skewed data resulting from the differential preservation of pollen taxa.

At Whitesheet Hill the fills of the recut are relatively chalk-free silty loams and are undoubtedly derived from the typically worm-sorted upper humic soil horizons (Ah) on the edges of the ditch. These fills most probably derive from surrounding soils very shortly after the re-cut and may provide evidence of the vegetation growing at this time. As in Dumbleby's analysis of postholes at Ranscombe Camp, Sussex (Dumbleby 1986 and pers. comm.) such were analysed in the hope of providing data on the local environs.

The pollen data

Absolute pollen frequencies were measured in samples from 78, 96 and 100cm. Raw pollen data and absolute pollen frequencies (where ascertained) are presented in Table 8. A total of seven samples produced pollen and spores. In the case of samples from 54cm and 64cm pollen was extremely sparse. Pollen sums from the remaining samples range from 100-200.

The data (Table 8) clearly shows that Liguliflorae (*Taraxacum* type) is the dominant taxon in all samples analysed. This is highly characteristic of pollen in downland soils where differential preservation favours this robust pollen type. Similarly, the relatively high values of certain fern spore types must also be noted. The seven pollen levels analysed are all characterised by relatively few pollen grains of arboreal taxa

Table 8. Whitesheet Hill: Pollen counts from the ditch recut.

(Full counts only undertaken on samples at 78, 96 and 100cm)

context	1319				1328		
depth cm	44	54	64	78	88	96	100
TREES							
<i>Betula</i>	-	-	-	-	4	3	-
<i>Pinus</i>	1	-	-	5	1	-	3
<i>Quercus</i>	7	1	-	1	1	5	3
<i>Fagus</i>	-	-	-	-	-	-	1
<i>Tilia</i>	2	-	-	-	-	-	-
<i>Alnus</i>	1	-	-	-	-	3	-
SHRUBS							
<i>Corylus</i> type	3	-	-	-	3	1	2
<i>Salix</i>	-	-	-	-	1	-	-
<i>Calluna</i>	-	-	-	1	1	-	-
HERBS							
<i>Ranunculus</i> type	-	-	-	-	1	1	1
<i>Medicago</i> type	-	-	-	1	-	-	-
<i>Trifolium</i> type	-	-	-	-	1	1	1
<i>Poterium sanguisorba</i>	-	-	-	1	-	-	-
<i>Convolvulus</i>	-	-	-	-	1	1	-
<i>Scabiosa</i>	-	-	-	-	-	2	1
<i>Plantago lanceolata</i>	1	-	1	8	7	-	12
<i>Plantago major</i> type	-	1	-	1	1	-	-
Liguliflorae	77	10	21	168	66	64	45
<i>Bidens</i> type	-	-	1	-	-	-	-
<i>Centaurea</i>	1	-	-	-	1	-	-
<i>Sagittaria</i>	3	-	-	-	-	-	-
Gramineae	3	-	-	11	11	17	28
Cyperaceae	1	-	-	3	-	-	-
Unident./degraded	-	-	-	-	-	3	3
APF (pollen grains/ml)	-	-	-	1743	-	1340	2132
pollen sum	100	12	22	200	100	101	100
SPORES							
<i>Pteridium</i>	16	5	-	88	19	29	33
<i>Dryopteris</i> type	7	4	4	26	9	30	39
<i>Polypodium</i>	9	6	9	12	10	5	15
Sphagnum	-	1	-	-	1	-	-
Pre-Quaternary	-	1	2	1	-	-	-
Spore sum	32	17	15	127	39	64	87

including *Pinus*, *Quercus*, *Fagus*, *Tilia* and *Alnus*, and by the dominance of herbaceous taxa. *Pinus* is likely to originate from a long distance away and may be over-represented in these poor pollen preserving conditions. The presence of tree pollen and especially that of *Quercus* indicates the possible existence of some woodland although not in the vicinity of the enclosure.

Alnus is noted in a number of samples and undoubtedly relates to local alder carr communities in the Stour valley, 0.5km to the north-west of the

enclosure. Small numbers of *Tilia* pollen grains are found at 44cm. Whilst this may be residual from earlier woodland, it is likely that some *Tilia* woodland remained in the region since it has been demonstrated that such woodland was widespread in areas of southern England from c. 7000 BP until its asynchronous disappearance through later prehistoric forest clearance (Turner 1962; Scaife 1980; Greig 1982).

Hinton (below) and Gale (above) have recorded a substantial number of *Corylus* nut fragments from

pits. Whilst these were undoubtedly a valuable food resource, they indicate that scrub woodland may have been present on, or near, the occupation site. Small numbers of *Corylus* pollen grains are present but in view of its high pollen production it appears that by the later Neolithic represented by these upper ditch samples, hazel had been largely removed from the local environment.

Herb pollen numbers comprise the larger part of the pollen spectra, dominated by Compositae and Liguliflorae in large part due to the effects of differential preservation in their favour. Their presence indicates that these Compositae were growing on the site at some earlier stage. It is not, however, possible to state precisely whether these are indicative of pasture, as is often assumed. The presence of other herb taxa indicates that grassland was dominant. *Ranunculus* type, *Plantago lanceolata*, *Poterium sanguisorba*, *Scabiosa*, *Centaurea* and Gramineae may be indicative of such a grassland and perhaps pastoral habitat. The absence of cereal pollen and arable weeds in the spectra may be used as evidence (albeit negative) for a grassland rather than cultivated environments.

A substantial number of spores of ferns were also recovered, especially in the lower levels of the section (context 1328, 78-100 cm). Spores, as with Compositae, are similarly frequently over-represented in pollen spectra from chalk soils. *Pteridium aquilinum*, Polypodium and monolet spores of *Dryopteris* type are relatively abundant. *Polypodium* and *Dryopteris* type are likely to have remained for longer periods in the soil than most of the pollen types noted above and represent an earlier period of woodland growing on the site. Although *Polypodium* is frequently found in open habitats (e.g. dunes, epiphytic on trees and on walls) this may be regarded as a largely woodland taxon.

Pteridium aquilinum has also frequently been recorded in later prehistoric soils from the downlands (Dimbleby and Evans 1974). Similar abundances of *Pteridium* have been recorded from the soils underlying South Street Long barrow (Dimbleby and Evans 1974; Dimbleby 1986) and at Hazelton North Long Barrow, Gloucestershire (Scaife 1990, 218). This has posed an interesting problem discussed by Dimbleby (1986) who notes that bracken does not occur as a normal component of the chalk vegetation today, being characteristic of neutral to acid soils. This may be a result of spores being introduced from dung of cattle which had been grazing on older and non-poisonous bracken

(Dimbleby 1986, 144), or manuring, or possibly the presence of locally more acidic soils. Bracken was in the past a valuable resource for a variety of uses including domestic and animal bedding (Rymer 1976; Clapham and Scaife 1988). It is also possible that bracken may have regenerated subsequent to forest/scrub clearance when soils were thicker, more stable and possibly decalcified. *Pteridium*, a frequent colonizer after fire whose spores are also relatively resistant to decay, may derive from an earlier stage of woodland and soil characteristics.

Conclusion

Pollen analysis of base-rich chalk soils is always less satisfactory than that of acid soils. In spite of this useful interpretations have been made, especially when compared with data from plant macro-fossil and molluscan analyses. Results shows that the local environment was largely devoid of trees, although some localised growth and/or woodland at some distance may be indicated by sporadic pollen occurrence of oak, lime, beech, hazel and alder. Herb pollen are dominated by Compositae (Liguliflorae) largely over-represented through differential preservation. This latter taxon, along with other herbs, is suggestive of a grassland environment. There is no indication of cereal or other cultivation. That woodland and/or scrub existed prior to clearance is evidenced by substantial quantities of spores (again differentially preserved) of *Polypodium* and monolet (*Dryopteris* type) that have remained in the buried soil. The characteristic presence of *Pteridium* in chalk soils is also noted at this site. While the possibility of manuring is considered, it seems more plausible that the spores of bracken may result from earlier episodes of burning of woodland/scrub on the site, perhaps when soils were of a different character.

Plant remains by Pat Hinton

Charred plant remains floated from the environmental samples were sorted by binocular microscope at x7-40 magnification. Samples were from internal features and dominated by fragments of hazel nut shells. Fragments larger than c. 2 x 2mm were removed and added to those previously extracted from the 5.6mm and 2mm fractions of the residues during the flotation procedures. These are recorded by weight in Table 9 although many smaller fragments remain unsorted.

Table 9. Whitesheet Hill: Charred plant remains, summary data

Several samples from different contexts were analysed from each pit, but are summarised by feature (details in archive).

	Feature (pits)	pit 1295	pit 1303	saucer pit 1293	post hole 1326	nat.feature 1297	feature 1299	feature 1301	?RB feature 1291
no of samples/sampled contexts		3	3	3	1	4	1	1	3
Total volume (litres)		30	30	19	7	40	8	10	25
<i>Corylus avellana</i> L. nut shell fragments, (g)		20	26.5	104.5	2	155	17	3.5	6
<i>Prunus spinosa</i> L. (stone)		-	1	-	-	-	-	-	-
<i>Conopodium majus</i> Loret (tuber) cf <i>C. majus</i> (tuber fragments)		-	-	c. 11	-	-	-	4	-
<i>Vicia/Lathyrus</i> sp. (seed)		+	-	+	-	+	+	++	-
<i>Solanum</i> cf <i>nigrum</i> L. (seed)		-	1	-	-	1	-	-	-
<i>Galium</i> sp. (seed)		-	-	-	-	-	1	-	-
<i>Triticum</i> cf <i>dicoccum</i> Schubl. (grain)		1	-	-	-	-	-	-	-
(glume base)		-	-	-	-	1	-	-	-
<i>Triticum monococcum/dicoccum</i>		-	-	-	-	-	-	-	1
<i>Triticum</i> sp.		1	-	-	-	-	-	-	-
<i>Cerealia</i> indet. (grain fragments)		+	+	?	-	+	?	-	+
+ = less than 10 fragments		++ = 10-20 fragments							

Wild plant foods

Hazel nut shell fragments were found in every sample taken from features within the causewayed enclosure. There were no whole nuts and very few fragments were more than a quarter of a whole shell. A number of fragments indicate impactation or crushing suggesting that they were deliberately broken by hand. There is no indication of more refined techniques such as those suggested by Scaife (1992), nor of natural separation at germination. No traces of kernels were found nor signs of gnawing by animals.

Crude estimates of the number of nuts involved experimentally charring six modern nuts gathered from close to the site (in late autumn). These gave an average weight of 0.53g, thus 0.5g was taken as an estimate of the charred weight of a single nut. From this we can calculate that the fragments (125.5g) from context 1341 (pit 1297) would represent about 251 nuts and the 82g from context 1350 (pit 1293) about 164 nuts. Using Scaife's (1992) methods for larger samples of Mesolithic nuts the estimates would be at least doubled.

Tubers and fragments of *Conopodium majus* (pignut, earth-nut) were identified by Jon Hather whose microscopic examination (archive) showed that there was no evidence of peeling or scraping of the tubers, although the upper part of the tuber had been removed before charring occurred. Further, the particular nature of the enlarged vesicles indicated that the tissues were relatively fresh when charred rather than having been previously dried in

the ash of the fire. The sample from pit 1293 included, in addition to three whole tubers, about 30 fragments. By dividing their weight by the weight of individual tubers, Hather estimated that these fragments represent probably about another eight tubers, giving a total of approximately eleven from the sample.

A stone of *Prunus spinosa* (sloe) from pit 1303, is incomplete, but its size (c. 5.5 x 4.7mm) is typical of the small seeded sloe (var. *microcarpa*).

Cereals

The few grains recovered are mostly in very poor condition. Only one, from feature 1295, is at all well-preserved and is probably *Triticum dicoccum* (emmer) from a one-seeded spikelet. The other grains are very fragmentary, their surfaces almost totally abraded. They have been identified as wheat only by the characteristic outlines of surviving parts of the grains. A single glume base from 1297 is equally damaged but again likely to be emmer.

Weed seeds

Few weed seeds were recovered and identification is not certain beyond generic level. A damaged seed of *Vicia/Lathyrus* sp. (vetch) is compatible with *V. sativa* ssp *nigra* (common vetch) but the damage and distortion makes it impossible to identify this further. A very abraded seed of *Solanum* cf. *nigrum* (black nightshade) is likely to be black nightshade rather than *Solanum dulcamara* (bitter-sweet).

The third seed was an incomplete example of *Galium* spp. (bedstraw, cleavers) and its size suggests one of the smaller bedstraws, eg. *Galium verum* (lady's bedstraw).

Seed impression

The Neolithic pottery was examined for possible impressions of plant remains. A latex cast showing part of a grain of emmer was obtained from a sherd from context 1342.

Discussion

It is common for Neolithic sites in Britain to include a range of wild fruits and seeds but only small amounts of cereals (Moffet *et al.* 1989) and the results here are comparable. The predominant wild plant food represented is hazel, which grows in a range of soil types but only flowers and fruits when allowed light, such as in open woodland, woodland margins, and scrub.

There exists the possibility that the shrubs or trees from which the nuts were gathered were not entirely 'wild' and it might be that a harvest of nuts was a further aim in the management of woodland by the clearance of light-obscuring vegetation, perhaps in conjunction with coppicing. Fruits other than hazelnuts are represented only by one sloe stone. Sloe, like hazel, grows in woods, hedges and scrub and needs light to flower and fruit freely.

Tubers of pignuts have a history of collection for food or medicine (Grigson 1975, 232), but are rarely recorded from archaeological sites. They have been recorded at Windmill Hill (Fairbairn in Whittle *et al.* 1999), but poor preservation prevented conclusive identification of tubers in Late Neolithic/Early Bronze Age samples from Robin Hood's Ball, Wiltshire (Carruthers 1990). Moffet (1991) has identified pignuts (*Conopodium majus*) from a pit containing a Middle Bronze Age cremation burial at Barrow Hills in Oxfordshire.

Tubers cannot be easily pulled from the soil and require careful digging out so are unlikely to be included by chance. The presence of pignut tubers in association with hazel nut refuse in two of the pits (and probable fragments in others) at Whitesheet Hill is fairly convincing evidence for their collection as food at this site. After flowering the stems and leaves of pignut plants die back and by July only the tuber is alive (Grime *et al.* 1988, 202). This suggests that they were dug before mid-summer, but the hazelnuts that accompany them could only have been gathered in the autumn, when pignut plants would not be visible. Since the tubers

were charred soon after digging it would mean (if the tubers and nut shells were burned at the same time), either that the nuts had been stored until the spring, or that locations where tubers grew densely was known. Although the pignuts and hazel nut fragments occur in the same contexts in the pits, it does not necessarily follow that they were burned at the same time.

Pignuts are plants of damp woods, found today in the more acid soils of permanent grassland which have developed from cleared woodland. Uncommon on chalk soils, it is likely that tubers originated in wooded areas or on thicker more acid soils locally.

The seeds of the probable vetch, nightshade and bedstraw, today are found in hedges, scrub, arable or grassland, may have become included in the deposits as weeds of cultivated cereals, perhaps originating in the margins of cleared areas. Common vetch seeds, however, are edible, while bitter vetch (*Lathyrus montanus*) has tuberous rhizomes long known to be edible (Grigson 1975, 153-4).

The impression given by the results from the Whitesheet Hill samples is that cereals formed a minor part of the vegetable diet but possibly they are under-represented. Poor condition of the few grains and fragments indicates charring at high temperatures and subsequent damage, and it may be that they represent only a fraction of what was originally burned.

There is too little evidence to discuss whether cereals were grown near the enclosure or whether they were brought in from elsewhere, perhaps as ears or spikelets after preliminary threshing.

OTHER SITES ON WHITESHEET DOWN

Three other features on Whitesheet Down were also examined (Figure 1), and are summarised below. They comprise a Beaker pit on Mere Down and two cross-ridge earthworks (Whitesheet Linear and Mere Down Linear).

Mere Down Pit

On the eastern side of the Mere Down plateau the pipe-trench cut through a small U-shaped pit (Figure 1) 0.6m wide and 0.6m deep (Figure 14). The base of the dark fill (1260) was rich in charcoal,

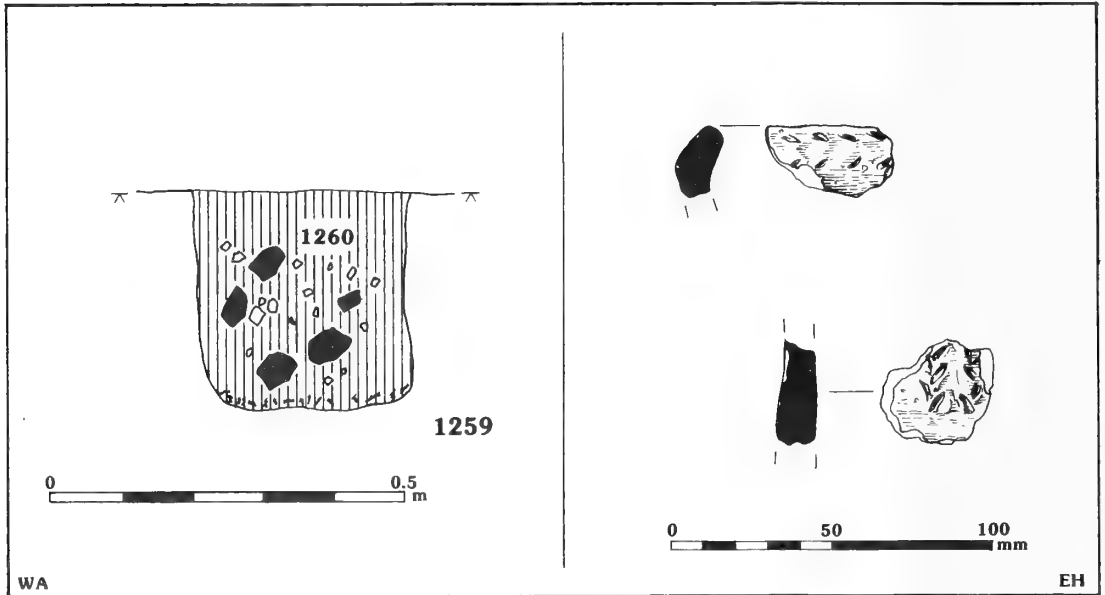


Fig. 14 Mere Down Beaker pit

with some of the fill recovered and wet-sieved in order to recover both environmental and artefactual evidence.

Two sherds of a collared, rusticated Beaker with paired, plastic, finger-nail decoration were recovered (Figure 14). Decoration was in vertical columns on the body but horizontal above the collar. Collared Beakers are rare and usually associated with domestic sites rather than funerary contexts (Clarke 1970, 36–7). The 39 fragments of both burnt and unburnt animal bone included pig (including two skull fragments), one ovicaprid bone and a tooth of a short-tailed vole (*Microtus agrestis*). Fifteen pieces of worked flint included a scraper manufactured on a thermally fractured fragment. Two fragments of burnt hazel nut shell were recovered from the sieved sample.

Whitesheet Hill Linear Ditch

This ditch (SAM 442), over 275m long, lies between the causewayed enclosure and the hillfort (Figures 1 and 2) and is aligned north-east to south-west. A well-preserved bank is extant on either side of the ditch although eroded in several places by trackways. The pipeline crossed the ditch directly on the line of the current access track thus the banks were no longer extant and the ditch was only just visible prior to excavation. It has been suggested that this feature is Neolithic (Oswald *et al.* 2001, 65 and 136).

The ditch (1500) was 0.65m deep and 2.2m wide at the surface with an irregular profile (Figure 15), being much steeper on the eastern side. A further irregularity was a small step at the base of the ditch that may indicate a recut, although this could not be substantiated in the fill sequence. Weathering and/or the use of the track may account for the surface width of the ditch, the profile indicates that 1.7m may be closer to the original size.

Angular fragments of chalk 50–100mm in size formed the main part of the basal fill (1510) along with compact decayed chalk and some large flint nodules. A secondary fill (1507) made up of fine chalky material and unworked flint nodules is probably aeolian in origin and is reminiscent of fills of ditches in the Dorchester area of Dorset, e.g. Mount Pleasant (Wainwright 1979) and Alington Avenue (Allen 2002a) which have been dated to the Bronze Age.

A small ditch recut (2m deep and V-shaped in profile) was recorded within the upper part of the fill sequence. This was aligned directly along the main linear ditch. A sample column was taken from the section in order to examine the environmental evidence.

Thirteen pieces of worked flint were recovered from the main ditch, and a further six from the small recut. The condition of the material from the main ditch ranges from fresh to dulled and iron-stained. Most pieces were flakes, including a single scraper. A single small fragment of ovicaprid

(sheep/goat) bone was recovered from the basal fill of the ditch.

Few land snails were recovered from the sample column, especially when compared to the potential aeolian deposits from other sites mentioned above. Snails were predominantly open country species (Table 10) and those catholic species that occurred (*Trichia hispida*) are common in open grassland and arable environments. The deposit probably accumulated during a prolonged phase of arable

activity resulting in deflation of local soils and deposition of wind-blown silts in the ditches. This assemblage seems to be more typical of Bronze Age rather than Neolithic hilltop environments.

Mere Down Linear Ditch

A second linear ditch (SAM 417) lies to the east of the hillfort, towards the Beaker pit (Figures 1 and 2). As with the Whitesheet Hill Linear, there are

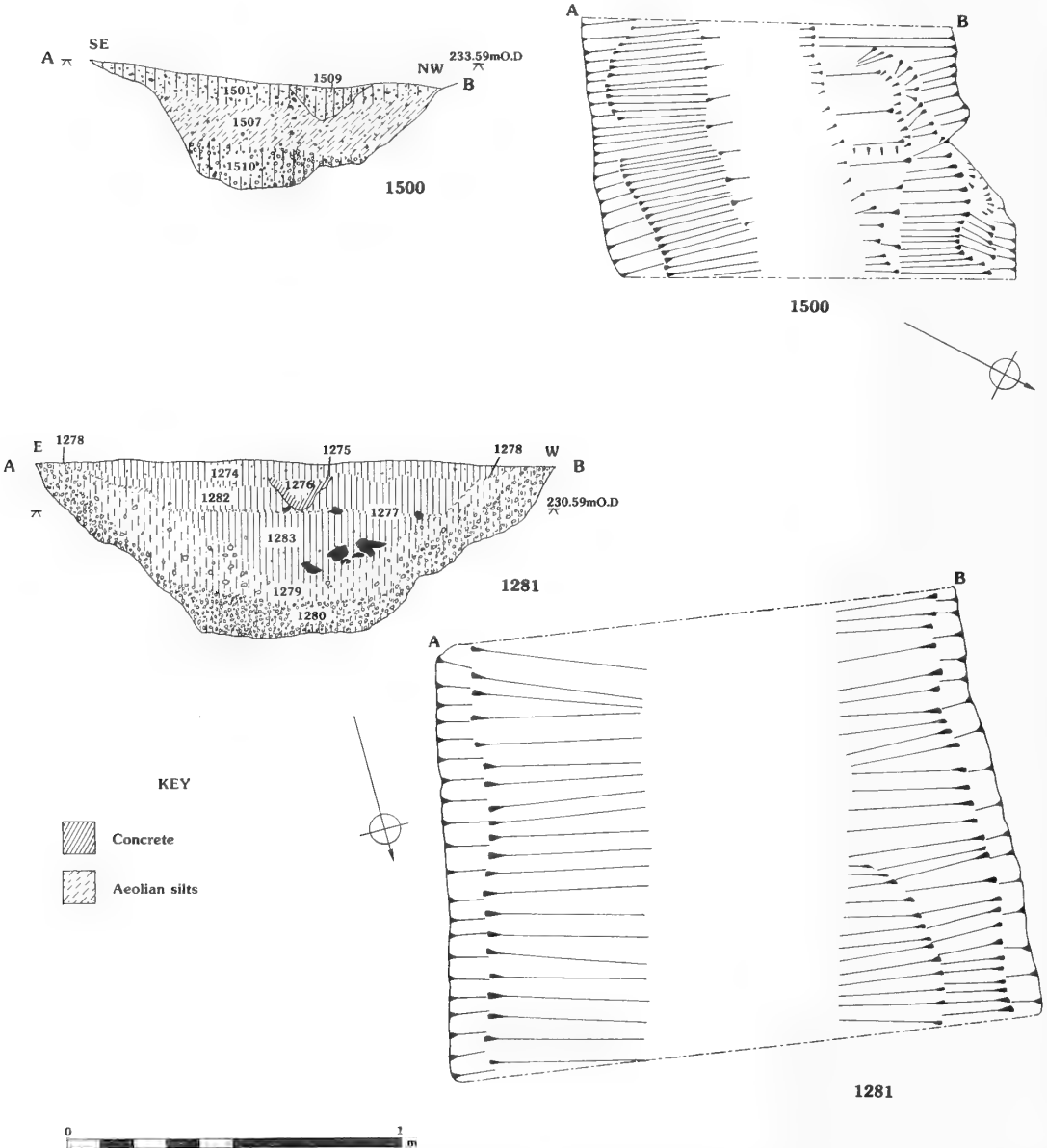


Fig. 15 Whitesheet Hill Linear and Mere Down Linear

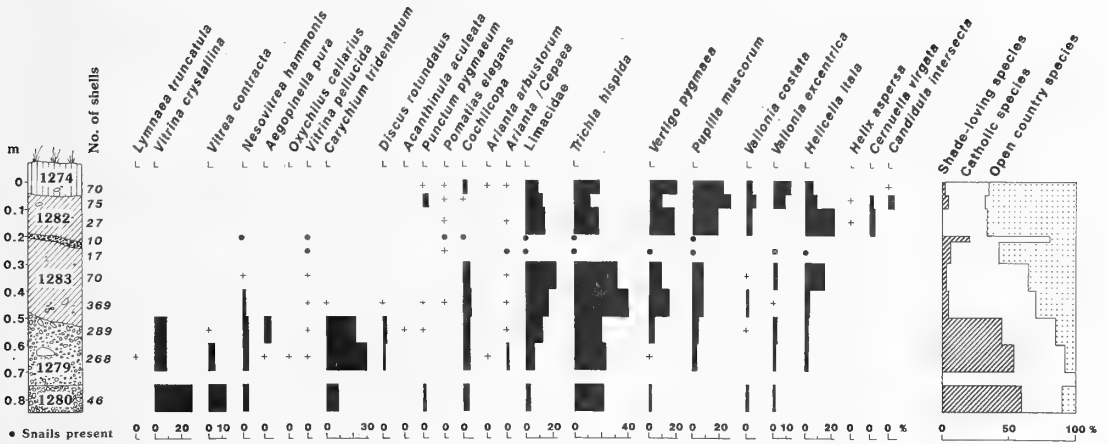


Fig. 16 Mollusc histogram from the Mere Down linear

banks on both sides. It is aligned north-south and can be traced for over 600m across Mere Down. The pipeline route crossed the monument immediately adjacent to the current access track, at a point where the banks were no longer extant and the ditch was only just visible prior to excavation.

Upon excavation (Figure 15) the ditch proved to be 1.05m deep and 3.1m wide at the surface. It had moderately sloping sides and a flat base, with a ledge on the lower part of either side indicating the possibility of a recut. A basal fill (1280) comprised angular chalk rubble with a few unworked flint nodules. Above this deposit were secondary fills of loamy soils (1279, 1283), again with occasional flint nodules, sealed by a thin layer of very fine flint gravel, almost certainly water-lain. This deposit was quite level and may represent the base of a ditch recut for drainage purposes. Above it a stone-free layer of soil (1282) was cut by a small concrete-lined drainage ditch (1273).

Eighty-one probably residual, abraded worked flints were recovered. Two sherds of grog-tempered pottery, possibly from the same vessel, from the lower ditch fills and a single iron nail or stud from the thin gravel deposit 1277 are probably Roman, a few fragments of animal bone were also recorded.

A column of samples through the ditch fill sequence was analysed for molluscs and four distinct mollusc assemblages can be detected (Figure 16). The basal fill (1280) produced an assemblage dominated by shade-loving species and characterised by a high proportion of *Vitrea crystallina* and *V. contracta* with *Trichia hispida* and *Carychium tridentatum*. Although most of this assemblage can be classed as woodland, the *Vitreas* and *Carychium* have affinities with the catholic

group (e.g. Kuiper 1964) and are common in chalk grassland succession communities (Cameron and Morgan-Huws 1975). More significant is that the long ungrazed grassland on the steeper slopes of Whitesheet Hill today supports a fauna dominated by *Vitrea crystallina*, *Carychium*, accompanied by *Nesovitrea hammonis*, *Trichia hispida* and the Introduced *Helicellids* (Allen pers. obs.). We can be reasonably certain that the local landscape in which the ditch was cut was one of tall ungrazed herbaceous grassland and some shrubs (perhaps blackberry and hawthorn).

Fill 1279 produced high shell numbers and a change in species composition. Although shade-loving species still predominate, *Carychium* and *Trichia* are now the main components and a number of more open country and even xerophilous species are present. This assemblage is indicative of grassland in which light grazing has occurred. The secondary fill 1283 produced a significant reduction in the shade-loving group and is dominated by *Trichia* and *Limacidae*. Open country species are present in low, but increasing, numbers and comprise mainly *Pupilla muscorum* and *Vertigo pygmaea*. These restricted assemblages with low species diversity indicate harsher open dry conditions and possibly arable contexts; *Pupilla* and *Vertigo* both inhabit bare ground environs and *Hellicella itala* is common in ancient tilled areas (Evans 1972, 181), but equally may indicate environs of short-turfed grazed grassland.

The tertiary fill (1282) produced assemblages almost largely comprised of open country species *Pupilla*, *Trichia*, *Vertigo*, and *Helicella*. These are assemblages typical of short open dry grassland, and the reduction in *Helicella* can be seen in part as

a result of competition for the Introduced Helicellids, but also possibly increased grazing intensity. This episode can be attributed to the medieval period or later by the occurrence of Introduced Helicellids (Kerney 1977).

Molluscan evidence indicates that the ditch was dug when long, probably ungrazed, grassland existed. It is thus evident that Bronze Age tillage had ceased and grassland had become established. It is likely that within this tall herbaceous vegetation other shrubs and bushes were dotted around the hilltop, possibly more prominent on the steeper slopes. Soon after the ditch was dug there is evidence for light grazing of the grassland. The ditch may therefore relate to pastoral farming management. It is generally thought that until the medieval or post-medieval periods grazing was fairly light. More intensive grazing producing short turfed dry grassland or even limited tillage can be seen in this last period.

DISCUSSION

by Michael J. Allen and Mick Rawlings

Discussion of the nature of Neolithic activity at Whitesheet Hill is restricted by the limited area examined within the pipeline corridor. Information about the date and nature of the earthworks, and activities in the interior have been elucidated, however, along with an environmental sequence and assemblages of various artefact types. This data can address some of the fundamental questions about the causewayed enclosure, the landscape in which it sits, and the landscape that it served.

The presence of a large undated circular enclosure on another spur of the hill, defined by an uninterrupted ditch, serves to highlight the number and range of monuments at Whitesheet Hill.

Date of Construction and Activity

Radiocarbon dates for the primary fill of the causewayed ditch indicate construction about 3730–3370 cal BC, which is directly comparable to dates for the enclosure ditches at Windmill Hill (Ambers and Housley 1999), Maiden Castle (Ambers *et al.* 1991), and Hambledon Hill (Bayliss *et al.* in prep.). More significant, however, is the date range of the features from the interior. These clearly fall into a range of c. 3720–3330 cal BC, proving that both the interior pits and the enclosure are contemporary events within the earlier Neolithic. These

contribute to an increasingly coherent group of dates for causewayed enclosures in Wessex.

Nature of the Monument

The form of the Whitesheet enclosure is described above and summarised elsewhere by Oswald *et al.* (2001, fig. 8.4, 157); it is typical of many such enclosure monuments. Excavation, however, revealed the scale of the ditch to be far from the 1.35m depth recorded by Piggott (1952, fig. 2). The size and shape of the ditch was unprecedented for a causewayed enclosure, being 2.8m deep, with a narrow 1m wide and 1m deep almost vertical sided 'slot' in the base making it almost defensive in form and quite unlike the typical broad, flat-bottomed, U shaped profiles of other enclosures (see Oswald *et al.* 2001, fig 3.8).

site	typical width	typical depth	form
Maiden Castle	3–4m	1.2–1.6m	broad flat bottomed U-shaped
Windmill Hill	2.5–4m	0.8–2.3	very broad flat bottomed U-shaped
Hambledon Hill c	1.8	1.1	broad flat bottomed U-shaped

This begs two questions: Did Piggott reach the bottom of the ditch in his cutting I (Piggott 1952, fig 2); and is the function of this causewayed enclosure significantly different from others?

Outlook and Landscape

From the enclosure circuit there is a clear series of views over the local landscape. From the eastern side the monument looks down the local deep-sided dry valley, and on the opposite side, the chalk escarpment falls away to the south and north-west giving panoramic views of the Blackmore Vale. The enclosure is conspicuous *from* all the landscapes it views. However, these views are not as clear, nor as striking in all directions from the interior of the enclosure. None of the artefact assemblages suggests any defensive or offensive events as seen at Carn Brae (Mercer 1974; 1999) that might have provided some light on the nature of the excavated ditch profile. The ditch at the location excavated was, however, across the most vulnerable location facing a spur towards the hillfort rather than steep scarp slope. Piggott's ditch faced on to the opposite spur towards the undated enclosure (Figure 2). This *might* suggest that Piggott had only reached

compacted primary fill rather than the true base of the ditch.

In many respects, Hambledon Hill provides the most obvious comparison for the range of monuments and activities now documented on Whitesheet Down. The similar physical location of the two sites has been noted before (Thomas 1991, 36): both occupy the very edge of the chalk uplands, at the junction with the low clay vales to the west. Both have more than one enclosure and although the uninterrupted ditched enclosure at Whitesheet Hill has yet to be investigated, similar enclosures have been found which are of earlier Neolithic date, e.g. Bury Hill, Sussex (Bedwin 1981).

Like those at Hambledon Hill, the monuments on Whitesheet Down occupy an extensive area of upland plateau, separated from the rest of the surrounding chalk massif by a number of linear ditches or cross-ridge earthworks. Excavation undertaken as part of the pipeline work indicates that at least one of these earthworks was constructed in the Romano-British period. Elsewhere within Wessex a range of dates has been suggested for this monument type, ranging from the Neolithic through to Romano-British. Although the excavated examples at Hambledon Hill are clearly contemporary with the causewayed enclosure (Mercer 1980, 40), this is a rare occurrence. More typical dates are from the 2nd and 1st millennia BC (Fowler 1964; 1965; Rahtz 1990; Cunliffe 1991, 36-9).

Activity and Function

As with many Neolithic monuments there is evidence for earlier, non-monumental activity. At Whitesheet this comprises a dated and weathered residual pig bone in the base of the recut of the enclosure ditch that dates to the Early Neolithic (4250-3350 cal BC).

Evidence of activities within the enclosure is provided by the pits. Although severely truncated along the trackway and old coach road, they nevertheless provided artefactual assemblages of pottery, flint, bone and charred remains. Certain of the pits also contained sarsen but more often large flint nodules, including some reused ground stone implements. Earlier Neolithic pottery of South-Western Style (Whittle 1977) and considerable quantities of flint debitage, much of it burnt, were also recovered. The flint was not calcined, but a very high proportion showed signs of burning (Healy pers. comm.).

All of the pits contained solution features or pipes. This may reflect the high concentration of solution features on the hilltop, or there may be a more formal link. Excavation of pits through clay may have been easier than through chalk, or the clay may have been a valued resource. The coincidence of Neolithic pits and natural features such as tree hollows and solution features is also noted by Healy at Hambledon Hill (Healy in Mercer and Healy in prep.).

The faunal assemblage from the pits was dominated by pig, with cattle, some red deer antlers and a few sheep/goats present. Again much of this material was burnt, and the pit fills contained considerable quantities of charcoal and charred hazelnuts. The features themselves showed no signs of internal burning suggesting that the material had been introduced, presumably from fairly close by, probably within the enclosure.

Overall much of the debris seems to indicate food waste. There are no 'placed' items, just discarded material. No other obvious activities are immediately evident in the record. This aspect may find parallels in the midden layers in the outer enclosure of Maiden Castle (Sharples 1991, 253-4), also seen as the products of activities taking place within the enclosure.

Whether or not these activities could be described as the disposal of domestic refuse or a more structured mode of deposition is a question intrinsically linked to the discussion of the function of causewayed enclosures (cf. Smith 1971, 100; Gardiner 1988, 306-15; Thomas 1991, 34; Oswald *et al.* 2001). At Hambledon Hill, Dorset (Mercer 1980, 23), most of the gabbroic pottery, at least two volcanic rock axes and all of the groundstone rubbers were found in pits within the interior of the main causewayed enclosure. The flintwork tended to be biased towards particular artefact types and red deer antlers, a rarity in the ditch fills, occurred in the pit bases (see also Gardiner 1988, 312-3). Some of the pits at Hambledon Hill are described as having held posts which were rammed into the pit fills, and were suggested to represent markers or possibly structural elements; but Mercer concluded that 'it would be a fair interpretation to infer that no feature on the interior suggests a purely domestic function and that, where the evidence is at all positive, irrational considerations would appear to be paramount in their digging, furnishing and filling' (*ibid.*, 25).

No spatial patterning of the interior features can be observed at Whitesheet Hill, largely because of the linear nature of the excavated area. It is clear

that the pits are located within the central area, away from the ditch and internal bank, and have no direct physical relationship with them. An almost total absence of burnt material from the ditch fill sequence was recorded by these excavations and those by Piggott (1952), and indicate that activities resulting in the deposition of such material were confined to the more central part of the enclosure and did not extend as far as the ditch.

A second, undated, phase of activity is indicated by redefinition of the enclosure ditch. The upper part of the ditch sequence was clearly recut with one rim sherd of Mortlake-style Peterborough Ware in its fill. The radiocarbon date from animal bone retrieved from the base of the recut indicates that the bone is residual. Peterborough Ware, however, is not infrequently found in secondary contexts at earlier Neolithic monuments, including causewayed enclosures such as Whitehawk Camp, Sussex (Curwen 1936) and Maiden Castle (Sharples 1991). Sharples suggests that recutting existing ditch circuits and the addition of extra ditch circuits in other causewayed enclosures may relate to changes in, and redefinition of, the function of the site (Sharples 1991, 255).

Food and Feasting

The dominance of pig is unusual for causewayed enclosures where cattle usually dominate. At Hambledon Hill, Dorset, the contemporary enclosure of a much larger area by the use of outworks and natural steep slopes has been seen as a means of controlling herds of cattle for short periods of time (Mercer 1980, 60). It has also been argued (Edmonds 1993, 113) that the presence of cattle at causewayed enclosures is linked to the status of the animal, i.e., high status is granted/confirmed by the deposition or consumption at a prestigious site. At Whitesheet Hill, although cattle are represented in the faunal assemblage, there is no indication of any differentiation in the mode of deposition of this animal. The high occurrence of pig may relate to the observation that most of the animal remains are food debris, and there is little other activity represented.

Burning is clearly evident from the preponderance of burnt flints and charred remains from the pits. The site of this burning was not identified, but at other sites such as Etton, for instance, areas of intense and/or repeated burning were identified on the buried soil (Challands in Pryor 1998, 73–7). The lack of identification at

Whitesheet Hill may relate to the limited area examined, but also to the possibility that no buried soil existed or that burning on a former chalkland ground surface within the enclosure may have left no obvious physical trace.

Neolithic Hilltop Environment and Land-use

The nature of the landscape context around causewayed enclosures, evidence for woodland clearance and the scale of any clearance (Thomas 1977; Evans and Rouse 1991; Bell *et al.* in prep.), are considered important factors in understanding how these monuments operated (Oswald *et al.* 2001; Darvill and Thomas 2001, 16). Even the ubiquitous presence of woodland in the Neolithic is now questioned (Allen 1997, 278; 2002b). We must admit that the evidence for the pre-monument environment at Whitesheet is slim.

The poor molluscan assemblages from the primary fills of the ditch indicate the presence of shade, possibly open woodland or shady grassland and shrubs. We cannot be sure of the nature of those shady habitats, there is no possibility of indicating the presence, or clearance, of woodland around this monument, let alone the scale of clearance and proximity of woodland (cf. Bell *et al.* in prep.). More significant are the coeval assemblages from the pits that suggest the presence of woodland and leaf-litter. We may tentatively propose that the ditch circuit at least was cleared of woodland, but the monument as a whole was probably located within a more extensively cleared area. There are insufficient data to hint at woodland regeneration, as seen at a number of other sites such as Maiden Castle (Evans and Rouse 1991) and the Sussex causewayed enclosures (Thomas 1982). By the time of recutting of the enclosure ditch in the later Neolithic, tall herbaceous vegetation existed, possibly as lightly grazed pasture.

If woodland surrounded the enclosure, it would have provided suitable pannage for the pigs that formed the major element of the faunal remains recovered.

Archaeological Development of Whitesheet Down

Evidence for Neolithic activity is restricted to the enclosure itself and its interior, but may also include the undated enclosure to the north (Figures

1 and 2). Using land snail evidence the cross-ridge earthwork adjacent to the main enclosure is not Neolithic (*contra* Oswald *et al.* 2001, 65 and 136). The barrow overlying the earthwork is thus later again (*cf.* Oswald *et al.* 2001, 136).

Until the construction of the Iron Age hillfort there is no subsequent intensive activity on the Down. Activities isolated by both time and location occurred throughout the Bronze Age, and these include the isolated Beaker pit on Mere Down which contained a collared Beaker and may indicate domestic and settlement activity rather than a funerary deposit. Presumably Bronze Age barrows scattered across the hilltop, many of them false-crested, may allude to settlement in the dry valley to the west or the clay vale to the east. The cross-ridge earthworks on Whitesheet Down and Mere Down are more enigmatic. While the former indicates land division probably in the Bronze Age, the latter seems to suggest similar activity in the Romano-British period.

The most coherent record, however, is that of the prehistoric land-use on the Down derived largely from land snail evidence from the Beaker pit, and cross-ridge earthworks. The Bronze Age environment and land-use was strikingly different from the Neolithic. Tillage and soil deflation (wind blown soil erosion) is indicated by aeolian deposits in the Whitesheet cross-ridge earthwork and its accompanying restricted and xerophile mollusc faunas loosely attributed to the Bronze Age. Thick humic, calcareous soils (brown earths) in the enclosure recut, were degraded to silty calcareous brown earths or rendzinas by the time the Whitesheet cross-ridge earthwork was infilling. We cannot be sure whether the environmental sequence from the Whitesheet linear covers the Iron Age, but when the Romano-British cross-ridge earthwork (Mere Down Linear) was dug, intensive Bronze Age agriculture and grazing had ceased. This ditch was dug through a long, probably ungrazed, grassland in which small shrubs and bushes very likely existed with the tall grassland of a typical chalk downland. Soon after construction of the ditch, there is evidence to suggest that the downland was lightly grazed. More intensive grazing producing a short grass sward occurred only in the medieval or post-medieval periods. The Mere Down cross-ridge earthwork, at least, may therefore be a part of pastoral land management and division.

Evidence so far recovered from Whitesheet Hill indicates that activities classed as non-domestic or,

using Mercer's (1980) terminology, 'irrational' took place in the earlier Neolithic and later. These activities included the construction of major monuments and smaller-scale activities such as the deposition of a Beaker with associated pig bone in a shallow pit described above.

PART 2: WHITESHEET QUARRY

Mick Rawlings

The pipe trench descended from the south-west of Whitesheet Hill down the scarp slope of a small spur. At the base of the slope, immediately below the disused quarry (Figure 1), a dark brown buried soil was sealed beneath a light, highly calcareous, silty hillwash, and beyond which two ditch sections and two pits were identified. These features and hillwash sequence were only recorded in the pipe-trench section. A number of artefacts were recovered manually and samples taken for snails and charred remains.

The buried calcareous brown earth (1225) lay directly on the chalk bedrock nearest the quarry and was sealed by a pale brown, highly calcareous, silty hillwash up to 0.4m thick, the result of downslope wash-out of chalk mud from the quarry. The dark, grey-brown, humic silty loam was recorded in section over a total distance of 76m and was c. 0.30m thick. Within it was a band of burnt sandstone fragments, probably dumped material rather than structural. Calcareous hillwash extended further down slope than the buried soil and overlay the natural geology.

The feature nearest Whitesheet Hill was a U-shaped ditch (1237), 1.8m wide at the surface and 1.6m deep, which was the only feature sealed by the buried soil. It was filled with an homogeneous brown soil, while the buried soil that sealed it filled the upper part of the ditch. This ditch was located towards the downslope (western) end of the buried soil. A second U-shaped ditch (1234) was recorded nearly 75m to the west and was 1.3m wide at the surface and 1.4m deep, but only sealed by hillwash.

Two pits were recorded between the two ditches. The first (pit 1211), about 50m downslope from the first ditch was U-shaped 1.5m wide, 1.6m deep and sealed by hillwash. A series of fills contained small fragments of chalk and much charcoal. A second pit (pit 1215) was recorded 10m to the west of the first and 11m upslope of the second ditch. This pit was

1.3m wide and 1.4m deep and its fill sealed by a 0.25m thick layer of stone blocks, mainly sandstone, but with some greensand. This layer represented an attempt to cap the pit, maybe in anticipation of subsidence. This deposit in turn was sealed by hillwash, but here was only 0.15m thick.

The site appears to be a small, possibly enclosed, settlement. The two U-shaped ditches were similar in profile and may represent a single enclosure *c.* 75m across. The only two features within the putative enclosure were pits. This hillwash sealed all of the other features.

FINDS

by *Elaine L. Morris*

Small quantities of a wide range of artefacts were recovered from excavated contexts including three worked flints; four pieces of fired clay, possibly from a loomweight or daub; burnt flint; a fragment of slag, possibly from a hearth base, and stone including fragments of sarsen saddle quern. In addition, 46 fragments of animal bone (397g) included 10 cattle, 8 ovicaprid and 5 pig (*id.* M. Maltby) were recovered.

Pottery

A total of 71 sherds (1559g) of pottery (Figure 16, 1–11) was recovered from excavated contexts and 25 sherds (17g) from sieved samples. This collection is mainly Early Iron Age in date, with some earlier Middle Iron Age material and one rim sherd (45g) of wheelthrown, Romano-British greyware. Overall, the condition of the pottery is sharp with

many large sherds and very little evidence of post-depositional abrasion.

Despite the small number of sherds recovered, fourteen different fabrics from six principal fabric groups were identified (Table 11). The sequence of fabric type numbers follows on from those used for the pottery from the causewayed enclosure (Cleal, above). The most common groups are calcareous fabrics that represent over 75% of the pottery. The oolitic and shelly limestone-tempered group (C4–C6) contain varying amounts (20–50%) of crushed limestone containing shells and ooliths in clay matrices, C6 also containing 5–10% of iron oxides. The shell-tempered group (Group S3–S7) contain crushed shell in various amounts (20–50%) and degrees of sorting in clay or slightly sandy clay matrices.

The remaining fabrics consist of a fine micaceous fabric (M1), a flint-tempered fabric (F3), a grog-tempered fabric (G1) and four sandy or silty fabrics (Q4–7), of which one (Q6) also includes rare flint and limestone fragments.

The area around Whitesheet Quarry contains a variety of calcareous deposits of the Jurassic period, including the Corallian and Oolitic series, which could have been utilised to produce the calcareous fabrics. These deposits are not located immediately adjacent to the site but lie *c.* 6–8km to the south and west respectively. In addition, the flintbearing fabrics (F3 and Q6) might be local products since the site lies on chalk, and the sandy fabrics, particularly Q7, may have been produced from the Upper Greensand and Gault deposits nearby which include glauconite-bearing sandy clays.

Table 11. Whitesheet Quarry: Quantification of pottery by fabric type.

<i>Context/feature</i>	<i>1271</i>	<i>1225</i>	<i>1211</i>	<i>1215</i>
<i>Fabric</i>	<i>no/wt</i>	<i>no/wt</i>	<i>no/wt</i>	<i>no/wt</i>
C4	6/173	9/366	12/177	9/4*
C5	3/212	1/210	1/18	-
C6	-	5/24	-	-
F3	-	-	2/8	-
G1	1/3	1/2*	1/9	-
M1	-	2/17	-	-
Q4	-	4/16	3/5	1/2*
Q5	-	1/7	-	2/1*
Q6	1/3	1/8	-	-
Q7	-	-	-	2/1*
S3	-	6/182	-	-
S4	-	1/19	-	-
S5	-	10/57	-	5/3*
S6	-	4/4*	-	-

Weight in grammes: *denotes sherds retrieved from sieved samples

Such variety of fabric groups is not unusual. A similar range was recognised in the Danebury (Cunliffe 1984, 308) and Old Down Farm (Davies 1981, 88-93) assemblages, Hampshire, as well as in the Early Iron Age pottery from All Cannings Cross (Cunnington 1923, 29-31), the Late Bronze-Early Iron Age sequence recovered from Potterne (Morris 1991; 2001) and the Late Bronze Age pottery from Norton Bavant Borrow Pit, Warminster (Mephram and Morris 1992), Wiltshire, which lie in similar geological zones to Whitesheet Hill. The two sherds of fabric Q7, for example, are extremely similar to material from Potterne and Norton Bavant.

This small collection includes seven different diagnostic vessel forms. Six jar types (R21-5) are represented including a large, slightly shouldered jar in fabric C4 (R21; Figure 17, 1), a barrel-shaped or ovoid form (fabric S3) with a bevel-edged rim (R22; Figure 17, 2) and a small 'proto-saucepan pot' in fabric S4 (R26; Figure 17, 4). One rim (R24) in fabric Q5 has finger-tip impressions on the exterior rim edge but the remainder are undecorated. The forms are all of Early to Middle Iron Age date with close parallels at sites such as All Cannings Cross (Cunnington 1923), Boscombe Down West (Richardson 1951) and Swallowcliffe Down (Clay 1925).

A slack-profile, necked bowl with curled over and rounded rim in fabric C4 (R30; Figure 17, 3) is irregularly fired and pitted on the interior surface below the rim. The type is well-known at, for instance, Danebury (Cunliffe 1984, type BC1.1, cp. 4-7, fig. 6.61), Little Somborne (Neal 1980, fig. 13.4), Little Woodbury (Brailsford 1948, fig. 4,1pp; fig. 5,10u) and Swallowcliffe Down (Clay 1925, pl. 5.4) in Middle Iron Age contexts of the 5th-1st centuries BC.

In addition, there is an undiagnostic rim (R99), an undecorated, sharply angled or carinated shoulder from a bowl in fabric Q6 (A20; Figure 17, 6; cf. Danebury (Cunliffe 1984, type BA2, cp.3-4, fig. 6.55) and two decorated sherds: one with incised lines (Figure 17, 11) in fabric Q6 and one fragment of a furrowed bowl in Q4. Fragments of two flat bases, one with a flaring edge (Figure 17, 8 and 10) were also identified in fabrics C4 and G1 respectively.

A few sherds (c. 15%) displayed evidence of surface treatment: an applied red slip to the exterior surface of the sharply angled bowl sherd (Figure 17, 6), on both surfaces of the furrowed bowl sherd and possibly on another sandy fabric example, and ten examples of burnishing on the bowls (Figure 17, 3 and 6) and on several sherds from unoxidised,

straight-walled vessels. The latter indicates that these particular sherds belong to the Middle Iron Age tradition of surface treatment, while the red-slip technique is usually an Early Iron Age tradition (Cunliffe 1984, 248).

Pitting, which occurs when an acidic liquid is in contact with a calcareous fabric, was observed on the interior of nine calcareous fabric sherds, including one jar and one burnished bowl (Figure 17, 1 and 3), as well as a large vessel of indeterminate form and three other burnished sherds. Single examples of carbonised food and sooting were noted on unburnished sherds in fabric S5.

Illustrated sherds (Figure 17)

- 1: C4, slack-shouldered jar R21, buried soil layer.
- 2: S3, ovoid jar with bevel edged rim R22, buried soil layer.
- 3: C4, slack-profile necked bowl R30, buried soil layer.
- 4: S4, proto-saucepan pot jar R26, buried soil layer.
- 5: Q5, vertical rim jar R24, buried soil layer.
- 6: Q6, carinated bowl A20, buried soil layer.
- 7: C4, small slack-profiled jar R23, pit 1211.
- 8: C4, splayed base B1, pit 1211.
- 9: Q4, everted rim R25, pit 1211.
- 10: G1, base B2, pit 1211.
- 11: Q6, decorated sherd D1, clearance 1271.

Discussion

The variety of jar and bowl forms identified amongst this small collection of handmade pottery is typical of the Early Iron Age tradition and the beginning of the Middle Iron Age ceramic phases. The finger-tip decorated rim, the furrowed bowl sherd and the carinated bowl sherd, both of which are red-slipped, and possibly the incised sherd, are all typical of the decorated Early Iron Age period (Cunliffe 1978, 1984).

Red-slip surface treatment, formerly known as 'haematite-coating' (Middleton 1987), disappeared in Wiltshire and Hampshire by the end of the 5th century BC (Cunliffe 1978). Slightly shouldered, ovoid and slack-shouldered jars were common in the 5th century BC and later (Cunliffe 1984, 248), as at Boscombe Down West, Danebury and Little Woodbury. A pit at All Cannings Cross contained a slightly shouldered jar and an ovoid jar (Cunnington 1923, pl. 29,9 and pl. 46,1). The proto-saucepan pot form is best dated to the 4th century BC and later (Cunliffe 1984, 248, figs 6.18-19). The undecorated bowl was current in the 5th to 4th centuries BC.

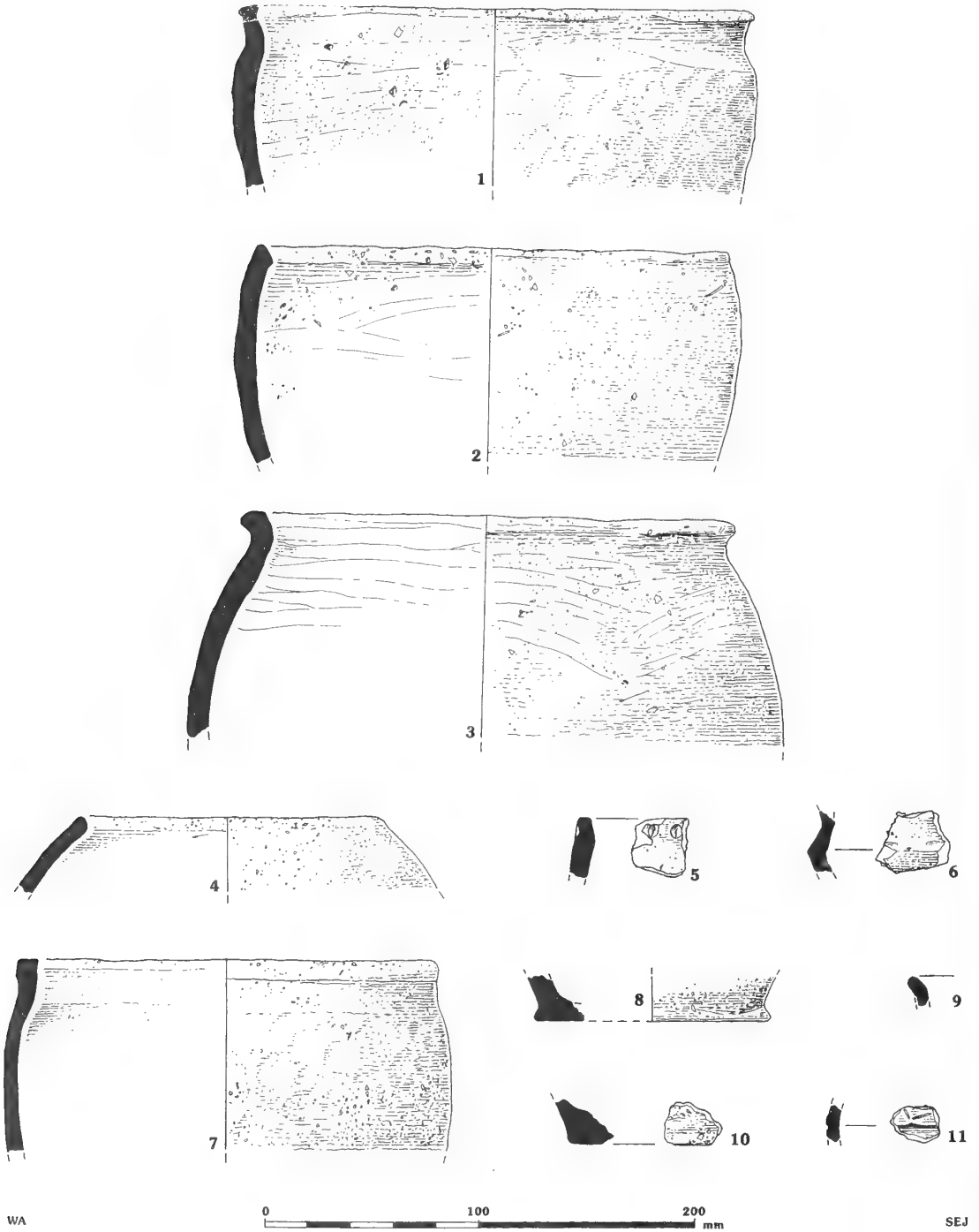


Fig. 17 Pottery from Whitesheet Quarry

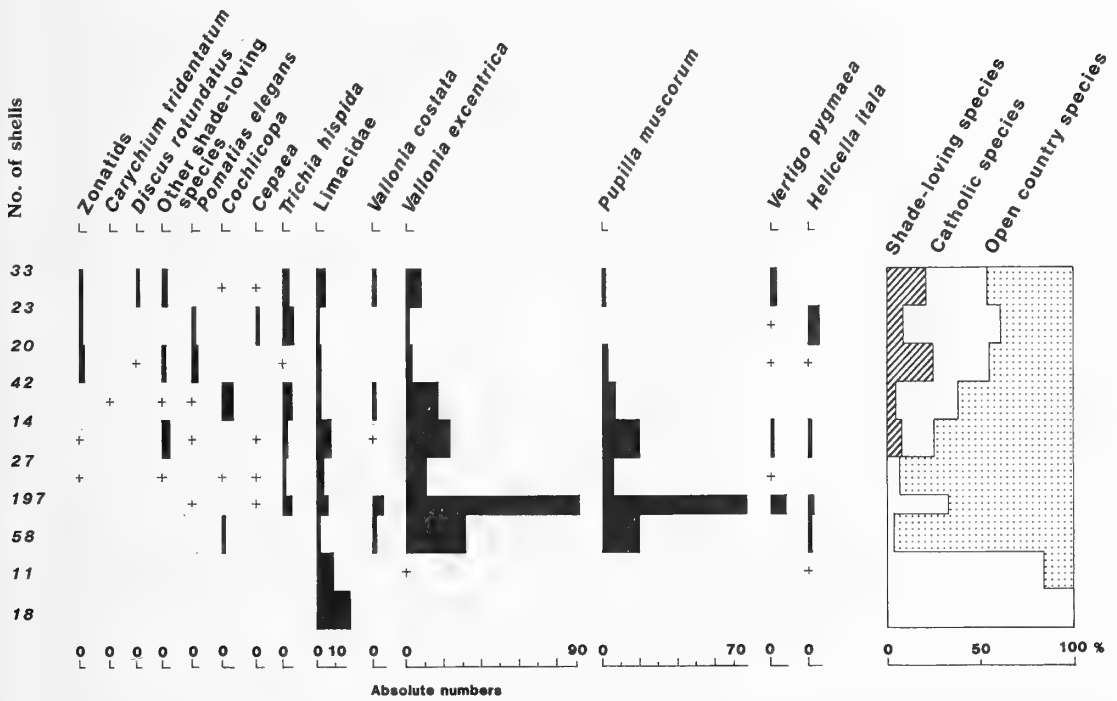


Fig. 18 Mollusc histogram from the Iron Age soil and colluvium at Whitesheet Quarry

Although there are only 94 sherds in the collection, it is interesting to note that there are no Middle Iron Age saucepan pots, which date from the 3rd century BC to the pre-Conquest period. Therefore, the range of material represented spans the All Cannings Cross phase of the Early Iron Age through to the earlier part of the Middle Iron Age.

ENVIRONMENTAL DATA

A column of samples for snails was taken through the hillwash and buried soil to provide some environmental context, while bulk samples from pit 1215 were analysed for charred remains.

Land snails from the buried soil

by Michael J. Allen

The buried soil (1225) displayed a dark humic silty loam, an almost apedal bB horizon, and a silty light grey stone-free bA horizon with very little obvious evidence of any biotic activity. The overlying slopewash deposit was an amorphous, heterogeneous silty loam, suggesting rapid deposition of subsoil material.

The molluscan assemblage (Figure 18) from the bB horizon was impoverished and almost exclusively contained slug plates of Limacidae/

Deroceras (Table 10). The bA horizon, however, produced a larger assemblage in which the dominant species were *Pupilla muscorum* and *Vallonia excentrica*, the latter being super-abundant. This type of assemblage is exemplified by Evans and Williams (1991, 122) Group 4: heavily grazed grassland with no scrub.

Despite the highly calcareous nature of the deposit, and lack of large clasts, the hillwash contained surprisingly few shells. Nevertheless, two broad groups can be detected within the assemblage (Figure 18). The lower portion of the deposit was again dominated by *Pupilla muscorum* and *Vallonia excentrica*, but now accompanied by *Trichia hispida* and a range of other shade-loving species. This assemblage, although still typical of grassy swards, is more likely to result from slightly longer herbaceous vegetation or arable ploughwash contexts (Bell 1983).

The upper part of the hillwash deposit produced a slightly different mollusc assemblage characterised by greater species diversity, an increase in shade-loving species and a major reduction in *Pupilla* numbers. A more shaded environment is indicated here, probably comprising taller herbaceous communities (ungrazed) and shrubs, that may represent the

Table 12. Whitesheet Quarry: Charred plant remains.

	Feature	buried soil	Pit 1215	
	Context	1225	1216	1218
	Sample	1600	1603	1604
	Total volume (litres)	10	9	10
<hr/>				
<i>Triticum cf dicoccum</i> Schubl.				
Spikelet base	-	1	-	-
Glume bases	1	1	-	-
<i>Triticum cf spelta</i> L.	-	-	-	2
<i>Triticum dicoccum/spelta</i> L.	-	1	-	-
<i>Triticum</i> sp.	-	3	1	-
<i>Triticum</i> sp./ <i>Secale cereale</i> L.	-	1	-	-
<i>Hordeum vulgare</i> L.	-	2	-	-
<i>Cerealia</i> indet.	3+20f	3+25f	2+10f	-
<i>Chenopodium album</i> L.	1	-	-	-
<i>Rumex</i> sp. -	-	-	1	-
<i>Corylus avellana</i> L. (shell fragments)	2	-	-	-
<i>Galium cf aperine</i> L.	1	-	1	-
<i>Bromus secalinus</i> L.	2	2	-	-
Unidentified seed: cf Compositae	1	-	-	-
<i>Cenococcum geophilum</i> Fr.	9	-	-	-

establishment of grassland succession communities on the immediate slope along with the retention of open grassland at the base.

Plant remains

by Pat Hinton

In addition to small quantities of oak and ash charcoal from the buried soil and hazel, oak, and Pomoideae charcoal from pit 1215 (id. R. Gale), charred plant remains were recovered. Cereal grains were as poorly preserved as those from the causewayed enclosure. The wheat grains (Table 12) cannot be easily differentiated and the spikelet and glume bases which might be identifiable are also damaged. However, two with more rounded outlines and indications of veins on what remains of the body of the glumes are very likely to be *Triticum Spelta* (spelt), a grain resembling *Secale cereale* (rye) was found in pit 1215, and two grains of *Hordeum vulgare* (hulled barley) were identified, also from pit 1215.

Nine sclerotia of *Cenococcum geophilum* (a fungus) found in the buried soil (1225) seemed to be charred and therefore contemporary with the deposit. Modern small, black sclerotia occur frequently amongst roots in more superficial soil samples but can be distinguished from ancient, charred sclerotia which are brittle and fracture in a characteristic fashion.

With the exception of two fragments of hazel nut shell and an unidentified Compositae seed, possibly of *Matricaria* sp., the remains included only cereals and arable weed seeds. A possible rye grain may have been present as a weed but, like the rye-brome (*Bromus secalinus*) which is often found with spelt, may well have been an accepted part of the harvest. The grains and weeds recovered from the site were probably bi-products of the treatment of crops but these were not necessarily grown in the immediate vicinity. A very minor component of hazelnuts only indicates that light woodland or scrub was available for exploitation at no great distance.

DISCUSSION

The pipeline appears to have intersected a small enclosed domestic settlement of Early-Middle Iron Age date located at the foot of Whitesheet Hill, while the presence of a single piece of ironworking slag suggests a potential industrial component. Sites of a similar date are known within this area, although most were excavated in the earlier part of the last century (eg. Clay 1924; 1925) or have not yet been fully published, for example Cow Down, Longbridge Deverill (Hawkes 1994). A site dating to the Middle Iron Age was found recently at Encie Farm, near Penselwood, only 10km from Whitesheet Hill (Newman and Morris 2001).

The Whitesheet Quarry settlement was apparently enclosed by a well-defined ditch and although there was no evidence of an associated palisade, other sites in the area have shown that this is a common feature (Cunliffe 1991). Enclosed settlements of this period are often of a similar size to Whitesheet Quarry and are interpreted as individual farmsteads. The relationship between this site and the hillfort remains unclear.

Acknowledgements

The excavations were carried out in advance of laying the Codford-Ilchester water pipeline. Our thanks to Wessex Water plc and their team of staff, and to the excavation team. The project was managed in the field by Julian Richards and directed by Mick Rawlings. It was managed in post-excavation by Richard Newman and, latterly, by Julie Gardiner. We are grateful to many colleagues for their assistance in post-excavation and for useful discussion, in particular the contributors, Richard Macphail, Charly French, Janet Ambers and Ian Longworth. The illustrations are by S.E. James.

Note

A draft of this report was completed in 1993. It was revised for publication in 2002.

Bibliography

- ALLEN, M.J., 1989a. Land snails. In Fasham, P.J., Farwell, D.J. and Whinney, R.J.B. *The Archaeological Site at Easton Lane, Winchester*, 134-40. Winchester: Hampshire Field Club and Archaeological Society Monograph 6
- ALLEN, M.J., 1989b. The molluscan evidence. In Howard, S. A double ring-ditched Bronze Age barrow at Burford Farm, Pamphill. *Proceedings of the Dorset Natural History and Archaeological Society* 111, 49-52
- ALLEN, M.J., 1995. Land molluscs. In Wainwright, G.J. and Davies, S.M. *Balksbury Camp, Hampshire; excavations 1973 and 1981*. English Heritage Archaeological Report 4, 92-100
- ALLEN, M.J., 1997. Landscape, land-use and farming. In R.J.C. Smith, F. Healy, M.J. Allen, E.L. Morris, I. Barnes and P.J. Woodward, *Excavations along the Route of the Dorchester By-pass, Dorset, 1986-8*. Salisbury: Wessex Archaeology Report 11, 277-83
- ALLEN, M.J., 2002a. The land molluscs. In Davies, S.M., Bellamy, P.S., Heaton, M.J., Woodward, P.J., *Excavations at Alington Avenue, Fordington, Dorchester, Dorset, 1984-87*. Dorchester, Dorset Natural History and Archaeological Society Monograph, 215, 48-53
- ALLEN, M.J., 2002b. The chalkland landscape of Cranborne Chase; a prehistoric human ecology. *Landscapes* 3, 55-69
- AMBERS, J. and HOUSLEY, R., 1999. Radiocarbon dating. In Whittle *et al.* 1999, 116-20
- AMBERS, J. BALAAM, N.D., BOWMAN, S., CLARK, A., HOUSLEY, R. and SHARPLES, N., 1991. Radiocarbon dates. In Sharples 1991, 102-5
- ARMOUR-CHELU, M., 1991. The faunal remains. In Sharples 1991, 139-51.
- BEDWIN, O.R., 1981. Excavations at the Neolithic Enclosure on Bury Hill, Houghton, West Sussex, 1979. *Proceedings of the Prehistoric Society* 47, 69-86
- BELL, M.G. 1983. Valley sediments as evidence of prehistoric land-use on the South Downs. *Proceedings of the Prehistoric Society* 49, 119-50
- BRAILSFORD, J., 1948. Excavations at Little Woodbury, Part II. *Proceedings of the Prehistoric Society* 14, 1-23
- CAMERON, R.A.D. and MORGAN-HUWS, D.I., 1975. Snail faunas in the early stages of a chalk grassland succession. *Biological Journal of the Linnean Society* 7, 215-29
- CARRUTHERS, W., 1990. Carbonised plant remains. In Richards, J.C., *The Stonehenge Environs Project*. London: English Heritage Archaeological Report 16, 250-2
- CLAPHAM, A.J. and SCAIFE, R.G., 1988. A pollen and plant macrofossil investigation of Oakbank Crannog, Loch Tay, Scotland. In Murphy P. and French, C. (eds), *The Exploitation of Wetlands*. Oxford: British Archaeological Report 186, 293-326
- CLARKE, D.L., 1970. *Beaker Pottery of Great Britain and Ireland*. Cambridge: University Press
- CLAY, R.C.C., 1924. An Early Iron Age site on Fifield Bavant Down. *WANHM* 42, 457-94
- CLAY, R.C.C., 1925. An inhabited site of La Tène I date, on Swallowcliffe Down. *WANHM* 43, 59-93
- CLEAL, R.M.J., 1991. Earlier prehistoric pottery. In Sharples 1991, 171-85.
- CLEAL, R.M.J., 1992. Significant form: ceramic styles in the earlier Neolithic of southern England. In Sharples, N.M. and Sheridan, A.(eds), *Vessels for the Ancestors*. Edinburgh: University Press, 286-304
- CLEAL, R.M.J. and ALLEN, M.J., 1994. Investigations of tree-damaged barrows on King Barrow Ridge and Luxenborough Plantation, Amesbury. *WANHM* 87, 54-84
- COLT HOARE, R., 1812. *The Ancient History of South Wiltshire*, London: William Millar
- CUNLIFFE, B.W., 1978. *Iron Age Communities in Britain* (2nd edition). London: Routledge and Kegan Paul
- CUNLIFFE, B.W., 1984. *Danebury, An Iron Age Hillfort in Hampshire, vol. 2*. London: Council for British Archaeology Research Report 52

- CUNLIFFE, B.W., 1991. *Iron Age Communities in Britain* (3rd edition). London: Routledge
- CUNNINGTON, M.E., 1923. The Early Iron Age inhabited site at All Cannings Cross Farm, Wiltshire. Devizes: George Simpson and Co
- CURWEN, E.C., 1936. Excavations at Whitehawk Camp, Brighton, third season, 1935. *Sussex Archaeological Collections* 37, 66-92
- DARVILL, T. and THOMAS, J., 2001. Neolithic enclosures in Atlantic northwest Europe: some recent trends. In Darvill, T. and Thomas, J. (eds), *Neolithic Enclosures in Atlantic Northwest Europe*. Neolithic Studies Group Seminar papers 6. Oxford: Oxbow Books, 1-23
- DAVIES, S.M., 1981. Excavations at Old Down Farm, Andover, Part II: Prehistoric and Roman. *Proceedings of the Hampshire Field Club and Archaeological Society* 37, 81-163
- DIMBLEBY, G.W., 1978. *Plants and Archaeology: the archaeology of the soil*. London: John Baker/Granada
- DIMBLEBY, G.W., 1986. *The Palynology of Archaeological Sites*. London: Academic Press
- DIMBLEBY, G.W. and EVANS, J.G., 1974. Pollen and land snail analysis of calcareous soils. *Journal of Archaeological Science* 1, 117-33
- EDMONDS, M.E. 1993. Interpreting causewayed enclosures in the past and the present. In Tilley, C. (ed), *Interpretative Archaeology*. Oxford: Berg, 99-142
- EDMONDS, M.E. and BELLAMY, P., 1991. The flaked stone. In Sharples 1991, 214-29.
- EVANS, J.G., 1972. *Land Snails in Archaeology*. London: Seminar Press
- EVANS, J.G. and JONES, H., 1973. Subfossil and modern land-snail faunas from rock-rubble habitats, *Journal of Conchology* 28, 103-29
- EVANS, J.G. and ROUSE, A., 1991. The land Mollusca. In Sharples 1991, 118-25.
- EVANS, J.G. and SMITH, I.F., 1983. Excavations at Cherhill, North Wiltshire, 1967. *Proceedings of the Prehistoric Society* 49, 43-117
- EVANS, J.G. and WILLIAMS, D., 1991. Land Mollusca from the M3 archaeological sites – a review. In Fasham, P.J. and Whinney, R.J.B., *Archaeology and the M3*. Winchester: Hampshire Field Club and Archaeological Society Monograph 7, 113-42
- FOWLER, P.J. 1964. Cross-dykes on the Ebble-Nadder ridge. *WANHM* 59, 46-57
- FOWLER, P.J. 1965. The cross-dyke on Buxbury Hill, Sutton Mandeville. *WANHM* 60, 47-51
- GALE, R. and CUTLER, D., 2000. *Plants in Archaeology*. Kew: Westbury and Royal Botanic Gardens
- GARDINER, J.P., 1988. *The Composition and Distribution of Neolithic Surface Flint Assemblages in Central Southern England*. Unpublished PhD Thesis, University of Reading
- GREIG, J.R.A., 1982. Past and present lime woods of Europe. In Bell, M. and Limbrey, S. (eds), *Archaeological Aspects of Woodland Ecology*. Oxford: British Archaeological Report S146, 23-55
- GRIGSON, C., 1965. Faunal remains: measurements of bones, horncores, antlers and teeth. In Smith 1965, 145-67
- GRIGSON, C., 1981. Fauna. In Simmons, I. and Tooley, M. (eds), *The Environment in British Prehistory*. London: Duckworth
- GRIGSON, C., 1982. Porridge and pannage: pig husbandry in Neolithic England. In Bell, M. and Limbrey, S. (eds), *Archaeological Aspects of Woodland Ecology*. Oxford: British Archaeological Report S146, 297-314
- GRIGSON, C., 1999. The mammalian remains. In Whittle *et al.* 1999, 164-252
- GRIGSON, G., 1975. *The Englishman's Flora*. St. Albans: Paladin
- GRIME, J.P., HODGSON, J.G. and HUNT, R., 1988. *Comparative Plant Ecology*. London: Unwin Hyman
- HAWKES, S.C. 1994. Longbridge Deverill Cow Down, Wiltshire. House 3: a major round house of the Early Iron Age. *Oxford Journal of Archaeology* 13(1), 49-69
- HEALEY, E. and ROBERTSON-MACKAY, R. 1983. The lithic industries from Staines causewayed enclosure and their relationship to other earlier Neolithic industries in southern Britain. *Lithics* 4, 1-27
- HEALEY, E. and ROBERTSON-MACKAY, R., 1987. The flint industry. In Robertson-Mackay, R., *The Neolithic causewayed enclosure at Staines, Surrey: excavations 1961-63*. *Proceedings of the Prehistoric Society* 53, 95-118
- HEALY, F., 1988. *The Anglo-Saxon Cemetery at Spong Hill, North Elmham, Part VI: Occupation During the Seventh to Second Millennia BC*. Gressenhall: East Anglian Archaeology 39
- HOLGATE, R. and START, D., 1985. A Neolithic pit at Remenham near Henley-on-Thames, Berkshire. *Berkshire Archaeological Journal* 72, 1-7
- JACOMET, S., 1987. *Prähistorische Getreidefunde*. Basel: Botanisches Institut der Universität
- JOPE, M., 1965. Faunal remains: frequencies and ages of species. In Smith 1965, 142-5.
- KERNEY, M.P., 1977. A proposed zonation scheme for Late-glacial and Postglacial deposits using land Mollusca. *Journal of Archaeological Science* 4, 387-90
- KUIPER, J.G.J., 1964. On *Vitrea contracta* (Westerlund). *Journal of Conchology* 25, 276-8
- LAWS, K., 1991. The foreign stone. In Sharples 1991, 229-33.
- LEGGE, A.J., 1981. Aspects of cattle husbandry. In Mercer, R. (ed.), *Farming Practice in British Prehistory*. Edinburgh: University Press, 169-81
- MAGURRAN, A. 1988. *Ecological Diversity and its Measurement*. London, Chapman and Hall
- MEPHAM, L. and MORRIS, E.L., 1992. The pottery. In Butterworth, C., *Excavations at Norton Bavant Borrow Pit, Wiltshire, 18-21*, *WANHM* 85, 1-26
- MERCER, R.J., 1974. Carn Brae, *Current Archaeology* 47,

360-5

- MERCER, R.J., 1980. *Hambledon Hill: a Neolithic landscape*. Edinburgh: University Press
- MERCER, R.J. 1999. The Origins of Warfare in the British Isles. In Carman, J. and Harding, A. (eds), *Ancient Warfare*, 143-156. Stroud: Sutton
- MIDDLETON, A.P., 1987. Technological investigation of the coatings on some 'haematite coated' pottery from southern England. *Archaeometry* 29, 250-61.
- MIDDLETON, B., 1989. Middle Neolithic lithic technology at the Etton Causewayed Enclosure. *Lithics* 10, 44-6
- MOFFETT, L., 1991. Pignut tubers from a Bronze Age cremation at Barrow Hills, Oxfordshire, and the importance of vegetable tubers in the prehistoric period. *Journal of Archaeological Science* 18(2), 187-91
- MOFFETT, L., ROBINSON, M.A. and STRAKER, V., 1989. Cereals, fruit and nuts: charred plant remains from Neolithic sites in England and Wales and the Neolithic economy. In Milles, A. Williams, D. and Gardner, N. (eds), *The Beginnings of Agriculture*. Oxford: British Archaeological Report S496, 243-61
- MORRIS, E.L., 1991. Ceramic analysis and the pottery from Potterne: A summary. Middleton A. and Freestone, I. (eds), *Recent Developments in Ceramic Petrology*. London: British Museum Occasional Paper 81, 277-87
- MORRIS, E.L., 1992. *The Analysis of Pottery*. Salisbury: Wessex Archaeology Manual No. 4
- MORRIS, E.L., 2000. Fabrics. In Lawson, A., *Potterne 1982-5: animal husbandry in later prehistoric Wiltshire*. Salisbury: Wessex Archaeology Report 17, 40-9
- MOORE, P.D. and WEBB, J.A., 1978. *An Illustrated Guide to Pollen Analysis*. London: Hodder and Stoughton
- NEAL, D.S., 1980. Bronze Age, Iron Age and Roman settlement sites at Little Somborne and Ashley, Hampshire. *Proceedings of the Hampshire Field Club* 36, 91-143
- NEWCOMER, M.H. and KARLIN, C., 1987. Flint chips from Pincevent. In Sieveking, G. de G. and Newcomer, M.H. (eds), *The Human Uses of Flint and Chert: Papers from the Fourth International Flint Symposium*. Cambridge: University Press, 33-6
- NEWMAN, C. and MORRIS, E.L. 2001. Iron Age and Romano-British Sites along the Bowden Reservoir Link pipeline in south-east Somerset. *Proceedings of the Somerset Archaeological and Natural History Society* 143, 1-28
- OSWALD, A., DYER, C. and BARBER, M., 2001. *The Creation of Monuments; Neolithic causewayed enclosures in the British Isles*. Swindon, English Heritage
- OHNUMA, K. and BERGMAN, C., 1982. Experimental studies in the determination of flaking mode. *Bulletin of the Institute of Archaeology London* 19, 161-70
- PATCHETT, F.M., 1943. Querns. In Wheeler, R.E.M., *Maiden Castle, Dorset*. London: Report of the Research Committee of the Society of Antiquaries of London, 12, 321-9
- PEACOCK, D.P.S., 1969. Neolithic pottery production in Cornwall. *Antiquity* 43, 145-9
- PEACOCK, D.P.S., 1988. The gabbroic pottery of Cornwall. *Antiquity* 62, 302-4
- PIGGOTT, S., 1952. The Neolithic camp on Whitesheet Hill, Kilmington parish. *WANHM* 54, 404-10
- PRYOR, F.M.M., 1998. *Etton: excavations at a Neolithic causewayed enclosure near Maxey, Cambridgeshire*. London, English Heritage Archaeological Report 18
- RAHTZ, P., 1990. Bower Chalke 1959: Excavations at Great Ditch Banks and Middle Chase Ditch. *WANHM* 83, 1-49
- RAWLINGS, M.N., 1992. Romano-British sites observed along the Codford-Ilchester water pipeline. *Proceedings of the Somerset Archaeological and Natural History Society* 136, 29-60
- RAWLINGS, M.N., 1995. Archaeological sites along the Wiltshire section of the Codford-Ilchester water pipeline. *WANHM* 88, 26-49.
- RICE, P.M., 1987. *Pottery Analysis. A Sourcebook*. London: University of Chicago Press
- RICHARDSON, K.M., 1951. The Excavation of Iron Age Villages on Boscombe Down West. *WANHM* 54, 123-68
- RYMER, L., 1976. The history and ethnobotany of bracken. *Botanical Journal of the Linnean Society* 73, 152-76
- SAVILLE, A., 1981. The flint and chert artefacts. In Mercer, R.J., Excavation at Carn Brea, Illogan, Cornwall, 1970-73. *Cornish Archaeology* 20, 101-52
- SCAIFE, R.G., 1980. *Late Devensian and Flandrian palaeoecological studies in the Isle of Wight*. University of London unpublished PhD thesis
- SCAIFE, R.G., 1984. Bronze Age soil pollen data from Gallibury Down (formerly Newbarn Down), Isle of Wight. *Ancient Monuments Laboratory Report* 4240
- SCAIFE, R.G., 1990. Pollen analysis. In Saville, A., *Hazleton North, Gloucestershire, 1979-82: The excavation of a Neolithic long cairn of the Cotswold-Severn group*. London: English Heritage Archaeological Report 13, 18-9
- SCAIFE, R.G., 1992. Plant macrofossils. In Healy, F., Heaton, M.J. and Lobb, S.J., Excavations of a Mesolithic site at Thatcham, Berkshire, 66-70. *Proceedings of the Prehistoric Society* 58, 64-6
- SCAIFE, R.G., 1995. Boreal and Sub-boreal chalk landscape: pollen evidence. In Cleal, R.M.J., Walker, K.E. and Montague, R., *Stonehenge in its Landscape; twentieth century excavations*. English Heritage Archaeological Report 10, 51-4
- SHARPLES, N.M., 1991 *Maiden Castle: Excavations and Field Survey 1985-6*, London: English Heritage Archaeological Report 19
- SHEPARD, A.O., 1954. *Ceramics for the Archaeologist*. Washington: Carnegie Institute
- SILVER, I.A., 1969. The ageing of domestic animals. In Brothwell, D. and Higgs, E.S. (eds), *Science in Archaeology*. London: Thames and Hudson, 283-302

- SMITH, I.F., 1965. *Windmill Hill and Avebury: excavations by A. Keiller 1925-39*. Oxford: Clarendon Press
- SMITH, I.F., 1971. Causewayed enclosures. In Simpson, D.D.A. (ed), *Economy and Settlement in Neolithic and Early Bronze Age Britain and Europe*. Leicester: University Press, 89-112
- SMITH, I.F., 1974. The Neolithic. In Renfrew, C. (ed.), *British Prehistory: A New Outline*. London: Duckworth, 100-36
- SMITH, I.F., 1981. The Neolithic pottery. In Mercer, R., Excavations at Carn Brea, Illogan, Cornwall, 1970-73. *Cornish Archaeological Journal* 20, 161-85
- STUIVER, M. and REIMER, P.J., 1986. A computer programme for radiocarbon age calibration. *Radiocarbon* 28, 1022-30
- THOMAS, J., 1991. *Rethinking the Neolithic*. Cambridge: University Press
- THOMAS, K.D., 1977. The land Mollusca from an Iron Age pit at Winklebury. In Smith, K., The excavation of Winklebury Camp, Basingstoke, Hampshire. *Proceedings of the Prehistoric Society* 43, 70-4
- THOMAS, K.D., 1982. Neolithic enclosures and woodland habitats on the South Downs in Sussex, England. In Bell, M. and Limbrey, S. (eds), *Archaeological Aspects of Woodland Ecology*. Oxford: British Archaeological Report S146, 147-70
- TURNER, J., 1962. The *Tilia* decline: an anthropogenic interpretation, *New Phytologist* 61, 328-41
- VCH. 1957. *Victoria County History of Wiltshire*, Volume 1, Part i
- WAINWRIGHT, G.J. 1972. The excavation of a Neolithic settlement on Broome Heath, Ditchingham, Norfolk. *Proceedings of the Prehistoric Society* 38, 1-97
- WAINWRIGHT, G.J., 1979. *Mount Pleasant, Dorset: Excavations 1770-1971*. London: Report of the Research Committee of the Society of Antiquaries of London 37
- WARD, G.K. and WILSON, S.R., 1978. Procedures for comparing and combining radiocarbon age determinations: a critique. *Archaeometry* 20, 19-31
- WESSEX ARCHAEOLOGY, 1986. *Whitesheet Hill Archaeological Evaluation*. Unpublished Client Report, Project 31202
- WHITTLE, A.W.R., 1977. *The Earlier Neolithic of Southern England and its Continental Background*. Oxford: British Archaeological Report S35.
- WHITTLE, A.W.R., 1990. A model for the Mesolithic-Neolithic transition in the upper Kennet Valley, North Wiltshire. *Proceedings of the Prehistoric Society* 56, 101-10
- WHITTLE, A., POLLARD, J. and GRIGSON, C., 1999. *The Harmony of Symbols; the Windmill Hill causewayed enclosure*. Oxford, Oxbow Books

A. D. Passmore and the Stone Circles of North Wiltshire

by *Aubrey Burl*

Prehistoric stone circles continue to surprise. And multiply. In WANHM 27 of 1893 A. D. Passmore informed the Society 'of a hitherto unnoticed circle of stones' at Coate near Swindon, and the following year he described it and the remains of a second ring nearby. In two Notebooks, unpublished until this year, he provided more details about them and of a possible four more in the same area. Even though he was mistaken with his 'hitherto unnoticed', his fieldwork transformed previous beliefs about the number of megalithic rings in Wiltshire.

It is seldom appreciated how rich northern Wiltshire had been in the distribution, size and architectural complexity of its prehistoric stone circles. Although those near Avebury are well-known others near Swindon are almost forgotten. Hardly realised today because of savage destruction in the last five centuries, the countryside north of Winterbourne Bassett once had as many as seven megalithic rings, several within a few miles of each other, a tight group of stone circles just south of Swindon. Only the vestiges of one remain. (Fig. 1)

Until the end of the 19th century just two or three of those rings were known. As well as the questionable ring on Avebury Down there were examples at Winterbourne Bassett and Broome, both now destroyed. It was not until 1894 that A. D. Passmore recorded several more in his brief report.¹ That report has now been supplemented, at considerable cost, by the Society's purchase of Passmore's two Notebooks in which those circles are described more fully. They add details to rings whose existence modifies our understanding of the so-called Avebury complex.

In both Notebooks the writing, mostly in pencil, sometimes in red ink, is confined to the left-hand side of the page. Volume I is a soft-backed, lined exercise book, the second a rather smaller, hard-covered book, also lined. Each has about sixty

pages, some left blank. Being a man of catholic interests, Passmore made notes on a miscellany of topics: the hill-forts of Wiltshire; the value of coins he owned; a boar's tusk; round barrows; Dartmoor monuments; Roman jewellery; and a murder in Swindon.

Here, in this report, only his records of stone circles are included. In the transcription the spelling, changes of mind, and contradictions have been left as they appear in the Notebooks.

Before considering Passmore's 'new' sites, the two that were already known must be considered. The more problematical, **Winterbourne Bassett** just a few miles north of Avebury, has gone. William Stukeley was the first to mention it. In his *Abury* of 1743, he wrote. 'At *Winterburn-basset*, a little north of *Abury*, in a field north-west of the church, upon elevated ground, is a double circle of stones concentric, 60 cubits diameter', referring to his imaginary 'Druid's Cubit' of 20.8 inches, sixty being the equivalent of 31.7m. 'The two circles are near one another, so that one may walk between. Many of the stones have of late been carry'd away. West of it is a single, broad, flat and high stone, standing by itself. And about as far northward from the circle, in a plough'd field, is a barrow set round with, or rather compos'd of large stones. I take this double circle to have been a family-chapel, as we

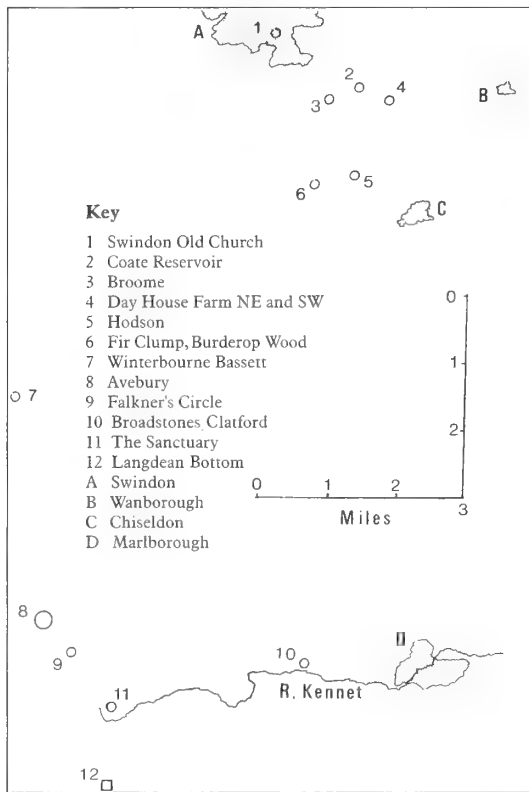


Fig. 1 Map. The North Wiltshire stone circles

may call it, to an archdruid dwelling near thereabouts, whilst *Abury* was his cathedral'.²

Almost a hundred years later Sir Richard Colt Hoare believed he had re-discovered it. 'I was enabled to find the remains of this ring, which is situated in a pasture ground at the angle of a road leading to Broad Hinton and consists at present only of a few inconsiderable stones'. His map showed the scattered stones in the corner of a crossroads at SU 094 755, north of the lane between Winterbourne Bassett and 'Cleeve Pipard' (Clyffe Pypard) and east of another to Broad Hinton .

Having read Hoare, the Rev. Edward Duke in 1846 offered an early version of a ley line laid out by 'our ingenious ancestors'. He imagined a gigantic planetarium composed of seven landscaped concentric rings, the outermost 32 miles in diameter. At their heads, lying exactly north-south, were the prehistoric 'planets'. At the centre was the sun of Silbury Hill. At the south was Saturn, Stonehenge. Failing to find any suitable heavenly bodies at the north of rings 5, 6 and 7 Duke chose Winterbourne Bassett on ring 4, 'a fair temple of stone', as Venus. That unvisited and long-vanished

shrine of the goddess of love rouses no enthusiasm in ley-liners today.

Hoare had mistaken the site but his confident description misled all his successors. In 1881 the Rev A. C. Smith probed the field for missing stones 'by means of the crowbar and spade' and in the following year a plan was made by the Rev. W. C. Lukis showing the remains of a concentric circle whose diameters were 73.2m and 50.3m. Seventy years later Alexander and Archie Thom surveyed the same stones. Their plan showed an off-centre stone, and a plain ring 47.6m across. (Fig. 2)³

Everyone had accepted Hoare's irrelevant stones but a geophysical survey of the field in 1998 rejected them. 'No convincing evidence was found'.⁴ In the Bodleian Library, Oxford the same investigators examined Stukeley's sketch of Winterbourne Bassett. It was entitled 'a double circle of Stones 100 f. diam at Winterburn basset 20 May 1724' and consisted of an outer ring about 30.5m across, the largest stone on its south-west arc, and an interrupted inner circle.

Drawn from the ring's northern side it showed Silbury Hill and Avebury's church in the distance with Tan Hill beyond them, places that cannot be seen from the traditional site because of rising ground. A more likely situation for the destroyed

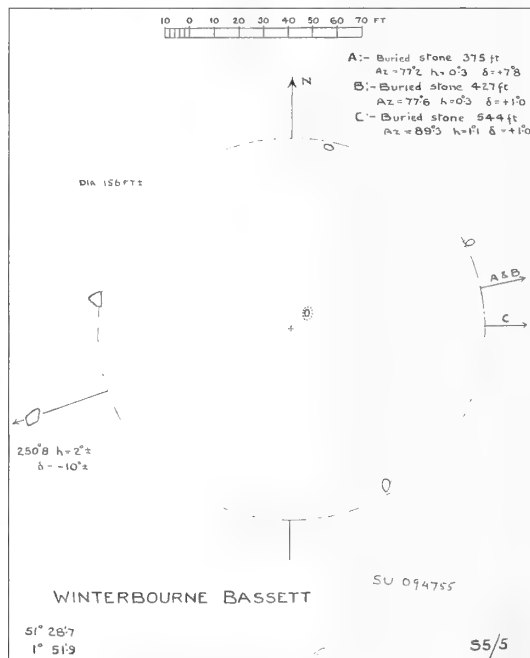


Fig. 2 Plan of the supposed Winterbourne Bassett stone circle. Thom, Thom & Burl, 1980, 132, S5/5.

ring is probably a little south of the lane around SU 093 753 with the barrow about a third of a mile away in Hoare's field.

The second known ring was at **Broome**, SU 167 825, 6½ miles NW of Winterbourne Bassett. In the late 17th century John Aubrey wrote:

at Brome near Swindon in Wiltshire in the middle of a pasture ground called Long-stone is a great stone 10 foot high (or better) standing upright, which I take to be the Remainder of these kind of Temples. In the ground below are many thus 00000000000000 in a right line. The ground is ye Inheritance of the right Honable Lord Seymour.

Seymour was Aubrey's friend of long-standing, with whom he often stayed at Marlborough. Sixty years later Stukeley copied Aubrey's description without acknowledgement. 'Long Stone, at Broome, near Swindon, Wilts, is a great high stone, and a little way off many lesser in a line'. At some time the sarsen was dragged away but in 1894 Passmore himself noted that its hole was still visible in Longstone Field between Coate Road and Broome Lane.⁵

The other boulders were destroyed in the mid-19th century when the executors of a benefactor's will 'purchased the remains of the Druidical temple at Broome, and after having them broken up they were conveyed to Cricklade' eight miles to the north-west 'and they now formed parts of the roads and footways of the town'.

Nineteenth century indifference to ancient relics in the neighbourhood was no different in France. An antiquarian there came upon a magnificently capstoned portal-dolmen and made enthusiastic arrangements for members of his Society to inspect it. To his consternation, when they arrived, there was nothing to be seen. In disbelief he asked the proprietor whether they were at the wrong place. 'Oh, you mean those big stones? Oh, when you said there was a large company coming, and I thought you would have more room to circulate, so I had them broken up and hauled away to mend the road.' Incredible or not the report is 'absolument vraie quoique invraisemblable!'. *Courrier de l'Europe*, Septembre 27, 1884.⁶

And not only in England and France. In August, 1987, during intensive fieldwork in south-west Ireland, the writer was advised to go the attractively-ditched recumbent stone circle of Glantane NE near Millstreet. Behind the drab house was a green wilderness, garden overgrown, long grass, weeds, a shadow of trees green with

moss:

Annihilating all that's made

To a green thought in a green shade.

Andrew Marvell, *Thoughts in a Garden*, stanza 6

Like that green thought the stone circle had also been annihilated, its ditch filled, its pudgy recumbent, two tall portals, eight chunky circle-stones, a pair of outliers all dragged from the ground and carted away to add no more than a square metre or two to the cultivated fields.⁷ The fate of Broome was not unique.

Even today destruction continues, often through ignorance, sometimes through necessity, occasionally because of deliberate vandalism, and it is fortunate that fieldworkers like Arthur Passmore recorded monuments that otherwise would have vanished leaving no word of their existence.

He was a man of considerable prejudices, finding fools insufferable. The writer owns his copy of Alfred Watkins' *Early British Trackways, Moats, Camps, and Sites* of 1922. Passmore thought little of it. On the title-page he pencilled 'ROT' and stuck in a typed comment, 'How any man at any time can have made such a collection of damned nonsense I cannot imagine'. Inside the front cover is a further scornful criticism, 'Useful for illustrations only'

Early British Trackways, Moats, Mounds, Camps, and Sites.

A Lecture given to the Wootheope Naturalists' Field Club, at Hereford, September, 1921, by ALFRED WATKINS, Fellow and Progress Medalist (for 1910), of the Royal Photographic Society; Past President (1919) of the Wootheope Club. With illustrations by the Author, and much added matter.

How any man at any time can have made such a collection of damned nonsense I cannot imagine.

1922:

HEREFORD: THE WATKINS METER Co.
LONDON: SIMPKIN, MARSHALL, HAMILTON, KENT & Co., Ltd

Fig. 3 Title-page of Passmore's copy of Alfred Watkins' *Early British Trackways...*

and, conclusively, opposite, 'Pure idiocy' (Fig. 3) Yet the same intolerant man discovered a forgotten stone circle.

The writer also possesses Passmore's copy of the first editions of Stukeley's *Stonehenge*, 1740, and *Abury*, 1743, bound together. In that dual volume Passmore's bookplate displays a mini-gallery of urns, a Southern beaker, china, porcelain plates, and a hand-axe. The majority of the pieces were presented to the Ashmolean Museum, Oxford (see paper by Phillips in this volume).

From 1883 onwards Passmore contributed to this magazine on a pot-pourri of topics. As early as 1898, *WANHM* 30, 91, 303, he was proudly displaying his treasured objects to members: local antiquities, stone implements, Samian ware, painted Roman plaster, Saxon urns and a spearhead, a blue glass necklace, amber beads, pack-horse bells, a man-trap and a Belgic urn.

In *WANHM* 42 he wrote about Wansdyke and the controversial 'stone circle' – which it is not – at Langdean Bottom. In *WANHM* 51, 432, he discussed a pterodactyl bone; in *WANHM* 53 long barrows, round barrows and Roman buildings. There were idiosyncrasies. In *WANHM* 44, 1927, 76 the editor noted that in the *Wilts Gazette* of October 7, 1926 Passmore argued that at Stonehenge the Aubrey Holes, the stone circle and trilithons 'were really intended to contain wooden posts to support a roof'.

The contributions continued: *WANHM* 46 about Luckington, Roman coins, and a Saxon mint. *WANHM* 47, 493 reported that he took a plaster model to Wayland's Smithy for Society members to see at a visit in August, 1936. In *WANHM* 50, 1944, 292, he wrote about a human skull filled with lead in Stratton St. Margaret church dug up 'years ago'. In *WANHM* 51, 1947, 118, the topic was the slitting of cows' ears; *WANHM* 52, 394, a Roman discus; and, finally in *WANHM* 53, 1950, 259, the spurious relics of witches found in Wiltshire. It was his final contribution. In *WANHM* 54, 1952, 464 there was a rather terse announcement that he had resigned from the Society. The chairman 'wanted to mention the severing of Mr. Passmore's long association with the Society. How much Wiltshire archaeology owed to his labours only those could appreciate who turned to the volumes of the *Magazine* and read his communications over nearly fifty years'. Six years later he died.⁸

By a megalithic coincidence, of all these notes and articles his very first contribution had been the note in *WANHM* 27, 1893, about the 'hitherto

undescribed stone circle' at Coate. In the short paper that followed in *WANHM* 27, 1894, 171-4, he reported the discovery of the tumbled ring at Day House Farm NE and included a plan of eight half-buried stones forming two-thirds of a circle that had been disturbed and damaged by the erection of a rick- and cow-yards to its west.

Some quarter of a mile to the south-west near Coate Reservoir were three more large tumbled sarsens, the southern arc of a second ring, Day House Farm SW. Alongside the road passing Day House Farm was a line of five widely separated stones that Passmore suggested could have been an 'avenue' approaching the first circle. He ended by mentioning the erstwhile circle at Broome and a possible megalithic ring at Hodson just over a mile SSW of Day House Farm. It also had a 'stone row' near it.

It was a scanty report but until today that was almost all that was known about these forgotten sites. It is a considerable benefit to prehistoric studies not only in Wiltshire but to stone circle research generally that the purchase of Passmore's Notebooks allows those data to be considerably augmented.

NOTE. In the quoted passages from those Notebooks that follow numbers in square brackets [] either refer to his pages, e.g. [p.14] or Passmore's own insertions in the books. Any remark in round brackets () is an explanatory interpolation by the writer. To make the descriptions of the various sites easier to follow they have been arranged in alphabetical order: Coate Reservoir; Day House Farm NE; Day House Farm SW; Fir Clump; Hodson; and Swindon Old Church.

STONE CIRCLE EXTRACTS FROM THE NOTEBOOKS OF A. D. PASSMORE

Coate Reservoir

SU 17. 82. Passmore, Notebook 1, [p.29b]. At the end of Coate Reservoir there are [what to] a lot of sarsens of large size and from their positions I think they are the remains of a double circle, one within the other like the one at Winterbourne [They seem to] There is also a double line leading up to them about 400 yards long. All these stones are in the [p.30] bed of the reservoir under high water mark and when the Reservoir [was dug] they were [rolled from their proper] [positions but] probably moved a bit out of their original position.

(Note. This is followed by descriptions of the Day House circles in Coate hamlet between the escarpment of the downs and the isolated Swindon hill. The village lies by a little stream 2.5 miles south-east of Swindon town centre. The wreckage of Day House Lane NE ring can still be seen. It was first noticed by Richard Jefferies who was born at Coate Farm in 1848. A quarter of a century after Jefferies, Passmore described the circle and its partner in considerable detail).

Day House Farm NW and SE.

[p.20] 'Discovery of stone circles at Coate', by A. D. Passmore. These circles which are situated at Day House Farm about ¼ of a mile from the village of Coate are of sarsen stone and not one [is] now standing all having tumbled down and [scarcely noticeable to any but] gradually worked their way underground until only the tops are visible. at first they appear very small but on closer investigation I found them to range in size from 6 ft to 12 ft (1.8m, 3.7m) long and about the same width. I first noticed these stones in last January (1893) and since then I have made many fresh discoveries namely another circle to the S.W. of the Day House circle [see Day House SW][and also] the [p.21a] remains of a [a not] double circle and/at the end of the reservoir about ½ a mile [distant] west [see Coate Reservoir]

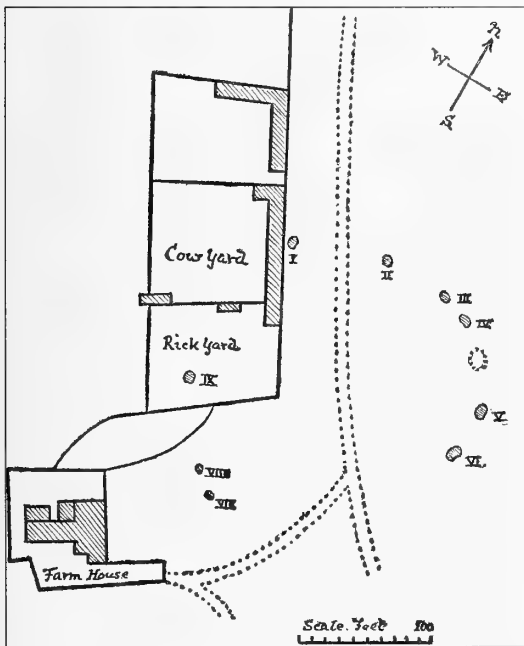


Fig. 4 Plan. Day House Lane circle NE. Passmore, WANHM 27, 1894, 171.

and a line of three stones [pointing straight] almost ¼ mile of 2nd circle. These stone(s) point straight at Hodson about 1 ½ away and on going to [?] place where I expected them to my surprise and gratification I found the remains of another circle and on going to the other side of it I [found] saw a line of stones going away from it and this time pointing straight to Coate. Owing to want of time I must leave Hodson circle till the next number of the magazine [where I hope to have] (see Hodson circle).

Notebook 1 [p.8] About 6 months ago whilst walking home from Chiseldon to Swindon through Day House Farm I was struck by the remarkable position of certain [stones] sarsen stones which were lying in the field in front of the farm. [I continued my walk] [mentally resolving to again visit] [this circle].

[About two months after made] [I thoroughly examined it and] of which I give a scale plan 32 feet to the sq inch the stones [a] in the circle are 9 in number and in [the] line leading up it there are [p.9] 5 stones. (Sixty years later Alexander Thom planned the stones more accurately but when redrawing his field-notes misplaced north at the east. Figs. 4, 5). The circle or rather oval appears to have originally consisted of 30 stones which was the number of days in the lunar month and a favourite cycle with the Druids; the diameters are 220 ft from to and 170 ft (67m, 51.8m) from to . The stones are themselves are of small size ranging from 5 ft long to 10 ft long (1.5m, 3.1m). None of them now remain upright. One part of the oval is unfortunately encroached upon by a rick yd and cow sheds and I hope to find another stone when

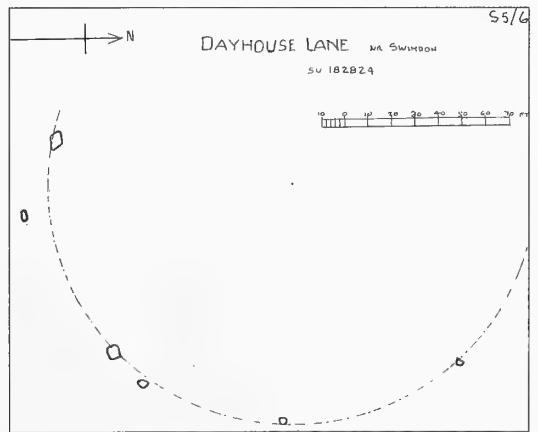


Fig. 5 Plan. Day House Lane circle NE. Thom, Thom & Burl, 1980, 134, S5/6.

the ricks are removed, in the walls of the shed [there] and scattered about the field there are large pieces of sarsen which would account for the few stones that [p.10] [the stones were] some of the stones were broken up. I have proved by digging into the hollow between stones marked 8 and 9 and there discovering a[nd] quantity of ashes probably straw and some chips of burnt sarsen.

The line of stones which leads up to the circle consists of 5 stones none now standing upright. They are about the same size as the others i.e. about 5 or 7 feet long (1.8m, 2.1m). I cannot find traces of any stones within 400 ft (122m) of the circle but the wall of the cowsheds covers most of this distance and would probably account [for them] their absence at the above distance [there] from the circle there is a stone and at the distance of 6? 5? ft. (65 feet, 20m) there is another and at a like distance 1 more. [p.11] [at a dis[tance] 191ft (58m) from this there is a stone which would [be] leave room for two stones in between and about the same distances that is 65 ft (20m) [which] and [280] ft (20m, 85m) from this [last] stone there is one more This being the last stone that I can trace, it will be noticed in the plan that the road makes a bend between these two end stones of which I shall say more farther on.

Some archaeologists (repeated on pages 24, 25) whom I have taken over the ground deny that the line of stones has any connection with the circle and that they were drawn out of the way when the road was made but I ask why should the stones be equal distances from each other and why should they cross the road [between] the last stones where it curves [an] on its way to Coate while the stones [continue] [p.12a] are in a straight line. I think also that these stones are two (*sic*) large to have been moved for the purpose by modern workmen most of the[m] stones weighing between 3-4 and 5 tons. This would have taken [almost] at least 20 men to lift [which] and all this labour would not have taken place in recent times. These stones also could not have been [put? like] natural because in a district where stones are comparatively scarce it is a rare thing to find more than one and in a straight line.

The circle appears to have originally consisted of 30 stones [p.22] the same number as the inner circles at Avebury. This number [of] was the number of years counted by the Druids for a generation and was a favourite cycle of theirs. The lunar month also anciently consisted of 30 days. It is not quite a circle [be] there being a considerable difference between the diameters from E to W and N to S. The oval [in] on the W side is unfortunately

encroached upon by [a] cowshed and a rick yard and in this large space there is only one stone left that being mutilated. The others were probably buried or smashed up to build the walls around. Scattered about the sheds are a [good] few pieces of sarsen which [p.23] would account for [so] such a small number remaining. That some of the stones were broken up I have proved by digging into the hollow between the 9th and 10th stone and I there found some black ashes and a piece of burnt sarsen.

By the side of the road which passes through the circle there are five stones which from their present position I think may have formed part of an avenue leading up to the circle from the north none of these now remain upright. They are about the same size as those in the circle i.e. about 5 to seven feet (1.5m, 2.1m) long.

On turning round the road to Day House Farm in the left hand side [there] between the third and fourth [stone] there is a stone [no. 4] 5 ft long [at] a distance of 400 feet (122m) there is another 6 ft (1.8m) long in the side of a ditch. 191 ft (58m) from this is a stone and 65 ft (20m) further on there is one and at a like distance there is another. This one [number 5 on plan] is the last I can [trace] find near the circle*. It will be observed from the plan that the line if continued would pass over stone 14 or just to the E of stone 1 in the second circle.

The [stone] first stone of the circle number [6] is within 3 yards of the shed wall and has fortunately not been noticed by the builders. of the [sto] walls [acro] The next three stones 7, 8 and 9 are not broken [p.26a] [and] the distance between stones 8 and 9 I take to have been the original distance apart, between stones 9 and 10 there is a hollow from which I obtained a piece of burnt sarsen and ashes probably show between stones 11 and 12 there is a wide gap which after hours of search with a bar I have failed to fill up. Stone 14 is the only one I can find in this rick yard but in the ditch outside it There are some large pieces which have been broken up and thrown in. We now pass on to the second circle. (see Day House Lane SW).

[15] (repeated in different words on p.28) I think it rather remarkable that these circles have never been mentioned before. Stukeley and Britton mention the stones at Broome Manor ½ miles distant but not Coate [Sir R. C. Hoare must have passed] [along the road also] Hoare doesnt mention it, neither does Richard Jefferies who must have passed [seen] it every day. [30b] [Near the] [It is] Richard Jefferies also seems to have overlooked the circles [as] he lived [within] _____ very close and

was married from Day House Farm before which the circle stands.

Passmore was unaware that Jefferies had already described the circle in one of a series of articles for the *Wiltshire Herald* in 1867-8. Jefferies wrote:

The road from Coate makes a wide semi-circle round to Chisledon. Day-house Lane cuts off the angle, and was formerly much used, until the road was widened and macadamised. There may be seen on the left side of Day-house Lane, exactly opposite the entrance to a pen on Day-house Farm, five Sarsden stones, much sunk in the ground, but forming a semi-circle of which the lane is the base-line or tangent. There was a sixth upon the edge of the lane, but it was blown up and removed, in order to make the road more serviceable, a few years ago. Whether this was or was not one of those circles known as Druidical, cannot now be determined, but it wears that appearance. It would seem that the modern lane had cut right through the circle, destroying all vestige of one half of it. In the next field, known as the Plain, lies, near the footpath across the fields to Chisledon, another Sarsden of enormous size, with two smaller satellites of the same stone close by. If the semi-circle just spoken of was a work of the Druids, or of the description known as Druidical, which some think a very different thing, it may be just possible that these detached stones in the Plain had some connection with it'.⁹

In the Notebook he continued his account. [p.15] In conclusion (repeated on page 13) I wish to express my best thanks to Mr. Handy [the] upon whose farm the stones are and for the kind manner in which he gave me permission to go over his land and do what excavation I thought necessary. If any one who reads may have any doubt of the accuracy of the above statements [I] and think I may have drawn from my [p.16] Imagination I shall be pleased to take them over the ground and convince them of the truth of what I have said.

Near this circle on the bank of the Reservoir I have picked up flint implements of a shape very often found in the Swiss lacustrine dwellings there [are also] nearly 2 ft (60cm) under surface [unseen] among fossils which would assign them to a very early palaeolithic age and also other implements of a later period near the same spot.

[p.17b] The 2 stones behind the shed [Coate] have evidently been moved to their present position [level with the shed wall lately] when the shed was

built and this shed being exactly between the two circles I think that they are the remains of an avenue between (pages 18, 19, blank)

[p.22] Near this circle I found a piece of red pottery of very rude make [being], the clay mixed with small flints and I [should] is [put it] early British. I have also found implements near here one being [the same] of a type very often found in the Swiss Lakes.

The word Coate is a Celtic Word derived from [the] a form of old Welsh *coed*, wood, or the Cornish 'Coit'.

October 1st A. Passmore
The line of stones leading from the Coate circle if continued would lead to water this is the case at Avebury in the Beckhampton which I firmly believe in. At Stanton Drew two of the circles have short avenues which go from them towards the river which flows close by. At Mount Murray in the I. of Man there is a small circle [which] with a small [p.33] curved avenue. (There is no stone circle at Mount Murray. The site at SC 325 766 3.5 miles west of Douglas is the Glendarragh 'circle' at Braaid, Kirk Marown, a mixture of a round 'Celtic' house and, just to the north, the 'avenue', the remains of a Norse 'boat-shaped house of about 1000 AD'. A.B.)

Mr. A. L. Lewis in reading a paper before the Anthropological Institute says that all [sto] nearly all stone circles have a reference to the NE either a hill top, [or] a large outlying stone or another circle.¹⁰ Out of 21 circles visited by him he says 18 had a special reference to the N.E. the next most distinguished marker is the S. E. [nine cases] the circle at Coate [Coate at Co] adds another as it has a circle at the S. E.

In a Saxon Charter the ten stones are mentioned as a boundary of the parish of Chisledon. (page 34 blank).

[p.35] In the N. W. sky of the evening there are the following stars which by a singular coincidence are nearly in the same positions as the stones at Coate [plan] and to the S. E. of these there are three more which are exactly like the 3 stones in the [scn] circle at Coate the only difference being that [the apex of] star number 1 is the wrong side of the other two.

Passmore, Notebook 2, [p.30]. July 29, 1895. The dry weather [of] in June of this year scorched up the grass in several places around the stone circle at Coate leaving brown patches thinking that stones might be underneath I examined the ground with a bar and was rewarded by finding 5 new stones

[some of larger] one of larger size than any I had previously examined the first stone no X belongs to the avenue or line of stones is 170 ft (52m) distant from stone no 2 and 20 ft (6.1m) from the road. No 11 which is 8 ft long is 110 ft (2.4m, 33.5m) from the [circle] stone no 2 and 60 ft from stone 10 [it will be noticed from the plan that the probable original distance between the stones in the line was 65 ft] (19.8m).

Day House Lane SE

c.SU 182 823. [p.26a] In the next field about a quarter of a mile from the above I found the remains of another. (Fig. 6) [p.14a] The line of stones which leads up to the first circle (Day House NE) which seems to be lost [and] stone number 1 may have curved here and gone towards Swindon and I have traced it [at] with great trouble [to the] some stones being 100 yards (90m) from others till it gets as far as the second park field.

this is only a suggestion very probably correct to E of Swindon where it seems to end is a row of 16 large sarsens about 2 feet (60cm) apart and a ¼ of a mile to the N of this [line] row of stones [I ha] behind Swindon church (new) discovered the remains of another circle or two of stones of which I give a plan (see: Swindon Old Church).

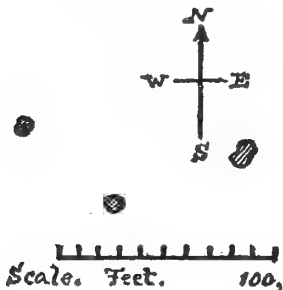


Fig. 6 Plan. Day House Lane part-circle SW. Passmore, WАННМ 27, 1894, 172.

Notebook 1. [p.12b]. A smaller one (Day House Farm SW) with only three stones remaining (of which I give a plan) the stone marked 1 is of greater size and I think I am right in stating that its the largest [within 3 miles] in the district. The stone marked 2 is of small size [have been] bearing marks of having been mutilated. The stone number 1 (no. 3?) has also been knocked about. They are equal distances [p.13] apart [i. e.] 59 feet (18m). Between the two circles (Day House Lane NE and SW) [there is] in a straight line there is a stable and by

the side of this there are 3 large stones which have evidently been placed against the wall [at some] within the century [?] and the inside of the stable is paved mostly with sarsen I think that these circles may once have been connected by a line of stones.

To the west of the second circle (SW) there are 3 stones in a straight line pointing straight for Burderop ¼ miles distant where on top of ladder hill there are to (sic but?) stones of large size standing upright about 20 yards (18m) apart and in a straight line with the stones at Coate.

[p.26b] between the two circles there [are] is a place 12 feet square (3.7m) paved with sarsens. This may have been part of the [sheds] cow sheds which are within 6 feet At the back [p.27] of this shed there are 2 stones which have evidently been moved to their present position lately and were drawn from out of this shed when it was built and placed against the wall, as this building is in a straight line between the two circles. I think that these are the remains of a connecting line. The first stone in the second circle is of very large size. The other two have been mutilated and that they were of very large size is proved by the large hole which remains. There are equal distances apart 59 ft (18m) and this circle must have been [and... have been] [much smaller circle] than the first, to the west of this second circle there are three stones pointing straight from Hodson of which I have already spoken. It is rather a remarkable fact that these circles have escaped observation on the part of Archaeologists. Neither Stukeley, Aubrey Hoare or Britton mention it although the [1st] former and Sir R. Hoare must have passed very close to it. Stukeley mentions the stones which were at Broome, now unfortunately in Cricklade streets and in a note book of his there is the following entry "Longstones* at Broome, near Swindon, Wilts is a great high stone, and a little way of many lesser ones in a row [* The field in which they stood still retains the name Longstones Meadow.]

[p.29a] These stones [being] may have been connected with [a line of] [stones] a circle which was [smashed] broken up before Stukeley's time and being so close to Coate I think this confirms my opinion about the line at [Coate] Day House Farm being connected with the circle.

Fir Clump, Burderop Wood

SU 161 814. Notebook. [p.17a]. Local tradition says that there [is] [a] was a stone circle of large size near the railway bridge outside Swindon Old Town station and the old Marlboro road leading to

Ladder Hill (SU 161 804) but of the size and number of stones I cannot gain any information as they were broken up about 30 years ago. There are a lot of small pieces of sarsen on the spot where it is said to have been.

(Passmore failed to find the actual location of the ring where there was to be a megalithic tragedy. In 1965, a mile south of Broome, Richard Reiss noticed a much disturbed concentric ring of coarse sarsens, the inner, flattened at the north, 86.5 x 73.7m, the fragmentary but enormous outer about 107m across. About 125m to the west was a single line of stones, 102m long, lying NNW-SSE. In 1969 the stones were casually removed during the construction of the M4 motorway.¹¹).

Hodson

c.SU 17. 80. [p.21b] This circle must wait till the next number of the / Magazine [when I hope to have] [p.38] This circle is situated in the village of Hodson about 3 miles from Swindon and 1 mile from Chiseldon station.

It is like the Coate circles encroached upon by barns and other buildings, the road also passes through it. the stones are about the same size as those at Coate none are now standing. 8 stones are in position and inside these there are traces of a second circle of which I can only find 3 stones and these being out of position I think they [are the remains of] came there by accident or probably for some agricultural purpose leading up to this circle there are 4 distinct lines of stones which [go in] leave the circles in the [p.39] direction of Coate and I think that this line if stones was continued on to Coate and joined the line of stones there [the three by second circle].

This circle is about the same size as the one at Coate being 250 ft (76m) in diameter but is unfortunately right in the midst of sheds hedges road and lanes which make it very difficult to find.

Swindon Old Church

SU 15. 84.[p.14b] behind Swindon Church [new] I have discovered the remains of another circle of two of stones of which I give a plan (Fig. 7) [p.54].

(The Old Church, Holy Rood, Swindon, was a ruin by 1852, the chancel being refurbished as a chapel in 1964. The new church, Christ Church, Cricklade Street, was designed by Sir George Gilbert Scott in 1851).¹²

[p.55] Notes on Swindon Circle. In the big field behind the Church there are a lot of sarsen stones which form a half circle [I am going over the

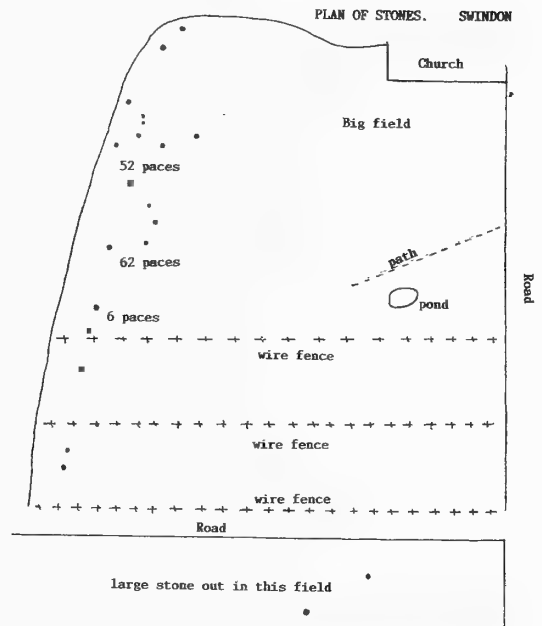


Fig. 7 Plan. Swindon stone circle and row. Passmore, Notebook 1, 54.

ground with a bar] on Jan 18 mr Leslie went out in the field below the big field and discovered several more stones extending in all about ½ a mile [nearly] they are sarsen stones, some big about 5 to 6 feet (1.5m, 1.8m) average size, some nearly buried [this stone lin] this stone line may have been a sacred road leading to some worship place.

(In the Notebook all the following six lines have been crossed out). probably the circle in big field the northern end of this [circle] line points in the direction of Stratton where near [Hodn] Notts boundary in a field on right hand side of road there are [p.56] large stones. Keeping the same N+S direction, this line also points straight for Avebury. Mr Haliday says that these stones were broken up to form part of the wall and that they were in the form of a circle 18 years ago. (Pages 57 – 70 blank).

The Purpose of Stone Circles

[p.36] The question will probably be asked what where these stone circles & their uses? An answer to this question is very difficult to give as the archaeologists are divided in their opinions respecting them but the most widely accept theory is that they were connected with the worship of the Sun & Moon [is] this is almost certain as most circles have an [reference?] outlying stone or some other distinguishing object on the Eastern side the

famous "Friar's Heel" at Stonehenge may be taken as an example.

There are several other theories which have at different times been accepted as correct namely the Water Worship [p.37] Theory and Stukeley's Snake Worship The former's opinion is upheld by the following facts. That in some circles a line of stones is found leading from the circle to the nearest river, at Stanton Drew this is the case in 2 instances and at Coate the line by the road would if continued run to water in at [?] direction. Whether this had any connection with the worship carried on in he main temple is doubtful.

In conclusion there is one fact to be mentioned against the temple theory & that is if all the inhabitants of the districts where these circles are why should they not be all together instead of being scattered about in circles very close to one another.

Letter to C. H. Goddard Esq 1/1/14.

[p.40] (In 1914 the Rev. E. H. Goddard was the Editor of the *Wiltshire Archaeological and Natural History Magazine*. He lived at Clyffe Vicarage, Swindon).

Dear Sir,

I write to tell you of a remarkable coincidence in connection with the stone circle at Coate. You will remember that the stones 1 to 6 in the [large] first circle are of large size and the other three are very small and one could almost [be] say that they were not really a part of the circle, if these six stones are left and the three small ones struck out, and these being put on paper together with the 3 stones of the second circle and also the three stones which are in a line to the west of the second circle. Having placed these in their proper positions on the first clear night go out and look in the Northern sky and just under the north star [p.41] you will observe half a circle of 6 stones exactly like those on your plan to the right of these [that is to the west] there are three stones exactly like the second circle the only difference being [in] that they are on a rather large scale and that the middle star is on the wrong side of the other two. On the right of these again judging the distance by your plan you will see three stars in a line exactly like the three in the line mentioned above after you have seen these stars you will be [struck by the] surprised at the coincidence. I don't wish to say that this is anything more than a very remarkable coincidence but if as some authorities on stone circles say that they are connected with the Worship of the Sun, Moon, & [p.42] Stars one would be justified in saying that this is something

more than a mere accident[al].

If you cannot find out these stars please write to me and I will point them to you myself if possible. (Pages 43 to 55 blank)

This marked the end of Passmore's notes on stone circles.

The stone circles described by Passmore create more questions than answers. Six of them form a clumsy rhomboid about a mile wide and a mile and a half northwards from Fir Clump up the south-eastern outskirts of Swindon. Had they been contemporaries each would have had a little territory of no more than 160 acres (65ha). This is so limited that a chronological sequence is more likely.

Why they were erected in such a limited area is predictable. As always, prehistoric people used whatever local material there was and around Coate sarsens littered the ground. 'Broome Manor must have boasted many 1000s... At Coate there are many. Here a Bronze Age circle is found of them... Ladder Hill... can show many examples'. These were the ancient Lower Greensand sarsens unlike the later Bagshot blocks around Avebury.¹³ That stone circles should be put up in such a megalithic abundance is understandable. And that there should be concentric rings amongst them is not unexpected.

Two were already known at Winterbourne Bassett and the Sanctuary. Both of them were far above average size for stone circles in Britain. The surprise is that Fir Clump, a mere three miles north of Winterbourne Bassett, was enormous, over seven times the area of the Sanctuary and nearly twelve times as big as Winterbourne Bassett. It was almost as big as the southern circle inside Avebury and must have been an important meeting-place like a 'tribal' lodge for an extensive region.

It is a criticism of our times that this irreplaceable relic of antiquity, perhaps the ritual centre of prehistoric generations, could be destroyed with the indifference of ignorance to make room for that modern passage of convenience, a motorway from London to Bristol.

Its associated concentrics may also have been large. The dimensions of Coate Reservoir are unknown but the Hodson ring was spacious if Passmore's recorded diameter of 76m is correct. Capable of accommodating a congregation of hundreds, Fir Clump even more, surely these monsters could only have been contemporaries if used for ceremonies at seasonal times of the year as

the cromlechs at Carnac in Brittany were.¹⁴

Despite this modern concentration in north Wiltshire concentric circles were uncommon in Britain and Ireland, only about thirty previously being known, widely spread from Cnoc Fillibhair on Lewis in the Outer Hebrides down to the outer sarsen ring and inner bluestone circle at Stonehenge five hundred miles to the south. There are two distinct regions, a concentration around the coasts of the Irish Sea and a scatter in Wessex.

Around the North Channel the ovals are unimpressive, their outer ring enclosing a much smaller containing a central cairn, a feature which may reveal their sepulchral nature. The Wessex concentrics are different. Their paired rings are closely-set and arguably they were open-air facsimiles of a roofed, wooden prototype. In such an interpretation the concentrics represented the outer wall-posts and inner uprights of a covered building that had been a place of assembly or maybe a mortuary house as the Sanctuary may have been.¹⁵

That Passmore was able to claim several concentrics in northern Wiltshire is helpful but not perplexing. They were part of an established tradition. So was his long double line at Coate Reservoir. Such avenues in Wessex have been known for centuries: at Stonehenge; at Stanton Drew in Somerset; at Avebury and the Sanctuary. Probably added to an existing ring they are comfortably explained as processional approaches to the circle.

To the contrary, in Wiltshire single lines were almost unknown. Because John Aubrey's *Monumenta Britannica* remained unpublished until 1980 there was no early record of such solitary rows. Yet in south-west England they were abundant, some in Cornwall and on Exmoor, plentiful on Dartmoor, non-existent in Wessex.¹⁶

According to Passmore they did exist, sometimes leading in the direction of another ring: at Day House Farm NE 'from the circle there is a stone... and at 65 ft. there is another and a like distance more...; at Day House Farm SW, 'a line of three stones...'; at Fir Clump, 'to the west was a single line of stones'; at Hodson, '4 distinct lines of stones'; and at Swindon Old Church 'several more stones extending in all about ½ a mile'. There was another at Broome as John Aubrey wrote. 'In the ground below (the Longstone) are many thus oooooooooooooo in a right line'.¹⁷

Such a sudden emergence of single lines makes it possible that these were the result of influences, even immigrations, from the south-west perhaps

quite late in the history of stone circles, rows of standing stones added to existing rings just as avenues had been. There is possible confirmation in the misinterpreted setting at Langdean Bottom three miles south of Avebury. It is a confusion of sarsen.

Passmore described it: 'An unrecorded stone circle' and 'a curious collection of stones quite unlike anything in the county... an irregular north and south line of stones, the first three of which [to the north] are upright and in their original position'. 'A short distance east of this line stands a stone circle' with two big stones forming an entrance slightly north of west. The ring 'stands on slightly raised ground'.¹⁸

Despite his interpretation of the site as a stone circle there has been a conflict of opinions including the negative one that Langdean, like Coate and others, was unrewarding to visit because 'few traces of these remain'. Happily, those 'remains' do survive. Other suggestions were more positive but contradictory. Langdean was either a stone circle or a round barrow or a dwelling.

Nikolaus Pevsner, uninhibited by any understanding of prehistory, wrote of. 'a small circle of undressed sarsen 33 ft (10m) in diameter'. To Stuart Piggott the site 'appears to be the retaining sarsen kerb of a round barrow 30 ft. across'. Terence Meaden thought that the stones might be 'a foundation ring for supporting the floor of a hut'. Neil Mortimer who re-examined the area inclined to the view that Langdean Bottom might be an unusual type of stone circle.

The conclusions were inconclusive. The surveyors of the National Monuments Record shrugged. To them the site 'hardly conforms to a prehistoric hut or a stone circle, but proof one way or another is unfortunately lacking'.¹⁹

They were over-pessimistic and seemingly did not consider that a nearby feature provided a possible solution to the mystery. Pevsner mentioned it: 'E of the circle is a short avenue of standing stones'. So did that doyen of fieldwork studies, Leslie Grinsell. Very close to the 'stone circle' he recorded '2 parallel rows of upright sarsens 10-13 yds. apart (9-12m) and 45 yds. long (41m), running roughly W-E., with indications of about 3 transverse rows'. Of the 'stone circle' he thought that 'the valley situation perhaps favours the view that it might be a circular house site'.²⁰

It supports the idea of Langdean Bottom as a form of Dartmoor hut-circle because the suggestion is strengthened by its adjacent double row so

typical of Dartmoor. Many such rows lie isolated on the moor except for nearby hut-circles. On Dartmoor and Exmoor, hardly a hundred miles from the Marlborough Downs, there are over fifty of these independent settings.²¹

There is a paradox. People on the sarsen-covered Marlborough Downs did not use stone for the foundation-walls of their dwellings and there are no recorded hut-circles which may be because they are deeply buried under today's towns and villages. On the uninhabited uplands of Dartmoor there are many more than a thousand.

Langdean Bottom, far too small to be a stone circle and quite unlike any stone-surrounded round barrow in Wessex, may be such a hut-circle with tall, wide slabs for its walls, a conspicuous entrance and, tellingly for a Dartmoor connection, a double row typical of that region close to it. Both the style of house and the lines of stones are untypical of Wiltshire but almost identical to the settings and hut-circles on Dartmoor. It is revealing. Like the un-Wessex-like single rows in the neighbourhood of Swindon the sarsen settings at Langdean Bottom may be one more instance of intrusive fashions reaching Wessex, perhaps in the Middle Bronze Age when a deteriorating climate was already causing people to abandon the inhospitable uplands.²²

It must be conjectural but the alternatives are unconvincing. The 'stone circle' is not only claustrophobic but it is on a low mound unlike any other Wiltshire ring. The setting differs entirely from other round barrows in the county. Of necessity, queries remain. Grinsell wavered about the rows of sarsens, 'Query whether the site (was) a row of 2 or 3 prehistoric houses'. Mortimer was less doubtful. 'The enclosure is definitely a rectangle with an additional row of sarsens running parallel to its northern side'.²³

Such assessments take no account of later interference such as the medieval labour-saving expedient of integrating rows of standing stones into the walls of cattle- or sheep-pens. Such vandalism was commonplace. The Rollright Stones circle in Oxfordshire became a Roman cock-fighting arena. Castilly henge in Cornwall was transformed into a play-house in the Middle Ages. The high banks of the Maumbury Rings henge at Dorchester were adapted for a Civil War gun-battery. So was the Castilly erstwhile theatre.²⁴ There are many similar sacrileges.

At Langdean Bottom the individual similarities of a sarsen ring and stone rows to monuments on

Dartmoor could be coincidental. What makes the distant origin a likelihood is the closeness of the ring and the rows, oddities a few steps from each other in a countryside of established local forms. That, in turn, offers the probability that the double and single rows a few miles to the north also were related to Dartmoor customs.

If ideas, even human immigration, from that bleak upland to the more sheltered countryside of northern Wiltshire did occur then it is from the detailed notes of A. D. Passmore that the first clues have emerged, providing a glimmer of light on prehistory like the flickering of a birthday cake candle in the darkness of the past.

Acknowledgements

I am grateful to Anne Foster and Val Knowles for their respective hand-written and typed transcriptions of the notebooks; to Lorna Haycock, Sandell Librarian of the Wiltshire Archaeological & Natural History Society, for information about Richard Jefferies and the Day House Farm circle; to R. H. Reiss and the National Monuments Record, Swindon, for information about Fir Clump; and to the National Monuments Record for additional information about the Day House Farm stone circles; Hilary Schrafft for searching for Passmore's obituary in the *Wiltshire Gazette & Herald* of 1958; and to Neil Mortimer who led me to the controversial sites at Langdean Bottom.

Notes

- ¹ Passmore, A. D. 1893-4, *WANHM* 27, 104, 171-4.
- ² Stukeley, 1743, 45.
- ³ Hoare, 1819, 94-5; Duke, 1846, 6, 80-2; Lukis, *Proceedings of the Society of Antiquaries of London, (III)*, 1883, 347; Smith, A. C., 1885, 76-8; Thom, Thom & Burl, 1980, S5/5, 132-3.
- ⁴ Andrew David et al, 202. Stukeley sketch of Winterbourne Bassett: Bodleian Library, Oxford, Gough Maps 231, fol. 216.
- ⁵ Broome circle: Aubrey, 1980, 106-107. Passmore and the Long Stone: *WANHM* 44, 1929, 84-5.
- ⁶ Destruction of the Broome circle and Cricklade: *WANHM* 23, 1887, 115-16. French portal-dolmen: *ibid*, 156-7.
- ⁷ Glantane recumbent stone circle: O'Nuallain, 1984, 12, no. 3, plan, 52; Burl, 1995, 220.
- ⁸ Passmore's death: There were obituaries in *WANHM* 57, 1959, 255-6, and, reputedly, in the *Wiltshire Gazette & Herald* of March 13, 1958, although there is no report in that or adjacent issues.
- ⁹ Richard Jefferies and Coate: *North Wiltshire Herald*

- articles, October, 1867 to June, 1868; G. Toplis, (ed) *Jefferies' Land. A History of Swindon and its Environs*, Simpkin, Marshall, London, 1896, 134-5.
- ¹⁰ A. L. Lewis, 1912.
- ¹¹ Fir Clump stone circle: R. H. Reiss, *in litt.*, 23 January 1996; National Monuments Record, Swindon, *in litt.*, 13 February, 1996; *WANHM* 96, 2003, 222.
- ¹² Swindon old and new churches: Pevsner, 323.
- ¹³ J. B. Jones, 'Wiltshire's oldest sarsens', *WANHM* 53, 1950, 131-3.
- ¹⁴ Seasonal gatherings in Brittany: T. Cato Worsfold, *The French Stonehenge*, Bemrose, London, 1898, 7, 20, 21-2; Burl, 2000, 341.
- ¹⁵ Concentric stone circles in Britain and Ireland: Burl, 2000, 316.
- ¹⁶ Long single rows of stones in south-west England: Burl, 1993, 91-116; Dartmoor, 236-7, Cornwall, 236, Exmoor, 237.
- ¹⁷ Single row at Broome: Aubrey, 1980, 107.
- ¹⁸ Langdean Bottom: Passmore, 'Langdean stone circle', *WANHM* 42, 1924, 364-6. Plan.
- ¹⁹ Interpretations of Langdean Bottom: almost destroyed: A. Service & J. Bradbury, *The Standing Stones of Europe*, J. M. Dent, 1993, 224; stone circle: Pevsner, 231; round barrow: Piggott, 1973, 332; stone circle?: Mortimer, 1997, 24-6; National Monuments Record, Mortimer, *ibid.*, 26.
- ²⁰ Double row of stones: Pevsner, 231; L. Grinsell, 1957, 67. Hut-circle: Burl, *Prehistoric Avebury*, Yale U.P., 2002, 268.
- ²¹ Dartmoor double rows: R. H. Worth, *Worth's Dartmoor*, eds. G. M. Spooner & F. M. Russell, David & Charles, Newton Abbot, 1967, 99-132; Burl, 1993, 75, 78-88, 233-5.
- ²² Langdean Bottom and an exodus from Dartmoor: Burl, 2000, 125; Burl, *Prehistoric Avebury*, Yale U. P., 2002, 268.
- ²³ Row of houses: Grinsell, 1957, 67. A definite rectangle: Mortimer, 25-6.
- ²⁴ Rollright Stones: G. Lambrick, *The Rollright Stones*, Oxford, 1983, 46-7; Castilly henge: Charles Thomas, *Cornish Archaeology* 3, 1964, 10-12; Maumbury Rings, H. St. George Gray, 'Fourth interim report on the excavations at Maumbury Rings, Dorchester, 1912', *Proc. Dorset Nat. Hist & Ant. Field Club* 34, 15-16; 'Fifth interim report', *Ibid* 35, 1914, 4, 13, Plate 2.
- BURL, A. 2000, *The Stone Circles of Britain, Ireland and Brittany*. New Haven & London: Yale University Press
- DAVID, A., FIELD, D., FASSBINDER, J., LINFORD, N., PAYNE, A., 2003. 'A Family Chapel...to an Archdruid's Dwelling': an investigation into the stone circle at Winterbourne Bassett, Wiltshire. *WAHNM* 96, 195-205
- DUKE, Rev. E. 1846, *The Druidical Temples of the County of Wilts....* London: Russell Smith
- GRINSELL, L. V. 1957, 'Archaeological Gazetteer' in ed. R. B. Pugh, *A History of Wiltshire. The Victoria History of the Counties of England, I, 1*, London: Oxford University Press, 21-279
- HOARE, R. C. 1819, *The Ancient History of Wiltshire, II*, London: Lackington, Hughes, Harding, Mavor & Jones
- LEWIS, A. L. 1912. On the relation of stone circles to outlying stones, or tumuli, or neighbouring hills, with some information therefrom. *Journal of the Royal Anthropological Institute* 12, 176-91
- LUKIS, Rev. W. C. 1883. Report on the prehistoric monuments of Wilts, Somerset and South Wales. *Proceedings of the Society of Antiquaries of London* 9, 344-55, 'Winterborne-Bassett', 347
- MEADEN, T. 1999, *The Secrets of the Avebury Stones*, London: Souvenir Press
- MORTIMER, N. 1997, 'On Longan dene', *3rd Stone* 26, 1997, 24-6
- MURRAY, L. J. 1999, *A Zest for life: the Story of Alexander Keiler*. Wootton Bassett: Morven Books
- O'NUALLAIN, S. 1984. A survey of stone circles in Cork and Kerry. *Proceedings of the Royal Irish Academy* 84, 1, Dublin: Royal Irish Academy.
- PASSMORE, A. D. 1893. Stone circle near Swindon. *WANHM* 27, 104
- PASSMORE, A. D. 1894. Notes on an undescribed stone circle at Coate, near Swindon. *WANHM* 27, 171-4
- PASSMORE, A. D. 1923. Langdean stone circle. *WANHM* 42, 364-6
- PEVSNER, N. 1975, *The Buildings of England. Wiltshire*, revised by B. Cherry, London: Penguin
- PIGGOTT, S. 1973, 'The first agricultural communities: Neolithic period, c.3000-1500 BC, in ed. E. Crittall, *A History of Wiltshire. The Victoria History of the Counties of England, I, 2*. London: Oxford University Press, 284-332
- SMITH, Rev. A. C. 1885, *British and Roman Antiquities of the North Wiltshire Downs*, Devizes: Wiltshire Archaeological and Natural History Society
- STUKELEY, W. 1743, *Abury, a Temple of the British Druids...* London: Innys, Manby, Dod & Brindley
- THOM, A., A. S. & BURL, A. 1980, *Megalithic Rings: Plans and Data for 229 Monuments in Britain*. Oxford: British Archaeological Reports 81
- TOPLIS, G. (ed). 1896, *Jefferies' Land. A History of Swindon and its Environs*. London: Simpkin, Marshall
- TREHERNE, J. 1985, *The Trap*. New York: Beaufort Books

Bibliography

- AUBREY, J. 1980, *Monumenta Britannica, I*. Milborne Port: Dorset Publishing Co.
- BURL, A. 1993, *From Carnac to Callanish. The Prehistoric Stone Rows and Avenues of Britain, Ireland and Brittany*. New Haven & London: Yale University Press
- BURL, A. 1995, *A Guide to the Stone Circles of Britain, Ireland and Brittany*. New Haven & London: Yale University Press

Appendix: Corpus of Stone Circles in the Notebooks of A.D. Passmore

- Broome.** SU 167 825. Aubrey, I, 106, 107; Long Stone, Broome., *WANHM 11*, 1869, 341 (Stukeley); *WANHM 23*, 1887, 115-16, 156, 157; Passmore, *WANHM 27*, 1894, 174; Passmore, Notebook 1, 28. *Victoria County History, Wiltshire, I (1)*, 1957, 111-12, 332.
- Coate Reservoir.** SU 17. 82. Passmore, Notebook 1, 29.
- Day House Lane, NE.** SU 181 824. Richard Jefferies, *North Wiltshire Herald*, October, 1867 to June, 1868; G. Toplis, 134-5; Passmore, *WANHM 27*, 1894, 171-4, plan 172; Passmore, Notebook 1, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17b, 20, 21, 22, 23, 24, 25, 26, 31, 32, 33, 35a, 40; *Victoria County History -Wiltshire, I, (1)*, 1957, 111-12; Thom, 1967, 140, S5/6, Circle, stone, 'part only'; Thom, Thom & Burl, 1980, 134-5, plan, diameter c. 207' [63m]. Today only five stones of the circle survive. The 'row' has been removed: National Monuments Record, *in litt.*, 15. 8. 03.
- Day House Lane SW,** SU 181 819. Passmore, Notebook 1, 21a, 27, 35b; *WANHM 27*, 1894, 171-4. Since Passmore's Note the stones have been blown up: National Monuments Record, *in litt.*, 15. 8. 2003.
- Fir Clump, Burderop Wood.** SU 161 814. Passmore, Notebook 1, 17a; *WANHM 27*, 1894, 174; R. H. Reiss, *in litt.*, 23. 1. 96; National Monuments Record, Swindon, *in litt.*, 13. 2. 96.
- Hodson,** c.SU 172 809. Passmore, *WANHM 27*, 1894, 174; Notebook 1, 21b, 22, 23, 38, 39.
- Swindon Old Church.** SU 15. 84. Passmore, Notebook 1, 55, 56.
- Winterbourne Bassett:** c.SU 093 753. Stukeley, 1743, 45; Hoare, 1821, 94-5; Duke, 80-2; Lukis, 1883, 347; Smith, A. C., 76-8; Thom, 1967, 140, S5/5, 'Circle, stone, all fallen'; Thom, Thom & Burl, 132-3, plan, 156 ft (47.6m); A. David et al, 195-205.

Recent work at Barton Grange Farm, Bradford-on-Avon, Wiltshire, 1998–2003

by *Michael Heaton*¹ and *William Moffatt*²

Excavations in advance of the rebuilding of the West Barn at Barton Grange, Bradford-on-Avon (damaged by fire in 1982), revealed a sequence of archaeological layers earlier than the barn's construction date of 1769, and probably extending back to a period contemporary with or earlier than the building of the adjacent medieval tithe barn.

INTRODUCTION

The Site

Bradford-on-Avon is situated on a bend of the (Bristol) River Avon, within the Corallian ridge of Jurassic limestones at the south-west periphery of the Cotswold Hills, 6km south-east of Bath, in West Wiltshire. Barton Grange Farm lies on the south-west edge of the town, on the Avon floodplain, at NGR ST 8230 6047, and comprises buildings grouped around a large open courtyard, with the Great Tithe Barn defining the southern edge of the yard, and the House, the north.

The works comprised the rebuilding of the West Barn; stabilisation of the walls at the north-east corner of the Stack Yard; excavation of four new service trenches (A-D) across the 'Stack yard' and along the access road; and excavation of footings for a new boundary wall north of the Granary. Detailed descriptions of the 'standing' components of the site have been included within reports submitted to English Heritage and the County SMR. The following concerns only the 'below ground' deposits pertinent to the archaeology of the West Barn. The extent of archaeological observations and structures affected by the works is indicated on Figure 1, and detailed plans and cross-sections of the West Barn are presented on Figures 2 and 3.

Archaeological Background

The archaeological background has been summarised by Haslam (1976; 1984). Academic interest in the farm complex has historically focused on the Great Tithe Barn, with the adjacent buildings within the group being afforded 'Listed Building' status by virtue of their 'group value'. Despite the existence of a 1769 date stone in its east elevation, the 1974 'Listing Schedule' for the West Barn describes it as:

Probably C14th, or possibly later. Considerably altered. Single storey. Coursed rubble. Ashlar quoins. Modern pantile roof. Stone gable-ends with cappings and saddle-stones. Square-headed opening in east gable wall with timber lintel. Assortment of windows on north side. Plain queen-post roof, probably C19th. Included for group value.

The West Barn attracted academic interest, ironically, after a fire in 1982 which destroyed the roof. Base crucks in the long side walls, observed archaeologically for the first time, indicated that part of the building was of a potentially earlier date. Subsequent excavations (Haslam, 1984) identified masonry outside and inside the West Barn that the excavator concluded were the footprint – possibly a cart porch – of an earlier and larger building. Despite Haslam's appeals, the building was allowed to deteriorate. By 1989 Jeremy Lake, in his study of

¹ ASI, Furlong House, 61 East Street, Warminster, BA12 9BZ ²25 The Hollow, Lower Woodford, Salisbury SP4 6NJ

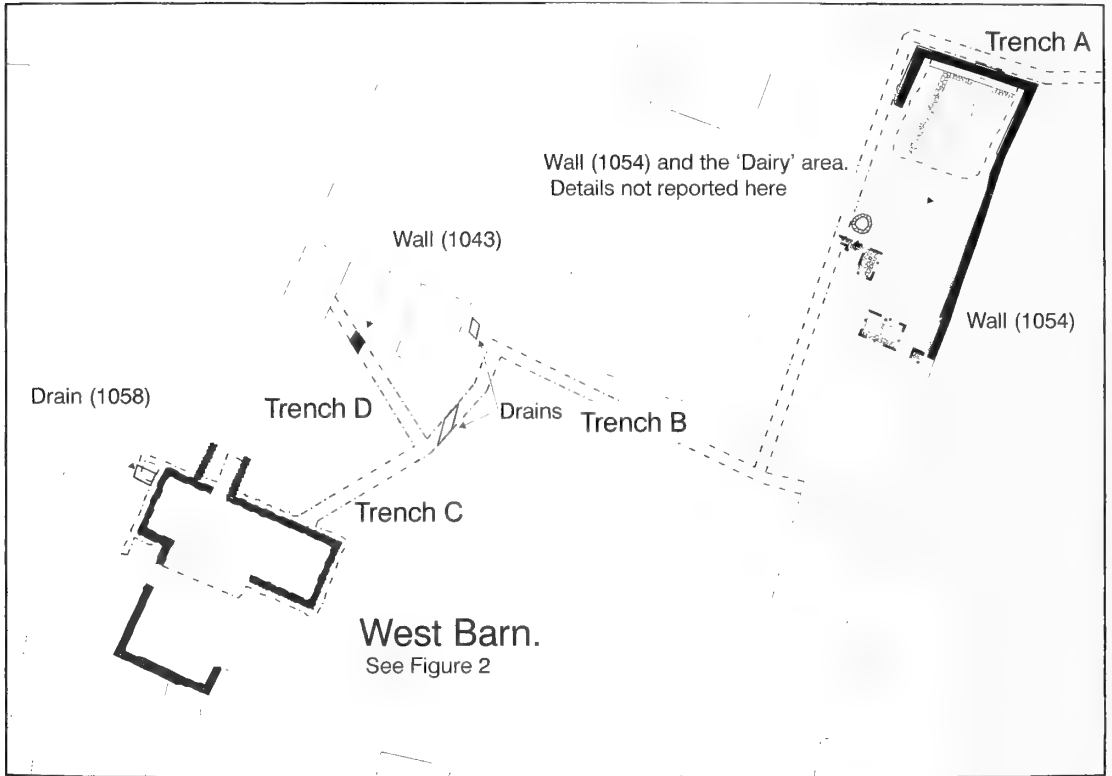


Fig. 1 Extent of Works

historic buildings (1989) was able to describe the West Barn only as 'the ruins of another medieval farm building, probably a byre'.

RESULTS

Stratigraphic Data

Excluding wholly modern concrete surfaces and associated disturbances, seven stratigraphically distinct phases of deposit were revealed in the main excavations and service trenches, with contiguous deposits extending between them. The stratigraphic relationships are illustrated on Figure 4.

Phase 1

Brickearth subsoil (1038) was revealed at the base of most excavations and, in Trench C, was sealed by a localised remnant of a grey silty loam 'A' horizon topsoil (1037).

Phase 2.

The stratigraphically lowest structural deposits comprised wall (1043) and wall (0005/1018), though

no direct stratigraphic relationship between them was revealed. Wall (1043) was exposed only in Trench D. It comprised one course of a bipartite wall of Oolitic limestone slabs retaining a rubble and clay core, its orientation corresponding approximately to that of the West Barn. The stratigraphic relationship between wall (1043) and limestone rubble layer (1036) to the east of it had been severed by a narrow modern disturbance [1047] that had cut down on to the top of the masonry skin of (1043) but without – apparently – disturbing it. The inclination of surviving upper surfaces of (1036) further to the east suggests that (1036) must have lain against the eastern face of (1043) and possibly over it. It did not extend west nor beneath (1043). Wall (0005/1018) forms the extant south-west corner of the West Barn and the north end of the adjoining enclosure wall. It is L-shaped in plan and has a fully bonded corner upon which rested the cruck blade recorded by Haslam (1984). Though fully integrated in the plan of the West Barn, it is structurally separate from the ostensibly adjoining walls (1027, 1007, 0004) with clear abutting joints visible in the west elevation and the inner face of the south elevation. Figures 3

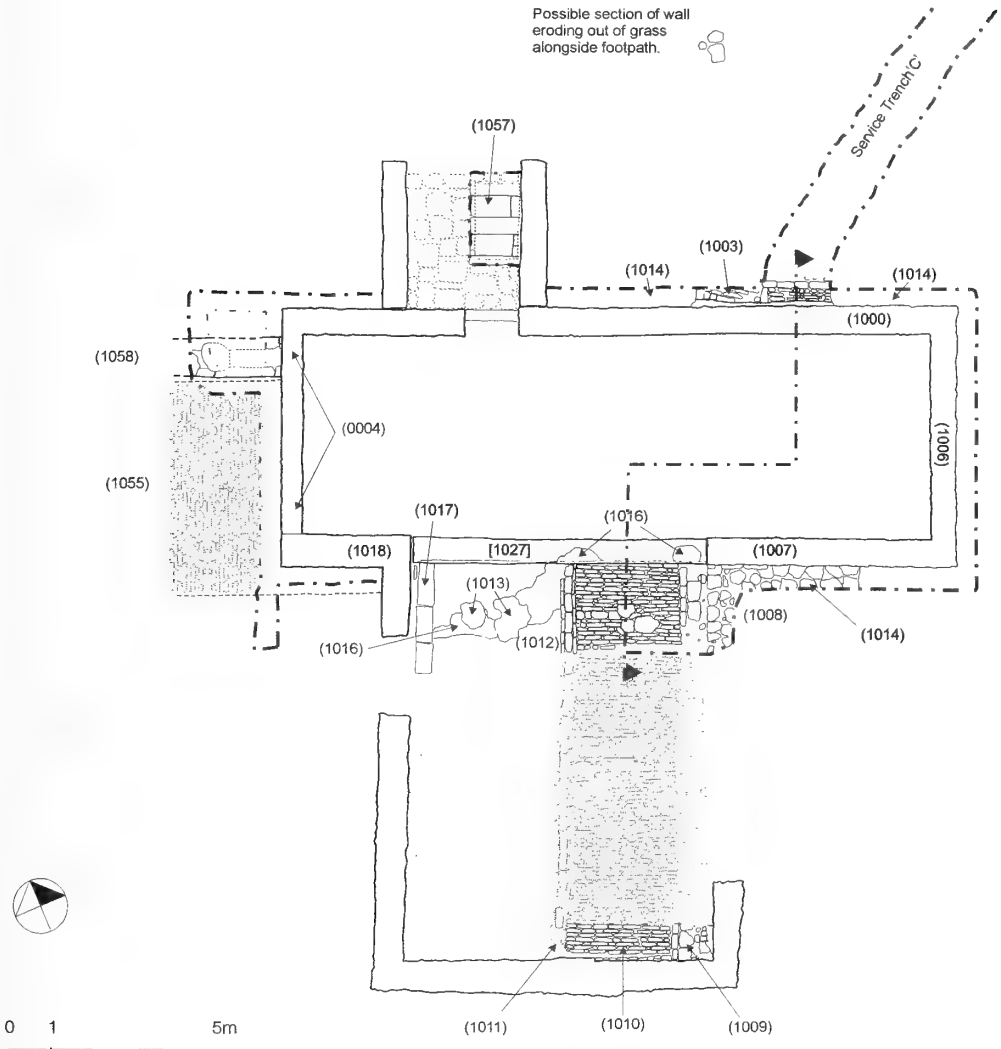


Fig. 2 West Barn. Plan of excavated area

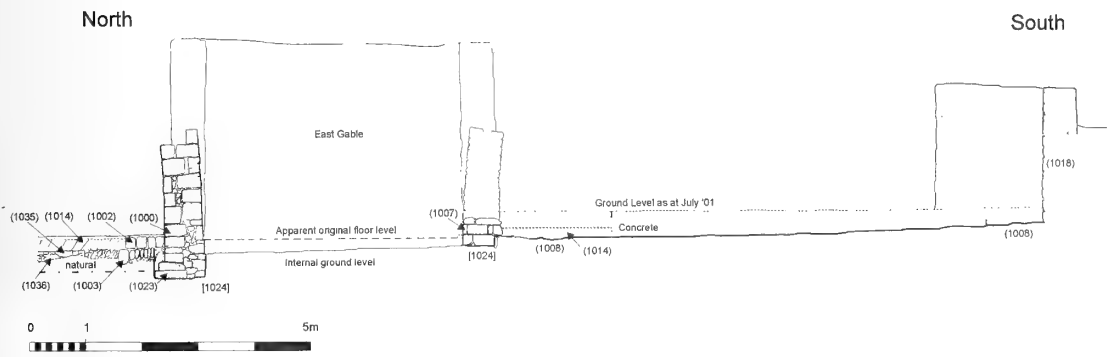


Fig. 3 West Barn. Section N-S through excavations

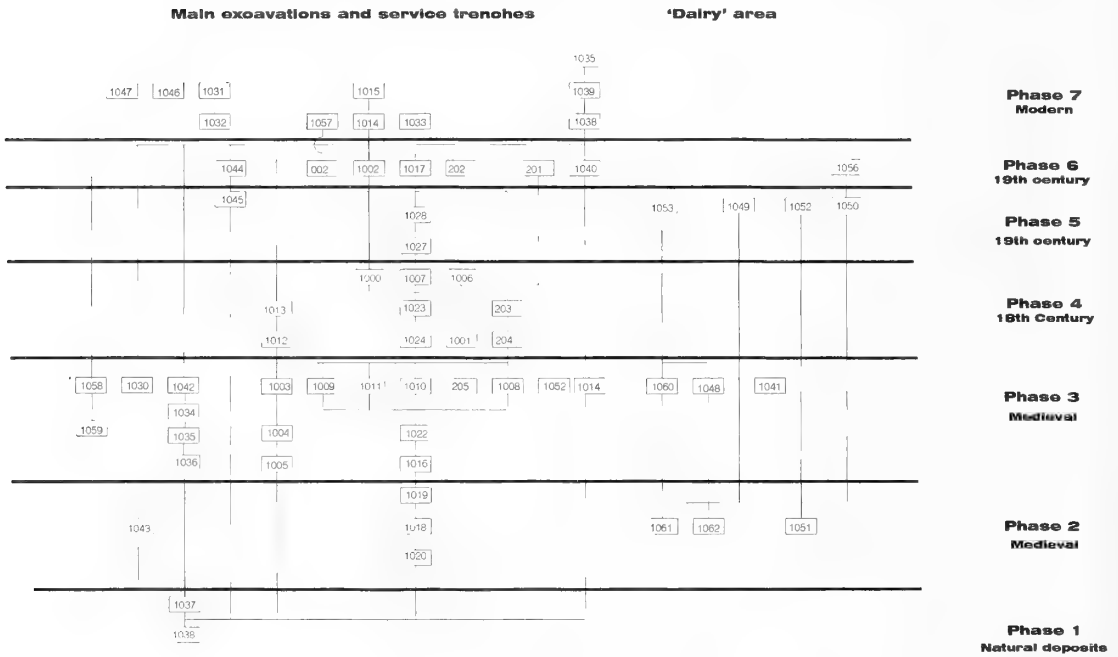


Fig. 4 Stratigraphic sequence diagram

and 4 illustrates its stratigraphic separation from the rest of the buildings: its footing trench [1020] and foundation (1019) are sealed by layer (1016) which form the base of a ‘make-up’ sequence through which walls (1000) and (1027) etc are cut.

Phase 3.

Traces of the lower of two limestone pavements were encountered in the main excavation and in Trenches B, C and D, stratigraphically above Phase 2 deposits and partially truncated by the main walls of the West Barn (Phase 4). The pavement comprised a well-defined, cambered, 200mm deep course of limestone ‘pitchstones’ (1003, 1008, 1010, and 1055) bedded on two layers of compacted limestone rubble (1004/1022 and 1005/1016) together approximately 200mm thick. Three areas of paving were revealed: an E-W pavement (1055) at the west end of the barn, approximately 4.5m wide; a N-S pavement (1010, 1008, 205) 2.5m wide and bounded on both sides by well-formed stone gutters (1011 and 1009) in the excavations on the south side of the barn; and fragments of a N-S pavement (1003) against the east end of the north side of the barn. The latter two were bounded by spreads of flat-laid limestone rubble paving (1014), the spatial extent of which lay outside the excavations. The northern extent of (1003) had been truncated by later disturbances (see below),

but the compacted limestone rubble base extended as a continuous and well-defined layer (1036) from the north face of the barn foundation along the entire length of Trenches C and D and the western part of B. Stratigraphically level with the lower pavement was a series of stone conduits (1030, 1042, 1058) revealed in Trenches C and in the French drain at the west end of the West Barn. These conduits were formed of two skins of undressed limestone slabs approximately 300mm apart capped by a single course of similarly undressed limestone slabs, set into the compacted limestone rubble base (1036) of the lower pavement. Though visible only in short lengths, two are discernible: running N-S (1030/1042) through Trenches C and B, and running E-W (1058) from the west end of the West Barn. The eastern extent of (1058) was not identified: it did not exist within the reduced interior of the West Barn, and the French drain excavations along the east and north foundations were not deep enough to encounter it.

Phase 4. Main walls

The limestone pavements were cut by the footings of the south (1007), west (1004), north (1000) and east (1006) walls of the West Barn, and in places the lower course of the wall proper (above the foundation) lay directly on pavement setts. The

relationship is most clearly demonstrated by the cross-sectional drawing Figure 3. On the north side, the footing [1024] of wall (1000) and its foundation (1023) clearly defines the southern extent of pavement (1003) – a contemporaneous or later pavement would butt against the wall face – while on the south side the lower course of the wall (1007) rests directly on the pavement (1008).

Phase 5. Blocking wall (1028)

The south elevation immediately prior to dismantling comprised three fabrics distinguishable by bond and slight variations in thickness, and demarcated by clear and fully ‘closed’ vertical joints. The stratigraphically highest was ‘blocking’ wall (1028), infilling a 6.80m wide gap in the south elevation. Though directly related stratigraphically only to pavements (1008) and (1014), though which its footing [1027] had cut, the east and west ends of wall (1028) were ill-formed and lay against the fully quoined reveals of walls (1007) and (1018), suggesting they were built against existing structures. In the north-east corner of the Stack yard, stratigraphically level with the later modifications to the West Barn but physically unconnected with it, were extensively disturbed paved surfaces, hearths and wall foundations revealed during site clearance. Materially unaffected by the works, and now protected beneath a geotextile and sand membrane, these were rapidly recorded but not investigated in detail. Referred to here generically as (1041), the westernmost components were abutted by the upper limestone pavement (Phase 6, see below) indicating that these deposits pre-date it. No stratigraphic relationship with wall 1054, however, was established.

Phase 6. Upper pavement

Traces of an upper and more massive paved surface were revealed in all areas, including the north end of Trench A. The upper pavement comprised massive blocks of Carboniferous limestone (1017, 1002, 201, 202, 140) resting directly on the lower pavement (1003 etc) or on localised spreads of compacted limestone rubble (1034) that sealed a localised grey silt clay (1035) revealed only in the southern end of trench C. The latter – which sealed Phase 2 layer (1036) – contained fragments of metamorphic roofing slate and hand-made stock brick, suggesting (here) an 18th C date for its deposition, or later. Stratigraphically level, but physically distant, were the edges of two limestone

pavements (1044, 1045) revealed at the west end of Trench D, and a slab pavement (1057) within the outshot walls against the north elevation of the West Barn. The former were revealed beyond wall (1043), hard against – and abutting – the foundations of the existing building. The southernmost, (1044) was curved in plan and appeared centred on a blocked door opening in the eastern elevation; to the north and 100mm lower than it, (1045) was aligned almost normal to the existing building. Both were formed of rectangular setts – c. 300mm × 100mm × 200mm – rather than pitchstones.

Pavement (1057) was revealed during localised re-laying of the rough slab surface between the outshot walls (0002) and, as a result, neither its lateral extent nor stratigraphic relationship with (0002) were identified. It comprised sawn slabs of Oolitic limestone, 180mm – 200mm wide x 500mm long, laid parallel to the axis of the building and, apparently, hard against the wall face, with an upper surface 250mm below site datum. Packed tightly together, but with no evidence of a bonding agent, the visible slabs formed a rectangular platform approximately 860mm x 500mm, the interior of which had been gauged out to create well-defined 40mm wide lip around the edge. The reduced interior was intentional and, on the basis of chisel marks, executed *in situ*. The coincidence of the lip with the position of the easternmost lean-to wall suggests that these are contemporaneous.

Phase 7. Modern disturbances

Where absent, the upper pavement (1017 etc.) was replaced by a thick deposit of coal clinker/cinders (1032, 1033, 1014) that extended in thickness of up to 600mm across the entire site. Where juxtaposed – for instance at the south end of Trench C – the cinders lay against the setts (1017 etc.) within a shallow cut into the bedding layers, suggesting that the cinders were infilling a void created by removal of the setts. The cinders lay against all four foundations of the West Barn and extended across the entire site area, and formed the lowest layer encountered in the French drain excavations around the east and north foundations of the West Barn and across most of the length of Trenches A and B. The cinder deposit was sealed by concrete surfaces and cut into by a number of drains, service pipes and excavated disturbances. These are not further described here.

Artefactual Data

No datable artefacts were recovered during the operations, other than post-18th-century material such as roofing slate and bricks. These have been discarded, and are described in the stratigraphic descriptions above.

Palaeoenvironmental Data

No deposits suitable for palaeoenvironmental analysis were revealed; and no coarse materials, such as animal bone, were recovered.

CONCLUSIONS

Wall (1043) appears to be the feature identified by Haslam (1984) – feature (1047) being his backfilled trench – and there is no reason to dispute his interpretation that it represents one side of a rectangular building with orientation corresponding to the Tithe Barn that predates construction of the West Barn. Similarly, his interpretation of wall (1018) as a remnant of an earlier building is also supported by the stratigraphic data recovered here, but there is no direct stratigraphic link between the two and, indeed, they differ significantly in the form of foundation. They are both earlier than the West Barn, but in all other respects cannot be related. The ashlar quoining (0005) at the west end of (1018) may be a later dressing of an exposure, as the work differs from all other fabric on the site.

Culvert (1058) coincides exactly with the position and orientation of the north wall of Haslam's 'porch', and is a substantial sub-surface structure that also coincides exactly with the functionally ambiguous breaks in the fabric of the west elevation of the West Barn. Unfortunately, floor reductions within the West Barn subsequent to Haslam's excavations have removed all trace of the eastward continuations of (1058); and the French drains excavated for the present work were not deep enough to encounter its continuation beyond that, so it is not possible to test Haslam's interpretation. However, the culvert and its associated feature (1030) to the east are stratigraphically level with the lower limestone pavement (1008 etc.), an extensive deposit that is stratigraphically later than walls (1018) and (1043). If (1058) is the western extension of the feature Haslam described as a wall foundation, it is a drain, and it cannot be associated with walls (1043) or (1018).

The lower limestone pavement (1008 etc.) is an unambiguous structure, and appears to be one component of an extensive network of paths and surfaces extending away from the West Barn in all directions. It remains undated here, and, as a utilitarian structure executed in vernacular material, is inherently undatable. It is, however, identical in form to the limestone pavements adjacent to the Tithe Barn and so might be broadly contemporaneous. If this is the case, Haslam is correct in ascribing a pre-Tithe Barn date to walls (1043) and (1018).

We conclude that the West Barn was built in a single principal episode in 1769, utilising wall (1018) which had by that time been dressed with ashlar (0005) at its west end. The matching pier (0003) to the north of it suggests the possibility of an earlier structure related to (1018), but no trace exists within or beneath the West Barn. Furthermore, the poor closing of the rubble masonry against its north edge suggests that (0003) was added to an existing wall. The east, north, west and most of the southern walls were constructed in shallow footings excavated through the limestone pavement (1008 etc) and the shallow soils (1012 and 1013) that had developed over it. The building in its original form had a very broad opening in its south side, to link with the pre-existing open-sided cattle shed/ cart shed that had been built against wall (1018), but the west gable was fully closed. The rubble masonry forming the west gable was stitched into the pre-existent ashlar quoins (0005) of (1018) above first-floor level. The ashlar work may have been a modification of (1018), perhaps a later dressing of exposed core material at a break. The visually matching pier of ashlar (0003) on the north side of the gable, which is founded on culvert (1058), is also a veneer – the vertical joints evident in the west face are not present in the internal east face – suggesting a repair or perhaps a cosmetic treatment, in the absence of a more plausible explanation. The gambrel-roofed shed existed until 1923, at least, though the date of blocking (1027) that probably followed its demolition cannot be more accurately estimated.

The upper pavement – (1017) etc. – extended across the entire site and utilised carboniferous limestone. Not local to this site, this type of stone would have been prohibitively expensive to transport prior to the canal or railway eras. Layers immediately beneath it contained metamorphic roofing slate and brick fragments which suggest a post-18th-century date. It is likely, therefore, that

the upper pavement was a 19th-century addition to Barton Grange Farm. It was subsequently removed and replaced by cinders, at an unknown date prior to the 1982 excavations.

Bibliography

- ASI, 1998, 'West Barn....Bradford on Avon: Historic Building Record'. (Non publication assessment report Ref. ASI 3078 submitted to English Heritage and Wiltshire County Council)
- ASI, 2000, 'West Barn....Bradford on Avon: archaeological works to accompany....: project design'. (non publication project design ref. ASI 3167/1 submitted to English Heritage with SMC application)
- HARVEY, R.B., and HARVEY, B.K., 1993, Bradford-on-Avon in the 14th Century, *WANHM*, 86, 118-129
- HASLAM, J., 1976, *Wiltshire Towns: The archaeological potential*. Devizes: WANHS.
- HASLAM, J., 1984, Excavations at Barton Farm, Bradford-on-Avon, 1983: Interim Report, *WANHM*, 78, 120-121
- LAKE, J., 1989, *Historic Farm Buildings*

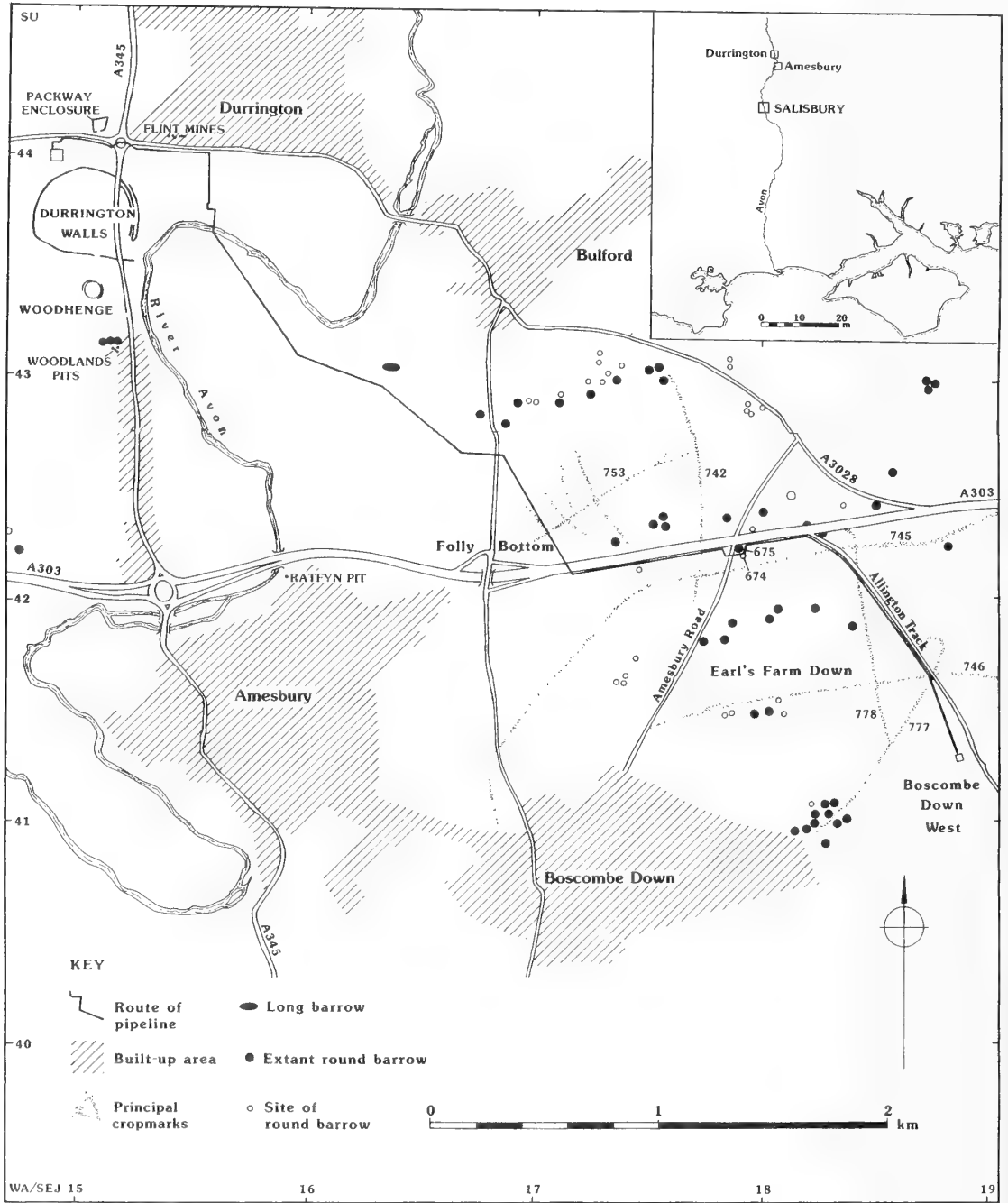


Fig. 1 The pipeline location with known archaeological features

An Archaeological and Environmental Study of the Neolithic and Later Prehistoric Landscape of the Avon Valley and Durrington Walls Environs

by Rosamund M. J. Cleal,¹ Michael J. Allen² and Caron Newman³
with contributions from S. Hamilton-Dyer, Phil Harding, Lorraine Mephram,
Elaine L. Morris, Robert G. Scaife and S.F. Wyles

Small-scale excavations and a watching brief along the route of a water mains between two reservoirs at Durrington Walls and Earl's Farm Down recorded Neolithic pits and other later prehistoric features to the north of Durrington Walls and later prehistoric features on Earl's Farm Down, including a section excavated through the Earl's Farm Down linear ditch. Other features included a probable Roman burial near Durrington Walls and a ploughed out disc barrow. The Avon valley floodplain profile was recorded by an auger transect along the pipeline route where it crossed the Avon valley. Peat and organic sediments were recorded from which a key pollen sequence for southern England was obtained, dating from the Upper Palaeolithic and very Early Mesolithic through to the Roman and medieval periods.

Wessex Archaeology was commissioned by Wessex Water Construction Ltd. to undertake excavations and a watching brief during the laying of a water mains to the north of Amesbury (SU 1487 4400 to SU 1878 4135). The first stage of the project was undertaken in the spring and summer of 1991, followed by observation of the River Avon crossing in autumn 1991. The final section of the pipeline was constructed between mid-November and mid-December 1991, when a watching brief was maintained at the western reservoir site where a new water treatment works was constructed.

TOPOGRAPHY AND GEOLOGY

The pipeline route (Figure 1) crosses the rolling Upper Chalk downland of the Salisbury Plain north of Amesbury. Numerous dendritic dry valleys dissect the chalk upland, some of which are mapped as containing valley gravel (including Folly

Bottom), and localised valley bottom colluvium. The downland here is bisected by the meandering course of the River Avon which is mapped as containing valley gravel and alluvium. The pipeline route crossed the floodplain alluvium on a large meander bend to the east of Durrington Walls. The soils are mainly brown rendzinas over the Upper Chalk, with typical calcareous brown earths mapped within the valley of the River Avon, over alluvial and flinty subsoils (Jarvis *et al.* 1984).

ARCHAEOLOGICAL BACKGROUND

The pipeline passes through an area of obvious archaeological importance (Figure 1). The western end of the route passed just 120m to the north of the henge monument of Durrington Walls with the Packway Iron Age enclosure 50m to the south

¹ Alexander Keiller Museum, Avebury, Marlborough SN8 1RF ² Wessex Archaeology, Portway House, Old Sarum Park, Salisbury SP4 6EB ³ Egerton Lea Consultancy, Room 9, Victoria Hall, Grange over Sands LA11 6DP

(Wainwright and Longworth 1971). The latter was partially excavated in 1968 and has been more recently subject to work in advance of a gas pipeline (Graham and Newman 1993, 52–5). The dating of the enclosure within the Iron Age remains uncertain and, on the basis of the recent work, it appears to have few internal features.

The area to the east of the River Avon also contains numerous linear cropmarks and barrows. North of the A303 the pipeline passes close to Longbarrow Clump (SU 1640 4304) and to the south of a dispersed round barrow cemetery (SU 1725 4289). The length of pipeline south of the A303 runs through an area characterised by intensive linear cropmarks, the Earl's Farm Down field system (centred SU 1840 4120), and round barrow groups (centred SU 1790 4230, SU 1780 4180, SU 1800 4148 and SU 1880 4100). The Earl's Farm Down field system has been studied as part of the Wessex Linear Ditch Project, a programme of survey and excavation undertaken by the University of Reading (Bradley *et al.* 1994). This project revealed that much of the field system on Earl's Farm Down, once thought to be associated with a major Bronze Age linear ditch, dates to the Roman period.

METHODS

A series of small excavations was undertaken where the pipeline crossed known features. Following these excavations, the topsoil was stripped from the remainder of the pipeline route and most of the Durrington reservoir, all of which was examined for archaeological features and artefacts. Pipe trenching was observed in plots where subsoil might mask features. The main concentrations of features have been assigned site numbers, and these are shown in Figures 2 and 8.

Where the pipeline crossed the valley of the River Avon, the alluvial profile was recorded and sampled in a transect of auger holes at 10 m intervals (Figure 2). Samples were taken from the most significant sequence and provided a key vegetational history of the adjacent chalk downland.

ORGANIZATION OF THE REPORT

Although the entire length of the pipeline was observed, archaeological discoveries were largely

confined to two main areas: i) the high ground to the north-west of the river, in the vicinity of Durrington Walls henge monument; and ii) Earl's Farm Down. Minor archaeological features were identified in the Avon valley, including three water meadow ditches and a probable field boundary (Figure 2, Sites 5 and 6 respectively), as well as small quantities of prehistoric and Roman pottery and a scatter of worked flint in the area between Sites 5 and 6. These are not reported here in detail, but are listed in archive.

Findings in the Durrington Walls area were mainly of Neolithic date, and those from Earl's Farm Down of Bronze Age or later date. In addition, environmental data obtained from the Avon valley, and from a shallow colluvial sequence at Folly Bottom allow the landscape context of both areas to be put into a broader landscape and environmental context. Thus the report is divided into four sections: Durrington Walls environs, the Avon valley, Folly Bottom and Earl's Farm Down.

PART 1: DURRINGTON WALLS ENVIRONS – SITES 1–4

NEOLITHIC FEATURES

Prehistoric features, almost certainly dating to the later Neolithic, occurred along the pipeline from the area of the reservoir to the west, to the area north of the river meander in the east (Figure 2, A and B). Within the area of the reservoir and its access road at Durrington Walls (Site 1, Figure 2), the earliest datable feature was a small pit, 155, situated some 28m to the west of a second pit, 157 (Figure 3). The feature was circular in plan and measured 1.35m in diameter and 0.51m deep. Although the pit had been cut into crumbling weathered chalk, there was very little chalk in the dark yellowish-brown silty clay fill. It contained a total of 18 Neolithic flint artefacts including a broken ground flint axe, a single piece of burnt flint, 26 fragments of bone, mainly cattle, and some traces of charcoal. The absence of chalk rubble and the uniform nature of the deposit indicate that the pit was backfilled in a single episode soon after it was dug.

Pit 157 was a shallow scoop cut into the chalk (Figures 2 and 3), 1.2m in diameter and 0.19m deep.

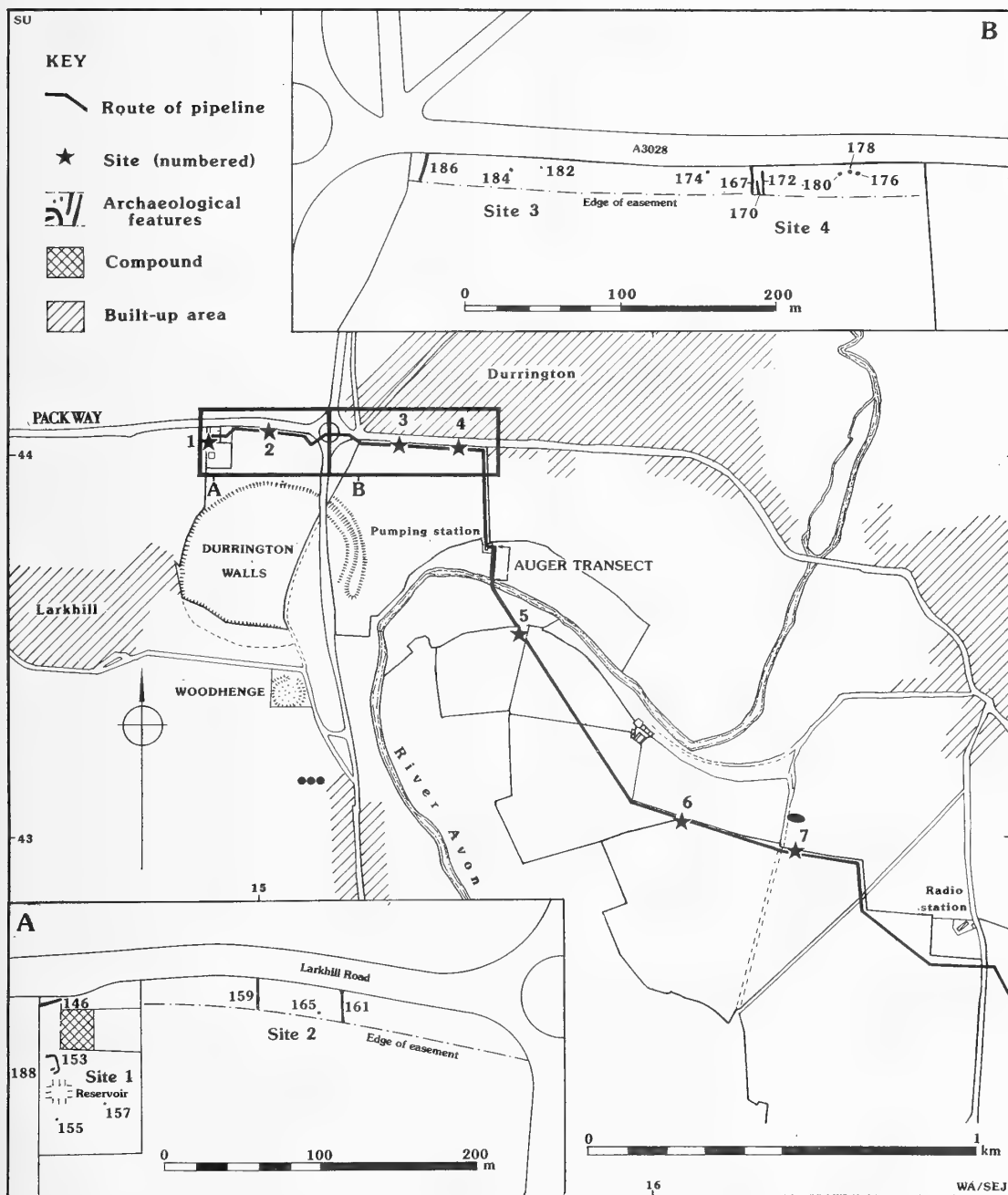


Fig. 2 The pipeline between Durrington reservoir and the radio station, showing site locations

It was filled with a dark yellowish-brown silty clay and contained a very large amount of burnt flint (195 pieces weighing 4.38kg), but no evidence of flint working or other kinds of waste material. The average size of the burnt flint was far larger than in any other feature excavated along the pipeline.

The earliest feature recorded was pit 165, a shallow cut into the chalk (Figure 3) directly north of the Neolithic henge monument (Figure 2, Site 2). It contained worked flint, animal bone and 20 sherds of Grooved Ware pottery. The large quantity of struck flint from the pit included seven scrapers,

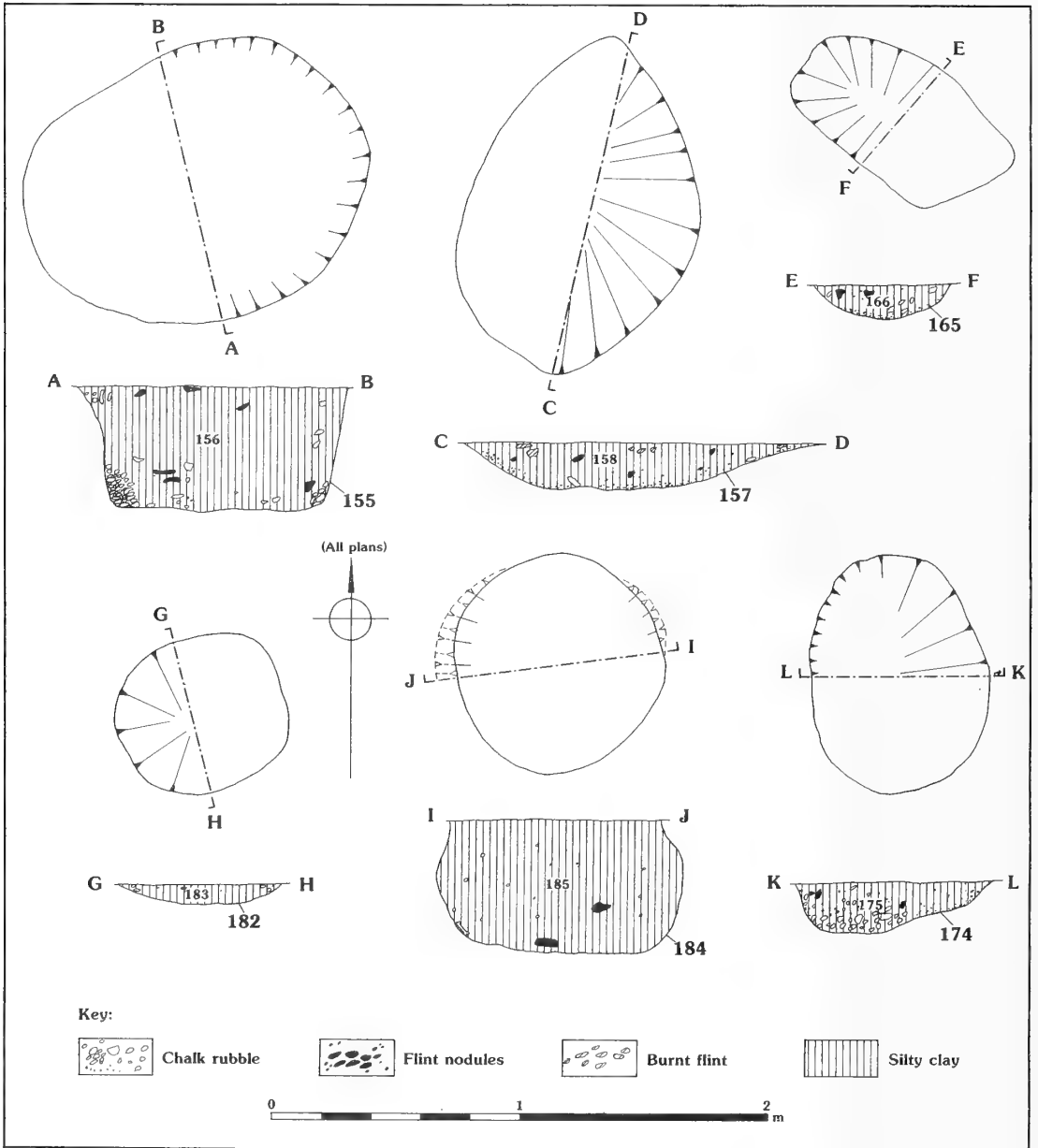


Fig. 3 Sections through features from Sites 1-4, Durrington Walls environs

a knife and two retouched flakes. The animal bone, although small in quantity, included pig and cattle bones, as well as a fragment of jaw and tooth from a beaver.

Three widely spaced features were identified to the east of the roundabout (Figure 2, Site 3). The first was pit 184, a substantial, bell-shaped feature 0.57m deep with a diameter of 0.85m. It contained 146 pieces of Neolithic struck flint (see Harding

below), two sherds of pottery, and animal bone fragments including the remains of an antler pick. The pottery has no distinguishing characteristics, but is likely to be Neolithic, because of its association with so much worked flint of that date. Twenty metres to the east was a very shallow circular pit, 182, 0.65m in diameter, and filled with a silty clay (Figure 3). The feature was so ephemeral that interpretation is difficult, however, two flint

flakes and a core were recovered from the fill, and it is probably prehistoric.

Site 4 lay to the east of Site 3 and included a number of features spread over about 500m. The most westerly was 174, a small irregular depression. This was roughly oval in plan, with a flat base and it produced a large amount of burnt flint (1.79kg), 11 fragments of animal bone and three flint flakes. The fill was homogeneous in character, indicating that the feature had been backfilled in a single episode.

LATER FEATURES

At the reservoir, an inhumation of Romano-British or later date was found lying within a ditched enclosure (188) (Figure 2, Site 1). The human remains were those of an immature individual (Jenkins, pers. comm.), about 12 years of age, within a grave. A water pipe trench had previously destroyed around 75% of the grave. The remainder was excavated, revealing both legs and feet below the knees. A quantity of disarticulated bone was also recovered, and only the arms and a tibia remain missing. The grave was aligned west-east, and was filled with very loose vacuous chalk rubble. The *in situ* legs and feet were surrounded by square-shank nails, which appear to have been part of a coffin. No datable material was recovered from the grave, but the west-east style of burial and the presence of a coffin suggests a Roman or later date.

A ditch (186), situated to the east of the roundabout and running north-south, was possibly of later prehistoric date (Figure 2, Site 3). Post-medieval field boundaries and wheel-ruts were also encountered (Figure 2, features 159, 161, 167, 170 and 172).

UNDATED FEATURE

Ditch 146 was situated at the junction between the access road and the A3028 (Figure 2, Site 1). There was no time available for this feature to be excavated because of its position on the access road. It was, however, sealed, and thus preserved, below a layer of 'terrain' and hard-core. The feature was 1.7m wide, and ran across the line of the access road on a west-south-west to east-north-east axis. The ditch was filled with a light yellowish-brown fine silty clay, a much finer deposit than the fills of other features observed in this area, and appears to have been washed into the ditch by successive periods of rain. No finds were recovered from the top of this fill.

POTTERY

by Elaine L. Morris and Rosamund M.J. Cleal

Twenty sherds from a single Grooved Ware vessel were recovered from pit 165 (Site 2; Figures 2 and 4). The form is not reconstructable, but the three conjoining sherds appear to belong to the base and lower part of the vessel. The fabric is soft and contains sparse quartz sand (0.5mm), rare iron oxides (small reddish grains responding to a magnet), rare calcareous fragments (shell or chalk; the fragments are too small to identify), and some grog. The grog is difficult to distinguish from the matrix. The colour is pale brown (exterior), dark grey-brown (interior) and the core black. The decoration consists of incised lines and jabbed impressions, with at least one wavy applied cordon. It is not possible to reconstruct the arrangement of the decoration, but areas of jabbed impressions do occur on vessels with zones of incision, although the impressed decoration tends to be confined to the upper body, as for instance on P77 and P229 at Durrington Walls (Longworth 1971, figs 38 and 49). The wavy cordon is also paralleled at Durrington Walls, where there is one sherd with a smooth wavy cordon (fig. 36, P58) and several with wavy rusticated cordons (fig. 44, P162-167). The example from pit 165 seems more similar to the latter

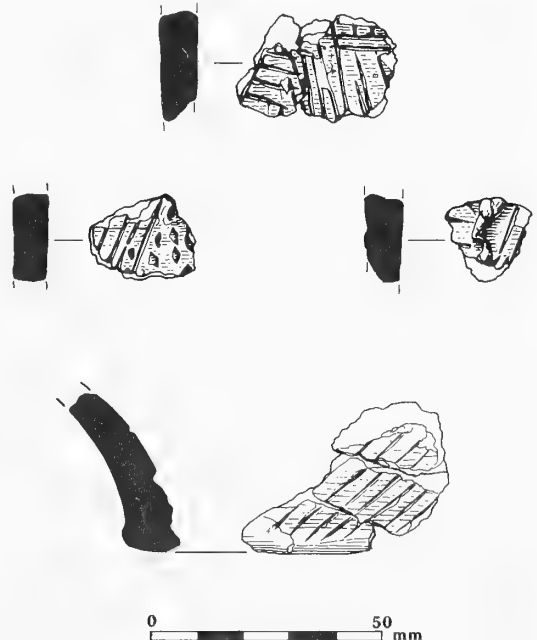


Fig. 4 Grooved Ware from Site 2, pit 165

than the former. The presence of a such a cordon, which is almost certainly vertical, enables the vessel to be assigned to the Durrington Walls sub-style of the Grooved Ware tradition (*op cit.* 240–242).

Two additional sherds, recovered from pit 184 (Site 3), are also likely to be Neolithic in date but these have no diagnostic characteristics. One is in a fine, micaceous clay containing infrequent fragments of flint, whilst the other has rounded quartz grains and rare pieces of flint and a limestone similar to chalk. On the grounds of their fabric and general appearance they are almost certainly not later Neolithic, but could be earlier Neolithic. As the flake analysis of the flint indicates a later Neolithic date for the associated flint assemblage (Harding below), it is possible that this material is residual.

WORKED FLINT

by *Phil Harding*

The flint contents of the excavated features are shown in Table 1. Features 174 and 182 contained insufficient material to be informative.

Raw material and condition

The flakes and tools were removed from cores made of large pieces of good quality flint. It is nodular in form with incipient thermal fractures and a thick chalky cortex. No fresh exposures of Chalk were seen during the installation of the pipe so it was not possible to compare the cores with the local flint. Wainwright and Longworth (1971, 162) recorded seams of flint nodules that were exposed in the Durrington Walls ditch. The flint mines located 70m north of the pipeline (Booth and Stone 1952) produced only poor quality flint and are therefore unlikely to have provided the raw material. Three flakes from feature 184 (Site 3), two of which refit, were removed from a nodule of gravel flint that was probably obtained from the Avon valley. The material is in mint condition and patinated white

with some pieces heavily coated with calcium carbonate concretion.

Technology

The material from pit 184 provided the only sample of sufficient quantity to be suitable for analysis. This was carried out using the system adopted for the Stonehenge Environs Project (Harding 1990). The analysis shows that flakes were apparently removed using soft hammers, probably cortical parts of a flint nodule. Butts are generally less than 5mm across and percussion angles between 70° and 80°. Most of the flakes are large, only 13% measuring less than 30mm long and 7% less than 20mm wide. Most flakes are squat in shape with 74% less than 5.5:5 (breadth:length), although blades, represented by flakes with length equal to twice width, comprise only 12% of the sample. The largest flake from the pit exhibited characteristics similar to those of Levallois technology (Figure 5, 1).

The results of the flake analysis are comparable with the Grooved Ware assemblages at Durrington Walls (Wainwright and Longworth 1971) and King Barrow Ridge (Harding 1990). The similarities are particularly apparent in the overall flake shape (breadth:length). All three sites contain similar proportions of blades (11% Durrington Walls; 15% King Barrow Ridge) and flake maximums with breadth:length ratios of 4.5:5 (28% Durrington Walls; 34% King Barrow Ridge). The most marked divergence occurs in overall size, particularly flake length, where only 13% of the flakes from the Durrington pipeline pits measure less than 30mm. None of the assemblages of industrial waste from the Stonehenge Environs Project approached this proportion. The residue from flint knapping usually includes higher proportions of small material once the tool blanks have been removed. Although the contents of the pit were not sieved, it is unlikely that flakes of less than 30 mm would be lost during the excavation. It must be assumed,

Table 1. Worked flint from features in the Durrington Walls environs

Feature	Core	Flake	Broken flake	Burnt flake	Retouched flake	Scraper	Scraper/ knife	Knife/ fabricator	Chisel	Axe	Other	Total
Pit 155	1	6	-	1	6	2	1	-	-	1	-	18
Pit 165	3	13	10	3	2	7	-	1	-	-	-	39
Pit 174	-	3	-	-	-	-	-	-	-	-	-	3
Scoop 182	1	-	2	-	-	-	-	-	-	-	-	3
Pit 184	5	74	44	8	2	-	-	1	-	-	12	146
Ditch 186	2	1	-	-	-	-	-	-	-	-	-	3
Total	12	97	56	12	10	9	1	1	1	1	12	212

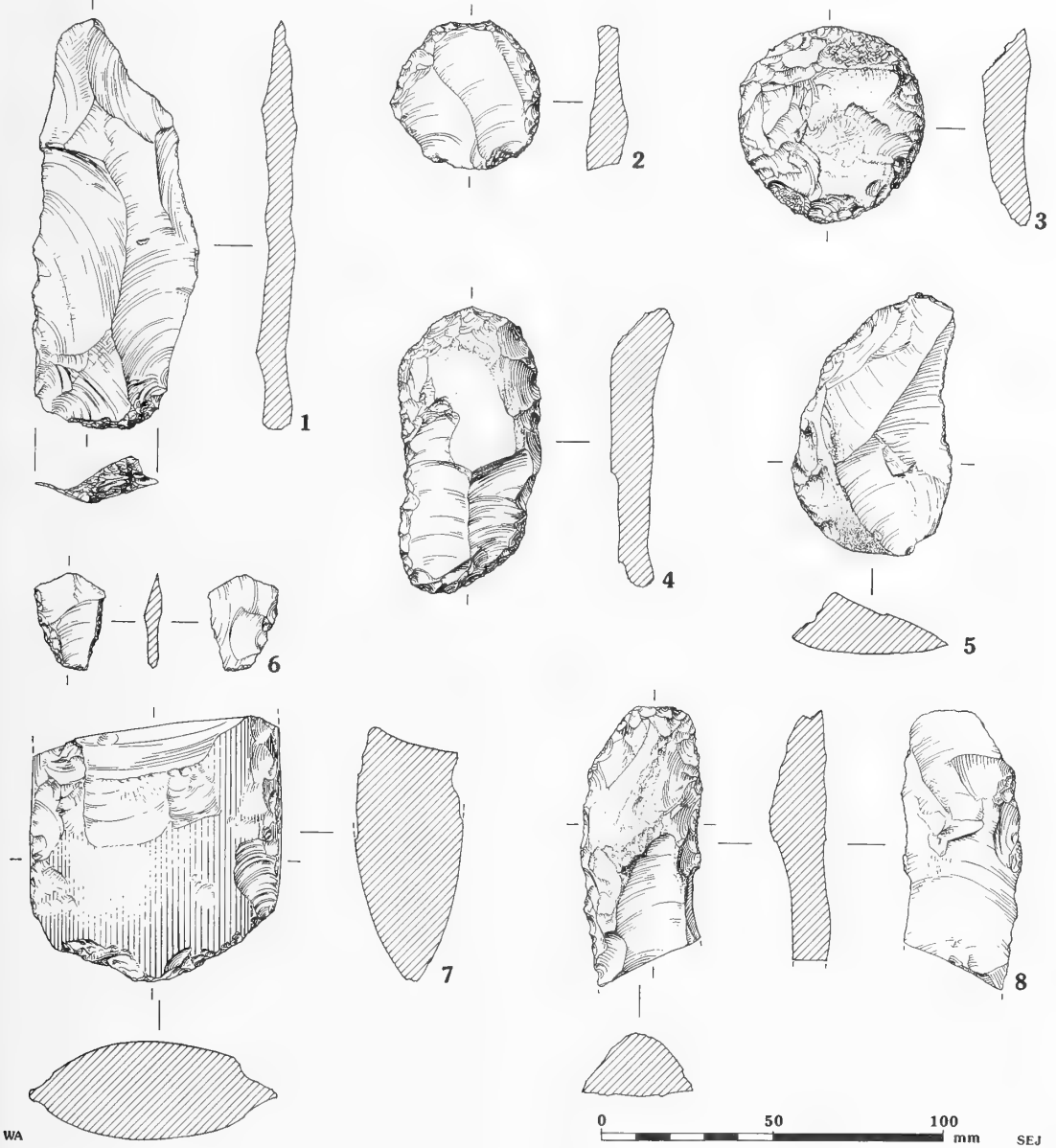


Fig. 5 Flint artefacts from Sites 1-4

therefore, that small material was never present. None of the flakes showed signs of use.

The cores that accompanied the flakes comprise two single platform cores, two others with a second flaking surface forming a 'bifacial' core, and a biconical/discoidal core. This suggests that no consistent form of core was produced, however the technique of flaking these cores produced flakes with squat proportions. Striking platforms were

generally prepared although it is unclear how much deliberate faceting occurred during flake production.

Scrapers

The nine flake scrapers from pits 155 and 165 are well made and comprise seven end scrapers (Figure 5, 2), a discoidal scraper (Figure 5, 3) and one double end scraper (Figure 5, 4). Retouch is direct,

continuous and usually only on the distal end, producing a convex scraping edge. The eight unbroken blanks average 56 mm long, 50 mm wide and 14 mm thick.

Although the scrapers comprise only a small collection they compare well with implements from late Neolithic contexts at the West Kennet Avenue (Smith 1965, 95), Durrington Walls (Wainwright and Longworth 1971, 168) and King Barrow Ridge (Harding 1990, 222). Scraper blanks at these sites were consistently thinner than at other prehistoric periods. The mean thickness of the Durrington Pipeline scrapers is 14mm. The largest individual group, however, lies within the bracket 9–13 mm, which is in accord with the other groups.

Knives, microdenticulates and edge retouched flakes

Seven retouched flakes were found with marginal edge retouch (Figure 5, 5), of which one was classified as a microdenticulate. Five of these pieces were from pit 155 and the remainder from pit 165. They range from 46mm to 76mm in length and were selected for their straight or slightly convex edges. The edge was usually modified by marginal direct retouch but unretouched edges, smoothed by use, are also present.

Chisel arrowhead

A chisel arrowhead of Clark's type C (Clark 1934) was found in pit 184 (Figure 5, 6). It has been made on a lightly ridged flake with truncations which converge on the left edge. It shares similar dimensions with a small group of chisel arrowheads from King Barrow Ridge (Harding 1990, table 121).

Ground flint axe

The blade of a ground flint axe (Figure 5, 7), snapped at the hafting, was found in pit 155. Both sides were ground completely smooth although residual flake scars remain near the edges. The blade is heavily damaged and chipped through use.

Miscellaneous tools

An implement classified as a scraper/knife was found in pit 155. This piece, made on a naturally backed flake, was blunted with irregular direct retouch. The opposite edge was modified by marginal, direct flaking. A knife/fabricator, which may have been snapped in manufacture, was found in pit 165 (Figure 5, 8). It has a rounded tip and both edges are shaped by direct, continuous, irregular retouch.

Discussion

The excavated pits found north of Durrington Walls undoubtedly form part of a single complex; however they showed considerable variations in both the quantity and type of their flint contents. Pits 155 and 165 were dominated largely by implements from domestic or ritual functions, while pit 184 contained what appeared to be industrial waste. It has been noted however that this assemblage contains unusual features of size.

In their reassessment of the Rinyo-Clacton 'culture', Wainwright and Longworth (1971) listed the frequency with which individual tool types occurred in Grooved Ware contexts. Flint artefacts were recorded from 88% of the listed sites, of which scrapers, transverse arrowheads, knives, saws, ground axe fragments and fabricators occurred in at least 27%. The tools from the Durrington Pipeline appear typical, and although Grooved Ware pottery was only found in one feature, an association can be inferred for the remaining features. The study of the scrapers showed a marked similarity to groups where larger assemblages were examined.

The use of pits for the deposition of domestic refuse, including discarded flint tools, is also in keeping, both with the local occurrences at King Barrow Ridge and with findings from national distributions (Wainwright and Longworth 1971, 250). At King Barrow Ridge, it was also apparent that no large-scale industrial activity was represented but that knapping was confined to small-scale domestic production. It was also considered that flint, exemplified at King Barrow Ridge by a large flake with Levallois characteristics (Harding 1990, 217), may have been imported from the south of the Stonehenge Environs, where large scale industrial knapping appears to be associated with more plentiful raw material. The presence of a similar flake measuring 118 mm in length from pit 184 may also be associated with this source.

ANIMAL BONE

by Sheila Hamilton-Dyer

The four later Neolithic pits (155, 165, 174 and 183) produced 80 fragments of animal bone. The species distribution for these four features is given in Table 2.

The largest group, of 50 fragments, was recovered from pit 184. Forty-six of these were pig, from at least three individuals indicating a minimum of two males and one female. The animals were not mature, tooth eruption indicates

Table 2. Animal bone from features in the Durrington Walls Environs

Feature	Context	Cattle	Red deer	Pig	Horse	Unidentified mammal	Beaver	Total
Pit 155	156	11	-	2	-	9	-	20
Pit 165	166	2	-	2	-	5	1	8
Pit 174	175	-	1	-	-	1	-	2
Pit 184	185	1	2	42	-	5	-	50
Total		14	3	46	0	16	1	80
%		17.4%	3.7%	57.4%	0	20%	1.3%	100
Ditch 186	187 (scanned)-	-	-	-	1	-	-	1

one animal of approximately six months and two between 12 and 18 months (Bull and Payne 1982). Of the tibia fragments, two (not a pair) had unfused distal epiphyses, also indicating animals under two years at time of slaughter. The fragments are biased towards head and hind legs. This is slightly offset by the fragmentation of the jaws and maxillae and the presence of some of the foot bones (11 fragments are probably from the same leg). There are, however, no fragments of scapula or foreleg perhaps indicating a deliberate deposition of mostly head and lower leg joints. Although not the prime meat joints, the head and feet of the pig are not necessarily regarded as waste, as they often are for sheep and cattle. The female jaw had been axially chopped, a common butchery practice. Other pig fragments were one acetabulum and two vertebrae. Four rib fragments of a medium sized mammal and a small fragment of skull are probably also of pig. The smaller bones are underrepresented, only three phalanges compared with nine metapodi and three calcanae were present. If three feet are represented, 12 metapodi and 36 phalanges would be expected. This loss may be due to both recovery methods and preservation.

Only one cattle bone was identified, a portion of chopped rib. Two fragments of red deer were present, one of which was a poorly preserved metatarsal shaft. The other was part of a shed antler, probably a discarded pick. The preservation is not good enough to show presence or absence of wear in use. The main beam is broken below the crown, just above the trez tine. Only one brow tine arises from the base of the beam, whereas two are a characteristic of the species. The single tine variant is sometimes present in British red deer stocks today (Staines 1991). This occurrence implies the ancient origins of this presumably genetic variation. The presence of the burr at the base of the beam indicates this antler was collected after the stag had shed its antlers. Many antler picks, often

shed ones, were found in the excavations at Durrington Walls, as at many other Neolithic monuments, where they were used to dig the pits and ditches (Harcourt 1971) and were frequently deliberately deposited (cf. Wainwright and Longworth 1971; Sargeantson and Gardiner 1995).

Pit 174 contained a proximal portion of a red deer metatarsus and a small fragment of mammal rib. The other three pits, 155, 165, and 184, all contained pig and cattle bones. No sheep or goat bones were identified. Pit 155 contained at least four cattle individuals. These varied from calf to probably fully grown. The assemblage did not represent the disposal of just feet, as fragments of femur, ulna, scapula, vertebra and a tooth were also present. Two pig scapulae, probably a pair, were also present and perhaps represent a deliberate deposition rather than disposal of waste.

Only eight bones were recovered from small shallow pit 165 (Figure 3). These were fragments of a pig maxilla and a deciduous lower incisor, a cattle radius and frontal and two unidentified fragments of cattle size. The remaining fragment was the lower right incisor and fragment of jaw of a beaver, *Castor fiber*. This species has been recorded from several local Neolithic sites, including Durrington Walls (Harcourt 1971) and the Coneybury Anomaly (Maltby 1990), and their significance has been outlined by Coles (1992). This might suggest a significant population of beaver in the Avon valley during the Neolithic.

Discussion

Although the fragment numbers are extremely small, pit 184 contains mostly pig bones. Late Neolithic deposits, especially those associated with Grooved Ware, often have a high proportion of pig in the animal remains when compared with cattle and sheep (Harcourt 1971; Legge 1991). Many of these deposits appear to have a ritual element and are selective so do not accurately reflect the

composition of the livestock. Pigs, with their high reproduction rate and limited usefulness as adults, are an ideal feasting animal. They also prefer woodlands and are excellent at clearing regenerating woodland. The problems of interpretation have frequently been discussed (Grigson 1982; Richards and Thomas 1984; Maltby 1990), and the degree to which their prevalence reflects selection for feasting or the amount of local woodland is unresolved (see Bradley 1984, chapter 3). The presence of beaver remains may also indicate that the nearby Avon valley was more wooded than today.

Although the sample is very small, the high number of pig bones, the selection of joints, and lack of sheep bones all fit well with material from Durrington Walls where the midden in particular contained a mass of pig bones (Wainwright and Longworth 1971). The association with Grooved Ware and flint artefacts is significant; it is highly probable that the material from this group of pits reflects the ritual activity at Durrington Walls, and indeed in the wider Stonehenge environs.

PART 2: AVON VALLEY FLOODPLAIN SEDIMENTS: THE PRE-ROMAN VEGETATIONAL HISTORY

by *Robert G. Scaife*

The northern floodplain of the River Avon, approximately 300m east of Durrington Walls, was surveyed and augered to provide a detailed cross-profile of the valley alluvium (Figures 2 and 6). Samples for pollen analysis were obtained from the deepest sequence of peat and organic sediments. The location was of special interest because of the possibility of pollen preservation in alluvial sediments and peats in proximity to Durrington Walls (Wainwright 1971). This might enable correlation with Dimbleby's 'on-site' pollen analysis of the henge (in Wainwright and Longworth 1971, 332-4) and Evans's environmental changes as shown by molluscan analyses (Evans 1971, 329-37). The full report is available in archive.

STRATIGRAPHY

by *Michael J. Allen and Robert G. Scaife*

Ten boreholes were examined on the northern side of the River Avon floodplain. The surface of the

floodplain, which is now largely under pasture, supports a gleyed soil caused by a fluctuating ground water table. In places, this also comprises highly oxidised peat. The lithostratigraphy ranges from grey alluvial silts with varying thicknesses and degrees of organic content to humified fen peat with only small quantities of inorganics. A maximum depth of 1.68m of monocot peat and organic silt was recorded in borehole 6 (Figure 6) from which detailed pollen analysis was obtained. The character of these sediments is given below. These rest on sands, which appeared in the field to be glauconitic and derived from the Upper Greensand, and in places on gravel of undetermined age (e.g. borehole 1).

- 0 – 0.30m Oxidised chocolate brown, humified peat with silt. Monocotyledonous remains were evident. Occasional chips of flint present.
- 0.30 – 0.35m Wetter, darker brown peat and grey silts containing monocotyledonous remains and occasional flint chips.
- 0.35 – 1.47m Chocolate brown peat. Well humified but with identifiable monocotyledonous remains. Charcoal present at 1.12m and Roman pottery at 1.15 m. Sharp, well defined junction with the underlying very dark brown to black highly humified peat (DURR: 4 DURR: 3 DURR: 2).
- 1.47 – 1.60m Very dark brown to black humified peat with little visible structure (DURR: 1).
- 1.60 – 1.74m Grey-green glauconitic fine to medium sand. Weathered or transported Upper Greensand.

The gravel is likely to be river terrace gravel or gravel sheets laid down during the late Devensian or early Flandrian (c. 10,000 BP). Calcareous marls and silts form a thin deposit over the gravel and glauconitic sand, and varying depths of floodplain and local channel peat form most of the floodplain profile (Figure 6). A horizon of fine charcoal fragments was recorded at 1.12 m in borehole 6. In this same sequence, a single sherd of undiagnostic Roman pottery was recovered from a depth of 1.14 m indicating that most of the floodplain sequence is probably of post Romano-British date.

There was a noticeable change between the lower dark brown/black peats and overlying lighter peat and alluvial silts noted in a number of the profiles. This is one of a number of possible hiatuses in the alluvial stratigraphy which have been detected in the pollen/biostratigraphy. Immediately adjacent

to the river is a distinct levee (Figure 6, borehole 10) built up from dredging and dumping along the banks. This comprised up to 1m of silts with derived ash, and modern (glazed) pottery was recovered in the silts beneath the make-up.

SAMPLING AND POLLEN ANALYSIS (core 6)

Coring was undertaken using a 30mm diameter gouge corer with a 1m chamber because of the relative dryness and stiffness of the sediments. Sampling was carried out at 20mm intervals in the field. Samples of 1ml were prepared using standard pollen extraction techniques (Moore *et al.* 1991). A minimum of 300 pollen grains plus spores was counted at each level, and where pollen was more abundant a greater sum was obtained. Full details are given in archive.

The results are presented in standard form as a summary diagram only (Figure 7) with pollen represented as a percentage of total dry land taxa and spores as a percentage of total pollen plus spores. Pollen of marsh and aquatic taxa are calculated as a percentage of total dry land pollen plus determinable wetland taxa. Nomenclature

follows that of Stace (1991) for plants and Moore *et al.* (1991).

Forty-one levels were analysed at 20mm intervals from the base at 1.60m to 0.92m and at 40mm intervals from 0.92m to 0.68m. A number of significant changes can be seen in the pollen stratigraphy which have enabled four principal pollen assemblage zones to be assigned (Durrington: 1-4, Figure 7). The most significant pollen assemblages (Durrington: 1) relate to late Devensian and early Flandrian conditions and there is little evidence of human interference in this natural sequence, or evidence of relevant archaeological activity, so this data is only summarised here.

VEGETATION HISTORY

The depositional environment of river floodplains present problems not usually encountered in the peat forming environments of larger fens and bogs. Taphonomic questions of sediment/pollen sources and river erosive and depositional processes must be considered in addition to interpretations about the local/autochthonous and region/pollen sources (cf. Burrin and Scaife 1984; Scaife and Burrin 1992; Hunt 1987; Moore *et al.* 1991).

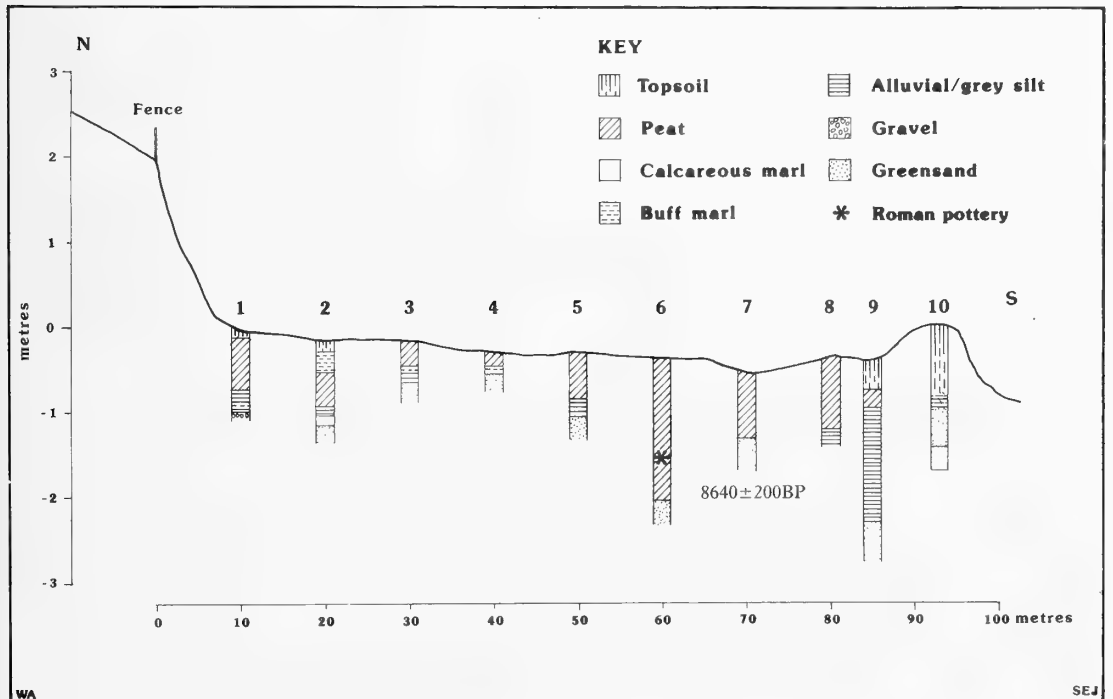


Fig. 6 Schematic profile through the auger transect across the Avon valley

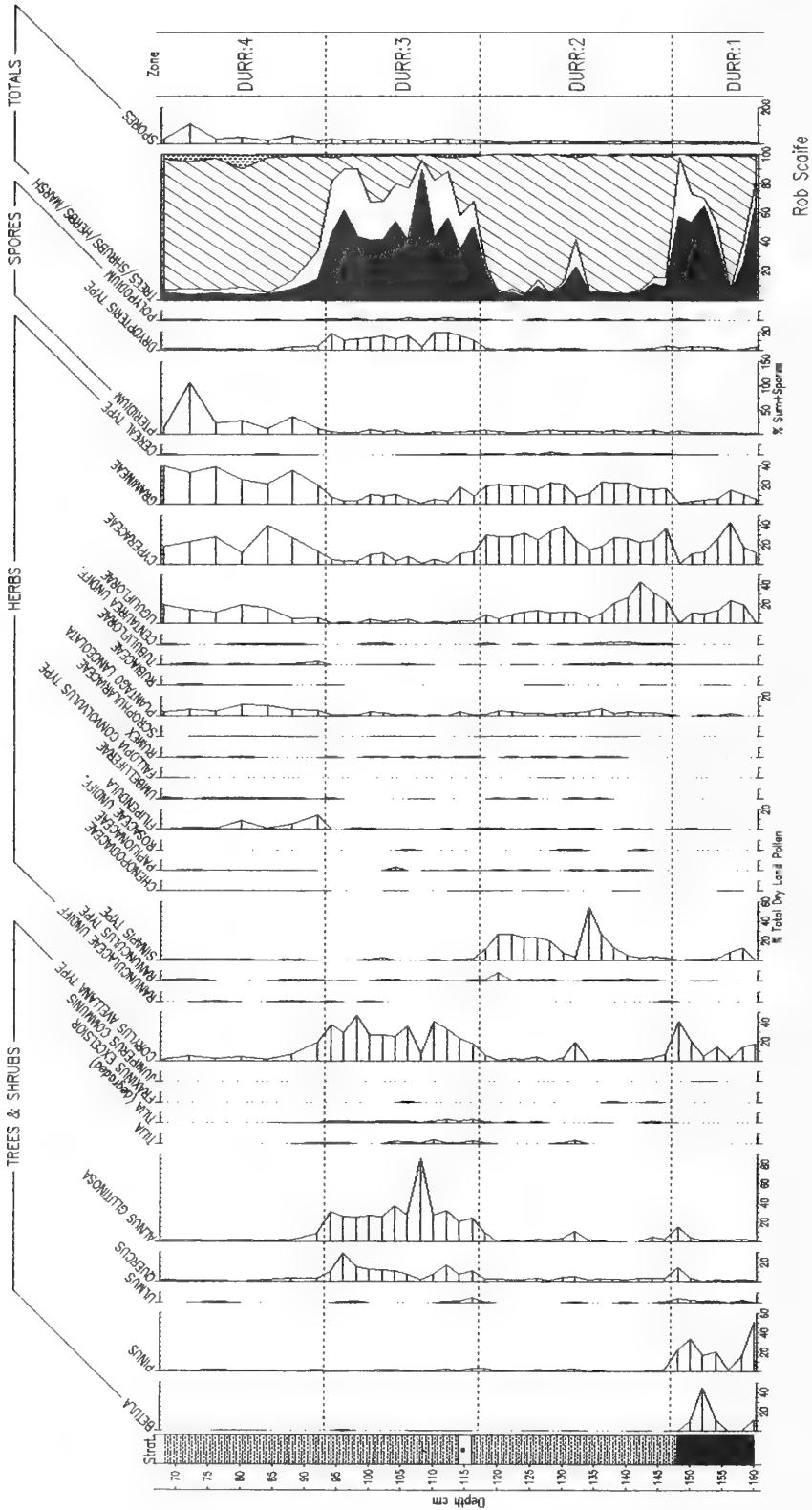


Fig. 7 Pollen Diagram

At Durrington (Figure 7) the peat represents 'on-site' organic accumulation on the floodplain communities of fen, wet pasture and carr woodland, and the inorganic sediments are derived from fluviially transported sediments and by colluvial processes from the valley sides. Thus, pollen input into this location may come from a variety of sources but, nevertheless, illustrates the vegetation history of the local region. The pollen spectra illustrated in Figure 7 provides interpretation of the development of the floodplain vegetation and of the dry-land plant communities. It will be evident that changes on the interfluves may also have had an effect on the character of the floodplain. Changes within the drainage basin may be responsible for variations in sedimentation, organic deposition and erosion of sediments which resulted in hiatuses in deposition.

Durrington: 1 (1.60-1.47m)

The dominance of *Betula* (birch) and *Pinus* (pine) in this basal zone and the increasing importance of *Quercus* (oak), *Ulmus* (elm) and *Corylus* (hazel) suggests a late Devensian to early Holocene age for this zone. A radiocarbon date from humic acids from a bulk sample (1.60–1.45m) of this basal peat of 8640±200 BP (GU-3239), calibrates to 8050–7260 cal BC using data from Kromer and Becker (1993) with Calib 3, and indicates an early Holocene date for peat inception. Fluctuations in these taxa appear to follow a pattern typical of changes in arboreal and shrub pollen known from other sites in southern England. The relatively high values of *Betula* and *Pinus*, the latter being dominant, are typical of the Allerod/Windermere interstadial with the lesser values of other arboreal taxa (*Ulmus*, *Quercus*, and *Corylus*) considered as being transported long distance.

The vegetation at the very base of this zone comprises largely open herbaceous communities dominated by Cyperaceae (sedges) and Gramineae (grasses) growing in the damper valley bottom. This may be attributable to colder conditions in the late Devensian (c. 10,800–10,000 BP). Whether this was a true river floodplain or a low marshy area with perhaps periodic/seasonal outwash, which is more likely, is speculative. Sharp increases in the percentage of *Betula* followed by *Pinus*, *Corylus* and *Quercus* are typical of the early Flandrian succession of woody vegetation from 10,000 BP brought about by climatic amelioration at the end of the last cold stage. Subsequently, *Pinus* and then *Quercus* and *Ulmus* with *Corylus* are represented as these taxa migrated into the region. These deposits

appear to be compacted and thus sampling intervals less than 20mm might illustrate this succession more clearly.

Durrington: 2 (1.47–1.17m)

At 1.47m, there is a marked change in the sediments and contained pollen spectra, indicating a zone of erosion and marked hiatus embracing mid Boreal to Atlantic climatic zones (Godwin's (1975) pollen zones V–VIIa) i.e. Mesolithic. The deposits are peaty silts and silts which contain markedly fewer tree and shrub pollen. *Betula* is only sporadically present and *Pinus* although continuously represented is regarded as 'normal' background pollen rain from extra regional sources. *Tilia* (lime) is recorded for the first time. In contrast, herb pollen becomes dominant (to c. 250% AP or 95% total pollen). This comprises the autochthonous, local floodplain community and from the drier interfluves. The floodplain was dominated by grasses and sedges with other fen type plants which include *Thalictrum*, *Caltha* type (probably including *Caltha palustris*/ marsh marigold), *Filipendula* (meadowsweet), *Valeriana officinalis* (valerian), and *Typha/Sparganium* type (reedmace and bur-reed). *Alnus* (alder) is present but in view of the very high pollen production of this tree (Janssen 1959; Andersen 1973), it is not considered to have been important on or near the sample site. Non-wetland taxa include a diverse range of herbs which are typical of Neolithic or post-Neolithic land use subsequent to woodland clearance.

It is clear that there is substantial evidence for anthropogenic activity in the local area and specifically for arable activity. Pollen of segetals (weeds associated with arable habitats) such as *Fallopia convolvulus* (black bindweed) and *Polygonum aviculare* (knotted bindweed); *Centaurea cyanus* (blue cornflower) and cereal type pollen are typical. Of particular interest are the high percentages of Cruciferae (*Sinapis* type/charlocks) which is frequently associated with arable agriculture. Here, however, the high percentages are likely to be from 'on site' growth. A range of herbs typical of waste or cleared ground and pastoral habitats were also present. Typically these include increased occurrences of Chenopodiaceae (goosefoots and atriplexes), Papilionaceae (clovers etc.), *Rumex* (docks) *Plantago lanceolata* (ribwort plantain) and *Plantago media/major* type (hoary plantain and greater plantain) and a range of Compositae taxa.

It is suggested that the sediments of this zone started to accumulate after major forest clearance in the area (see below). The presence of arable pollen and weeds indicates a date post *c.* 4000 cal BC, i.e. Neolithic. Pollen data spanning this period in southern England are sparse and, where present, usually relate to areas away from the chalk where pollen preservation in more acid environments is better suited to more detailed palynological investigation. Nevertheless on the Chalk in Sussex (Thorley 1981), Dorset (Haskins 1978; Waton 1980; 1982), Hampshire (Waton 1980; 1982) and the Isle of Wight (Scaife 1980; 1987) partial woodland clearance took place during the Neolithic. More extensive clearance took place subsequently in the Bronze Age with large areas of woodland cleared on the lighter soils of the Chalk and Greensand. This presents two possible interpretations for the Durrington pollen spectra in Durrington: 2. First, the relative absence of trees locally here, suggests a Bronze Age (or later) date. Second, the absence of pollen data from on or near the chalklands here presents the possibility that a large area was cleared of woodland at sometime during the Neolithic. Given the archaeological, pollen and molluscan evidence from Durrington Walls (Evans 1971) and mollusc evidence from Woodhenge (Evans and Jones 1979), it seems likely that zone Durrington: 2 represents continuous and possibly intense Neolithic land use in this region. Furthermore, this poses the interesting possibility that such clearance and land use was responsible for the re-initiation of sedimentation in the Avon valley after a hiatus of possibly thousands of years. The removal of trees on the interfluves makes soil available for erosion and will have raised groundwater tables and increased surface sediment run-off (colluviation) into the valley bottom. This cause and effect has now been widely demonstrated from a number of British alluvial sites (Burrin and Scaife 1984; Scaife and Burrin 1983; 1985; 1992) and dry chalk valleys (Bell 1981; 1982; 1983; Allen 1988; 1992).

Durrington: 3 (1.17–0.90m)

A sherd of undiagnostic Roman pottery was recovered at 1.15m at the base of Durrington:3, clearly dates this zone to the Roman or post-Roman period. Since the pottery was a small, broken fragment, it could even have been incorporated at a later date. If the interpretation of zone Durrington: 2 as Neolithic or Bronze Age is correct, there appears to be a substantial hiatus between these zones (perhaps spanning the later Bronze Age and

Iron Age). In zone Durrington: 3, tree and shrub pollen become dominant in these fen carr peats. High values of *Alnus* and *Corylus* in more organic sediment and peat represent the growth of local alder dominated carr woodland on the floodplain here and is attested by the of 'clusters' of pollen found. This appears to represent a phase of stability in the catchment with lower water tables allowing the growth of a drier (fen carr) woodland and an absence of constant flooding. This phase is mirrored by a reduction in wetland herbs (largely Cyperaceae).

There is some evidence of other woodland growth with *Ulmus* and a single record of *Fraxinus* (ash). *Tilia* continues to be represented with a mixture of degraded and non-degraded pollen grains. This indicates that some lime woodland remained on the drier areas of the river catchment. Since *Tilia* produces relatively small numbers of pollen and is insect pollinated, it is likely that it is under-represented in the pollen spectra (Anderson 1973; Tauber 1965).

The growth of more closed carr woodland on the Avon floodplain probably had a significant effect in reducing pollen input from the surrounding region on to the mire. Although reduced in numbers, many taxa remain and *Plantago lanceolata* and other typical anthropogenic pollen types are present. Cereal pollen and associated taxa present in the previous zone are largely absent. This may be interpreted as a real decrease in arable cultivation or, more likely, that the generally poorly dispersed pollen taxa have been 'filtered out' by the now substantial woodland growing on the river floodplain, but a presence of pasture is substantiated

The substantial hiatus between zone Durrington: 2 and Durrington: 3 is not uncommon in alluvial sediments (e.g. Burrin and Scaife 1984; Scaife and Burrin 1992). The top of Durrington: 2 may have been a land surface with perhaps seasonally waterlogged pasture on which the Roman pottery (at 1.15m) and charcoal (at 1.12m) was deposited. There is no visible effect of a fire on the vegetation/pollen spectra, nor was any evidence of pedogenesis noted in the sediments. Pedogenesis would be arrested if the floodplain remained wet or waterlogged.

Durrington: 4 (0.90–0.68m)

There was a return to an open floodplain environment with the demise of alder carr. Small numbers of *Sphagnum* spores may indicate localised

growth although taxa represented are likely to be those from the less acid end of the range (eg. *S. plumulosum*) and flushed habitats. It can be noted that such a community of meadowsweet and sedges is present today in localised areas of the River Avon floodplain. There is also a corresponding increase in dry land herbs and a marked increase in taxa indicative of arable cultivation (cereal type, Polygonaceae etc.) and ruderals (especially *Plantago* spp.). *Pteridium aquilinum* (bracken) reaches its highest values in this pollen profile and as such, the whole zone is indicative of an open landscape showing the effects of intense and widespread land use (arable, pasture and possibly wet meadow pasture on the floodplain) in the local area. It seems likely that this zone is medieval, reflecting a period of intense land use.

RELATIONSHIP OF THE ARCHAEOLOGY TO THE SEDIMENTS

The floodplain stratigraphy and biostratigraphical record will reflect important human activity in the area and especially that of the nearby monuments of Durrington Walls (Wainwright 1971) and Woodhenge (Evans and Wainwright 1979). Human activity can have a profound impact on the fluvial hydrology of river catchments (Evans 1992) and in many cases is responsible for varying degrees of alluviation. The sediment architecture of river valleys show that increased erosion and sedimentation occur in response to prehistoric human activities such as increased agricultural pressure (Burrin and Scaife 1988). In contrast, during periods of interfluvial soil stability caused by woodland growth, sediment input to river systems is absent or markedly diminished. Thus major periods with little human intervention in the landscape, such as the Mesolithic, may not be represented in the sequence. Consequently, lithostratigraphical units, or parcels of sediments (*sensu* Needham 1991) may be separated by hiatuses spanning considerable time. On this part of the Avon floodplain the lower energy levels of overbank deposition is confirmed by the semi-organic character of the sediments, indicating *in situ* deposition of organic matter on a herb rich floodplain or wet meadow. It is clear that a number of natural *and* anthropogenic factors are responsible for the variations noted.

It is unlikely that there is a direct causal

relationship between the Durrington: 1 deposits and the impact of the essentially hunting and gathering communities of the Upper Palaeolithic and very early Mesolithic periods. It is, however, clear from other studies throughout Britain and Europe that the initiation of organic and inorganic sedimentation can occur at this time. Evidence for similar late Devensian/early Flandrian conditions has been provided by Evans (1971) at Durrington Walls, and been noted at a number of southern English sites (cf. Scaife 1980; 1982; 1987; Scaife and Burrin 1992). Thus, we can see the pollen fluctuations of Durrington: 1 as reflecting natural environmental changes. The cessation of sedimentation at the top of Durrington: 1 can be viewed as a response to either increasing soil stability caused by the dominance of deciduous woodland on the interfluvial, or through the drier, continental-type climate of the Boreal period (c. 8500–6000 BC). It is, however, clear that during the hiatus between Durrington: 1 and Durrington: 2, essentially representing the Mesolithic period, that there was major environmental change.

The herb dominated Durrington: 2 suggests a Neolithic or post-Neolithic date since it is generally accepted that cereal cultivation arrived with the Neolithic at c. 4000 cal BC. Unfortunately we have no absolute dates for this zone, and as such we must compare and contrast this data set with studies of pollen and mollusca at Durrington Walls (Evans 1971) and Woodhenge (Evans and Jones 1979) that provide data on the local Neolithic.

The molluscan data from the pre-henge environment at Durrington Walls shows a phase of prehistoric woodland clearance and cultivation of possible middle Neolithic date (Evans 1971, 335). Pollen data (Dimbleby in Evans 1971, 334) is superficially discordant with the molluscan evidence in showing open vegetation dominated not by grasses but by ferns and bracken attributed to non-contemporaneous pollen and spore assemblages. In view of the extremely low pollen sum analysed, and the poor pollen-preserving conditions of chalk soil, it is perhaps more relevant to consider the molluscan evidence rather than the impoverished pollen data from Durrington Walls. The pollen record reveals some evidence of hazel woodland prior to clearance and anthropogenic activity. The open landscape postulated by Evans compares favourably with the evidence of Durrington: 2 noted above. This complete openness of the landscape during the Neolithic can now be regarded as unusual for this period (Allen 1997)

since many analyses (pollen and mollusca) show that the outer fringes of chalklands remained to some extent wooded until the Bronze Age, and there is widespread evidence for a phase of later Neolithic woodland regeneration (Scaife 1988; Evans 1992). It is concluded that Durrington: 2 could easily be correlated with this extensive evidence of Neolithic activity in the area. If so, the pollen evidence clearly indicates the prevalence of grassland which may be attributed to pasture, and also cereal cropping both of which held scrub colonisation at bay. It is likely that extensive woodland clearance resulted in locally high water tables, reduced evapotranspiration and increased surface run-off, all of which contributed to the re-initiation of sedimentation in the Avon valley.

The temporal span of zone Durrington: 2 is unknown. It possibly spans only middle and late Neolithic activity, although it seems more plausible that continued land use into the Bronze Age was maintaining conditions in which peat accumulated on the floodplain. The major change in floodplain vegetation from open, wet sedge fen communities to drier alder carr is interesting since this apparently occurred during the Roman (or post Roman) period, representing a period of drier floodplain conditions which allowed the succession of carr woodland. This would indicate that the floodplain had standing water for only two or three months of the winter. This reverted to sedge fen but with meadow and fen herbs dominated by *Filipendula ulmaria* (Meadowsweet). This change may have been through natural causes or by clearance of the valley carr wood.

FOLLY BOTTOM

by Michael J. Allen

The pipeline trench traversed the large dry valley of Folly Bottom, incised into the Middle Chalk of Salisbury Plain to the north-west of Amesbury. Only a shallow colluvial profile was revealed and comprised a gravel fan in a weakly calcareous dark silty clay matrix which overlay late Pleistocene/Devensian Chalk meltwater deposits and sealed a relict tree hollow containing a reddish-brown silty clay loam.

Stratigraphy

An irregular pocket of dark, reddish-brown, mottled silty clay loam with occasional flint nodules was recorded beneath the colluvium, 134 (Site 8, Figure 8). It contained charcoal flecks

throughout and was possibly a tree-throw hollow which contained evidence of a relict mature palaeo-argillic soil. It was sealed by a gravel fan comprised of medium to large flint nodules in a dark silty loam matrix (133) situated on the edge of the valley floor (Allen 1992, fig. 4.3 and cf Allen 1988, fig. 6.5) and which originated from valley side erosion. A thin silty, stonefree calcareous layer (174) sealed the gravel fan, but terminated downslope. This probably represents the erosion of fine-grained material, possibly as a slurry.

The section was carefully cleaned but no artefacts were recovered. A series of samples was, however, taken for molluscan analysis, but produced very few shells; all species were typically open country.

Discussion

The basal tree-throw hollow indicates the presence of former argillic brown earths/brown earths and the presence of charcoal may indicate deliberate felling perhaps associated with the Neolithic barrow of Longbarrow Clump on Bulford Down. The overlying flint gravel horizon indicates high energy erosion. Augering showed that this deposit extended for almost 80m along the axis of the valley, as well as down the valley side. This may, therefore, represent the coarse channel deposit of a temporary winterbourne, or high energy erosion down the valley axis (Bell and Boardman 1992) This erosion was probably responsible for truncating and stripping out any previous, possibly prehistoric, colluvial deposits which may have been transported further down the valley axis. By analogy with other colluvial deposits in Wessex (Allen 1992) it is plausible that this belongs to the later prehistoric period. The lack of colluvium does not therefore necessarily represent a general lack of erosion and long term land-use.

PART 3: EARL'S FARM DOWN (SITES 9-19)

ARCHAEOLOGICAL BACKGROUND

The palimpsest of archaeological features on Earl's Farm Down (Figure 8) forms part of a wider pattern of linear ditches and trackways of Bronze Age, Iron Age, and Romano-British date which extends over

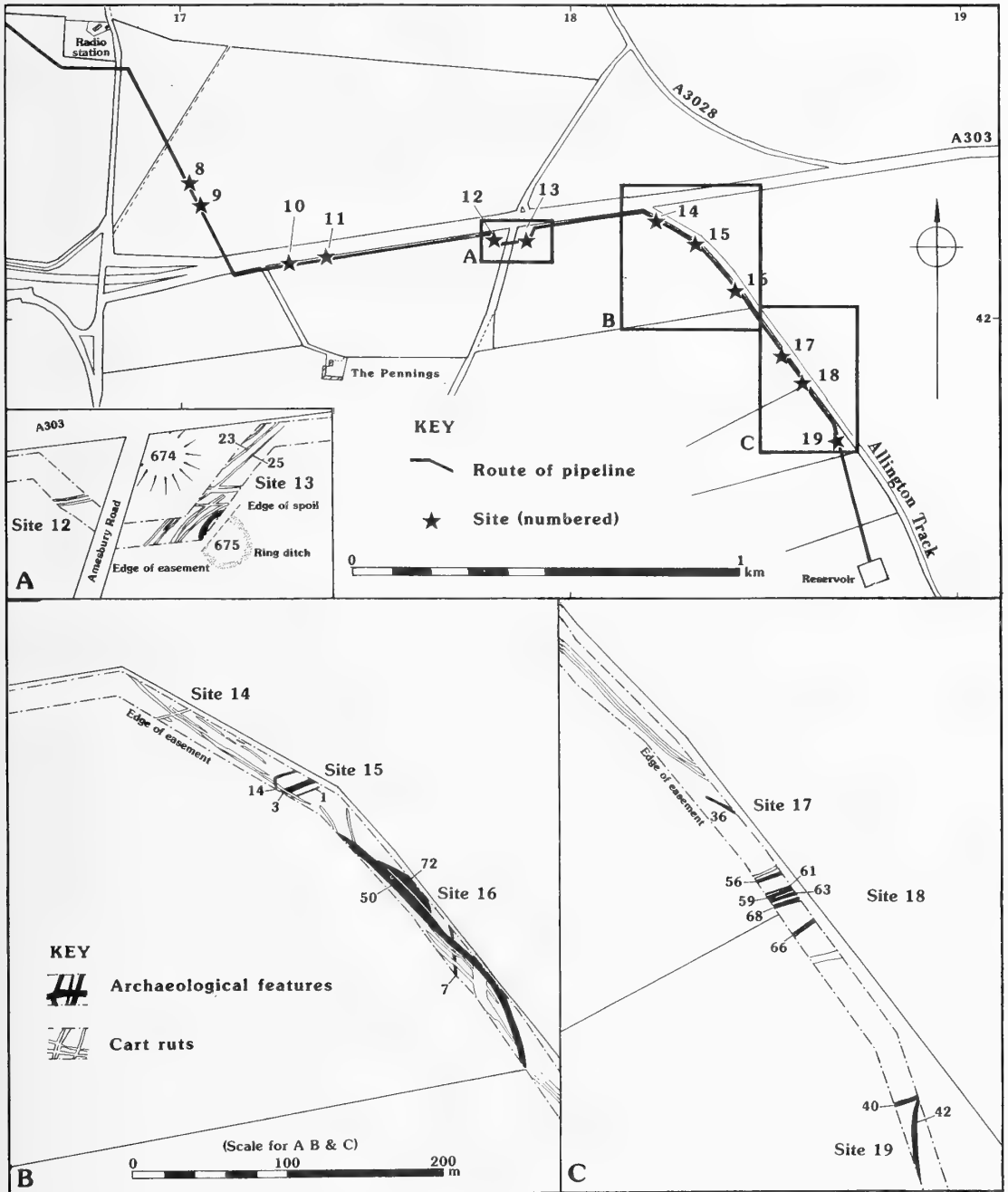


Fig. 8 Location of sites of Earl's Farm Down

much of the eastern part of Salisbury Plain and into western Hampshire. Features known from aerial photography include 'Wessex linears', defined as lengths of ditches running long distances across country, sometimes in pairs, often approximately 1km apart; and 'local' linears, which do not seem to

form part of major systems and often extend from, and sometimes link Iron Age enclosures (Palmer 1984, 10). 'Wessex linears' appear to be a largely Bronze Age phenomenon, representing large-scale organization of the landscape.

Figure 1 shows a much-simplified version of

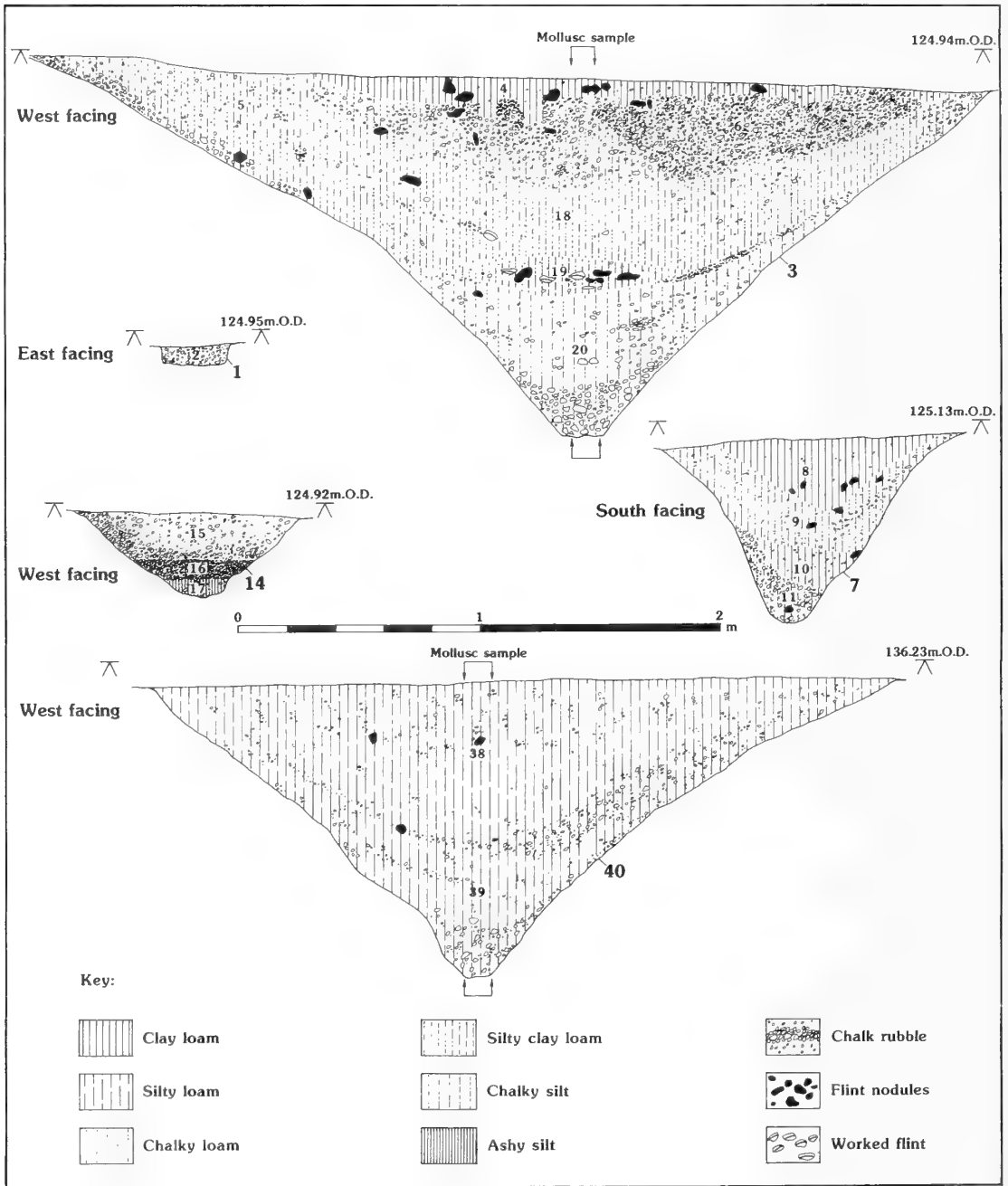


Fig. 9 Sections across ditches on Earl's Farm Down

features known from aerial survey and as earthworks. The long linear ditch running for part of its length parallel to the A303 is the Earl's Farm Down linear (Wiltshire SMR no. SU14SE745), a Wessex linear which appears to run parallel to one to the south (SMR no. SU14SE746). An extensive and

complicated field system in this area is not shown.

Earl's Farm Down lies just outside the survey area of the Danebury environs project (Palmer 1984, map), but the Earl's Farm Down linear runs into the study area for that research, where its most easterly recorded point is just to the south of

Beacon Hill (Palmer 1984, map, SU 212 422). Earl's Farm Down itself lies within the study area of the Wessex Linear Ditch Project (Bradley *et al.* 1994), which used a combination of excavation, augering and geophysical survey to investigate cropmarks in this area. The results of this work appear to have isolated a number of trackways, which, it is suggested, relate to the Iron Age and Romano-British settlement, leaving a pattern of linear ditches which can be compared with other patterns in the area (Bradley *et al.* 1994).

LATER PREHISTORIC AND ROMANO-BRITISH FEATURES

The pipeline revealed a number of features already known from cropmarks and recorded on the Sites and Monuments Record to the south of the A303 and parallel to the Allington track. The cropmark (SMR no. 5U145E742) crosses the line of the route, but no feature was observed to correspond with it. The most westerly feature observed was the edge of a ring-ditch, Site 13 (Figure 8), belonging to a known, ploughed-out disc barrow (SMR no. 5U145E675), lying to the south-east of a surviving barrow (SMR no. 5U145E674). The ring-ditch lay outside the line of the pipe trench, but was revealed by the topsoil strip. It was therefore recorded and its exact location noted, but it was not excavated.

The remainder of the cropmarks were exposed along the section of pipeline running parallel to the Allington track. A number of previously unknown features were also identified in addition to the cropmarks which, in some places, were obscured by later features (Figure 8). The principal feature was the Earl's Farm Down linear ditch (SMR no. 5U145E745) which was sectioned (Site 15). The cropmark evidence clearly shows a ditch bordered by two banks, although no evidence of the banks was seen in the excavated section (Figure 9; ditch 3). Small quantities of animal bone and Romano-British pottery were recovered from the upper fills and two flint flakes were recovered from the primary fill, but there was not enough evidence to suggest at what date the ditch originated, although it is assumed to be of Bronze Age date on analogy with similar features throughout Wessex. Parallel to this major boundary ditch were two linear features, 1 on the south side and 14 on the north. Both were undated, shallow slots (Figure 9), their function and relationship to the Earl's Farm Down ditch

unknown.

Leading south from the Earl's Farm Down linear ditch was a substantial feature, ditch 7 (Figures 8 and 9), which contained one sherd of possible later Bronze Age pottery. Although partially obscured by later features, including numerous cart ruts, it was possible to discern its alignment, which corresponds to a linear cropmark (SMR no. 778). The fills contained small amounts of animal bone and flint, and a sherd of probably Late Bronze Age pottery. Two large features, ditches or scoops, 50 and 72, are undated, but appear to post-date ditch 7; they were both 1.5m in depth. The other major excavated feature was a V-shaped ditch, 40 (Site 19, Figures 8 and 9), identified as cropmark SMR no. SU14SE746. It is 600m to the south of SMR no. 5U14SE745, and runs parallel with it. Two sherds of possibly later Bronze Age pottery were recovered from the primary fill with a Roman coin and sherds of Iron Age and Roman pottery in the upper fill. A lynchet, 42, running southwards from ditch 40, appears to coincide with cropmark SMR no. SU14SE777. The excavated section produced two sherds of third to fourth century Roman pottery.

OTHER FEATURES

The remainder of the archaeological features on Earl's Farm Down included minor ditches (Sites 8 and 18, Figure 8), the alignment of which could not always be ascertained before trenching, as they were usually obscured by large deposits of silty loams. Thus they were mainly seen in section. Dating of these features is uncertain, but is likely to include Romano-British as well as possibly later prehistoric features. Other sites observed on Earl's Farm Down comprised tracks and cart ruts, containing post-medieval and modern finds, details of which are contained in archive.

FINDS

by Lorraine Mephram

Just 11 sherds (73g) of pottery were recovered from the ditches on Earl's Farm Down. A small fragment of a flat-topped or bevelled rim sherd in a fabric containing abundant amounts of flint temper was recovered from ditch 7 (Site 16). The vessel may date to the Late Bronze Age though the sherd is too small to be confident of a more precise date. The primary fill of ditch 40 (Site 19) produced two sherds in different sandy fabrics, one fine and one

coarse, of first millennium BC date. These are very small and have no diagnostic attributes and so could date from the Late Bronze Age through to the latest pre-Roman Iron Age. The upper fill of this ditch contained rim sherds from a carinated bowl, dated elsewhere to the fifth century BC (Cunliffe 1984, fig. 6.54-6.55).

The upper fill of ditch 40 also produced two undated sandy fabric coarseware sherds and a tiny fragment of first-second century samian, along with a very worn, illegible Roman coin. Ditch 3 (Site 15), the Earl's Farm Down linear, produced two sherds in a coarse sandy ware, similar to a fabric from ditch 40, from its upper fill and lynchet 42 (Site 19) produced a sherd of fine, white New Forest colour-coated ware and one of fine, micaceous Oxfordshire ware, both of third to fourth century date. One body sherd of Black Burnished ware was recovered from a layer on Site 18.

Other finds consist of 230 generally undiagnostic struck flints, amongst which are 19 cores and core fragments, 4 scrapers and 9 edge retouched flakes, and a very small amount (37g) of burnt flint.

ANIMAL BONE

by Sheila Hamilton-Dyer

Very little bone was recovered and only 19 fragments were scanned from three probably Late Bronze Age ditches (ditches 3, 7 and 40). These comprise 2 horse, 3 sheep/goat, 1 pig bone together with 13 unidentified fragments from hoofed animals. Ditch 40 (context 39) contained part of the jaw of a small female horse. The sieved samples contained mostly amphibian and small mammal remains; the bones and teeth of a shrew, mouse and voles were present. Samples from the lower fill of ditch 3 (context 19/20) and the upper fill of ditch 40 (context 38) contained common eel (*Anguilla anguilla*) vertebrae, the only fish recovered from the assemblage.

LAND MOLLUSCA

by Michael J. Allen and S.F. Wyles

The two large linear ditches excavated on Earl's Down Farm (ditches 3 and 40; figure 9) were sampled for Mollusca by the excavator. Although there was no dating evidence from the lower fills, it is thought that both ditches date from the later Bronze Age. The aims of the analysis were to determine the environment and land use of the area

into which the ditches were cut and existed, and to attempt to determine their function. A further aim was to see if the environment and land use determined by mollusc analysis was compatible with the assumed late Bronze Age date of the ditches.

Standard methods of molluscan analysis were employed as outlined by Evans (1972, 44-5). Mollusc nomenclature follows Walden (1976). The results are given in Tables 3 and 4, and for ditch 3 as a histogram of relative abundance with *Pupilla muscorum* being calculated over and above the remaining assemblage (see below).

Results

The assemblages from both ditches typically comprised open country species dominated by *Pupilla muscorum*, which is consistently high (over 80% of one sample). *Pupilla* often occurs in large numbers and is known to have been abundant in the area in the Late Neolithic/Early Bronze Age at Durrington Walls (Evans 1971; 1972, 148), Earl's Farm Down (Kerney 1967), and the barrows on King Barrow Ridge (Allen and Wyles 1994). *P. muscorum* favours areas bare of vegetation such as patches of broken ground induced by sheep grazing on grassy chalk slopes but also the ditch micro-environments themselves where patchy vegetation and small actively eroding areas of bare chalky soil may occur.

The super-abundance of this one species creates problems in interpretation as it distorts and masks the relative and absolute trends within the remaining assemblage (Thomas 1985, 134). In order to lessen the obscuring effect of a super-abundant species histograms can be plotted in absolute numbers but in this case the numbers of shells were both too high and too variable. For these reasons *Pupilla* was calculated as relative percentages over and above the remaining assemblage and thus the relative trends of other species could be observed. The diagram produced in this way for ditch 3 (Table 3) typifies the sequence and is published in (Figure 10), while that for ditch 40 (Table 4) is available in archive.

Both ditches have similar assemblages so are discussed together. The assemblages, excluding *Pupilla*, are typical of very open environments and are dominated by *Vallonia costata* (up to 80%). The predominance of *V. costata* over its cogener *V. excentrica* is indicative of short-turfed grazed downland. *Trichia hispida* and *Helicella italica* have a constant but low presence throughout the

Table 3. Molluscs from Earl's Farm Down ditch 3

Feature Context	Ditch 3															4			
	20					19/20					18						5/6		
Sample	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1			
Depth (cm)	150-160	140-150	130-140	120-130	110-120	100-110	87-100	78-87	70-78	60-70	50-60	40-50	30-40	20-30	10-20	0-10			
Wt (g)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	815			
LAND																			
<i>Pomatias elegans</i> (Müller)	1	2	-	-	1	-	-	1	-	4	2	2	2	3	3	4			
<i>Cochlicopa lubrica</i> (Müller)	-	-	-	-	-	-	-	1	1	2	1	-	-	-	-	3			
<i>Cochlicopa</i> spp.	1	-	1	1	-	-	3	4	4	5	3	3	2	3	1	-			
<i>Vertigo pygmaea</i> (Draparnaud)	-	-	-	-	-	-	-	1	2	3	1	1	2	1	2	-			
<i>Vertigo moulinsiana</i> (Dupuy)	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-			
<i>Pupilla muscorum</i> (Linnaeus)	68	99	125	73	44	98	192	570	794	741	558	259	141	114	79	60			
<i>Vallonia costata</i> (Müller)	34	33	62	24	13	43	98	64	79	70	76	28	28	22	14	1			
<i>Vallonia excentrica</i> Sterki	7	14	11	2	4	14	52	20	46	36	24	9	9	25	20	8			
<i>Vallonia</i> spp.	-	-	-	-	-	-	8	7	8	6	7	6	4	-	-	-			
<i>Punctum pygmaeum</i> (Draparnaud)	-	-	-	-	-	1	6	3	4	1	1	-	-	-	-	-			
<i>Vitrina pellucida</i> (Müller)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
<i>Nesovireta hammonis</i> (Ström)	-	-	-	-	-	-	2	-	-	2	-	-	-	-	-	-			
Limacidae	-	-	-	-	-	-	2	2	-	2	-	-	-	-	-	-			
<i>Cecilioides acicula</i> (Müller)	-	-	-	-	-	-	-	-	-	1	-	-	2	1	2	28			
<i>Cochlodina laminata</i> (Montagu)	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-			
<i>Clausilia bidentata</i> (Ström)	-	-	-	-	-	-	-	2	-	-	1	-	-	-	-	-			
<i>Candidula intersecta</i> (Poirer)	-	-	-	-	-	-	-	-	-	-	-	-	6	-	1	-			
<i>Ceriuella virgata</i> (Da Costa)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1			
<i>Helicella uiala</i> (Linnaeus)	10	5	12	1	3	11	17	40	24	22	20	16	10	19	9	4			
<i>Trichia hispida</i> (Linnaeus)	11	16	23	2	4	14	52	14	24	24	14	17	1	3	2	-			
<i>Arianta arbustorum</i> (Linnaeus)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
<i>Helicigona lapicida</i> (Linnaeus)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
<i>Cepaea/Arianta</i> spp.	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-			
Taxa	7	6	6	6	6	6	9	11	10	12	11	8	9	8	9	7			
TOTAL	132	169	234	103	69	181	432	729	989	919	709	341	205	190	131	81			

assemblage. These are species also found in short-turfed grassland. The absence of the shade-loving catholic species often found in longer grassland, such as *Carychium tridentatum*, indicates a well-established short-turfed (trampled or grazed) grassland, and the homogeneity of the local open landscape. It may also suggest the absence of long vegetation colonising the ditch itself (see Evans 1972, 322-4).

The virtual absence of shade-loving species indicates that the ditches were cut into a pre-existing well established open short-turfed grassland. The assemblages are both specialised and mature ones. The relatively high numbers of shells retrieved, together with the absence of evidence for long vegetation within the ditches, indicate a lack of stabilisation and a constant slow process of infilling within the ditches. The assemblages therefore seem broadly to represent the same general land-use throughout the history of the ditches although there are slight fluctuations within the mollusc assemblages (Tables 3 and 4; Figure 10).

Minor fluctuations within the assemblages have been attributed to sub-zones within each ditch (see Figure 10). These subzones, although based on the molluscan assemblages also correspond to the tripartite ditch fills (cf. Evans 1972, 322-8;

Limbrey 1975, 290-300; see Figure 10).

The subzones seem to reflect localised changes in the intensity of land use, particular to grazing. The ditches were dug into, and existed in, a short-turfed grass downland (sub-zone 1) indicating long established open (grazed) downland prior to their construction. During the natural sedimentation of the ditches, increased, or more intensive grazing (possibly even over grazing) and the creation of bare patches of soil (*Pupilla* and *Pomatias*) is evident (sub-zone 2). Finally, grazing pressure is reduced and a slightly longer grassland sward established, but with hints of localised and possibly intermittent arable activity (sub-zone 3). This occurs from at least the medieval period and later and may be compatible with the establishment and use of the Romano-British field systems visible on aerial photographs.

Conclusion

The land-use of the surrounding areas seems to be one of open pasture throughout the history of the ditches with a little arable activity coming in late on. The paucity of shade-loving species from these sequences indicates that not only had clearance occurred some considerable time prior to ditch infilling, but also that the grazed downland was long established. This would therefore not be

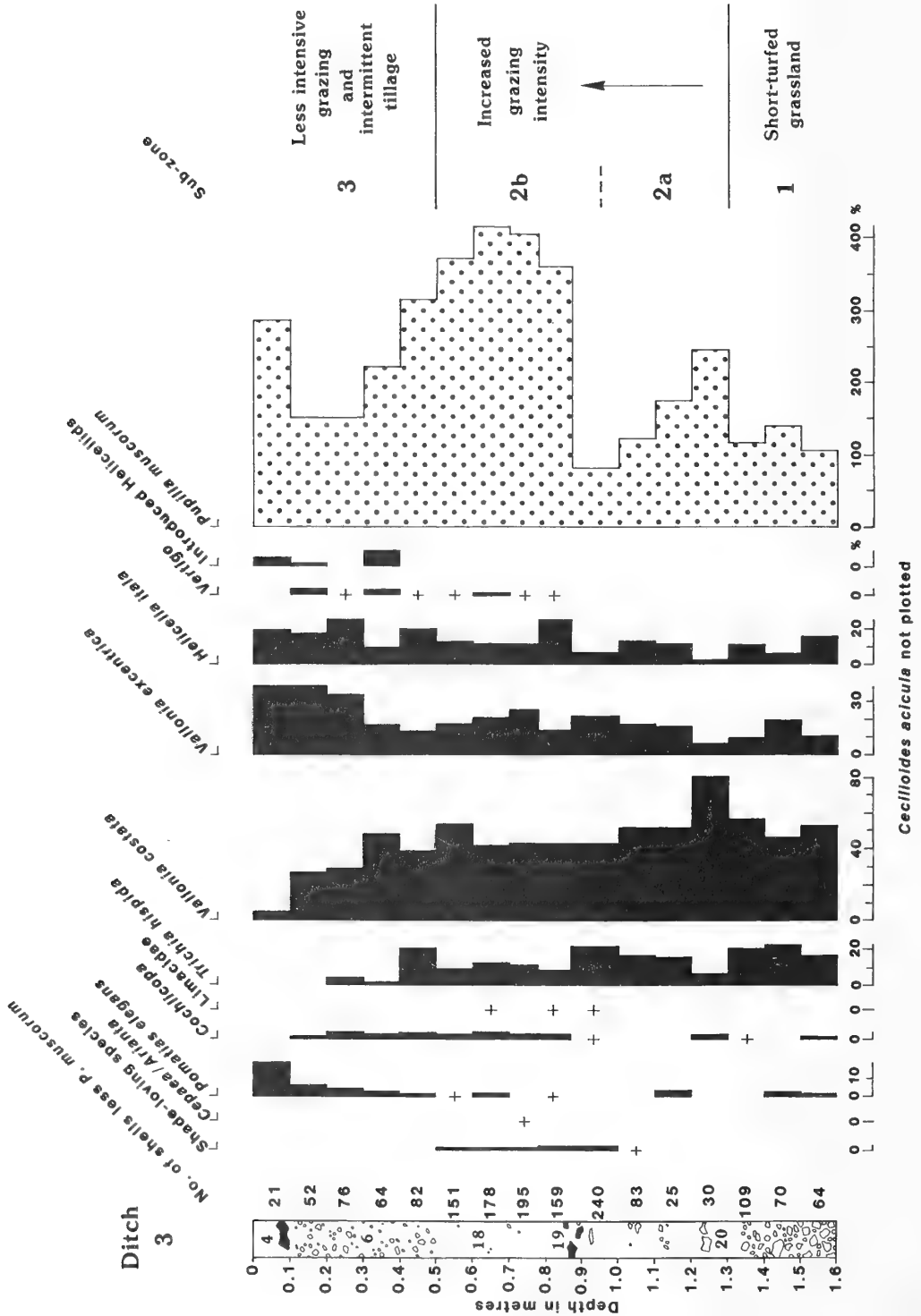


Fig. 10 Mollusc diagram from ditch 3

Table 4. Molluscs from Earl's Farm Down Ditch 40

Feature	Ditch 40													
	39							38						
Context	30	29	28	27	26	25	24	23	22	21	20	19	18	17
Sample														
Depth (cm)	120-130	110-120	100-110	90-100	80-90	70-80	65-70	60-65	50-60	40-50	30-40	20-30	10-20	0-10
Wt (g)	1000	1000	1000	1000	1000	1000	822	880	1000	1000	1000	1000	1000	1000
LAND														
<i>Pomatias elegans</i> (Müller)	+	+	3	+	4	3	4	2	17	10	5	13	13	16
<i>Cochlicopa lubrica</i> (Müller)	-	-	2	-	3	-	-	3	6	3	3	1	2	3
<i>Cochlicopa</i> spp.	-	-	9	8	8	5	3	11	10	5	9	14	3	2
<i>Vertigo pygmaea</i> (Draparnaud)	1	-	-	-	1	-	-	4	8	7	3	1	2	-
<i>Vertigo moulinsiana</i> (Dupuy)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Pupilla muscorum</i> (Linnaeus)	11	20	112	195	289	188	110	373	597	379	389	288	313	385
<i>Vallonia costata</i> (Müller)	1	6	190	369	191	67	63	233	230	47	41	25	19	13
<i>Vallonia excentrica</i> Sterki	4	2	17	29	52	19	14	53	57	31	38	28	20	14
<i>Vallonia</i> spp.	-	-	12	14	10	-	-	15	9	-	-	-	-	-
<i>Punctum pygmaeum</i> (Draparnaud)	-	-	-	-	-	-	1	3	3	3	1	-	-	-
<i>Vitrina pellucida</i> (Müller)	-	-	-	6	-	-	-	1	2	-	-	-	-	-
<i>Nesovitrea hammonis</i> (Ström)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Limacidae	-	-	3	-	1	-	-	-	2	5	3	2	4	6
<i>Cecilioides acicula</i> (Müller)	-	-	-	-	-	-	-	-	-	1	5	3	3	4
<i>Cochlodina laminata</i> (Montagu)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Clausilia bidentata</i> (Ström)	-	-	-	1	-	1	1	-	-	2	-	3	2	2
<i>Candidula intersecta</i> (Poiret)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Ceriuella virgata</i> (Da Costa)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Helicella iuala</i> (Linnaeus)	4	4	38	44	51	13	5	18	28	25	18	21	11	7
<i>Trichia hispida</i> (Linnaeus)	-	1	13	12	21	7	4	44	27	8	13	12	4	11
<i>Arianta arbustorum</i> (Linnaeus)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Helicigona lapicida</i> (Linnaeus)	-	+	-	-	-	-	-	-	-	-	-	-	-	-
<i>Cepaea/Arianta</i> spp.	-	+	-	-	-	-	-	-	3	-	1	2	1	1
Taxa	5	5	8	8	9	8	9	10	12	11	11	11	11	10
TOTAL	21	33	399	678	631	303	205	760	999	523	524	410	394	460

incompatible with the suggested later Bronze Age date for these features. Certainly other landscape studies in the area have pointed to an open landscape with a mixture of pasture and arable land-use at this time (Allen and Wyles 1993; 1994; Evans 1971; Evans and Jones 1979; Entwistle 1994).

In view of some of the recent research on the chalk downlands of southern England (Allen 1994; 1997) it is relatively unusual to record such a long history of uninterrupted pasture and lack of tillage. It does however, confirm suggestions made for the Stonehenge area (Allen 1997). If, however, these large linear ditches had banks on both sides then the assemblages may represent, for instance, the grazed grassy bank rather than an arable landscape, through which the ditch system passed. Indeed, recent observations (Entwistle pers. comm.) indicate that this feature may exist as a double-banked ditch further to the south. It is, nevertheless, more likely that the short-turfed grassland was much more widespread than in the

immediate vicinity.

The consistent use of the area as pasture may indicate that this was a well established and managed downland farm and that the ditches were more than simple field boundaries to retain stock. The ditches may comprise a part of Bradley's 'ranch boundaries' of the Wessex Downland (Bradley 1978, 47; Bowen 1978; Bowen and Fowler 1978; Bradley *et al.* 1994). Bradley suggests that the instigation of these boundaries in the later Bronze Age reflects either a change in the economy from a revival of cereal farming to a greater emphasis on livestock, or an attempt to secure a better integration of arable and pasture, or a desire to demarcate territories possibly in connection with increased competition and even raiding (Bradley 1978, 117). These are not mutually exclusive hypotheses. If agro-pastoral integration was one of the objectives then it is likely that arable areas were not adjacent to both the ditches.

PART 4: DISCUSSION

by *Michael J. Allen and Rosamund M.J. Cleal*

The investigations conducted along the pipeline are individually not necessarily of great importance, excepting the pollen sequence from the Avon Valley. Nevertheless, the intervention provides a 'sample slice' of chalk landscape (cf. Allen and Powell 1996) essentially avoiding all major archaeological sites and features that might normally be investigated within a research programme. This rather arbitrary selection of sites provides an opportunity to review the non-monumental nature of, especially, the Neolithic to Bronze Age periods north of Amesbury.

ENVIRONMENT AND ECONOMY

by *Michael J. Allen*

The pollen analysis of the Avon Valley deposits has undoubtedly produced a major prehistoric sequence, the full interpretation of which is limited by the lack of a series of radiocarbon dates. Nevertheless, the data provided by this analysis combined with molluscan evidence from a number of sites in the region make a significant contribution to our understanding of the activities of past populations on the Amesbury downland.

Mesolithic

The undated pollen spectrum from the Avon Valley at Durrington produced a major early Holocene sequence. Apart from depicting a typical but short late glacial sequence it provides the basis for understanding the development of the river valley floodplain and, therefore, the potential for human activity within and adjacent to the floodplain. Without dating for the pollen sequence, however, no detailed archaeological commentary is possible to augment this information – palynological investigation of the Upper Palaeolithic and Mesolithic periods is therefore in archive. Needless to say, the valley was an important topographic feature of the environment in all periods, acting as a communication route (either on water or within the valley), providing access to water, and to local riverbank and floodplain vegetation, including resources for food, shelter, fire-making and the like.

The pollen sequence spanning the Upper Palaeolithic and Mesolithic periods does not seem to show any direct anthropogenic intrusion into the natural vegetation sequence, but there are defined vegetation fluctuations within this zone. The lack of such activity is confirmed, to some extent, by both the presence of assumed Mesolithic woodland, as evidenced by the mollusca at Durrington Walls (Evans 1971) and Woodhenge (Evans and Jones 1979), and also by the lack of Mesolithic elements in the large flint assemblages from Durrington Walls (Wainwright and Longworth 1971) and from the Stonehenge Environs Project as a whole (Richards 1990; Cleal *et al.* 1995). Contrary to this, there are indications at Stonehenge that localised clearance occurred in the Mesolithic (Scaife 1995; Allen 1995). A pit and postholes from the Stonehenge car park all produced pine charcoal with Mesolithic radiocarbon dates (Vatcher and Vatcher 1973; Allen 1994; 1995), and gave rise to indications of more formal activity in the Mesolithic period (Allen and Gardiner 2002). Further clearance is also recorded about 16km north-west at Strawberry Hill, West Lavington (Hedges *et al.* 1992; Allen 1994). Similar evidence has not yet been forthcoming from the Downs around Amesbury, though it has been observed elsewhere in southern England (Allen and Gardiner 2002; Allen 2002).

Neolithic

The pollen sequence from the valley indicates a major hiatus and Scaife suggests that the later Mesolithic and earlier Neolithic sedimentary elements were lost through erosion. Although the pollen sequence remains undated, Scaife argues that the inception of a cleared and tilled landscape could be of Neolithic to Bronze Age date. We might, however, envisage this as mid to later Neolithic activity, in view of the significant molluscan evidence from nearby monuments and the general reconstructions of the landscape suggested by Allen (1997). Molluscan evidence for widespread clearance in the earlier-middle Neolithic includes that from the pre-bank occupation at Durrington Walls (associated with earlier Neolithic Windmill Hill pottery with radiocarbon dates from charcoal mainly between 3500 and 3000 cal BC (Allen 1997, fig. 2)), and the buried soil at Stonehenge (Allen 1997). These examples indicate that open established grassland conditions and arable land existed in the middle Neolithic. Similar evidence includes the later Neolithic molluscan faunas from

the buried soils and ditches of barrows on the King Barrow Ridge (Allen and Wyles 1994), colluvium and a pit at Figcheldean (Allen and Wyles 1993), the ditch at Woodhenge (Evans and Jones 1979) and the results of the Stonehenge Environs Project (Allen *et al.* 1990). These data show that fairly large tracts of land were cleared in the Early Neolithic, and that by the later Neolithic the area was a largely cleared landscape (cf Allen *et al.* 1990, fig. 154; Allen 1997, plates 3 and 4). This process probably followed initial localised clearance on the downland, but evidently not in the Avon valley.

Bronze Age

During the Bronze Age the Stonehenge environs existed as a large area of pasture and fields with large-scale woodland clearance. Molluscan evidence from the Figcheldean ring-ditch supports this view and indicates highly xerophilous (i.e. open dry) conditions exemplified by the record of *Truncatellina cylindrica*, a species now extinct in Wiltshire (Evans 1972, 140), from the Bronze Age ditch fills. This rare species has been recorded particularly in the Durrington locality in the third and early second millennia BC. It occurred in the middle to Late Neolithic pre-bank soil at Durrington Walls (Evans 1971) and Woodhenge (Evans and Jones 1971), Neolithic fills of the Stonehenge Cursus (Allen 1997), the later Neolithic buried soil beneath the King Barrows (Allen and Wyles 1994) and buried soil beneath the Bronze Age barrows on Earl's Farm Down (Kerney 1964; 1967) and Boscombe Down (Kennard and Woodward 1931). Occurrence of the species is seen to be both spatially and temporally controlled. It was not recorded within the Stonehenge Environs Project (Allen *et al.* 1990), Stonehenge ditch (Evans 1984) or Wilsford Shaft (Bell 1991) and may indicate long term, well established clearance. The existence of a large area of established open downland covering King Barrow Ridge – Figcheldean – Boscombe Down, in at least the early second millennium suggests initial clearance and establishment of open downland prior to this (i.e. earlier-middle Neolithic). Perhaps this open landscape is recorded in the Avon Valley pollen diagram (Durrington: 2). This long established open landscape may also provide the opportunity for large-scale erosion from open downland, resulting in the truncation of early deposits in the local valleys and the deposition of coarse gravel fans (e.g. at Folly Bottom). Truncation of the original soils from these locations may have occurred as

early as the middle Neolithic, when, it is argued, the inception of larger-scale clearance occurred (Allen 1997).

By the later Bronze Age this open, well-established, landscape was extensively farmed, subdivided and defined by the linear ditch systems (Earls Farm Down; Bradley *et al.* 1994). These boundaries may also have separated different land-uses as well as demarcating ownership or territorial rights.

Romano-British

Localised alder carr in the Avon valley floodplain suggests that it was drier than previously, thus enabling woody vegetation to develop. Exploitation of the area seems to have been focused on the surrounding downland. It is only in the medieval period that the use of the floodplain itself for grazing or agriculture became established, being dry at this period.

CONCLUSIONS

by Rosamund M. J. Cleal

There is little archaeological evidence for activity in the vicinity of Durrington Walls before the Neolithic. In the earlier Neolithic there was unenclosed occupation on the high ground to the west of the river in the area later occupied by Durrington Walls and Woodhenge, and a long barrow at Longbarrow Clump, to the east of the river (Figure 1). The extent and nature of this early settlement is largely unknown, as the evidence survives only beneath the extant banks of the two later Neolithic henge monuments and as redeposited material within the later Neolithic assemblages. The pre-bank occupation at Durrington Walls has been dated by three radiocarbon determinations, calibrated to the second half of the fourth millennium BC (3500–3000 cal BC; Richards 1990, fig. 156). The material from Woodhenge does not have any associated radiocarbon determination, but is likely to be of similar date.

Whether the earlier Neolithic pottery from these contexts represents long term use of the area, or episodic use over half a millennium or more, it is this earlier Neolithic occupation which has been tentatively associated with woodland clearance, indicated by the molluscan evidence from beneath the northern sector of the bank at Durrington Walls (Evans 1971). A long period of open conditions in the area is also attested by the molluscs from

Woodhenge, where there is evidence for open country before the construction of the bank and throughout the secondary fill of the ditch.

The large, well-known henge monument of Durrington Walls appears to have been in use in the period c. 2800–2100 cal BC, while that of the neighbouring Woodhenge probably falls within the second half of the third millennium (2500–2000 cal BC; Burleigh *et al.* 1972; Evans and Wainwright, 1979; Richards 1990, table 137 and fig. 156). Other activity within the area is indicated by the following:

- Four pits and a probably later Neolithic ditch at Larkhill Married Quarters (Wainwright 1971), immediately south-west of Durrington Walls, containing Grooved Ware, struck flint, bone artefacts, animal bone and a single limpet shell.
- Structure A: 19 pits or postholes covering an area approximately 18m by 11m, 64m to the south of the henge bank excavated during the main campaign of excavations Durrington Walls in 1966–7 (Wainwright and Longworth 1971, 44–7).
- Structure B: a shallow ditch terminal, which cut an artificial hollow, produced plain body sherds and fragments probably of later Neolithic date from its upper fill. It was interpreted as possibly part of a ring-ditch similar to those excavated by Mrs Cunnington to the south (Wainwright and Longworth 1971, 47).
- Four pits in the garden of Woodlands, 274m to the south-east of the centre of Woodhenge, which contained Grooved Ware, struck flint, part of a Graig Lwyd axe (Group VII), bone artefacts and animal bone, antler, and marine shells (Wainwright and Longworth 1971, 48).
- Three small Grooved Ware sherds found with a cremation in a pit within the ring-ditch Circle 2, south of Woodhenge. The ring-ditch, which is interpreted as one of four ploughed-out barrows, appeared to cut a rectilinear setting of stakeholes (Cunnington 1929; Wainwright and Longworth 1971, 3). Grooved Ware was also recovered from the ditches of Circles 3 and 4 (Cunnington 1929).
- A series of small flint mines was discovered to the north-east of Durrington Walls during trenching operations through the gardens of the houses to the north of Larkhill Road. Three shallow pits and three pit-shafts were recorded. The flint was of poor quality and extraction was abandoned, presumably fairly quickly. A chisel arrowhead of Clarke's type D (Clarke 1934) lay on the base of pit-shaft 5, indicating a later Neolithic date for the pits (Booth and Stone 1952).
- Grooved Ware was found redeposited in Ditch A, a ditch almost certainly of Middle Bronze Age date immediately to the east of the Packway enclosure (Wainwright and Longworth 1971, 310).
- Four plain sherds of Grooved Ware recovered at Totterdown from spoil thrown out from a pit that contained a crouched skeleton (Wainwright and Longworth 1971, 293).

Further afield, approximately 1.6km to the south-east of Woodhenge, Grooved Ware was recovered from Ratfyn, Amesbury. Excavation revealed four pits, three of which were considered to be contemporaneous. Only one pit contained pottery, and also a total of 519 flints, a scallop shell, and the bones of red deer, roebuck, cattle and pig. It is also notable for a single brown bear scapula (Stone 1935). A recent radiocarbon date indicates that deposition of the material was probably contemporary with the latest use of Woodhenge, rather than with the main use of Durrington Walls, as its calibrated range lies around the turn of the third millennium cal BC (see Allen 1997).

The Amesbury area is well-known for its Neolithic monuments and, to some extent, also for smaller sites such as the pits at Woodlands, the type site for the Woodlands sub-style of Grooved Ware (Wainwright and Longworth 1971) and at Ratfyn. The known sites have been, on the one hand, obvious and large (Durrington Walls, Woodhenge), or small and unrecognised until found fortuitously (the pits at Larkhill Married Quarters, Woodlands, Ratfyn) and because of this it has been difficult to gauge the density of smaller sites. To some extent the construction of the pipeline has helped to establish the density of Neolithic sites within the area, in that it provided a swathe of stripped surface over 5km long which was subject to professional archaeological observation.

The results have added considerably to the known pattern in that they suggest a more widespread use of the area to the north and north-west of Durrington Walls than was previously attested, while the lack of sites in the river valley suggests that the lower ground may not have been occupied on the same scale. There was little alluvium exposed within the pipeline easement, but elsewhere in the valley it is possible that alluvium masks Neolithic material. That the lack of sites can be attributed to wet conditions during the Neolithic is also unlikely to be correct, as peat formation was very limited within the pipeline trench, and it seems likely that much of the valley

floor would have been available for use during at least spring to autumn for each year. On the higher ground to the east of the river the lack of recorded Neolithic sites is presumably due in part to intensive later activity and the limited size of the sample. The absence of any isolated pits, which unlike surface sites are likely to have escaped complete destruction, is likely to represent a lesser density of sites in the Neolithic than in the area around Durrington Walls. It is perhaps of particular interest that no Neolithic features were noted where the pipeline passed close to the long barrow at Longbarrow Clump.

It is clear, therefore, that the evidence from the pipeline fits well into the known pattern, but also fills out the picture in some areas. The occurrence of occupation north of Durrington Walls, suggested by the residual material found during Wainwright's excavations in Ditch A, is confirmed, and the use of the area to the north of the river meander and south of the abortive flint mines is attested for the first time. The flint artefacts from this area, however, do not include any material obviously from the flint mines. Indeed the single piece of gravel flint (pit 184, Harding, above) indicates that raw material from the river valley was being utilised.

The nature of activity represented by the features excavated along the route of the pipeline is more difficult to identify, but they seem to be part of a local concentration of sites focused on the river valley rather than simply on the henge monuments. The occurrence of beaver in pit 165, and the similar occurrence at Durrington Walls (minimum of one individual, Harcourt 1971, 338) suggest, as might reasonably be expected, that the river valley was exploited, and this is also borne out by the occurrence of chub, a freshwater fish, at Ratfyn (Jackson 1935, 301). Without a firm date for the intensive agricultural activity suggested by pollen zone Durrington:2 it is difficult to be confident about the nature of the contemporary landscape. The molluscan evidence from Durrington Walls and Woodhenge indicates strongly that there was well-established open grassland in the immediate vicinity of the monuments, but the wider picture is still unclear. Some woodland or scrub is likely to have survived, perhaps along the slopes of the river valley, as hazel, hawthorn, ash and oak charcoal were identified at Ratfyn and Durrington Walls. Beech was also present at Durrington Walls, and the majority of structural timbers appear to have been oak, requiring a very large quantity of that timber to construct the Northern and Southern

Circles. The excavators suggest that this might have been obtained from the Vale of Pewsey to the north, with the felled trees transported along the river (Wainwright and Longworth 1971, 222–3).

Although the results of the pipeline observations and excavations have been on a small-scale in terms of the Neolithic finds, observation of the pipeline provided a valuable opportunity to assess the likely spread of Neolithic activity within the environs of the two major later Neolithic monuments. The environmental evidence is of particular importance and the necessity of dating the intensive agricultural activity of Durrington: 2 is clearly a priority. If this should prove to be of later Neolithic or earlier date, as suggested here, it would radically alter the prevailing view of the area at that period, and indeed of the type of occupation generally associated with the users of Grooved Ware, for which there is little evidence of cereal cultivation. If, on the other hand, it should prove to be of Bronze Age date, it would fit the known settlement of the area attested by the 'egg-shaped' Middle Bronze Age enclosure excavated by Cunnington (1929), which appears to lie within an area of more extensive activity (Richards 1990, 279; Stone *et al.* 1954, 164–6).

The palimpsest of features along the eastern length of the pipeline is difficult to interpret. The section cut through the main Earl's Farm Down linear (ditch 3) has neither proved nor disproved the presumed later Bronze Age dating of this feature, as only two flint flakes were recovered from the primary fill. But the small sherd of later Bronze Age pottery found in the primary fill of the ditch running south from the Earl's Farm Down linear (ditch 7), and the lack of Romano-British pottery in the lower fill, seems to indicate that this ditch at least may date to the early first millennium BC. This is in contrast to the results of the Wessex Linear Ditches Project, which classify this cropmark as a 'trackway (confirmed)' (Bradley *et al.* 1994). Environmental data from the linear ditches, however, has provided a useful picture of the likely landscape during the life of ditches 3 and 40. The long history of pasture and lack of arable suggested by this forms a useful contribution to our knowledge of the area in later prehistory.

Acknowledgements

Wessex Archaeology would like to thank Wessex Water Engineering Services Ltd for their assistance

and financial support, in particular Jim Stables and Ted Olney. The co-operation of the landowners, of Amey Construction, Avron Construction and Raymond Brown Ltd was also much appreciated during both the excavations and the watching brief. The authors would also like to thank Helena Cave-Penney of the Archaeology Section of Wiltshire County Council's Library and Museum Service, for providing archaeological background information. Fieldwork was carried out by Neil Adams, Phil Harding and Julie Lancley. Augering was carried out by Mike Allen and Rob Scaife, assisted by Sarah Wyles. The project was managed by Caron Newman and, latterly, by Julie Gardiner. Illustrations are by S.E. James and Linda Coleman. The archive has been deposited with the Salisbury and South Wiltshire Museum, Salisbury.

Note

A draft of this paper was completed in 1994. It was revised for publication in 2003.

Bibliography

- ALLEN, M.J., 1988. Archaeological and environmental aspects of colluviation in south-east England. In Robinson M. and Groenman-Van Waateringe, W. (eds), *Man Made Soils*. Oxford: British Archaeological Report S410, 69-94
- ALLEN, M.J., 1992. Products of erosion and the prehistoric land-use of the Wessex Chalk. In Bell and Boardman (eds) 1992, 37-52
- ALLEN, M.J., 1994. *The land-use history of the southern English chalklands with an evaluation of the Beaker period using environmental data; colluvial deposits as environmental and cultural indicators*. Unpublished PhD thesis, University of Southampton
- ALLEN, M.J., 1995. Before Stonehenge. In Cleal *et al.* 1995, 41-64
- ALLEN, M.J., 1997. Environment and land-use: the economic development of the communities who built Stonehenge (an economy to support the stones). In Cunliffe, B. and Renfrew, C. (eds), *Science and Stonehenge*. London: Proceedings of the British Academy 92, 115-44
- ALLEN, M.J., 2002. The chalkland landscape of Cranborne Chase; a prehistoric human ecology. *Landscapes* 3, 55-69
- ALLEN, M.J., ENTWHISTLE, R. and RICHARDS, J.C., 1990. Molluscan studies. In Richards 1990, 253-8
- ALLEN, M.J. and GARDINER, J. 2002. A sense of time; cultural markers in the Mesolithic of southern England?. In David, B. and Wilson, M. (eds), *Inscribed Landscapes; marking and making place*. Honolulu: University Press, 139-53
- ALLEN, M.J. and POWELL, A.B., 1996. The contribution of pipeline archaeology to our understanding of the environment, farming, and settlement patterns of the Winterbourne and Kennet Valleys. In Powell A.B., Allen, M.J. and Barnes I., *Archaeology in the Avebury Area, Wiltshire: Recent Discoveries Along the Line of the Kennet Valley Foul Sewer Pipeline, 1993*. Salisbury: Wessex Archaeology Report 8, 82-8
- ALLEN, M.J. and WYLES, S.F., 1993. The land-use history; the molluscan evidence. In Graham and Newman 1993, 45-50
- ALLEN, M.J. and WYLES, S.F., 1994. The contemporary land-use and landscape of the King Barrows as evidenced by the buried soils, pollen and molluscs. In Cleal, R.M.J. and Allen, M.J., *Investigation of tree-damaged barrows on King Barrow Ridge and Luxenborough Plantation, Amesbury, W/ANHM 87*, 76-81
- ANDERSEN, S.Th., 1973. The differential pollen productivity of trees and its significance for interpretation of a pollen diagram from a forested region. In Birks H.J.B. and West, R.G. (eds), *Quaternary Plant Ecology*. Oxford: University Press, 109-15
- BELL, M.G., 1981. Valley sediments and environmental change. In Jones M. and Dimpleby, G.W. (eds), *Climatic Change in Later European Prehistory* Oxford: British Archaeological Report 87, 75-91
- BELL, M.G., 1982. The effects of land-uses and climate on valley sedimentation. In Harding, A.F. (ed.), *Climatic Change in Later Prehistory*. Edinburgh: University Press, 127-47
- BELL, M.G., 1983. Valley sediments as evidence of prehistoric land-use on the South Downs. *Proceedings of the Prehistoric Society* 49, 119-50
- BELL, M.G., 1991. Land snails. In Ashbee, P., Bell, M. and Proudfoot, E. *Wilsford Shaft: Excavations 1960-62*. London: English Heritage Archaeological Report 11, 99-103
- BELL, M.G. and BOARDMAN, J., (eds) 1992. *Past and Present Soil Erosion; Archaeological and Geographical Perspectives*. Oxford: Oxbow
- BOOTH, A. St. J. and Stone, J.F.S., 1952. A trial flint mine at Durrington, Wiltshire. *W/ANHM* 54, 381-8
- BOWEN, H.C., 1978. 'Celtic' fields and 'ranch' boundaries in Wessex. In Limbrey, S. and Evans, J.G. (eds). *The Effect of Man on the Landscape: the Lowland Zone*. London: Council for British Archaeology Research Report 21, 115-23
- BOWEN, H.C. and FOWLER, P.J. (eds.), 1978. *Early Land Allotment*, Oxford: British Archaeological Report 48
- BRADLEY, R.J., 1978. *The Prehistoric Settlement of Britain*. London: Routledge & Keegan Paul

- BRADLEY, R.J., 1984. *The Social Foundations of Prehistoric Britain*. London: Longman
- BRADLEY, R. ENWISTLE, R. and RAYMOND, F., 1994. *Prehistoric land divisions on Salisbury Plain*. London: English Heritage Archaeological Report 2
- BULL, G. and PAYNE, S., 1982. Tooth eruption and epiphysal fusion in pigs and wild boar. In Wilson, B., Grigson, C. and Payne, S. (eds). *Ageing and Sexing Animal Bones from Archaeological Sites* Oxford: British Archaeological Report 109, 55-72
- BURLEIGH, R., LONGWORTH, I.H. and WAINWRIGHT, G.J., 1972. Relative and absolute dating of four Late Neolithic enclosures: an exercise in the interpretation of radiocarbon determinations. *Proceedings of the Prehistoric Society* 38, 389-407
- BURRIN, P.J. and SCAIFE, R.G., 1984. Aspects of Holocene valley sedimentation and floodplain development in southern England. *Proceedings of the Geologists' Association* 95, 1-96
- BURRIN, P.J. and SCAIFE, R.G., 1988. Environmental thresholds, catastrophe theory and landscape sensitivity: their relevance to the impact of man on valley alluviation. In Bintliff, J. (ed.). *Conceptual Issues in Environmental Archaeology*. Edinburgh: University Press, 211-32
- CLARK, J.G.D., 1934. Derivative forms of the petit tranchet in Britain. *Archaeological Journal* 91, 32-58
- CLEAL, R.M.J., WALKER, K.E. and MONTAGUE, R., 1995. *Stonehenge; a monument in its landscape*. London: English Heritage Archaeological Report 10
- COLES, B., 1992. Further thoughts on the impact of beaver on temperate landscapes. In Needham, S. and Macklin, M.G. (eds), *Alluvial Archaeology in Britain*. Oxford: Oxbow, 93-9
- CUNLIFFE, B., 1984. *Danebury. an Iron Age hillfort in Hampshire Volume 2 The Excavations 1969-1978: The Finds*. London: Council for British Archaeology Research Report 52
- CUNNINGTON, M.E., 1929. *Woodhenge*. Devises
- ENTWISTLE, R., 1994. The environmental setting of the linear ditches system. In Bradley *et al.* 1994, 101-21
- EVANS, J.G., 1971. Durrington Walls: the pre-henge environment. In Wainwright and Longworth 1971, 329-37
- EVANS, J.G., 1972. *Land Snails in Archaeology*. London: Seminar Press
- EVANS, J.G., 1984. Stonehenge - the environment in the Late Neolithic and Early Bronze Age and a Beaker burial. *WANHM* 78,7-30
- EVANS, J.G., 1992. River valley bottoms and archaeology in the Holocene. In Coles, B. (ed.), *The Wetland Revolution in Prehistory*. Exeter: WARP Occas. Pap. 6, 47-53
- EVANS, J.G., and JONES, H., 1979. Mount Pleasant and Woodhenge: the land Mollusca. In Wainwright, G.J., *Mount Pleasant, Dorset. Excavations 1970-1971*, 190-213
- EVANS, J.G., and WAINWRIGHT, G.J., 1979 The Woodhenge Excavations, in G.J. Wainwright, *Mount Pleasant, Dorset. Excavations 1970-1971*. Report of the Research Committee of the Society of Antiquaries of London 37, 1-74
- GODWIN, H., 1975. *The History of the British Flora* (2nd. ed.), Cambridge: University Press
- GRAHAM, A. and NEWMAN, C., 1993. Recent excavations of Iron Age and Romano-British enclosures in the Avon Valley. *WANHM* 86, 8-57
- GRIGSON, C., 1982. Porridge and pottage: pig husbandry in Neolithic England. In Bell, M. and Limbrey, S., *Archaeological Aspects of Woodland Ecology*. Oxford: British Archaeological Report S146, 297-314
- HARCOURT, R.A., 1971. Animal bones from Durrington Walls. In Wainwright and Longworth 1971, 338-50
- HARDING, P.A., 1990. The comparative analysis of four stratified flint assemblages and a knapping cluster. In Richards 1990, 213-24
- HASKINS, L.E., 1978. *The vegetational history of south-east Dorset*. Unpublished PhD Thesis, University of Southampton
- HEDGES, R.E.M., HOUSLEY, R.A., BRONK, R.G. and KLINKEN, G.J. van., 1992. Radiocarbon dates from the Oxford AMS system, *Archaeometry* datelist 14. *Archaeometry* 34, 141-59
- HUNT, C.O., 1987. Comment: the palynology of fluvial sediments: with special reference to alluvium of historic age from the upper Axe valley, Mendip Hills, Somerset. *Transactions of the Institute of British Geographers* 12, 364-7
- JACKSON, W., 1935. Report on animal bones. In Stone, J.F.S. and Young, W.E.V., Two pits of Grooved Ware date near Woodhenge. *WANHM* 52, 300-301
- JANSSEN, K., 1959. *Alnus* as a disturbing factor in pollen diagrams. *Acta Botanica Neere* 8, 55-8
- JARVIS, M.G., ALLEN, R.H., FORDHAM, S.J., HAZELDEN, J., MOFFAT, A.J. and STURDY, R.G. 1984. *Soils and their use in South East England*. Rothampsted, Soil Survey of England and Wales, Bulletin 15
- KENNARD, A.S. and WOODWARD, B.B., 1931. Mollusca. In Newall, R.S., Barrow 85, Amesbury (Goddard's list). *WANHM* 45, 442-3
- KERNEY, M.P., 1964. Mollusca. In Christie, P.M., A Bronze Age round barrow on Earl's Farm Down, Amesbury. *WANHM* 59, 43-4
- KERNEY, M.P., 1967. Appendix III, Mollusca. In Christie, P.M., A barrow cemetery of the second millennium BC in Wiltshire, England. *Proceedings of the Prehistoric Society* 33, 365-6
- KROMER, B. and BECKER, B., 1993. German oak and pine ¹⁴C calibration 7200 BC-9400 BC. *Radiocarbon* 35, 125-35
- LEGGE, A., 1991. The animal remains from six sites at Down Farm, Woodcutts. In Barrett, J., Bradley, R. and Hall, M., *Papers in the Prehistory of Cranborne*

- Chase*. Oxford: Oxbow, 54-100
- LIMBREY, S., 1975. *Soils and Archaeology*. London
- LONGWORTH, I.H., 1971. The Neolithic pottery. In Wainwright and Longworth 1971, 48-155
- MALTBY, J.M. 1990. The exploitation of animals in the Stonehenge Environs in the Neolithic and Bronze Age. In Richards 1990, 247-9
- MOORE, P.D., WEBB, J.A. and COLLINSON, M.E., 1991. *Pollen Analysis* (2nd edn). Oxford: University Press
- NEEDHAM, S., 1991. *Excavation and Salvage at Runnymede Bridge, 978: the Late Bronze Age Waterfront Site*. London: British Museum Press
- PALMER, R., 1984. *Danebury. An Iron Age Hillfort in Hampshire. An Aerial Photographic Interpretation of its Environs*. London: RCHME Supplementary Series 6
- RICHARDS, C. and THOMAS, J. 1984. Ritual activity and structured deposition in later Neolithic Wessex. In Bradley, R. and Gardiner, J. (eds), *Neolithic Studies*. Oxford: British Archaeological Report 133
- RICHARDS, J.C., 1990. *The Stonehenge Environs*. London: English Heritage Monograph 16
- SERJEANTSON, D. and GARDINER, J., 1995. Antler implements and ox scapulae shovels. In Cleal *et al.* 1995, 414-30
- SCAIFE, R.G., 1980 Late-Devensian and Flandrian Palaeoecological Studies in the Isle of Wight. Ph.D Thesis, King's College, University of London.
- SCAIFE, R.G., 1982. Late-Devensian and early Flandrian vegetation changes in southern England. In Bell, M. and Limbrey, S. (eds), *Archaeological Aspects of Woodland Ecology*. Oxford: British Archaeological Report S146, 57-74
- SCAIFE, R.G., 1987. Late-Devensian and Flandrian vegetation of the Isle of Wight. In Barber, K.E. (ed.), *Wessex and the Isle of Wight. Quaternary Research Association Field Guide*. Cambridge: Quaternary Research Association, 156-80
- SCAIFE, R.G., 1988. The Elm Decline in the pollen record of South East England and its relationship to early agriculture. In Jones, M. (ed.), *Archaeology and the Flora of the British Isles*. Oxford: University Committee for Archaeology Monograph 14, 21-33
- SCAIFE, R.G., 1995. Boreal and sub-boreal chalk landscape: pollen evidence. In Cleal *et al.* 1995, 51-5
- SCAIFE, R.G. and BURRIN, P.J., 1983. Floodplain development in, and the vegetational history of the Sussex High Weald and some archaeological implications. *Sussex Archaeological Collections* 121, 1-10
- SCAIFE, R.G. and BURRIN, P.J., 1985. The environmental impact of prehistoric man as recorded in the Upper Cuckmere valley at Stream Farm, Chiddingly, *Sussex Archaeological Collections* 123, 27-34
- SCAIFE, R.G. and BURRIN, P.J., 1992. Archaeological inferences from alluvial sediments: some findings from southern England. In Needham, S. and Macklin, A. (eds), *Archaeology under Alluvium*. London, 75-91
- SMITH, I.F., 1965. *Windmill Hill and Avebury. Excavations by Alexander Keiller*. Oxford: Clarendon Press
- STACE, C., 1991. *New flora of the British Isles*. Cambridge: Cambridge University Press
- STAINES, B.W., 1991. Red deer. In Corbet, G.B. and Harris, S., *The Handbook of British Mammals* (3rd edn), Oxford, 492-504
- STONE, J.F.S., 1935. Some discoveries at Ratfyn, Amesbury, and their bearing on the date of Woodhenge. *WANHM* 47, 55-67
- STONE, J.F.S., PIGGOTT, S. and BOOTH, A. St.J., 1954. Durrington Walls, Wiltshire: recent excavations at a ceremonial site of the early second millennium, B.C. *Antiquaries Journal* 34, 155-77
- TAUBER, H., 1965. Differential pollen dispersion and the interpretation of pollen diagrams. *Danm. geol. Unders* II 89, 1-69
- THOMAS, K.D., 1985. Land snail analysis in archaeology: theory and practice. In Fieller, N.R.J., Gilbertson D.D. and Ralph N.G.A. (eds), *Palaeobiological Investigations: Research Design, Methods and Data Analysis*. Oxford: British Archaeological Report S266, 131-75
- THORLEY, A., 1981. Pollen analytical evidence relating to the vegetation history of the chalk. *Journal of Biogeography* 8, 93-106
- VATCHER, F. de M. and VATCHER, H.L., 1973. The excavation of three postholes in Stonehenge car park. *WANHM* 68, 57-63
- WAINWRIGHT, G.J. 1971. The excavation of prehistoric and Romano-British settlements near Durrington Walls, Wiltshire, 1970. *WANHM* 66, 76-128
- WAINWRIGHT, G.J. and LONGWORTH, I.H., 1971. *Durrington Walls: Excavations 1966-1968* London: Report of the Research Committee of the Society of Antiquaries of London 29
- WALDEN, H.G., 1976. A nomenclatural list of the land Mollusca of the British Isles. *Journal of Conchology* 29, 21-5
- WATON, P.V., 1980. Rims Moor, Dorset: pollen record from late boreal to present in eighteen metres of peat. *Quaternary Newsletter* 30, 25
- WATON, P.V., 1982. Man's impact on the chalcidands: some new pollen evidence. In Bell, M.G. and Limbrey, S. (eds), *Archaeological Aspects of Woodland Ecology*. Oxford: British Archaeological Report S146 75-91

Wiltshire and Other Things in Common: Sir Peter Scott CH CBE DSC FRS (1909–1989) and Bernard Venables MBE (1907-2001)

by Brian Edwards

The Wiltshire associations of two well known twentieth-century artists and environmentalists are explored and illustrated.

Wiltshire is not a place that springs to mind alongside the names of Peter Scott and Bernard Venables. Both were outstanding individuals, widely respected for many things beyond their foremost international reputations as artists. As well known conservationists and writers, they influenced generations of countryside enthusiasts and lovers of natural history; but they each had many achievements besides.

Renowned for founding the Wildfowl and Wetlands Trust and instrumental in founding the World Wide Fund for Nature, Scott was of course famously the son of the ill-fated polar explorer Captain Scott. He also won the DSC as a wartime gunboat commander, gained an Olympic Bronze medal for single-handed dinghy sailing, was skipper of an America's Cup yacht, and became a British Open Gliding Champion and a competition ice skater. Scott's writings, radio broadcasts and television programmes made him a household name that was inevitably linked with Slimbridge where he established the Wildfowl and Wetlands Trust in 1946.

Venables, like Scott, was an avid schoolboy angler who had also gratuitously graduated from the time-honoured traditional self-taught school of stick, string, and pin. Primarily recalled as author-illustrator of the most widely influential best selling angling book of all time, *Mr Crabtree Goes Fishing*, Bernard Venables has been described

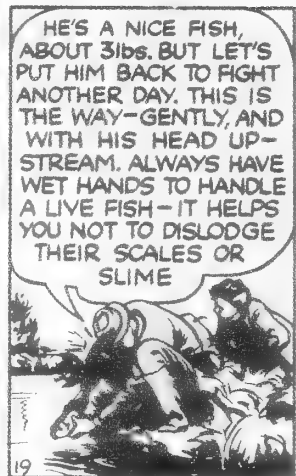
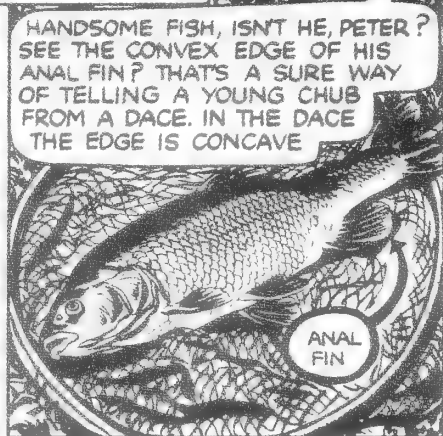
without exaggeration as an adventurer and with genuine diastrophic esteem as the 'Venerable Venables'. It seems quite incredible to reflect upon Venables continuing to either fish, paint or sculpt – and some times enjoying all three activities – each day of the week at the age of 93. But it is even more extraordinary to learn that at an age when most had accepted state retirement and sought the fireside and slippers, his enthusiasm for David Livingstone's explorations saw Venables undertake, partly on foot, a hazardous 1,200 mile trek down the Zambezi from its Congo source to Mozambique.

A leading conservationist in the movement backed by the Anglers' Co-operative Association to clean up Britain's polluted waterways, Venables could also look back on being the record holder of the largest rod-caught shark, hooked in 1959, and experiencing two seasons in small open boats whaling with the hand-held harpoons of the Fayal Islanders in the Azores. If this doesn't appear a comfortable apposition alongside the idea of conservation, it might also be recalled that Peter Scott was a ferreter and wildfowler in younger days and, while punting with Dick and Tim Maurice (of the 'Marlborough Doctors') at Manton, perfected the capture of Graylings by striking them harpoon-style with the pole.

Venables and Scott were not only contemporaries of similar age, but they were also



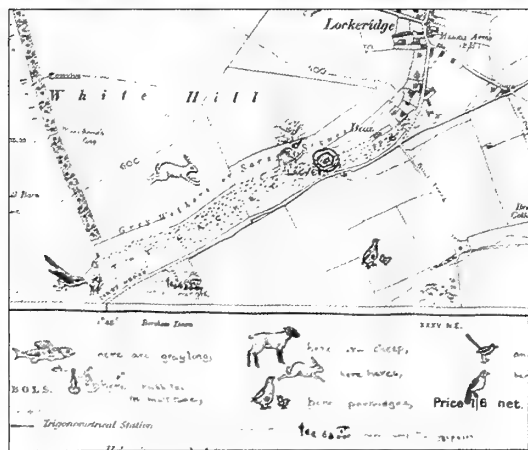
THE CRABTREES' FIRST CHUB COMES TO NET



The opening strip of Mr Crabtree Goes Fishing 1949 (top left) and self portrait by Bernard Venables c 1990s (top right). 'The Crabtree's First Chub' (bottom) is typical of the countryside care, conservation, and natural history intertwined with the technical detail in the strip.

children when their fathers died and were influenced subsequently by artistic near relatives. Venables' grandfather was an accomplished artist and Scott's mother a professional sculptor. As if it were not enough for Scott to have been born of one

famous parent, let alone a nationally acclaimed hero, his mother Kathleen was descended from Robert the Bruce, and was friends with such as Isadora Duncan, T.E. Lawrence, and George Bernard Shaw in addition to a host of politicians



'The Natural World of Man' (top), an unusual but succinct work by Scott showing threatened wildlife on the one hand and pollutive industrialization on the other. Self portrait with Lady Philippa and friends (bottom left). Map by the young Peter Scott showing the natural history of the area surrounding his stepfather's cottage, the Lacket (bottom right).

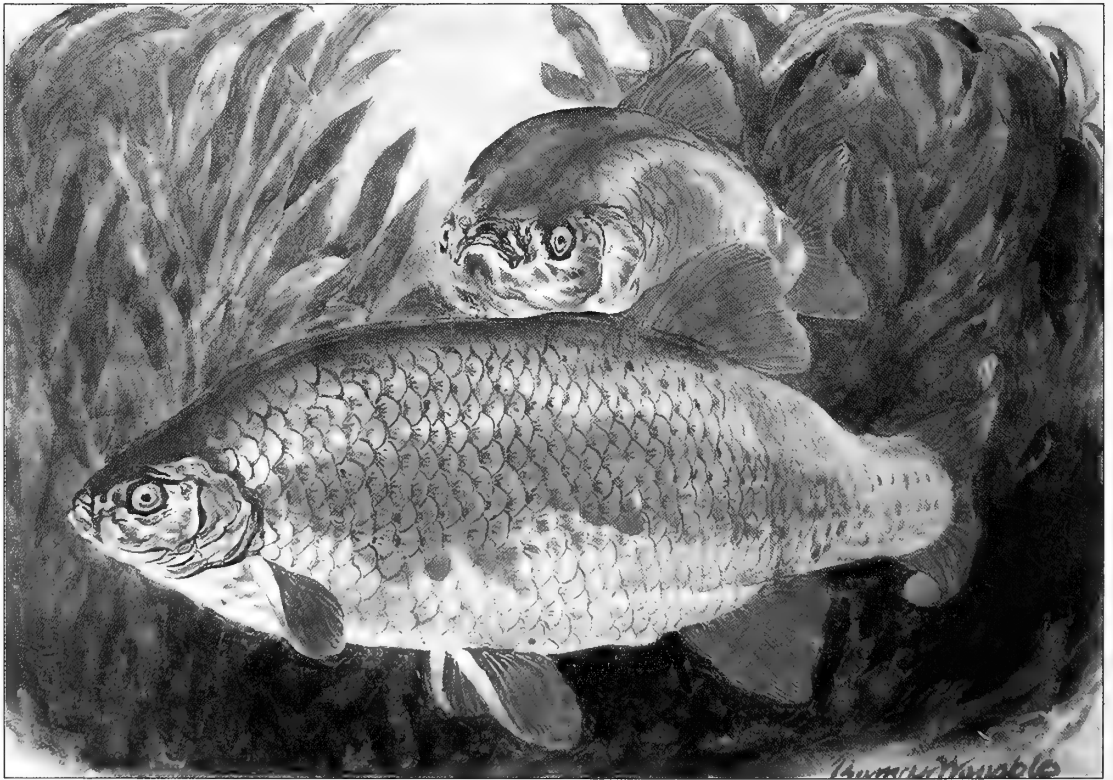
prior to her marriage, when Peter was 13, to Edward Hilton Young who was to become a cabinet minister and later Lord Kennet.

It was at his stepfather's Wiltshire cottage, The Lacket, in the Kennet Valley village of Lockeridge, described by Scott as the 'one of the most perfect thatched cottages I have ever seen', that the teenaged Peter recalled painting flowers [meticulously] in watercolours as his stepfather, a patient bird watcher, read aloud to him each evening.

It nestles amid ancient yews; and across from the cottage there is a gentle slope of fields to the West Woods. These woods were our particular delight, and we had our own names for all the places in them, which we marked on our own special six-inch-to-the-mile map – Archer's Dene, Brock Dene, Peached valley, Mole Joke. Often we used to walk far over the Downs and into Savernake Forest. Always on these walks I would collect wild flowers and bring them home... Finally I had quite a complete collection of small drawings of the common wild flowers that grew

around The Lacket. I always found being read aloud to an excellent stimulus to my drawing.

Scott had his first drawing published, a privet hawk moth, aged just 13. But while Wiltshire influenced the young Peter Scott, Venables did not move to the Wiltshire-Berkshire borders, and finally Upavon in Wiltshire, until later life, despite being drawn since 1940 by a fascination for the River Kennet. During the war Venables' skill as an artist saw him deployed by several government ministries, drawing tanks and aircraft for propaganda purposes. In 1946 he joined the *Daily Mirror* in which his famous cartoon strip character 'Mr Crabtree' first appeared, as a gardener, in 1947 – not long before Venables inevitably suggested when winter prevented work in the garden Mr Crabtree should go fishing. The daily strips in which Mr Crabtree taught his son Peter to fish in all conditions were compiled into a book in 1949 that was an instant best seller. Informed by some of the most glorious watercolours of British freshwater fish ever published, post-war generations were



'Rudd' by Bernard Venables watercolour 15 x 12 inches – one of a series of 31 started in 1946 in a return to the colours and posture of Victorian natural history prints.



'Upavon' by Bernard Venables 1994 watercolour 25.5 x 19 inches.

taught not just angling but waterlife and bankside etiquette by the Crabtrees and another couple *Mr Cherry and Jim*. In 1953 Venables co-founded the *Angling Times* and ten years later founded a sophisticated country magazine titled *Creel*.

Scott's angling stories include catching and despatching to London Zoo's aquarium some exceptionally large Perch, weighing 2 lb. 10 oz. and 3 lb. 2 oz. respectively, and making detailed drawings of Roach-Rudd and Rudd-Bream hybrids that he sent to Dr Tate Regan at the Natural History Museum. Egg collecting and moth catching also feature; as does, of all things, catching a baby badger in an umbrella so that he could examine it. Scott revealed this to be the only badger he had seen in a radio broadcast in 1939, until he returned to Wiltshire to night-watch with a friend in woods near Hungerford and Marlborough. The same year Bernard Venables was first mesmerized by the trout swimming in the sparkling waters of the Kennet at Hungerford.

Compared side by side, pencil portraits by Scott and Venables show a remarkable similarity in easy,

light, effective use of the pencil; while the ink-drawn map key to creatures and plants encountered within walking distance of The Lacket produced by the young Scott shows the same explicit projection of form that Venables' superb illustrations of active fish brought to the tales of Mr Crabtree and Mr Cherry. Their watercolours of country scenes also show similarities in use of colour bringing backgrounds to life, involving the onlooker in the natural scene before them. Rare examples of their late artwork can also be found to be similar, strikingly symbolic scenes conveying meaning beyond the dimensions of their more familiar work. Above all other things in common, both Scott and Venables can be seen as inspiring multitudes in enjoying and respecting the natural world through mediums that appeal beyond the academy. Despite ascending that plane these intuitive natural historians instinctively encouraged others, and in doing so spread knowledge and wisdom along with their enthusiasm. Were one word required to epitomise a common thread in the legacy of Scott and Venables' work in natural history, it would



'Common Eel' by Bernard Venables

perhaps be 'look'. Whether it was Scott capturing the time of day through the flight of birds or Venables portraying a season through a river scene, these great artists brought us to the spot; to see what happened beneath and above the surface of rather more than just the water. Peter Scott, of course, aptly called his BBC television series *Look*, but he and Venables encouraged the many to also see and do.

Source material

The author's interviews, conversations and correspondence with Bernard Venables 1999-2000.

COURTNEY, Julia, 1989, *Peter Scott*. Watford: Exley

SCOTT, Peter, 1966, *The Eye of the Wind: an Autobiography*. London: Hodder and Stoughton

SCOTT, Peter, 1967, *Happy the Man: Episodes in an exciting life*. (Nigel Sitwell ed.) London: Sphere

VENABLES, Bernard, 1993, *The Illustrated Memoirs of a*

Fisherman. Ludlow: Merlin Unwin

VENABLES, Bernard, 1949, *Mr Crabtree Goes Fishing*. London: Daily Mirror

VENABLES, Bernard, 1968, *Baleia! the Whalers of the Azores*. London: Bodley Head and Knopf

Picture credits

Mr Crabtree Goes Fishing by kind permission of the *Mirror*.

Paintings by Peter Scott by kind permission of Lady Philippa Scott.

Paintings and a self portrait by Bernard Venables by kind permission of Eileen Venables, who wishes it to be known that she is the sole copyright holder of all works by Bernard Venables other than Mr Crabtree which is owned by the *Mirror*. Original artwork and prints by Bernard Venables are available through the shop at the Wiltshire Heritage Museum.

Map by Scott, Wiltshire Heritage Museum and Library.

The Wiltshire Wildlife Trust's Vera Jeans Nature Reserve at Jones's Mill, Pewsey

by Beverley Heath¹ with contributions by other authors

There was a mill until the fourteenth century. Eighteenth-century floated water meadows were abandoned in the nineteenth. The vale is greensand over clay. Low-lying land, watered by springs rising from nearby chalk through greensand and peat, has scarce fen and carr communities with a mosaic of calcicoles and calcifuges. They are maintained by summer grazing. Wet flushes are also valuable habitats. Much less interesting formerly improved fields on the northern slopes are recovering under sympathetic management. Grass-heath restoration is planned for the southern slopes. Various groups of fauna are described.

HISTORY

Ipsa æccl^a ten^t Pevesei ...vii molini redd. iiii lib. et v solid.

Very probably our Jones's Mill was one of the seven at Pewsey held by the church and paying £4 5s at the time of the Domesday survey (Thorn and Thorn, 1979, 10:67c). They would have stood on the Salisbury Avon, which flows through the heart of the reserve. Details of the site's history are set out in a paper commissioned by the Trust (Chandler, 1999). The earliest known reference to the mill by name is in 1359, when an *inquisition post mortem* lists a water mill named 'Jonesmulle' among the possessions of one Anastasia de Harden. This is almost certainly the one described in her father's *inquisition* in 1330: a water mill in Pewsey worth ten shillings a year held from the Abbot of Hyde. The mill was abandoned probably sometime in the fourteenth century, but the name Jones persisted, attached to various meadows and woods on the site. An estate map of c.1811 names the meadow just north-east of the main bridge over the Avon as Jones's Mill Mead (see map), a name also mentioned in a 1756 property list.

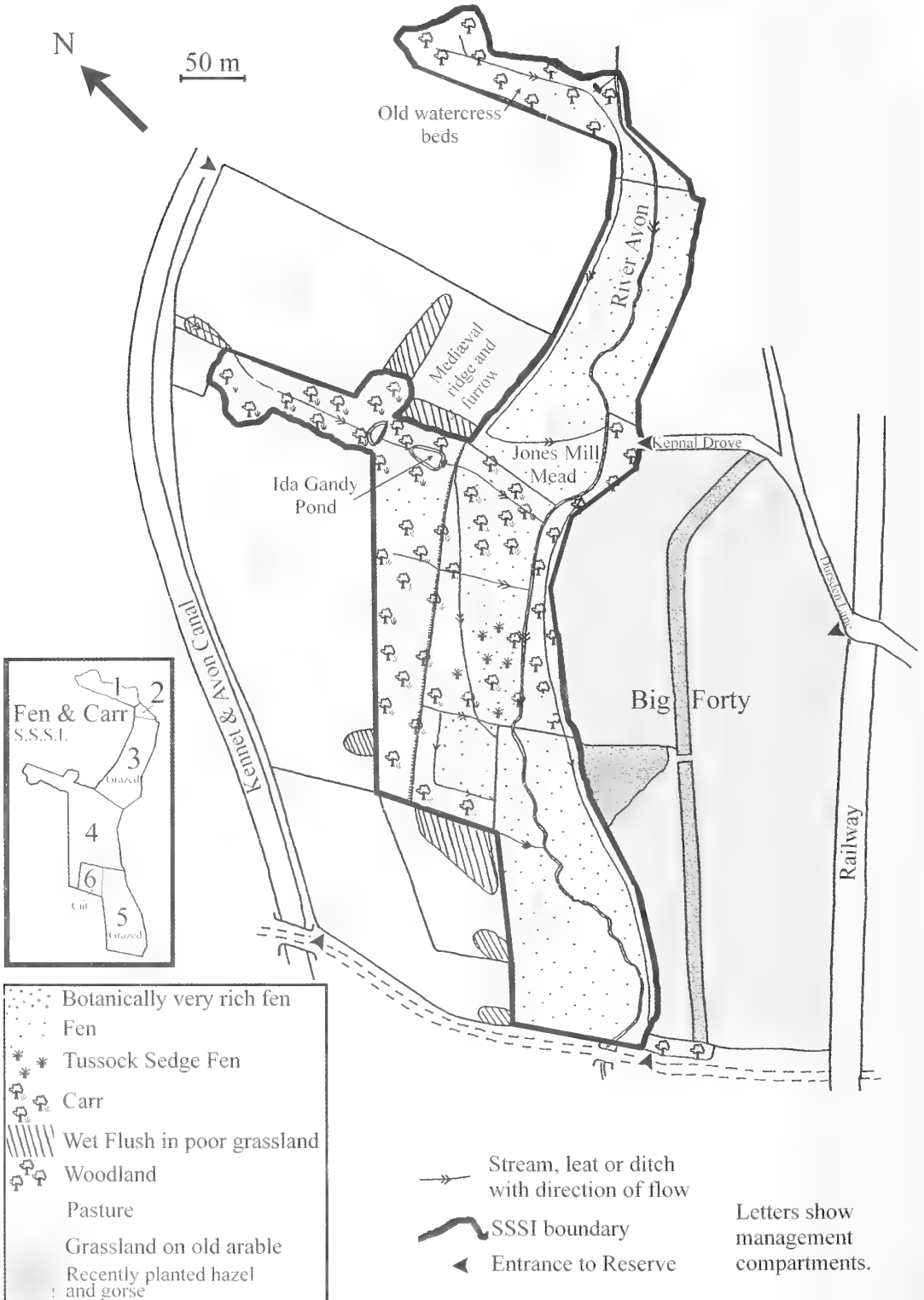
In one field in the north of the reserve, ridge and furrow is still discernible – evidence of a medieval

open field system (Wiltshire County Council Archaeology Service, undated). When the mill was abandoned it is likely that the land along the river reverted to marsh. By the mid-eighteenth century these marshes were converted to 'floated' water meadows. Kerridge (1953) describes the Wiltshire water meadows in detail. The usual procedure was to build a sluice upstream of the meadow to feed water into leats constructed parallel to the river but which ran higher up the valley slope. Between these and the river, and perpendicular to them, successive ridges were constructed about ten metres apart with their tops at the same height as the leat. Along these ran ducts, 'carriages', fed by the leats, and in the hollows between them were drainage channels, 'drawns' (*sic*), running down to the river. The elaborate structure of the meadows was expensive to create and maintain, but the rewards made it worthwhile. Controlled flooding both enriched the soil and kept it warmer at night and thus promoted vigorous early grass. This in turn allowed more sheep to be kept. Sheep were of crucial importance to the rural economy: for meat and wool, of course, but above all for their dung that was used to fertilise the arable fields.

At Jones's Mill the water for the leats was augmented – possibly even entirely supplied – by

¹ 9 West Manton, Marlborough SN8 4HN bjw.heath@ dial.pipex.com

Vera Jeans Reserve, Jones's Mill



springs and tributary streams rather than the more usual dams on the river. The temperature of spring water is very constant so in cold weather it did not just blanket the soil but actively warmed it. Another unusual feature of the meadows is that in Jones's Mill Mead the carriages and draws run parallel to the river. The Jones's Mill water meadows as such fell into disuse probably sometime in the nineteenth century, though there is a local memory of controlled flooding up to the First World War (Wall, 1999). Even so, the land was still used for occasional grazing of cattle. The ridges are still up to 20 centimetres above the troughs and stand out well in the patterns of vegetation.

Hidden just below ground level is a hard-core track across the fen along the eastern edge of Jones Mill Mead. This may be part of an ancient track, Kepnal Drove, which ran from Kepnal along what is now Dursden Lane, down the existing green lane and across the site and possibly on to Sunnyhill Lane and up to Martinsell. It was blocked in 1808 when this part of the Kennet and Avon Canal was built. There are no rights of way on the reserve, but there are permissive paths.

An estate map of 1811 shows a 'Strip by Pond' but not the pond itself. It looks as if the pond could have been where the Avon runs through the present carr (woodland on water-logged soil). The same map marks another part of the carr as 'Alder Bed'. At the north-east end of the reserve [1 on the inset Fen & Carr map], watercress beds, fed by springs, were in use serving the London market until just after the Second World War (Wall, 1999). All that remains of these old beds is a mire with a stream flowing through it and a line of diverse, exotic trees along its western edge, probably planted to protect the beds from frost. A dam, reconstructed in 1990, diverts part of this stream into the leat that supplies water to the north-eastern third of the water meadows.

At times, probably in the 1940s and 1950s, the old water meadows were deliberately burnt off to promote fresh growth – 'It would be green again in about a week' (Wall, 1999).

In 1975 the Jeans family, who owned the land from 1905, leased the old water meadows that form the core of the reserve to the Wiltshire Trust for Nature Conservation (now the Wiltshire Wildlife Trust). Miss Vera Jeans loved the old water meadows and to ensure their long-term protection she gave them to the Trust in 1980, on condition that they be kept as marshy areas. Their current plant community is in a transient stage in a

succession which, without active management, would ultimately become woodland. To preserve this rare and valuable habitat, water levels have to be maintained and the taller, ranker vegetation kept under control either by annual cutting or, better, by summer grazing with cattle. In order to be able to control the water levels, some of the leats were restored by the Wiltshire Wildlife Trust in 1987. When the meadows were in working order, the runnels leading out from the leats on to the ridges were blocked by removable boards, now long-since gone. A fine sandy silt had accumulated where they had been and, when the banks of the leats were restored, these silt patches remained in place. The effect was that alongside the tops of the old ridges there are now porous spots through which water continuously seeps, thus, probably as much by good fortune as design, keeping the water table on the fen at the optimum level. With the aid of local donations and two substantial grants from the Heritage Lottery Fund towards both purchase and maintenance, the Trust bought many of the surrounding fields during the 1990s, to protect the water meadows, and to enable the small herd of Belted Galloway cattle that graze them during the summer to be kept on the reserve throughout the year. The southern part of this was a large arable field, now under grass. This has become known as Big Forty – nothing to do with its size (10.6 hectares) but rather the Director's birthday!

The 1922 Ordnance Survey map appears to show two ponds in the other spur of woodland that runs almost due north in the centre of the reserve [Compartment G on the main map]. These dried up and were subsequently used as 'earth' watercress beds until the 1960s (Wall, 1999). In 1975 these were dry except for a stream running through them, but the remains of an earth dam could still be seen where the lower pond had been. This pond was restored by the Wiltshire Wildlife Trust in 1982 and 1983, the work paid for with a gift in memory of Miss Ida Gandy. A further dam was installed in 1997 to restore the upper pond.

LOCATION, GEOLOGY AND HABITATS

The Vale of Pewsey was formed when the chalk anticline arching from the Pewsey Downs to Salisbury Plain was eroded to reveal the underlying greensand (Barron, 1976, *87 et sequ.*). The reserve covers 33 hectares in the Vale just north-east of



Ida Gandy Pond

Pewsey itself. There are four entrances, but only one has direct access to a public road, Dursden Lane, at SU 169 610.

This gate gives on to Big Forty, at present a wide expanse of sown grasses and adventitious White Clover. Straight ahead, looking north-west across the valley, are the chalk downlands: Martinsell to the right and, in the distance on the left, Knap Hill and Walker's Hill. They stand above the fields of the Vale: loamy brown-earth soil over the fertile upper greensand (Soil Survey, 1983). The Kennet & Avon canal, the northern boundary of the reserve, runs south-west to north-east. It is hard to see except where it is crossed by Pains Bridge carrying an ancient green lane from Pewsey and Knowle up to the downs. This green lane forms the reserve's south west boundary. Along the valley bottom, largely hidden by trees, the Avon flows through marshy meadows. These meadows are kept wet by numerous powerful springs rising through the greensand from the chalk. The very name 'Pewsey' or the Norman form 'Pevesei', as in the quotation from the Domesday Book given above, or, even earlier – 880 AD – 'Pefesigge' means 'Pefe's well-watered place', but who Pefe was we have no idea (Gover *et al*, 1939, 350).

On the reserve, twenty-four categories of habitat have been identified (Mobsby, 2001). These include fen and carr; river, streams, ponds, ditches and wet flushes; woodland, including old trees with nest holes; large standing and fallen deadwood; parkland trees and grassland (semi-improved or improved).

The central core of the reserve, the old water meadows and woods, has been classified as a Site of Special Scientific Interest (SSSI) since 1975 and is proposed as a Special Area of Conservation (SAC). This key part is now surrounded entirely by grazing land or fen, but is still vulnerable to possible pollution either from upstream or via the groundwater.

The River Avon

The eastern headwater of the Salisbury Avon flows through the reserve. Three streams on the north of the Vale join to form it: one rises just south of Clench, another near Wootton Rivers and the third, Deane Water, comes from just west of Burbage. The river turns south at Pewsey to cut through the Salisbury Plain scarp at Upavon, demonstrating that the river pre-dates the Vale.

At Jones's Mill, while still in the Vale, it is a considerable stream. This September, after one of the driest and hottest summers for many years, measured just above the bridge where the old Kepnal Drove crosses the river, it was 3½ metres wide, about 40 centimetres deep and flowing, at the surface, at about half a metre per second. The aquifers feeding it are in the chalk, but at the bridge the water, with a pH of 7.5, is only weakly alkaline. Bullhead *Cottus gobio*, River Lamprey *Lampetra fluviatilis*, Brown Trout *Salmo trutta* have all been recorded, as has Rainbow Trout *S. gairdneri* but this last, fortunately, seems to have died out. There are records of the native White-clawed Crayfish *Austropotamobius pallipes*, but now there is a large population of American Signal Crayfish *Pacifastacus leniusculus*, which might have come from a known escape of farmed crayfish just downstream of the reserve in the late 70s or early 80s (Wall 1999).

Riverside Meadows and Carr

Although, except in extreme conditions, the meadows are never flooded, the soil is moist even at the height of summer. The area is now a mire and



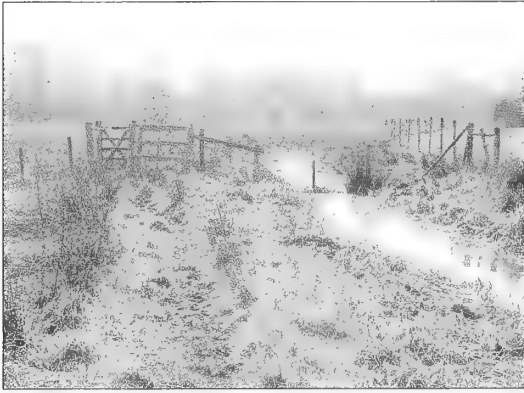
River Avon in North-East Fen

the plant communities which have developed are classified as fen and carr (Rodwell, 1998a, 30 *et sequ.*; Rodwell, 1998b, 24 *et sequ.* and Rodwell, 2000, 109 *et sequ.*). The nutrient status of the old meadows ranges from mesotrophic to eutrophic. The ground water is calcareous, but deposition of leaf litter over the years has created a peaty, slightly acid soil. Soil samples taken at both the east and west ends of the meadows gave a surface pH value of 6.5 and this remained constant down through the soil until an abrupt change to 7.5 at the greensand layer. The water in the leats had a pH of 7.5.

The leaf litter leads to somewhat drier conditions with tall herbs and, ultimately, shrubs and trees. The earlier stages of succession support a much more diverse and interesting ecosystem. To preserve these, the meadows are now managed by maintaining the leats and by grazing by Belted Galloway cattle – a tough but gentle breed that are happy to be out of doors all the year round and, in summer, do well grazing the fen. As can be seen on the map, there are two main areas of fen, one in the north-east of the reserve [2 & 3] and the other in the south-west [5 & 6]. These are separated by an area of carr [4] which also spreads beyond the probable extent of the old meadows into some of the wet flushes at the foot of the north slope of the valley. The two outer sections are lightly grazed during the summer. This has had important effects. Selective eating of the dominant competitive and tall plants has both reduced the accumulation of leaf litter and allowed the under-storey to flourish. The treading of the cattle has opened up pockets of bare soil, so allowing germination. These factors combine to make a complex mosaic of vegetation which is by no means unusual for such sites: the plant communities found here, while not matching exactly, are very similar to typical fen and carr communities elsewhere in southern England. They are dominated by sedges *Carex sp.* of which there are no fewer than fourteen species on the reserve. Lowland mires are now rare: most have either, through neglect, proceeded to woodland or, probably more often, have been deliberately drained. The SSSI citation describes Jones's Mill as 'the best known example of a calcareous valley mire in Wiltshire'.

The North-East Fen [2 & 3]

The Triple-spotted Pug *Eupithecia trisignaria* is a nationally rare moth. Its food plants Wild Angelica *Angelica sylvestris* and Hogweed *Heracleum sphondylium* grow in many parts of the reserve but



Leat in north-East Fen

are particularly protected here by excluding the cattle from about half of a hectare [2]. This small part has a litter layer some five centimetres thick and no pockets of bare soil. It is a tall-herb fen with only a dozen or so plant species, dominated by Reed Sweet-grass *Glyceria maxima*, Meadowsweet *Filipendula ulmaria* and Cleavers *Galium aparine*. There are also fair numbers of Lesser Pond Sedge *Carex acutiformis*, Marsh Horsetail *Equisetum palustre*, Stinging Nettle *Urtica dioica*, Common Hemp-nettle *Galeopsis tetrahit*, Wild Angelica and Common Comfrey *Symphytum officinale*.

Stinging Nettles are often indicators of enrichment by human activity but here they are in their natural habitat – remains of nettles have been found along with those of typical fen and carr communities in peat some 13,000 or 14,000 years old (Godwin, 1975, 432). Many of the Stinging Nettles on the reserve have few or no stings. This is not uncommon where nettles grow in the shade but some, as here, are in the open. It is thought that stinglessness is an inherited property sometimes found where there is little grazing (Pollard and Briggs, 1982, 1984a and 1984b). The familiar stinging form is a tetraploid, possibly derived from a stingless diploid (Mabberley, 2002, 739).

A plant in this spot the reserve could well do without is an introduction from the Himalayas: Indian Balsam *Impatiens glandulifera* which first appeared on the reserve ten years ago. It is weeded out every year, but is constantly replaced from a large patch just upstream of the reserve.

Apart from this small fenced-off area, the fen as far as and including Jones's Mill Mead [3] (about 2.5 hectares in all) was grazed for 6 to 8 weeks during September and October in 1984 and 1985. During the next two years it was hand cut and raked. Since then every year until 2002 it has been

grazed by two or three Belted Galloways between April and the end of October. This year (2003) unfortunately it was not grazed until very late in the year, but there is every intention of continuing the previous grazing regime next year. Even just beyond the fence the picture here is very different from where the fen is ungrazed. The leaf litter is barely 1 centimetre thick and there are numerous hoof-sized pockets with vigorous germination. In 2002 I recorded twenty-nine species of vascular plants from a 15 × 15 metres plot near the fence, of which the dominants were Lesser Pond-sedge *C. acutiformis* and Soft Rush *Juncus effusus*. Meadowsweet *F. ulmaria* was still found but only about a third as often, while Reed Sweet-grass *G. maxima* – much liked and sought out by the Belties – occurred even less. Both are grazed down before they can flower. After the dominants, the next commonest species in the quadrat was Greater Bird's-foot-trefoil *Lotus pedunculatus* whose yellow flowers are a conspicuous feature of the reserve in July. Every plant in the quadrat is found throughout the grazed fen. In spring Marsh-



Irises in Jones's Mill Mead

marigold *Caltha palustris* and Cuckooflower, or Lady's Smock *Cardamine pratensis* stand out as does, a little later, Ragged Robin *Lychnis flos-cuculi*, although this last is not present in such numbers as the others. Other frequent plants include Marsh Horsetail *E. palustre*, Water Forget-me-not *Myosotis scorpioides*, Meadow Vetchling *Lathyrus pratensis*, Water Mint *Mentha aquatica*, Fen Bedstraw *Galium uliginosum* and Common Valerian *Valeriana officinalis*.



Yellow Iris with Hybrid Common Spotted-orchids

Moving westwards, out of the quadrat but still within the north-east section [3], there is a small but detectable increase in wetness and along with it (although there is no evidence that it is the cause) there is increasing diversity of vegetation. The most obvious addition is the Yellow Iris *Iris pseudacorus* which is locally dominant, and which certainly adds greatly to the attractiveness of the reserve. There are other less conspicuous but botanically interesting delights. Marsh Valerian *Valeriana dioica* is widespread and there are isolated patches of Bogbean *Menyanthes trifoliata*, Common Cotton-grass *Eriophorum angustifolium*, and Bottle Sedge *Carex rostrata*. The last three are all indicative of acid soils, particularly the Cotton-grass. All four are

Wiltshire rarities: during the 1980s the Flora Mapping Project found them in only 87 (2%), 20 (<1%), 11 and 4 kilometre squares respectively (this and all subsequent references to plant status in Wiltshire are taken from Gillam, 1993). Also of note are a few specimens of Bulrush or Greater Reedmace *Typha latifolia* and of Common Spotted-orchid *Dactylorhiza fuchsii*. Some of this latter species grow very tall, and are probably hybrids with Southern Marsh-orchid *Dactylorhiza praetermissa*.

Along the north edge of Jones's Mill Mead are several pollarded Crack Willows *Salix fragilis*. Beside the hard track across the fen, the probable continuation of Kepnal Drove mentioned above, are a few shrubs (Alder *Alnus glutinosa*, Hawthorn *Crataegus monogyna* and Holly *Ilex aquifolium*) and some brambles *Rubus fruticosus*. These seemingly fairly insignificant features serve as important shelter for several species of fauna, as we shall see below.

The Central Carr [4]

On crossing the next fence, out of the grazed area into the central section of the SSSI, there is an even



Southern Marsh-orchid



Tussock Sedge in winter (© WWT – Steve Day)

more dramatic change to a late stage of fenland succession: willow and alder carr surrounding an earlier stage of as yet ungrazed Tussock Sedge fen. Part of this section has been fenced with the intention of grazing it in the near future.

As mentioned above, the carr extends north-westwards into the wet flushes and around the two ponds, making a total area of five hectares in all. The area around the ponds [G] and bordering the Avon [D] have been woodland for many years, but aerial photographs show that the carr between them [B and C] is comparatively recent in origin. Here in 1946 there were no trees or bushes except in the hedgelines; by 1958 a scatter of trees had appeared and by 1972 these were larger but still scattered, with none of the closed canopy that we have today. The open fen is dominated by Great Horsetail *Equisetum telmateia*, Reed Sweet-grass *G. maxima* and Meadowsweet *F. ulmaria*. Along one of the streams are several Greater Reedmace *T. latifolia*, and in another is Lesser Water-parsnip *Berula erecta*, which is rare in Wiltshire, particularly in the southern vice-county. Other typical fen plants found here are Common Valerian *V. officinalis*,

Marsh Valerian *V. dioica* and Square-stalked St. John's-wort *Hypericum tetrapterum*. There are impressively large Greater Tussock-sedge *Carex paniculata*, especially along the edges of the streams, which together with the primæval Horsetails give the area a very special character. Tussock Sedge is now very rare in Wiltshire, being found in only 1% of the kilometre squares but was once 'locally plentiful particularly in the Vale of Pewsey' (Grose 1957, 589). The central fen is also the best part of the reserve for the extremely rare Desmoulin's Whorl-snail *Vertigo moulinsiana*, a Red Data Book species that is common on the reserve.

The principal trees in the carr are Alder *A. glutinosa*, Grey Willow *Salix cinerea* and Crack Willow *S. fragilis*. In the drier places there are a few Pedunculate Oak *Quercus robur* and Ash *Fraxinus excelsior*. The shrubs include Hawthorn *C. monogyna* and Elder *Sambucus nigra* with a few Guelder-rose *Viburnum opulus* in open areas. The herb layer within the carr is principally Lesser Pond-sedge *C. acutiformis*, Yellow Iris *I. pseudacorus* – which does not flower – and Stinging Nettle *U. dioica*.



Great Horsetail

A tall exotic conifer was to have been felled as an unwanted alien, until it was realised that it was a favourite nest site for Sparrowhawks *Accipiter nisus*. There are several tall dead trees both standing and fallen, some with big root plates. Along the edge of the northern spur of the carr several willows have been pollarded and the resulting large logs left in piles. All this provides excellent habitats, particularly for bees and beetles.

Important plants on the northern edges of the carr, both along a path and where it merges into open fen, include Hemp-agrimony *Eupatorium cannabinum*, Wild Angelica *A. sylvestris* and Common Comfrey *S. officinale*. On the edge of the path itself can be found Southern Marsh-orchid *D.*



River Avon in South-west Fen

praetermissa and Water Avens *Geum rivale*, both strong indicators of mesotrophic conditions.

Where the carr borders the River Avon there are extensive patches of Opposite-leaved Golden-saxifrage *Chrysosplenium oppositifolium*. South of the river there are just a few metres of level ground and then another few of steep scarp up to the gentler slope of Big Forty and its dry grassland. There is considerable seepage of water at various levels on the scarp, so there is a gradation from carr at the bottom to ordinary woodland or hedgerow conditions at the top. (This seepage was heavily laced with fertilizer from the arable – one of the main reasons for its purchase by the Trust.) In the carr are Brooklime *Veronica beccabunga* and Blue Water-speedwell *V. anagallis-aquatica*. One specimen of the latter, growing this year on the bank where the river enters the carr, was quite remarkable for being 1.5 metres tall – three times its usual maximum height. It is thought to be probably a hybrid with Pink Water-speedwell *V. anagallis-aquatica* × *catenata* = *V. × lackschewitzii* which is often more robust (Stace 1992, 722). In the drier parts are Moschatel or Town-hall Clock *Adoxa moschatellina*, an ancient woodland indicator, Primroses *Primula vulgaris*, Bluebells

Hyacinthoides non-scripta and Bracken *Pteridium aquilinum*. Stone Parsley *Sison amomum* grows right beside the path, but has only just been noticed – it is probably a recent introduction. The Flora Mapping Project found it only in the north-west and south-east of Wiltshire, but describe it as a plant of ‘poorly tended footpaths’.

The South-west Fen [5 & 6]

The south-west section covers about three hectares in all. (As this is the most sensitive part of the reserve, access is restricted: visitors wishing to be admitted to it should apply to the Trust or directly to me.) Mostly it is tall-herb fen through which flows the Avon lined by mature Alders *A. glutinosa*. Since 1994 the fen [5] has been grazed during the summer, currently by seven Belted Galloways. Of the dominant plants, Great Horsetail *E. telmateia*, Meadowsweet *F. ulmaria*, Yellow Iris *I. pseudacorus* and Reed Sweet-grass *G. maxima*, which is locally dominant appears to depend on the wetness of the soil but this has not yet been tested properly. The plants of the north-east fen occur here as well with some additions such as Branched Bur-reed *Sparganium erectum*, Southern Marsh-orchid

D. praetermissa (and its hybrids with *D. fuchsii*) and Small Nettle *Urtica urens*. Greater Pond-sedge *C. riparia* is rather more common here. The Water Dock *Rumex hydrolapathum* is a prominent feature along the streams. There is a very small colony – in some years only one spike – of Green-flowered Helleborine *Epipactis phyllanthes*, which is rare not only in Wiltshire – found in only eight 1 × 1 kilometre squares – but also nationally.



Green-flowered Helleborine

Within this tall fen there is about a quarter of a hectare where the peat is floating. Part of it has a short turf and, unusually for the reserve, a lot of moss. This kind of mire is typical of spongy peat moistened by calcareous, base-rich waters. Here are large numbers of Bogbean, *M. trifoliata* and of Marsh Arrow-grass *Triglochin palustre*. This latter species was found in only nineteen kilometre squares by the Wiltshire Flora Mapping Project. At one time it was struggling on the reserve under competition from grasses and sedges. Grazing at this colony, and close cutting and light trampling during the winter (inadvertent but, as it turned out, beneficial) in the compartment mentioned next, have restored its fortunes and now, in 2003, there are hundreds of spikes.



Bogbean

Adjacent to the grazed fen, but fenced off from it, is another *Carex*-dominated mire covering about three quarters of a hectare [6]. It would be difficult to manage cattle on it, so it is not grazed but cut and raked every winter. (The raked heaps form excellent breeding grounds for the Grass Snakes *Natrix natrix* which are a feature of the reserve.) Not only does this small enclosure have the richest flora of the reserve with several Wiltshire rarities, but there are within it fascinating juxtapositions of plants characteristic of acid and of alkaline soils.

As an indication of its richness, of the 81 species of vascular plants listed for the south-west fen, 31 are found only here. It also has many species of moss, including a small patch of *Sphagnum palustre*.



Bogbean sward in South-west Fen

Of the Wiltshire rarities, as well as Common Cotton-grass *E. angustifolium* which also grows in Jones Mill Mead, there are five others found in only 2% or fewer of the kilometre squares in Wiltshire. The beautiful little Bog Pimpernel *Anagallis tenella* forms two patches, each about a metre across, that are bright pink when the flowers come in late June. This plant was found in only thirteen of the kilometre squares, which is less than 1% of them. Even rarer in Wiltshire is the Flea Sedge *Carex pulicaris*. Stace (1992, 978) describes its habitat as 'bogs, fens and flushes, usually base rich' so the plants growing here at Jones's Mill are behaving normally. In Wiltshire it is catholic in its tastes, growing in mesotrophic to eutrophic



Water Avens

conditions and in mires or on dry chalky grassland, but even so in only seven kilometre squares. Purple Moor-grass *Molinia caerulea* has been found in only twenty-nine kilometre squares – fewer than 1% – and almost all of these are concentrated on the New Forest heaths in the south-east corner of the county. The remaining two species rare in Wiltshire but found in this enclosure are Heath Wood-rush *Luzula multiflora* and Brown Sedge *C. disticha*.

The soil is acidic peat and the tussocky nature of the terrain has some of it bathed in alkaline ground-water while other parts stand proud. The calcifuges Common Cotton-grass, Bog Pimpernel, Heath Wood-rush and Purple Moor-grass, all mentioned above, as well as Tormentil *Potentilla erecta*, Carnation Sedge *C. panicea* and Common Sedge *C. nigra* grow side-by-side with the calcicoles Common Spotted-orchid *D. fuchsii* and Quaking Grass *Briza media*.

Two other plants from this small, botanically rich patch are worthy of note: Water Avens *G. rivale*, seen already in the carr but more abundant here, and Devil's-bit Scabious *Succisa pratensis*, the food plant of the caterpillars of the Marsh Fritillary, *Eurodryas aurinia*, referred to below.

Fields on the Valley Slopes

The Northern Fields

These meadows [J, K and L] were bought by the Trust in 1995 as a buffer zone and to provide winter grazing for the Belted Galloways. They are also grazed during the summer with his own cattle by the contract farmer who looks after the Belties.

The western fields are improved grassland of little botanical interest, but the eastern one [L] – the one which has mediæval ridge and furrow – is only semi-improved and has much more diversity. There are several plants of Pignut *Conopodium majus* in the drier part at the top of the field and lower down many of the fenland plants, including several Common Spotted-orchids *D. fuchsii* and Bottle Sedge *C. rostrata*, which has only just colonised this part. Since the Trust has owned them none of the fields have been treated with fertilizer or pesticide and nor, of course, will they be in the future.

There are isolated oaks *Q. robur* – one of them developing a 'stag's head' of dead branches – and some fine standard oaks in the hedgerows. Cuttings of the native Black-poplar *Populus nigra* have been planted. These were taken from one of several male trees a few miles downstream.

The wet flushes in all these fields have not yet been studied properly, but may well be of great interest for the many invertebrates that rely on seepages. Although small in area, as they are geological features they are likely to have existed a very long time, possibly thousands of years. It is this continuity which could make them of great ecological significance. Soldier flies often breed in

such places including three that have been recorded on the reserve: *Oplodontha viridula*, *Oxycera nigricornis* and *O. trilineata*.

The large logs produced by pollarding have been piled at the edges of these fields near the willows from which they came. Being out in the open in sunny places, they are warm and relatively dry – it is unusual for logs in such a situation to be left in place, so they form a comparatively rare habitat. The nationally notable longhorn beetle *Leptura quadrifasciata* was recorded on them in 1997 and again last year, when four were seen, two of them mating. Leaf-cutter bees and solitary wasps have been seen using the beetle exit holes, but they have not been identified to species level.

The Southern Fields: Big Forty

The single large arable field to the south of the then reserve was bought by the Trust in October 1997 to protect the main part of the reserve. During the first year a maize crop was planted (without fertilizer or other dressing) and cut to reduce the fertility of the land. The field was then put down to grass. This is cut twice a year for silage, again in order to reduce fertility. Eighty-six species of native flowering plants and several mosses have been found here in a recent survey. Unfortunately, an agricultural strain of White Clover *Trifolium repens* has established itself, which is busily putting the nitrogen back. The one large field has been divided into three by a broad belt and triangle containing 3820 hedging plants, including 860 hazel, 1120 hawthorn, several blocks of gorse (which used to grow on this slope before it was converted to arable) and a few other species. This planting will, in due course, provide a valuable habitat for a wide range of wildlife including, it is hoped, dormice *Muscardinus avellanarius* which have been found in the woodland at the far end of the field.

The main long-term aim for the fields is to create species-rich grass-heath. An additional proposal is to designate half a hectare or so for ploughing each year, to allow a weed crop to develop (Mobsby, 2001). This would be excellent for birds and would follow the recommendations of the Wiltshire Biodiversity Action Plan (2002, 7: 12 action 41).

FAUNA

The groups considered below are some of those for which there are reasonably extensive records.

Spiders

by Martin Askins

Fifty or so spiders have been recorded from the Reserve, none of which is particularly rare, although two are uncommon. These are *Araneus marmoreus*, a member of the orb-weaving family (in the same genus as the common, garden cross spider, *A. diadematus*), and *Xysticus ulmi*, a crab spider. Nationally *A. marmoreus* has a widespread distribution but is local, its habitats including damp woodland where it makes its web in trees, shrubs or even tall, rank vegetation. It has been recorded from only eight other sites in Wiltshire. *X. ulmi* is found in the field layer of damp habitats such as fens or marshes, and has been recorded from seven other sites in the county.

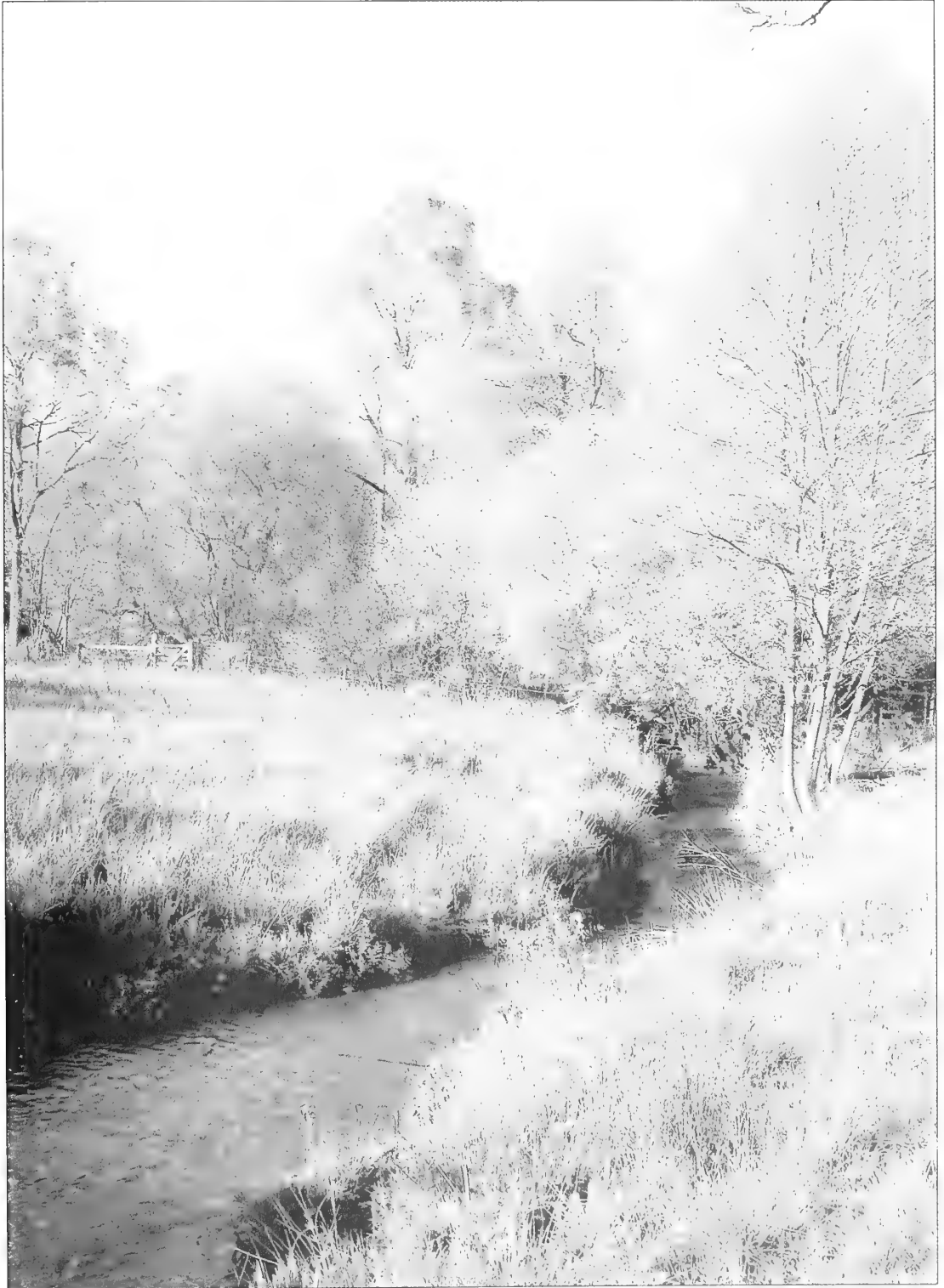
Demoiselles, Damselflies and Dragonflies

Eleven species have been recorded. The Banded Demoiselle *Calopteryx splendens* is not uncommon on the canal and has been recorded flying over the northern fields. One damselfly, the Emerald Damselfly *Lestes sponsa*, has been recorded only once, in 2001, but four others are common, usually seen around the Ida Gandy Pond or over the eastern fen: White-legged Damselfly *Platycnemis pennipes*, the Azure Damselfly *Coenagrion puella*, the Common Blue Damselfly *Enallagma cyathigerum*, and the Blue-tailed Damselfly *Ischnura elegans*. Three Hawkets can be seen in most parts of the reserve: the Migrant *Aeshna mixta*, the Southern *A. cyanea* and the Brown *A. grandis*. The Four-spotted Chaser *Libellula quadrimaculata* is not usually found at base-rich sites, but has been recorded twice, once in 1987 and again in 2001. Finally, the Common Darter *Sympetrum striolatum* should be at home in many parts of the reserve, but has been recorded only by the pond.

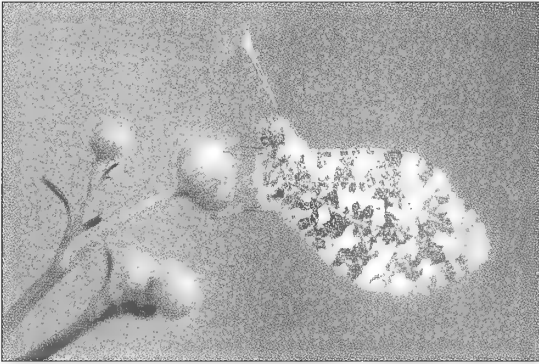
Butterflies

The butterflies have not been monitored systematically, but nevertheless 24 species have been recorded in more than one year, most of them regularly.

The first to be seen in large numbers almost every year are Orange-tip *Anthocharis cardamines* and Green-veined White *Pieris napi*: in good years,



River Avon in South-west Fen



Orange-tip



Green-veined Whites puddling

these two flutter everywhere you look on the open fens. Both feed on crucifers which grow here in plenty, particularly their favourite Cuckooflower *C. pratensis*. These two closely related butterflies do not compete with each other despite having the same food as, like Jack Sprat and his wife, they share the plant between them: the Orange-tip caterpillars eat the flower buds, flowers and, above all, the seed pods, while the Green-veined White feeds on the leaves. Orange-tip butterflies spend little time taking nectar, but the Green-veined White is an avid feeder and the males can often be seen 'puddling', that is supplementing their diet with sodium and other salts by feeding from muddy soil.

The grass-feeders do well on the fen: Meadow Browns *Maniola jurtina* and Ringlets *Aphantopus hyperantus* are the commonest while Large Skippers *Ochlodes venata* are also frequently seen. The abundant Greater Bird's-foot-trefoil *L. pedunculatus* attracts a good few Common Blues *Polyommatus icarus* in most years, particularly this one when parts of the fen seemed alive with them. Docks *Rumex sp.* are the chosen food of the widespread but now thinly distributed butterfly, the Small Copper *Lycaena phlaeas* which can usually be found on the reserve during August and September.

With nettles so common on the reserve it is no surprise that the Nymphalinae are abundant. Red Admirals *Vanessa atalanta* and Peacocks *Inachis io* feeding on Hemp-agrimony *E. cannabinum* make one of the memorable sights of a visit to the reserve. The Purple Hairstreak *Quercusia quercus* although said to be quite common in southern Britain (Emmet and Heath, 1990, 128) is rarely seen, as it spends most of its time at the tops of oaks and ashes feeding on aphid honeydew. I have only once seen it at ground level, early one morning drinking dew. As its scientific name suggests, its caterpillars feed

on oak *Quercus sp.* Both the butterfly and its eggs have been recorded on the reserve.

From time to time, including this year, the nationally scarce Marsh Fritillary *Eurodryas aurinia* has been seen on its sole food plant, the Devil's-bit Scabious *S. pratensis*. In 1991 some captive-bred larvae were introduced. Breeding has occurred but a lasting population has never established itself. There are known colonies not very far away on the Pewsey Downs and on Salisbury Plain.

Moths

by Humphrey Kay

Light trapping for moths has had a limited program (ten occasions) between May 1998 and September 2000. A total of 120 species of macromoths were identified, mostly common but with a few of local interest. They include Dingy Shears *Parastichtes ypsilon*, a wetland species and Triple-spotted Pug *Eupithecia trisignaria* whose larvae feed on the seed-heads of Wild Angelica. Uncommon day-flying moths include the Blackneck *Lygephila pastinum* and the Scarlet Tiger *Callimorpha dominula*, with larvae feeding conspicuously on Comfrey and Nettle. In the past Jones's Mill was an isolated enclave for this moth but in the last fifteen years it has spread a mile or more upstream and downstream – part of a national resurgence. One of the Five-spot Burnet-moths is seen regularly in June and July, possibly *Zygaena trifolii decreta*, rather than the Narrow-bordered Five-spot *Z. loniceriae*, but the distinction is notoriously difficult. Tunnels in sawn trunks of Sallow have shown the presence of Lunar Hornet moth *Sesia bembeciformis*, while the abundance of the Drinker Moth *Euthrix potatoria* has at times been most evident from their hairy caterpillars. These feed on *Glyceria* and are highly attractive in

April and May to the many Cuckoos which used to visit the reserve in the eighties and early nineties.

beetles *Pyrochroa coccinea* and *P. serraticornis*, and the wood borer *Ptilinus pectinicornis*.

Beetles

by Michael Darby

More than 200 species of beetle have been found at Jones's Mill. They include representatives of most of the main families as one would expect given the wide range of habitats. This number, however, is based on a handful of observations only in 2001 and 2002, and will certainly increase in future. One Red Data Book (RDB3) and ten nationally notable (Nb) species have been recorded.

The RDB species is the small water beetle *Eubria palustris* which lives in flushes and wet hollows and was found in the South West Fen together with the Notable leaf beetle *Plateumaris affinis*, usually associated with sedges, and *Stenus niveus*, a Notable rove beetle living on reeds and other vegetation at the fen edge. Another unusual water beetle found here is *Paracymus scutellaris*, more commonly a denizen of moorland.

The wide spread but local Notable species *Scaphisoma boleti*, *Eledona agricola*, *Orchesia minor* and *Gyrophana angustata*, were all found in their preferred habitat in fungi on dead trees in one of the more heavily wooded parts of the middle of the Reserve. Here, too, the rare 'soldier and sailor' beetle *Rhagoxycha translucida* also occurs.

Perhaps the most spectacular of all the beetles found at Jones's Mill is the black and yellow Longhorn beetle *Strangalia quadrifasciata*, which has been observed on several occasions running about on a log pile in which the larvae were undoubtedly living. This is a rare beetle nationally which has been expanding its range recently and it is now not uncommon in Wiltshire. Care must be taken however not to confuse it with the similar *S. aurentula*, the female of which is larger and redder, another species which is also rare but expanding. The handsome weevil *Grypus equiseti*, the only Notable weevil found on the Reserve to date, was discovered after an intensive search, in a patch of its preferred food plants Horsetails, *Equisetum* species, close to the river in the east.

Because Jones's Mill supports a large number of old and decaying trees, and management has allowed for the retention of fallen and dead wood on site, it is certain that further sampling will increase the number of saproxylic beetle species recorded. To the important species living in this habitat already mentioned may be added the cardinal

Birds

The birds have been recorded for as long as Jones's Mill has been a reserve. In particular the SSSI has been studied using the methods of the British Trust for Ornithology Common Bird Census during 1984 – 1994, 1999, 2000 and 2002 – present.

Including winter visitors, 66 species have been recorded, of which 43 are known to have bred. Six of these 66 have not been detected in the last ten years. One, the Lapwing *Vanellus vanellus*, is said to have been often seen on the reserve but there is no record of breeding; the other five, however, did. These were: Little Grebe *Tachybaptus ruficollis*, Nightingale *Luscinia megarhynchos*, Grasshopper Warbler *Locustella naevia*, Willow Tit *Parus montanus*, and Yellowhammer *Emberiza citrinella*. Although regrettable, most of these losses are only in line with the national picture and there have been no further losses since 1988 (but a few gains, for example Buzzard *Buteo buteo*). Several of the nationally endangered birds (British Trust for Ornithology, 2003) are found regularly: 13 on the Amber List (9 breeding) and 6 on the Red List (3 breeding).

There used to be 'any amount' of drumming Snipe *Gallinago gallinago* up to the late 1940s (Wall, 1999) but they last bred in 1982. However they still come regularly as winter visitors. There was a wisp of ten last winter, of which two birds stayed until early May. This might suggest that there is a chance they will breed again on the reserve, but the vast majority of snipe wintering in England are migrants from northern and eastern Europe (Wernham et al., 2002, 316).

Water Rail *Rallus aquaticus* and Woodcock *Scolopax rusticola* visit in the winter. The former may be resident – they are notoriously difficult to observe in the breeding season – or in any case local birds. Breeding Woodcock, on the other hand, are so easy to detect from their roding flight that we can be confident that they do not breed on the reserve. As English birds are sedentary these are probably Scandinavian migrants (Wernham et al., 2002, 319). Kingfishers *Alcedo atthis* sometimes nest on the reserve in rootplates and regularly fish in the ponds, river and leats throughout the year. Last year on several days they could be seen repeatedly flying across the fen to their favourite stream, and then returning with beakfuls of fish to a nest just

outside the reserve. The Belties help these birds by keeping the streams clear of vegetation.

Throughout the year, the reserve is a favourite fishing site for Grey Heron *Ardea cinerea*, which probably also take frogs in the meadows.

Just a few years ago Cuckoos *Cuculus canorus* came in large numbers, but now there are only one or two each year.

Barn Owls *Tyto alba* hunt over Big Forty and the fen, but are not known to have bred while Tawny Owls *Strix aluco* do, with two pairs in some years. Reed Buntings *Emberiza schoeniclus* have bred successfully in most years, at least one pair every year since 2000. This year there were two females and one male (the bird is sometimes polygamous). At Jones's Mill recently they have nested in the isolated shrubs in and around the fens where they hunt their food, but their usual position is at ground level or on sedge tussocks (Snow & Perrins 1998, 1675). During the summer they are exclusively insectivorous. They have been recorded on the reserve only during the breeding season. The bird's usual behaviour after breeding is to congregate in flocks and feed largely on small seeds of arable weeds. Their decline, like that of many farmland birds, is thought to be caused by poorer survival rates of fledglings during the winter now that weeds are scarce (Wingfield Gibbons *et al.*, 1993, 436).

The carr and northern woodland have breeding Sparrowhawk *A. nisus*, Green Woodpecker *Picus viridis*, Great Spotted Woodpecker *Dendrocopos major*, Nuthatch *Sitta europaea* and Treecreeper *Certhia familiaris*. In recent years there have been three pairs each of Song Thrush *Turdus philomelos*, Goldcrest *Regulus regulus* and Long-tailed Tits *Aegithales canolatus*. In the winter, flocks of up to twenty or so Long-tailed Tits roam through the woods, sometimes accompanied by Blue, Marsh and Coal Tits *Parus caeruleus*, *P. palustris* and *P. ater* and by Goldcrests *R. regulus*.

There are very few Dunnocks *Prunella modularis* on the reserve (just two pairs in 2003). They are found where there are brambles – often a preferred feeding ground included in their territory (Bishton, 2001).

Mammals

There have been a few small-scale investigations, but our knowledge of the mammals depends mostly on casual observations.

The only British Insectivore that has never been recorded is the Hedgehog *Erinaceus europaeus*.



Great Spotted Woodpecker

All three shrews have been found, the Water Shrew *Neomys fodiens*, just once in the very early days of the reserve. Moles *Talpa europea* are widespread.

There are at least two bats, probably many more.

Rabbits *Oryctolagus cuniculus* are common, but no hares *Lepus capensis* have ever been seen.

The Grey Squirrel *Sciurus carolinensis* is common. Surprisingly, the Bank Vole *Clethrionomys glareolus* has been seen only once and the Field Vole *Microtus agrestis* was not recorded until very recently, although both are almost certainly present in good numbers. In the 1940s there were 'masses' of Water Vole *Arvicola terrestris* (Wall, 1999) and they were still common in the 1980s but then the numbers slumped. Mink *Mustela vison*, that I saw with young in the river, were the probable cause. The vole numbers recovered to some extent but there are still very few. Recently found remains of predated Crayfish probably mean that Mink have returned. The records include Woodmouse *Apodemus sylvaticus* and Yellow-necked Mouse *A. flavicollis* and also Harvest Mice *Micromys minutus*. Dormice *Muscardinus avellanarius* have been found

within a few metres of the reserve boundary. There are suitable habitats on the reserve adjoining this spot, so it is quite possible that they are present, but if so they have eluded detection.

Foxes *Vulpes vulpes*, and their cubs, are seen regularly at all times of the day. Stoats *Mustela erminea* are seen far less often, but are still fairly common. Badgers *Meles meles* regularly use a tree trunk which has fallen across the river as a convenient bridge. There are several sets on the reserve and dung pits and dug-out wasp nests are found quite often. After the second world war the local keepers were busily shooting Otters *Lutra lutra* and nailing their legs to barn doors (Wall, 1999) but, as in most of southern England, they disappeared years ago. However, in the hope of their return, an artificial holt has been constructed next to the river. There have been no signs of them on the reserve so far, unless they, rather than Mink, have been taking the Crayfish, but it is encouraging that there has been a reliable sighting this year within 5 kilometres of the reserve.

During the last ten years or so, Roe Deer *Capreolus capreolus* have been seen regularly and there are now at least six, including a fine mature buck. From dusk to dawn they roam all over the reserve, but during the day are usually in the carr or more remote areas of tall fen.

Other Notable Species

by Michael Darby

Of the remaining insects recorded from the Reserve to date the most important are undoubtedly two sawflies and a hoverfly, all Red Data Book species. *Dolerus megapterus*, one of the 'black' *Dolerus* group of sawflies some of which are found in good numbers in grassland in Spring, is very rare in Britain with only 25 records mostly from Scotland. It uses sedges rather than grasses as a larval food plant. *D. bimaculatus*, one of the red-bodied members of the genus which lives on *Equisetum*, was also mainly known from Scotland with a similar number of records until after 1980 when it was recorded from several English sites. Jones's Mill represents the most southern record for both species. Interestingly, the hoverfly *Cheilosia pubera*, the third RDB species, is another whose main stronghold is in the north of Britain. Unlike many hoverflies *C. pubera*, which is believed to breed in Marsh-marigolds, is black but appears heavily dusted because of thick pubescence. A second specimen has recently turned up on the River Test in Hampshire.

Two other scarce, dark-coloured hoverflies also found on the Reserve are the Notable *Pipizella virens*, which is associated on the continent with aphids at the roots of Umbelliferae, and the larger *Ferdinandea cuprea*. The last is widespread in old woodlands but easily overlooked because of its habit of sitting on old tree trunks or dead leaves in dappled light. Other flies of interest found at Jones's Mill are the local horse-fly *Haematopota crassicornis*, one of the group sometimes known as 'Cleg' flies, and the soldier-flies *Oxycera nigricornis* and *Stratiomys potamida*. The Notable *S. potamida*, known as the Banded General because of its large size and black and yellow markings, has become more common since the 1970s and is nearly always found close to wet places.

Finally, the hornet *Vespa crabro* has been recorded commonly on the Reserve, where it breeds in old trees, dozens being observed as recently as October 2003.

SURVEYS AND MONITORING

There has been on-going recording from the late 1980s to the present, most importantly of the flora by Audrey Summers and also of the birds by, successively, Beatrice Gillam, Humphrey Kay and Beverley Heath and of the water levels by Humphrey Kay.

Before 1990 various surveys of habitats and vegetation types were made by staff from the then Nature Conservancy Council. There were also surveys of lichen by D.J. Hill and B. Fox, fungi by M.W. Storey and leafhoppers by Keith Payne. Since then, there have been occasional surveys of several features and taxa: vegetation type and distribution by Wanda Fojt of English Nature and by Paul Darby and Piers Mobsby for the Wiltshire Wildlife Trust, hedgerows by Pat Froud, bryophytes by Rod Stern, invertebrates by Andy Foster, *Vertigo moulinsiana* by Ian Killeen, spiders by Martin Askins, moths by Dominic Counsell and Humphrey Kay, beetles by Michael Darby. Many valuable individual records have also been submitted by numerous visitors to the reserve.

Surveys of small mammals using a grid of Longworth traps started late in 2003, and it is hoped that butterflies will be monitored regularly from 2004. There is a programme of recording for all Trust Reserves, but resources are stretched and there is plenty of scope for volunteers. In particular it would be good to know more about the invertebrates of the wet flushes, the bees and wasps,

the moths and life in the ponds, streams ditches and rivers.

Acknowledgements

I am very grateful to David Turner, Head of Reserves Management at the Wiltshire Wildlife Trust, for permission to use papers and records held by the Trust, and to Humphrey Kay, Piers Mobsby, Audrey and Leslie Summers and Janet Tanner who read this paper in draft and made very helpful comments and suggestions.

References

- ANON, 2002 *Wiltshire Biodiversity Action Plan*. Devizes: English Nature & Wiltshire Wildlife Trust
- BARRON, R.S., 1976, *The Geology of Wiltshire*. Bradford-on-Avon: Moonraker Press
- BISHTON, G., 2001, Social structure, habitat use and breeding biology of hedgerow Dunnocks *Prunella modularis*. *Bird Study* 48, 188 – 193
- BRITISH TRUST FOR ORNITHOLOGY, 2003, www.bto.org/psob
- CHANDLER, J., 1999, *Historic Land Use Assessment of Trust Reserves, The Vera Jeans Reserve* Wiltshire Wildlife Trust (unpublished)
- EMMET, A.M. and HEATH, J. (eds.), 1990, *The Moths and Butterflies of Great Britain and Ireland Vol. 7 (1) The Butterflies*. Colchester: Harley Books
- GILLAM, B. (ed.), 1993, *The Wiltshire Flora*. Newbury: Pisces Publications
- GODWIN, H., 1975, *History of the British Flora*. Cambridge: Cambridge University Press
- GOVER, J.E.B., MAWER, A. and STENTON, F.M., 1939, *The Place-names of Wiltshire*. Cambridge: Cambridge University Press
- GROSE, D., 1957, *The Flora of Wiltshire*. Devizes: WANHS Natural History Section
- KERRIDGE, E., 1953, The Floating of the Wiltshire Water meadows, *WANHM* 55, 105 – 118
- MABBERLEY, D.J., 2002, *The Plant Book*. Cambridge: Cambridge University Press
- MOBSBY, P., 2001, *Reserve Management Plan, Jones's Mill – Draft*. Wiltshire Wildlife Trust (unpublished)
- POLLARD, A.J. and BRIGGS, D., 1982, Genecological Studies of *Urtica dioica* L. I The nature of variation in *U. dioica*, *New Phytologist* 92, 453 – 470
- POLLARD, A.J. and BRIGGS, D., 1984a, Genecological Studies of *Urtica dioica* L. II Patterns of variation at Wicken Fen, Cambridgeshire, England, *New Phytologist* 96, 483 – 499
- POLLARD, A.J. and BRIGGS, D., 1984b, Genecological Studies of *Urtica dioica* L. III Stinging hairs and plant herbivore interactions, *New Phytologist* 97, 507 – 522
- RODWELL, J.S. (ed), 1998a, *British Plant Communities: volume 1 Woodlands and scrub*. Cambridge: Cambridge University Press
- RODWELL, J.S. (ed), 1998b, *British Plant Communities: volume 2 Mires and heaths*. Cambridge: Cambridge University Press
- RODWELL, J.S. (ed), 2000, *British Plant Communities: volume 4 Aquatic communities, swamps and tall-herb fens*. Cambridge: Cambridge University Press
- SNOW, D.W and PERRINS, C.M. (eds.), 1998, *The Birds of the Western Palearctic (Concise Edition)*. Oxford: Oxford University Press
- SOIL SURVEY OF ENGLAND AND WALES, 1983, Sheet 6 – *Soils of South East England*, 1:250 000 map and legend. Harpenden: Rothamsted Experimental Station
- STACE, C., 1992, *New Flora of the British Isles*. Cambridge: Cambridge University Press
- THORN, C and THORN, F., 1979, *Domesday Book, Wiltshire (History from the Sources)*. Chichester: Phillimore
- WALL, J., 1999, *Transcripts of interviews with local people who have known Jones's Mill for most of their lives*. Wiltshire Wildlife Trust (unpublished)
- WERNHAM, C.V., TOMS, M.P., MARCHANT, J.H., CLARK, J.A., SIRIWARDENA & BAILLIE, S.R. (eds.), 2002, *The Migration Atlas: movements of the birds of Britain and Ireland*. London: T & AD Poyser
- WILTSHIRE COUNTY COUNCIL ARCHAEOLOGY SERVICE, (undated), *Archaeological Assessment of Trust Reserves, Jones's Mill, The Vera Jeans Reserve*. WCC and WWT (unpublished)
- WINGFIELD GIBBONS, D., REID, J. & CHAPMAN, R., 1993, *The New Atlas of Breeding Birds in Britain and Ireland: 1988 – 1991*. London: T & AD Poyser

An Investigation into the Life of A.D. Passmore, 'A Most Curious Specimen'

by *Laura Phillips*

A biographical account of the Wiltshire archaeologist Arthur Dennis Passmore (1877 – 1958) is presented, together with an assessment of his fieldwork, and a discussion of his collecting activities. Far from being a rogue antiques dealer, as he is remembered, he should be regarded as a man with a passionate interest in recording the history of North Wiltshire, who contributed significantly to the archaeological study of the county. Lists of his published output and the present whereabouts of his collection are appended.

While looking round and collecting objects of interest in this neighbourhood, I have often noticed little things, which, while not important enough at the time to report in any paper or magazine may in the light of future discoveries be of great value. Therefore I am filling this volume with little notes which when completed may find a resting place in some museum where the archaeologists of a future time may peruse it with advantage.¹ (ADP unpublished 1903, i)

INTRODUCTION

During summer 2002, as an intern in the Department of Antiquities at the Ashmolean Museum in Oxford, one of my duties was to engage in research for a public enquiry into their collections from Stonehenge. The majority of Stonehenge material at the Ashmolean is noted in the Accession Register as being from the collection of Mr. A.D. Passmore. The objects held ranged from worked flints from Wiltshire to Acheulian hand-axes from Egypt. Letters relating to his collection do not supply information about the collector. Humphrey Case, former Keeper of the Department, discussed with me the circumstances

surrounding the collection being donated to the Ashmolean, and encouraged me to continue the investigation described here.

In the Epilogue to his *Encyclopaedia of Archaeology: The Great Archaeologists*, Tim Murray emphasises that there are many 'hidden histories of archaeology' (Murray 1999a, 877). One of his examples is the contribution of 20th-century amateur archaeologists before the 'professionalisation' of archaeology (Murray 1999a). Amateur archaeology in Wiltshire is no exception to this (see for example the recent biographical studies of Alexander Keiller (Murray 1999c) and Maud Cunnington (Roberts 2002)). This paper focuses on the life and achievements of a contemporary of the Cunningtons and Keiller, Arthur Dennis Passmore (?1877² – 1958). Despite being an active member of the Wiltshire archaeological community from the early 1880s until the mid 1950s, a period of almost 80 years, there has been no major study or indeed even proper local recognition of his life, nor of his extensive collection of local archaeological material.

Passmore was a member of many scholarly societies, including the Wiltshire Archaeological and Natural History Society; The British Numismatic Society; The Royal Anthropological

Society; The Berkshire Archaeological Society; The Royal Archaeological Institute of Great Britain and Ireland;³ The Prehistoric Society; and the Newbury and District Field Club. His interests were not restricted to archaeology; his letters reveal a knowledge of palaeontology, geology, ornithology, photography, aerial photography, antiques of all periods, anthropology, place-names, numismatics, experimental archaeology, restoration of furniture and archaeological objects and local dialect and folklore.

Passmore was a character about whom there are many rumours, including that he was a diamond smuggler, as suggested by a character based on him in the novel *The Trap*⁴ (Treherne 1985), and that he was the last Englishman out of King Tut's tomb (Elliot⁵ 1985, 11). Passmore was indeed an interesting character, and I have attempted to piece together his biography from his field notebook and the letters that he wrote to a variety of museum curators over the course of his life. From these it is possible to glean a sense of his personality.

THE LIFE OF A.D. PASSMORE (1877 – 1958)

Arthur Dennis Passmore (Figure 1) was the second son of Richard Keylock and Jane Passmore. The family owned a business at 29 and 30 Wood Street, Old Town, Swindon involved in antique dealing, paper hanging and cabinetmaking. His older brother, Hercules, was listed as working for the family business as a cabinetmaker in the 1891 Census, while Arthur, then aged about 14, was listed as a 'scholar'. Probably through the influence of his father, Arthur showed a keen interest in local history and archaeology from an early age. This is evident in his recollection of events such as his boyhood visit to the excavation by Henry Meux at Avebury in 1894 (Passmore 1935). The antique-dealing side of the Passmore family business introduced Passmore to the acquisition of objects, to local networks of dealers and collectors, and provided a suitable platform for the development of his interest in archaeology and local history.

In 1937, Passmore wrote to Dr E. Curwen,⁶ at the Lewes Museum, of going to a sale in London with his mother: 'About forty years ago my late Mother bought these flints for me in Russell Square, I well remember going with her to some hotel where a man from Sussex had spread out his collection for sale and as a boy I picked out what



Fig. 1 A.D. Passmore, photograph, from his field notebook (WANHS Library, Devizes)

you now have' (Passmore LM, 23 July 1937). Passmore did not go to university, but he was clearly intelligent, and filled with a natural curiosity about the world. His self-education through books and professional contacts were driven by his passion for archaeology and antiquities, and he became a respected member of the Wiltshire Archaeological and Natural History Society. His first articles, about a stone circle near Coate (see Burl, this volume) and barrows on Liddington Warren Farm, were published in the Society's magazine in 1893 (Passmore 1893a, 1893b). The young Passmore was a keen photographer, a necessary skill in the antiques trade learned from his father (Passmore BM, April 30 1953). He was an avid walker, and weekly covered miles by foot on various routes around North Wiltshire, particularly to Avebury (Passmore ASH, Oct 24, 1955).

Passmore started collecting archaeological and palaeontological specimens from the Swindon area in earnest around 1894. From the earliest days his collection consisted of objects he collected while on his walks, his excavating activities and his network of archaeological 'informants', including farm labourers, quarry diggers and others. Passmore wrote in his field notebook of men digging at a long

barrow North of Sugar Hill around 1896 and finding skeletons: '... unfortunately I arrived too late to get the skull but brought away some of the bones' (ADP unpublished, 6). His collecting efforts after only four years were impressive enough to be displayed during the forty-fifth general meeting of the Wiltshire Archaeological and Natural History Society, held at Swindon on 5-7 July, 1898:

... Mr. Passmore's collections of local antiquities, chiefly gathered within the last four years, show what can be done in a single locality by anyone who possesses the requisite amount of knowledge, patience, and perseverance, in saving and bringing together objects which would otherwise be lost or destroyed. The number of stone implements is large, and includes one or two small specimens of apparently Palaeolithic flints from the gravels near Swindon – a couple of ground axes of a hard green stone, a very rough long flint chisel in its buck's-horn handle – and a ground celt perforated at the butt end for suspension – as well as a curious rough axe-head of sarsen – and an object like a gigantic bead some 6 or 7 inches in diameter formed from a dark volcanic stone full of holes – all of which were found in the neighbourhood of Swindon. There were two or three cases filled with the Samian and other pottery, the painted wall plaster, and other remains from the Roman house at Weslecote, and others with the earlier fragments of pottery, &c., from the British settlement within the ramparts of Lyddington Castle. A nice series of Saxon remains, urns, spear-head, knives, necklaces of blue glass, and amber beads, are part of a large find of Saxon objects at Shefford, near Lambourne, Berks, the remainder of which are now in the British Museum. The pot discovered lately at Latton, whether it is of late Celtic or Romano-British date, is certainly of a very unusual and remarkable type. Mr. Passmore also exhibited good specimens of circular pack-horse bells, marked R.W. (probably R. Wells, of Aldbourne), and apparently of seventeenth century date, a man-trap, watchman's rattle, and an interesting sword, found in a barn at Stratton, of Civil War date, with 'Andrea Ferrara' on the blade. The collection included a considerable number of Saurian remains from the Kimmeridge Clay of Swindon: vertebrae, jaws, and limb bones of *Ichthyosaurus*, *Pleiosaurus*, *Plesiosaurus*, and *Teleosaurus* – the most notable specimen amongst them being a very large bone, as to which authorities have not as yet been able to decide, either the species of the beast or the position in its body, to which it belonged. Altogether the collection is a remarkable one and

shows what may be done by anyone who takes the trouble to keep his eyes open (Anon 1898, 91-2).

Passmore's first encounter with the military was in 1899, during the South African War. He enlisted in the No.1 Company of the Royal Wiltshire Yeomanry [RWY] and was stationed in Trowbridge for training. In March 1900 the RWY arrived in Cape Town, and participated in various battles with the Boers until being sent back to England in July 1901 (Graham 1908). Passmore was awarded the prestigious Distinguished Conduct Medal (Anon 1960).

After his war experience, Passmore returned to Swindon and resumed his acquisition of archaeological specimens. His field notebook for 1902 records that he found a flint axe and scrapers in a ploughed field South of Fargo Plantation, Amesbury (ADP unpublished 1902, 55), and bought a pot full of burnt bones and an incense cup found at Wilton, North Wiltshire (ADP unpublished 1902, 74-5).

In Swindon, Passmore's activities included buying and selling objects around Wiltshire for the family business, which meant frequent trips to auctions in the area and in London. His archaeological projects primarily consisted of opening barrows and searching gravel quarries for fossils and stone tools. He systematically recorded his finds in his field notebook, along with observations on natural history, and discoveries made during farm or construction work. Passmore was a dedicated letter writer, and corresponded frequently with Hercules Read and Reginald Smith in the Department of British and Medieval Antiquities at the British Museum,⁷ and often sent them objects for their opinion so that he could describe them in the *Wiltshire Archaeological and Natural History Magazine*.

From 1909 to 1912, Passmore spent time in Sudan, apparently on an archaeological excavation (Cunnington 1912, 532), and Egypt, particularly in Thebes, Luxor and Cairo. He collected a large number of Acheulian hand axes from the desert west of Thebes, that are now in the Ashmolean Museum. He worked in Luxor, where he collected objects later sold in London and was a student for a short period in Cairo. He also travelled into Abyssinia.

Passmore returned to Wiltshire in 1912, and resumed his usual activities, including his local archaeological endeavours: he excavated a mound at Chandler's Farm, Aldbourne; a mound and a

Roman well at North Farm, Aldbourne; a barrow at Smeech's Ridge, Ogbourne; collected surface finds from rabbit holes from Barrow 40, Fargo Plantation, the Okus Quarry in Swindon and the Winterbourne Stoke Group of Barrows. He acquired a 14th-century carved oak 'bench end', which he placed on loan in the Department of Woodwork at the Victoria and Albert Museum. In November 1913 he was nominated as a fellow to the Royal Anthropological Institute.

Despite being almost 40, Passmore served in World War I, with the 4th Wiltshire Regiment in India, before being transferred to the Mechanical Transport Corps. In August 1916 Passmore wrote to Hercules Read from Peshawar on the North West Frontier:

While talking to a man from Tibet, he told me of a necklace of stone beads that he had procured there. He gave me two and I was interested to notice that they were exactly like some from our Wilts Barrows only smaller 'Pulley Beads'. The holes at the base meet inside (drawing). I think I could get two for the B.Museum if you think them of sufficient interest for comparison with the English ones. Carpenters out here use a peculiar iron axe-hammer, which seems to be a descendant of a stone axe in its holder; it is in two pieces thus (drawing). If there is anything I can do as regards archaeology on this Frontier would be delighted to do it, in the way of obtaining required specimens or information of tribal customs. (Passmore BM, 1 August 1916)

He later mentioned having been to Afghanistan, and around the Himalayan foothills.

In 1917, Passmore returned to England, having achieved the rank of Quarter Master Sergeant, and was stationed at I.W. & D.R.E. Henbury, Bristol. He began to correspond with Herbert Bolton at Bristol City Museum and Art Gallery about objects in their collections. In one of his letters to Bolton, Passmore mentioned that during a recent visit to the museum he had noticed that there were no local flint specimens on display. He offered one that he had found in Henbury Camp, which was accepted into the museum's collections⁸ (Passmore BR, 27 November 1917). He returned to Swindon in 1918. His brother had been killed in the war, which left him to run the family business with the help of his elderly parents.

Passmore joined the Prehistoric Society in 1919, and was a member until the year before his death. He continued to be an active member of the Wiltshire Archaeological and Natural History

Society. Field trips included a ten-day tour of Wales as well as an excursion to France to examine mounds for comparison with Silbury Hill (Passmore 1920a). He also excavated the south side of a standing stone in a hedge east of Stanton Fitzwarren [Wiltshire SMR no. SU19SE552], the plan of which is included in his field notebook. He read a paper on hammerstones to the Prehistoric Society at their Norwich meeting on 18 October 1920, and used his own observations from Africa to elucidate their use in prehistoric England (Passmore 1920b). Even in his late 40s, he continued to excavate. From 1926 to 1928 his excavations included Barrow 12 (Goddard) at Ogbourne St. Andrew; Barrow 1 (Goddard) at Ogbourne St. George; and Chiseldon 2 (Goddard), all reported in the *Wiltshire Archaeological and Natural History Magazine* (Passmore 1928).



Figure 2: Callas House, Wanborough, in 1960 (SU213 832), the home of A.D. Passmore from 1928 – 1958. (© Crown copyright. NMR. Ref: AA71/323)

In 1927 Passmore's parents died and he retired from the antiques business and travelled to Greece. The following year he moved to Callas House, Wanborough (Figure 2), in the company of Miss Smith, his housekeeper. Callas House was a large 17th-century farmhouse with a small amount of land and outbuildings. He had a photography studio in the stables, and was kept busy by the demands of maintaining the property, which included an apple orchard. By many accounts, Callas House became a private museum, with most of his collection on display.

Passmore continued to correspond with the Keepers at the British Museum about a variety of topics. In a letter to Reginald Smith, he commented on the model of the 'Wiltshire type' of barrow that the British Museum had on display (Figure 3).

Fieldwork throughout the 1930s included excavating the Giant's Long Barrow at



Fig. 3 Letter to Reginald Smith, 5 September 1932

Luckington; barrows at Ashbury (Oxon); and Nythe Farm, Wanborough. In the summer of 1934, Passmore went on a camping trip to Colchester, Burgh Castle, Norwich, Grimes Graves, Newmarket Dykes, Bartlow Hills and Whipsnade and visited Maiden Castle, Dorset. He also lectured during the winter months on various topics of an archaeological nature, for which he used visual aids drawn from his large collection of lantern slides.

During World War II, Callas House was made into the headquarters of the North East Wiltshire Home Guard (Passmore ASH, May 4 1955), while Passmore's monitoring of archaeology in Wiltshire was somewhat limited due to petrol restrictions (Figure 4).

Towards the end of the 1940s, Passmore suffered health problems, including trouble with his eyes. At times, his health deteriorated to the point that he required hospitalisation. In a letter to J.W. Brailsford, Passmore wrote of his 'terror of blindness' (Passmore BM, Feb 19, 1949). Despite ill health, he privately published his account of the Roman Road from Silchester to Caerleon, in which he proved the name of the

Roman town of Wanborough to have been *Durocornovium*⁹ (Passmore 1948). On 6 March 1948, he wrote in his field notebook of a small stone with an inscription that had been found recently at Theobalds Cottage, near Coate. This entry was written in large, shaky handwriting, ending with 'Written when nearly blind' and underneath he later added 'Can now see a bit A.D.P. 1957' (ADP unpublished 1948, 151).

Passmore continued to go to London even when suffering from angina. He seemed to have faced his health problems and impending old age with impatience mixed with humour and self-deprecation. In 1953 he wrote to R.J. Charleston at the Victoria and Albert Museum:

Am sorry to have missed you at the Museum but as you know my one eye is none too good and I got mixed up in a maze of passages also was not in very good temper because I have to start from here at eight A.M. and in the darkness and hurry put on odd boots one brown and the other black, as I cannot see the ground it passed without notice till I dropped my stick and saw the trouble and so departed much amused (Passmore V&A, January 9, 1953)

To someone as independent and self-reliant as Passmore, it seems that having to be chaperoned on every outing was one of the more difficult adjustments that accompanied the impediments of old age. In 1954, Passmore wrote to Donald Harden at the Ashmolean Museum:

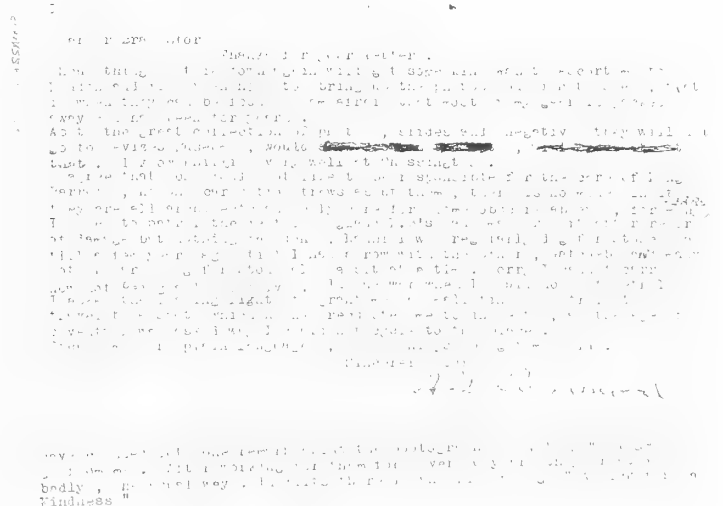


Fig. 4 Letter to J.W. Brailsford, 18 May 1953

. . . It would be a delightful experience to visit you and take advantage of your offer of hospitality but unfortunately after a very long and somewhat adventurous life am bound by the fact that an escort has to be found to take me around in which case am not a free man and have to conform to the movements of my escort... (Passmore ASH, November 6, 1954).

Having never married, Passmore had contemplated the future of his collection since about 1930. Most of his archaeological objects were eventually donated to the Antiquities Department at the Ashmolean Museum, Oxford in 1955 (the circumstances of which are discussed further below). Passmore offered his house and land to Oxford University, to use as a hostel or accommodation for students. The University declined this offer, apparently because Callas House had fallen into a state of disrepair and required almost complete renovation.

Passmore's eyesight continued to deteriorate in 1956, and at this time he seems to have become fairly bad-tempered and forgetful, exhibiting signs of mild senility. In January 1958 he visited the Ashmolean Museum to see his beloved collection, almost certainly for the last time, as he died at home, in Callas House, on 6 March 1958.

A.D. PASSMORE IN THE FIELD

Passmore recorded his archaeological observations in an unpublished manuscript almost 700 pages long. Although object provenances are not as precise as modern standards demand, most include directions to the find spot within a farm, or even a field, that could easily be matched to at least a four or six-figure national grid reference. His notebook also contains information about his daily activities, so that, in effect, it describes the history of 20th-century archaeology in Wiltshire.¹⁰ The following extract is typical (Figure 5).

Coate & Broome Stones.

Old Daniel Skinner of Devizes Road can well remember the breaking up of the large standing stones at Broome Farm (Longstone Field). He remembers some which were very white stone (sarsen) being taken to near Woodstock. He and also my father remember one large stone there which had what was thought to be the impression of a mans foot in it, and the people thought it was the devil's footprint as he walked amongst the stones.

I may perhaps be accused of seeing circle and avenues in all groups of sarsen stones, but I firmly believe that a lot of the lines of stones about here were deliberately placed in position. There is the part of a circle behind the barns on the E side of the Swindon Hodson Road just N of the public house.

Another 1/2 circle by the Roadside opposite the Black Horse on the Wroughton – Swindon Road, a line of stones in the second park field leading to Coate. A long line of big stones 500 yds NE of Swindon Christ's Church and another along the NW shore of Coate Reservoir. There are also many stones still at Broom. (ADP unpublished 1903, 62 – 63)

Passmore limited his fieldwork to sites in North Wiltshire and the area around Avebury, which was of particular interest to him. He wrote, for instance, about Kennet Avenue at Avebury:

Sometime ago I noticed that a lot of small natural sarsens were being broken up in the line of the Kennett [sic] Avenue, one was somewhat larger & stood right on the line. Goddard & I considered it not worth troubling about, however someone wrote to H.M. Inspector of A.M. and I met he & Captain Edwards (boss of Olymphina Agriculture Co) at the spot. I suggested that the stone should be buried where it is. This is now being done. It is 234 paces S of the last remaining stone towards Avebury and 20 paces E of road (ADP unpublished 1922, 273).

His fieldwork interest included the re-investigation of field observations made by earlier archaeologists such as William Stukeley, John Thurnam, and A.C. Smith. He wrote of examining a stone circle near Avebury that had been noted by A.C. Smith:

The stone circle must have been E of the one remaining stone, see Falkner's measurements. Have just noticed that the barrow H is a much-ploughed long barrow & not a round barrow as thought by Smith. It is roughly 150 ft x 72. Found also a new round barrow just above Beckhampton, at top of hill leading to Avebury, in grass field & almost touching the S side of road (by side of footpath). Opened. William Pullen, owner of the 'Sanctuary Field' where the end of the Avenue once stood, tells me that about 1890 he moved a big stone from this field in the line of the Avenue & about half way up, they dug it up and pulled it down hill to the south & heaved it into the rubbish pit on the SE corner. It is still there but covered up. They nearly killed a horse on the job. Also in the line of the Avenue in the field bounded by the Bath & Avebury roads there is a very big stone,

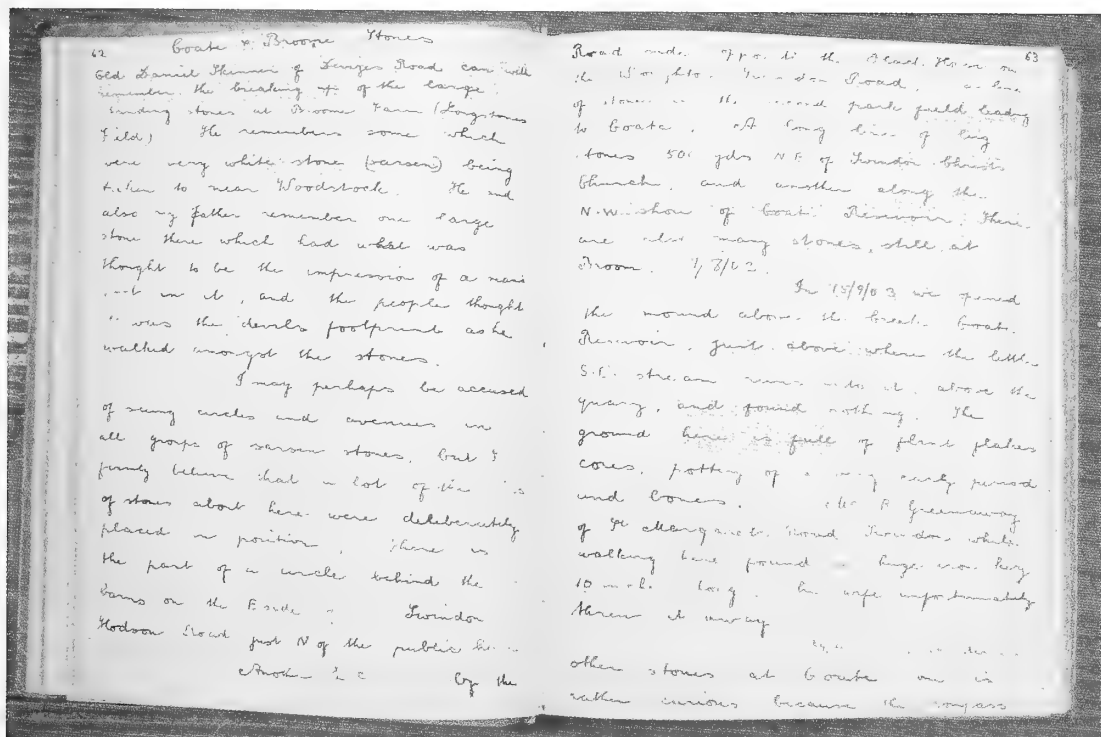


Fig 5 A typical page in Passmore's field notebook (WANHS Library, Devizes). For transcription see page 278 opposite

the engines used to slip over it when coming there threshing. Have tried to find the one supposed to be under the Brewery but could not, the men know nothing of it (14-6-1922). Stone just inside door of Brewery garden buried 7ft deep. NW of this, in bank between two small fields, there are several large stones. (ADP unpublished 1922, 283-284)

The final repository for this manuscript was obviously a concern for Passmore. One of the more amusing pages shows his change in favour over time. On December 3, 1910, he wrote: 'I wish to leave this book to the Museum of the Wilts Archaeological Society. Unless there is a proper museum in Swindon (not any Technical School foolery) in which case it should go there but unless it is a first class show let the book go to the W.A. Society.' In 1914, he wrote 'Swindon Museum off. Send book to Devizes, A.D.P.', which is reinforced in 1930 with 'Not to Swindon on any account whatever.' However, all of this is scribbled out, and the final comment is 'Cancelled A.D. Passmore June/1952' (ADP unpublished, 3).

Passmore was alive when Leslie Grinsell put together the archaeological gazetteer as part of the *Victoria History of Wiltshire* (Grinsell 1957), and his

field notebook was still in his possession. The gazetteer contains references to Passmore's published work, but on the whole his unpublished manuscript is rarely cited in archaeological publications.

A.D. PASSMORE AND THE WILTSHIRE ARCHAEOLOGICAL AND NATURAL HISTORY SOCIETY

Passmore was a member of the WANHS for about sixty years, listed as being on the 'Committee' for almost thirty years. He contributed a substantial number of articles and notes to the *Wiltshire Archaeological and Natural History Magazine* (see Appendix 1), the first published in 1893 and the last in 1950, with regular contributions in between. He also recorded information for M.W. Willson's bird reports (Willson 1931), and made financial donations for various WANHS projects, including maintenance work on the museum in Devizes, and the funding of urgent local archaeological projects.

He donated a variety of objects to both the WANHS Library and Museum collections, though the number seems scanty in proportion to the size of his private collection. Local objects of interest from Passmore's collection were frequently displayed at the Annual General Meeting of the WANHS. He sometimes contributed to the programme of events at an AGM by giving lectures, either when the touring party visited an archaeological site, or indoors during the evening. A home-made archaeological model usually accompanied his outdoor lectures, while his indoor evening lectures were illustrated using his lantern slides.

Passmore featured on one of the 'days out' during the Annual General Meeting of the WANHS, on Wednesday 12 August 1936:

Leaving Ashbury at 10:30 the cars went up the hill and along the rough track of the Ridgeway to Waylands' Smithy where Mr. A.D. Passmore was awaiting their arrival with a large plaster model of the Long Barrow specially made for the occasion showing the megalithic passage and chambers of the interior, and the stones which originally surrounded it outside. Here Mr. Passmore spoke of megalithic tombs and burial customs, as illustrated by the model before him, which to many of the company explained the original condition of the monument far better than any verbal description could do...Thence the cars went up to the down above the White Horse and members congregated on the sides of the ditch of Uffington Camp where Mr. Passmore had another plaster model showing the camp with a double wooden stockade on the banks. Here he discoursed at length on the purpose and history of the great camps, and also on that of the White Horse. He showed on the spot enlarged drawings and actual specimens of the British gold coins showing the disjointed horse, a degenerate copy of the 'Stater' of Philip of Macedon, the likeness of which to the figure of the White Horse has led to the suggestion that the monument may really date from pre-Roman times like the coins rather than from Saxon times. He himself, however, stood by the Battle of Ashdown and the Saxon Chronicle account as a historical document, and thought that the White Horse was a probable and fitting monument of Alfred's victory. Both Mr. Passmore's addresses, as well as his models, were greatly appreciated by those present. (Anon 1936, 493 - 494)

Passmore seems to have had a sound reputation within Wiltshire and the WANHS for most of his life. Alongside his excavation of barrows and field

collecting, he also participated in excavations at high profile sites in Wiltshire with well-known archaeologists. In August 1922 he helped W. Flinders Petrie excavate at Silbury Hill (Petrie 1923), and in 1923 he photographed some of the excavation work done by Lt. Col. W. Hawley at Stonehenge. In the same year he excavated part of the Avenue at Stonehenge with his fellow WANHS Committee member O.G.S. Crawford (Crawford 1924). Passmore contributed information and many of the photographs to *The Long Barrows of the Cotswolds* (Crawford 1925). It is likely that Crawford introduced Passmore to the archaeological uses of aerial photography, which Passmore explored further during his acquaintance with Major G.W.G. Allen. This resulted in their co-authored article about the enigmatic Highworth circles in north Wiltshire (Allen and Passmore 1935).

It is unclear exactly what events caused his abrupt resignation from the WANHS in 1952. Passmore's current reputation seems to be of an ill-tempered and disreputable character, possibly due to his clashes with prominent members of WANHS, including Maud and Ben Cunnington, Alexander Keiller, Stuart Piggott and O.G.S. Crawford.

Passmore was very critical of the Cunningtons throughout the years of their acquaintance, and he seems to have had little respect for either of them in spite of their eminence and generosity within the Society. In 1923 Passmore wrote in his field notebook about the protest against the proposal to erect a wireless tower at Avebury:

The Betrayal Special meeting of W.A.S. to protest against Wireless at Avebury. Cunnington had seen the Manor people in Town they had thrown dust in his eyes, told him that this was the only suitable place in England (real reason, cheapest land) & had stated that if there was no interference they would respect antiquities. So without firing one [illeg.] of protest the W.A.S. tamely surrendered. A disgraceful betrayal of their trust. One & one man only fought against it for 1 1/2 hours right through the meeting, myself alone, A.D.P. (ADP unpublished 1923, 705)

When WANHS had to consider moving their museum collections in case of air raids, Passmore found fault with the Cunningtons for their poor treatment of the Hoare collection when it was removed from Stourhead to Devizes Museum. He wrote in his notebook:

It always seemed strange that things in this collection figured by Hoare as perfect are now broken, it was unthinkable that they could have been smashed at Stourhead. It now appears that the Cunningtons went down themselves & brought it away without employing experienced packers & smashed the pots by their lack of knowledge of moving things. B.H.C. said at a meeting at the Museum in March 1940 'We moved the Stourhead Coll, & have been repairing ever since'. I heard him say this. (ADP unpublished, 435)

Alexander Keiller shared Passmore's contempt for the Cunningtons (Roberts 2002). Passmore was quick to befriend Keiller soon after he arrived on the Wiltshire archaeology scene. He seemed to identify with Keiller more than other members of the WANHS because they had both been in 'trade', and were therefore of a similar social standing. In June 1933 Passmore wrote to Keiller about the snobbery at WANHS, '... you must not forget that at one time I was engaged in business and as such am a very low person to be familiar with. . .' (Passmore KM, 15 June, 1933). Keiller replied, 'I quite see what you mean as regards the possible snobbery of the WAS members. . .' [and that Keiller had] '... been in business . . . in trade . . . [and] that perhaps I have not got any very fine sensibilities concerning social distinction, which personally I consider not only arbitrary but fictitious at best' (Keiller KM, June 29, 1933). Passmore and Keiller were acquainted for much of the 1930s, and both found fault in some of the local archaeological work carried out by the Cunningtons. In 1934, Keiller wrote to O.G.S. Crawford about spending some time with Passmore:

We [Keiller and Stuart Piggott] had a stupendous afternoon two days ago with Passmore – I always seem to get on awfully well with Passmore – and on this occasion he was remarkably illuminating; his mind is positively an encyclopaedia on local archaeological information. Some of his stories of the Cunningtons shook even me up a bit, to say nothing of the photographs of 'Adam' before its fall and after its re-erection. I blame anyone who saw the first photograph and the result of Mrs. Cunnington's handiwork and yet tacitly permitted her to have another shot at the stone in the Avenue. (Keiller KM, June 27, 1934)

This friendship ended when Passmore, Keiller and Stuart Piggott collaborated in the excavation of a chamber that Passmore had discovered in the Lanhill Long Barrow in 1936:

In Oct 1936 I directed the job of putting a fence round the S. chamber and was there each day from 7:30 til 4:30, nothing found in the holes dug to take the upright... Keiller and Piggott let me pay all expenses & then put me off time after time then printed the report behind my back. Dirty. Piggott did the same to General Hardy who discovered Ladle Hill SW of Newbury, he dug there secretly & Hardy got the blame for doing so without permission, P got all the praise & goes free. (ADP unpublished, 206 – 207)

Less than fifty years after his death, Passmore remains largely forgotten in the history of both the WANHS and of archaeology in Wiltshire, despite his life-long dedication to both causes. His tendency to fall out with fellow members of the WANHS was probably a large factor in his decision to look for an alternative to the WANHS Museum for the permanent accommodation of his collection. In 1941 he shared his concern over the future of his objects with W.J. Arkell:

After much suffering have at last become fed up with Cunnington, the fussy little Welshman and have refused to send my things to Devizes and have now no home for them, one could not send the work of a lifetime to Swindon, have a good mind to make a will ordering the whole lot to be sold. (Passmore UMNH, Dec 7, 1941)

In the last years of his life, Passmore seemed to feel that his efforts were no longer appreciated by the WANHS. Passmore wrote to Brailsford at the British Museum, and said that Devizes would get nothing from him: 'After working for them for over 60 years they treat me badly, the usual way. In Wilts there is an old saying "A kick for a Kindness".' (Passmore BM, May 18, 1953).

PASSMORE AND HIS COLLECTION

Passmore's zeal for local history and archaeology is evident in both his publications and his outstanding collection. While his archaeological collection may be of more interest here, it is important to note that he also collected, and had an almost expert knowledge of, fine British and Oriental ceramics, fossils,¹¹ antique furniture, paintings, books, and Classical antiquities. It is likely that most of his antiques were amassed during his time running the family business. He

often researched the provenances of his new acquisitions, as well as the circumstances of their discovery, with the realisation that contextual information enhanced their interest factor (ADP unpublished, 210 – 211). He also acquired from other collectors, including ‘the Barnes Collection’,¹² and a collection of flints from Windmill Hill and Avebury that formerly belonged to G.D. Leslie.

Passmore was dedicated to repatriating objects that he came across to the museum closest to their original provenance. This is evident from the number of objects he donated to various museums around the South West of England (see Appendix 2). From time to time, he would sell an object to a museum, usually at the price that he paid for it, not for profit. His museum correspondents included Reginald Smith, Hercules Read, T.D. Kendrick, J.W. Brailsford, E.A. Wallis Budge, C.F.C. Hawkes, and A.B. Tonnochy at the British Museum; W.J. Arkell at the Natural History Museum, University of Oxford; C.H.V. Sutherland, Ian Robertson, Humphrey Case, Donald Harden and E.T. Leeds at the Ashmolean Museum; Herbert Bolton, Frederick S. Wallis and Leslie Grinsell at Bristol Museum and Art Gallery; R.S. Newall and Frank Stevens at Salisbury Museum; A.J.E. Cave at the Royal College of Surgeons; and R.J. Charleston, E.A. Lane, W.B. Honey, Bernard Rack, H.C. Smith and A.J.B. Wace at the Victoria and Albert Museum. His letters to curators, usually written to discuss a ‘most curious specimen’ in their field of interest, were always very congenial, and phrased as if he saw himself almost as their peer. He perhaps used his collection to fit into the world of museums and academia, with which he felt he had more in common than in his local environment. He wrote to W.J. Arkell at Oxford that there was ‘...not one man in the whole village who can get higher than [sic] racing, football, women and booze’. (Passmore UM, Dec 7, 1941)

Passmore had been considering the fate of his collection since the 1930s, aware that well-provenanced archaeological specimens might one day be of interest to researchers. In 1930 he wrote to the Department of Woodwork at the Victoria and Albert Museum, inviting them to look at his collection for a possible bequest, saying, ‘I am the last of my race...’ (Passmore V&A, March 22, 1930). He also wrote to the Natural History Museum, London, and sent a list of the fossils he would like to bequeath to them, saying, ‘Have half promised to give all my things to the county museum at Devizes but think that the best fossils ought to be with you,

am sure they would agree to this if you thought them acceptable.’ (Passmore NHML, January 31, 1936).

Passmore has been described as ‘incalculable’. This was particularly evident when he was in pursuit of a museum to receive his collection. In the early 1950s he approached Bristol City Museum and Art Gallery about the possibility of a bequest. Leslie Grinsell and some of the museum directors visited him in 1953 to view his collection. Passmore corresponded frequently with members of the museum staff about his collection in 1954. The bequest seemed to have been decided when Passmore changed his mind. It is unclear why Bristol fell out of his favour. At this time, his behaviour was often irrational, a characteristic that has been identified by Muensterberger (1994) as a trait common to obsessive collectors. Whatever the reason, Passmore was once again left in search of a home for his collection.

In 1951, Humphrey Case, Assistant Keeper in the Department of Antiquities at the Ashmolean Museum, had been researching finds from the Seven Barrows, Lambourn, Berkshire, and contacted Passmore to see if there were objects from the site in his collection. Passmore invited Case to Callas House to see his collection. During the last few years of his life Passmore made frequent visits to the Ashmolean Museum. When Passmore eventually offered his collection to the Department of Antiquities in late 1954, it is possible that his decision was largely the result of his friendship with Case. He had also promised his collection of rare British ceramics to the Department of Western Art at the Ashmolean Museum, but fell out with the Keeper there when he accused the Department of damaging one of his most precious objects: a Chelsea cream jug. Consequently, the Department of British and Medieval Antiquities at the British Museum received his ceramic collection.¹³ It is within the realm of possibility that the Antiquities Department at Ashmolean Museum might have fallen out of his favour eventually, but Passmore died within a few years of his collection coming to Oxford. The remainder was sold at Sotheby’s ‘by order of the public trustee’ in May and June 1959.

DISCUSSION

Like some of his fellow members of the WANHS, Passmore could be a difficult individual at times. He was demanding, self-righteous, impatient, intolerant of snobbery, and held inflexible opinions

about what he believed to be true. It is hoped that the above biographical account has adequately demonstrated that he is worthy of being remembered for his contributions to the archaeology of Wiltshire, and that he deserves a respected place in the history of the WANHS.

Part of what made Passmore a unique character in archaeological history is that his life span bridged two eras: that of the antiquarian amateur archaeologist, and the introduction of modern professional archaeological practice. He demonstrated many qualities of these conflicting roles. His fieldwork can be criticized by modern standards, but he believed in publishing his archaeological fieldwork as well as the objects he acquired. His field notebook contains detailed notes on almost all of his excavating activities, including plans and some stratigraphic sections. Passmore also understood the importance of recording the past as it was destroyed by modern development.

Passmore has been criticized for purchasing objects not reported under the then Treasure Trove law (Robinson 1984). Under Treasure Trove¹⁴ the right to confiscate finds was sometimes given to various 'worthy' individuals acting on behalf of the Crown (Longworth 1993). According to entries in Passmore's field notebook, these local stewards were sometimes not wholly trustworthy. He recorded situations in which finds were taken by a local steward and the finder left without reward (ADP unpublished, 300 – 301). In the situation described by Robinson, Passmore had purchased silver spoons that had not been reported as a possible Treasure Trove find and therefore not subjected to an inquest. It seems clear that the finder of the spoons in question was going to sell the objects. While this does not excuse Passmore, it is hard to believe that he had malicious intent as he recorded their discovery and purchase in his field notebook, and wrote of the spoons in letters (Robinson 1984), a course of action unlikely if he had set out with criminal intent to break the law.

Passmore has also been accused of falsifying find-spots in his publications. He openly admitted that he used a code to record find-spots for objects on display in his collection, but the key to deciphering these symbols was listed in his field notebook. His explanation for using what could be interpreted as a 'secretive' system was that when he had some people over to look at his collection they immediately went and plundered the sites that his objects were from (ADP unpublished, 700).

Despite Wiltshire being the provenance for a large part of Passmore's collection he ultimately felt that the Ashmolean Museum was the most suitable institution to receive his collection. In a letter to Donald Harden, Passmore wrote, '... I now walk round my empty museum and think after 70 years of wandering around Wiltshire it is no light thing to part with my hard earned treasure, every week end [sic] wet or fine I walked to Avebury from Swindon and after a turn round the downs walked back full of bread cheese & beer, always more than a thirty mile walk...' (Passmore ASH, 24 October, 1955). To accept the collection was to accept Passmore. For all his efforts, he seems to have felt that he had been treated as an inferior by the 'great and the good' of Wiltshire. The Ashmolean Museum, with a history of receiving visitors and scholars alike, had an expansive world-view more in accordance with what Passmore expected from the guardians of his cherished objects. Moreover, perhaps one of the most important factors to A.D. Passmore was that the Ashmolean Museum lay beyond the confines of Wiltshire and the WANHS.

Acknowledgements

I would like to thank everyone who encouraged my interest in A.D. Passmore, particularly Alison Roberts, Arthur Macgregor and Rachel John in the Department of Antiquities at the Ashmolean Museum; and especially Humphrey Case, without whom the Passmore Collection would have been lost forever. I would like to thank the English Heritage National Monuments Record Centre in Swindon for permission to use the photograph of Callas House; Wiltshire Archaeological and Natural History Museum and the Visitors of the Ashmolean Museum for allowing me to reproduce images and pages from Passmore's field notebook; and Eva Oledzka at the British Museum for her time and effort in helping to locate Passmore's letters in their archives.

Epilogue

Members of the Wiltshire Archaeological and Natural History Society who have any information or memories of Passmore might like to correspond with the author to fill in details in his biography. Using primarily archival sources, there is great potential for adding valuable information to the documentation of the objects in his collection.

Notes

- ¹ Taken from the beginning of A.D. Passmore's unpublished field notebook [Hereafter referenced as ADP when quoted from], which he started in 1903. It contains some of his activities from before 1903 but the majority of the information is from after that date. The original manuscript is in the Wiltshire Archaeological and Natural History Museum at Devizes. A copy of this notebook is in the Ashmolean Museum of Art and Archaeology, Oxford.
- ² Determining the year of Passmore's birth is difficult. In obituaries, he is said to have been 85 when he died in 1958, which would indicate that he was born in 1873. In the 1891 census, however, he is recorded as being 14, which means that he was born in 1877. The date from the census is used here.
- ³ Passmore was elected a member in 1923.
- ⁴ John Treherne died in 1989. The character Uncle Hector, who is alleged to have been based on Passmore, was a cousin of the mother of the narrator. This relationship was possibly based on reality, though I have not come across Passmore making a reference to any living relations. Passmore did, apparently, have a 'man-trap' in his collection (Anon 1898, 92), but whether or not he ever actually used it will never be known. Many events of the life of 'Uncle Hector', as revealed in the course of the novel, are similar to events in Passmore's life.
- ⁵ This was written after Elliot did some 'investigation' after finding a book with Passmore's name in it in a skip outside Sotheby's. His 'research' included reading Passmore's obituary and chatting to Passmore's neighbours, who said that Passmore dressed up like a Roman, in a toga, at the end of his life, which is dubious. It is also unlikely that he was the last Englishman out of King Tut's tomb. Howard Carter made his famous discovery in 1922, and catalogued the contents from 1925 to 1932 (Murray 1999b, 294 – 297). Passmore spent time in Egypt in 1910 to 1912, but in the years following Carter's discovery seems to have been engaged in archaeological activities in Wiltshire.
- ⁶ It is not clear from the letter whether it was sent to Dr. Eliot Curwen, or Dr. E. Cecil Curwen, both of whom were involved in archaeology in Sussex.
- ⁷ This is now the Department of Prehistory and Europe.
- ⁸ There is no record of this accession at the Bristol Museum and Art Gallery, thus it is not listed as being there in Appendix 2.
- ⁹ The identification of *Durocornovium* with Wanborough is now accepted as correct. Both Burnham (1990) and Rivet (1979) identify *Durocornovium* with Wanborough, but Passmore's publication is not cited as the source for this information. According to Rivet, Passmore did arrive at the right conclusion but 'it is based on the supposition that the distance from Gloucester to Cirencester was 14 (instead of 18)

Roman miles; other figures in his table suggest that he was using a false value for the Roman mile' (Rivet 1970, 58).

- ¹⁰ Schlanger (2002) discusses the importance of recognising the value of such manuscripts.
- ¹¹ One of Passmore's discoveries from Swindon was a fossilized turtle. This specimen was subsequently identified by C.W. Andrews of the British Museum of Natural History as a new genus and named *Tholemys passmorei* after A.D. Passmore (Andrews 1921, 153).
- ¹² Passmore acquired this collection of worked flints from the area around Lambourn, Berkshire, in 1925. This collection also contained close to six hundred flints from Pusey, Oxfordshire. It is possible that 'Barnes' was J.O'N. Barnes [also referred to as J. O'Barnes and Mr. Barnes] who had a collection of archaeological finds from Berkshire (Anon 1895, 190, 204 – 205).
- ¹³ The Departments of Egyptian Antiquities and Western Asiatic Antiquities at the British Museum were also recipients of objects from Passmore. [The Department of Egyptian and Assyrian Antiquities was split into the Department of Egyptian Antiquities and the Department of Western Asiatic Antiquities in 1955 (Miller 1973)]. See Appendix 2.
- ¹⁴ Treasure Trove was replaced in 1996 by the Treasure Act.

References

Unpublished archival sources

- (ADP unpublished year page) = Field notebook, kept by A.D. Passmore from 1903 to 1958. The original manuscript is in The Wiltshire Archaeological and Natural History Museum, Devizes. There is a photocopy of this manuscript in the Department of Antiquities, Ashmolean Museum of Art and Archaeology, Oxford. The year or date, if known, indicates when the entry was written.
- ASH = Passmore letters in the Department of Antiquities, Ashmolean Museum of Art and Archaeology, Oxford.
- BM = Passmore letters in the Department of Prehistory, British Museum.
- BR = Passmore letters in the Bristol Museum [Bris530 and Bris3606].
- KM = Passmore letters in the Alexander Keiller Museum, Avebury.
- LM = Passmore letter in Lewes Museum, East Sussex.
- NHML = Natural History Museum, London [NHM DF100-175].
- UMNH = Passmore letters in the Natural History Museum, University of Oxford.
- V&A = Passmore letters in the archives of the Victoria & Albert Museum, Kensington, London. [P497]

Published Sources

- ALLEN, GWG & PASSMORE, A.D., 1935. Earthen circles near Highworth. *WANHM* 47, 114 – 122
- ANDREWS, C.W., 1921. On a new Chelonian from the Kimmeridge Clay of Swindon. *The Annals and Magazine of Natural History* 9th series. No. 38. February 1921, 145 – 153
- ANON, 1895. Appendix of Archaeological Notes. *Transactions of the Newbury District Field Club* Volume 4 (1886 – 1895), 183 – 205
- ANON, 1898. The Forty-fifth General Meeting of the Wiltshire Archaeological and Natural History Society, Held at Swindon. July 5th, 6th, and 7th, 1898. *WANHM* 30, 83 – 95
- ANON, 1927. Additions to the Museum and Library. *WANHM* 43, 572 – 573
- ANON, 1936. The Eighty-third General Meeting of the Wiltshire Archaeological and Natural History Society, Held at Swindon. August 11th, 12th, and 13th, 1936. *WANHM* 47, 490 – 495
- ANON, 1953. Annual General Meeting, 1952. *WANHM* 54, 464
- ANON, 1960. Obituaries: Arthur D. Passmore. *WANHM* 57, 255 – 256
- BUDGE, E.A. Wallis, 1907, *The Egyptian Sudan: Its History and Monuments*. London: Kegan Paul, Trench, Trübner & Co. Limited
- BURNHAM, B. C. and J. Wachter, 1990, *The 'Small Towns' of Roman Britain*. London: B.T. Batsford
- CRAWFORD, O.G.S., 1924. The Stonehenge Avenue. *Antiquaries Journal* 4, 57 – 59
- CRAWFORD, O.G.S., 1925. *The Long Barrows of the Cotswolds*. Gloucester: John Bellows
- CUNNINGTON, M.E., 1912. A Late Celtic Inhabited Site at All Cannings Cross Farm. *WANHM* 37, 526 – 538
- ELLIOT, C., 1985. Digging up Passmore. *Popular Archaeology* 6 (4), 11– 12
- GRAHAM, H., 1908, *The Annals of the Yeomanry Cavalry of Wiltshire vol II: Being a complete history of the Prince of Wales' Own Royal Regiment from 1893 to 1908*. Devizes: Geo. Simpson, 'Gazette' Printing Works
- GRINSELL, L.V., 1957, *Archaeological Gazetteer*. In Pugh, R.B. & Elizabeth Crittall (eds), *The Victoria History of the Counties of England. A History of Wiltshire, Volume I, Part I*, 21 – 272. London: Oxford University Press
- HAKEM, A. M. A., 1978. A history of Archaeological Research in Nubia and Sudan. In The Brooklyn Museum, *Africa in Antiquity 1. The Arts of Ancient Nubia and the Sudan. The Essays*, 36 – 45. New York: The Brooklyn Museum
- LONGWORTH, I., 1993, Portable Antiquities, in Hunter, John and Ian Ralston (eds) *Archaeological Resource Management in the UK: An Introduction*, 56 – 64. Stroud: Sutton Publishing Ltd
- MILLER, E., 1973, *That Noble Cabinet: A History of the British Museum*. London: André Deutsch Limited
- MINISTRY of Finance, Egypt, 1908, Survey Department, *The Archaeological Survey of Nubia. Bulletin No.1: Dealing with the work up to November 30, 1907*. Cairo: National Printing Department
- MUENSTERBERGER, W., 1994, *Collecting: An Urruly Passion*. Princeton: University Press
- MURRAY, T., 1999a, Epilogue: The Art of Archaeological Biography, in Murray, Tim (ed) *Encyclopedia of Archaeology: The Great Archaeologists*, 869 – 884. Santa Barbara: ABC-CLIO Inc
- MURRAY, T., 1999b, Howard Carter, in Murray, Tim (ed) *Encyclopedia of Archaeology: The Great Archaeologists*, 289 – 300. Santa Barbara: ABC-CLIO Inc
- MURRAY, L.J., 1999c, *Alexander Keiller: A Zest for Life*. Swindon: Morven Books
- PASSMORE, A.D., 1893a. Notes on an undescribed stone circle at Coate, near Swindon. *WANHM* 27, 171 – 174
- PASSMORE, A.D., 1893b. Opening of Two Barrows on Liddington Warren Farm, N. Wilts, *WANHM* 27, 175 – 176
- PASSMORE, A.D., 1920a. Silbury Hill. *WANHM* 41, 185 – 186
- PASSMORE, A.D., 1920b. Hammerstones. *Proceedings of the Prehistoric Society*, 3, 444-7
- PASSMORE, A.D., 1928. Fieldwork in N Wilts, 1926 – 1928. *WANHM* 44, 240 – 245
- PASSMORE, A.D., 1935. The Meux excavation at Avebury. *WANHM* 47, 288 – 289
- PASSMORE, A.D., 1948, *The Roman Road from Caerleon to Silchester*. Swindon: Twitcher & Co
- PETRIE, W.M.F., 1923. Report on Diggings in Silbury Hill, August, 1922. *WANHM* 42, 215 – 218
- RIVET, A.L.F., 1970. The British Section of the Antonine Itinerary. *Britannia* I, 34 – 197
- RIVET, A.L.F., and C. Smith, 1979, *The Place-Names of Roman Britain*. London: B.T. Batsford Ltd
- ROBERTS, J., 2002. 'That Terrible Woman': the Life, Work and Legacy of Maud Cunnington. *WANHM* 95, 46 – 62
- ROBINSON, P., 1984. A Find of Silver Spoons from Marlborough – the Problem of the Concealment of 'Treasure Trove'. *WANHM* 79, 239 – 240
- SCHLANGER, N., 2002. Ancestral Archives: Explorations in the History of Archaeology. *Antiquity* 76: 291, 127 – 131
- TÖRÖK, L., 1997, *Meroe City: An Ancient African Capital. John Garstang's Excavations in the Sudan. Part One: Text*. London: The Egyptian Exploration Society
- TREHERNE, J., 1985, *The Trap*. London: Jonathan Cape
- WILLSON, M.W. (ed), 1931. Report on the Birds of Wiltshire for 1930. *WANHM* 45, 418 – 431

Appendix 1: Publications by A.D.**Passmore****1893**

Notes on an undescribed stone circle at Coate, near Swindon. *WANHM* 27, 171 – 174

Opening of Two Barrows on Liddington Warren Farm, N. Wilts. *WANHM* 27, 175 – 176

1895

Opening of a Barrow at Popple Church, near Aldbourne. *WANHM* 28, p. 262 – 263.

British Skeleton at Swindon. *WANHM* 28, 263

1899

Notes on a Roman Building, and Interments, lately discovered at Swindon. *WANHM* 30, 217 – 220

1906

Notes on Recent Discoveries. *WANHM* 34, 308 – 312

1907

Some remarks on the Early History of Swindon. *Transactions of the North Wiltshire Field and Camera Club* I, 24 – 26

1911

Coin of Cuthred King of Kent 798 – 807. *WANHM* 37, 161

The Pre-Norman Sculptures at Rodbourne Cheney. *Transactions of the North Wiltshire Field and Camera Club* II, 21 – 23

1913

Prehistoric and Roman Swindon. *WANHM* 38, 41 – 47

Notes: Dinosaurian Spine from Swindon. *WANHM* 38, 106

1914

Rarity of Large Flint Implements in Gloucestershire. *Man* 14, 134 – 135

Liddington Castle (Camp). *WANHM* 38, 576 – 584

On Some Bronze Age Pottery of 'Food Vessel' Type. *WANHM* 38, 585 – 588

1920

Wayland Smith Cave, Sarsen Stones at Ashdown Park, Berks, and Avebury, Wilts. *Man* 20, 9 – 10

Hammerstones. *Proceedings of the Prehistoric Society* 3, 444 – 447

Late Celtic Iron Objects of unknown Use. *WANHM* 41, 184

Triple Barrows in Wilts. *WANHM* 41, 184

Norman Building at Swindon. *WANHM* 41, 184

Silbury Hill. *WANHM* 41, 185 – 186

1921

Roman Wanborough. *WANHM* 41, 272 – 280

Notes on Roman finds in North Wilts. *WANHM* 41, 389 – 395

Pterodactyl Bone from the Kimmeridge Clay, Swindon. *WANHM* 41, 432

1922

The Devil's Den dolmen, Clatford Bottom. An account of the monument and of work undertaken in 1921 to strengthen the north-east upright. *WANHM* 41, 523 – 530

The Avebury ditch. *The Antiquaries Journal* 2, 109 – 111

Notes on field-work in N. Wilts, 1921 – 1922. *WANHM* 42, 49 – 51

1923

Note [On Diggings in Silbury Hill]. *WANHM* 42, 218

Barrow 16 (Goddard's list), Winterbourne Monkton. *WANHM* 42, 247

Barrow 25 (Goddard's list), Winterbourne Stoke. *WANHM* 42, 248

Perforated maul or hammer of Greenstone. *WANHM* 42, 248

Earthwork on Sugar Hill, Wanborough. *WANHM* 42, 248 – 249

Langdean stone circle. *WANHM* 42, 364 – 366

Chambered long barrow in West Woods. *WANHM* 42, 366 – 367

(with M.A. Murray) The Sheela-Na-Gig at Oaksey. *Man* 23, 140 – 141

1924

The age and origin of the Wansdyke. *Antiquaries Journal* 4, 26 – 29

1925

Notes: Lyneham Barrow, Oxfordshire. *Antiquaries Journal* 5, 165

1926

Avebury. A new stone in the Kennett Avenue. *WANHM* 43, 341 – 343

Early Iron Age antiquities from N Wilts. *WANHM* 43, 343 – 344

A new site for Naturally Polished Flints. *WANHM* 43, 344

1928

Fieldwork in N Wilts, 1926 – 1928. *WANHM* 44, 240 – 245

(with H.H. Thomas) Notes on stone implements of material foreign to Wiltshire in the collection of Mr. A. D. Passmore. *WANHM* 44, 246 – 247

1930

Notes: An Aid to Excavators. *Antiquaries Journal* 10, 389

Early Iron Age bronze horse bit roller. *WANHM* 45, 94

1931

A hoard of bronze implements from Donhead St Mary, and a stone mould from Bulford, in Farnham Museum, Dorset. *WANHM* 45, 373 – 376

1932

The Catalogue of the Sturge Collection of Flint Implements in the British Museum, by Reginald A. Smith, 1931. *WANHM* 46, 99

Marden Circle. *WANHM* 46, 99

Roman Coins from Wootton Bassett. *WANHM* 46, 100

A Saxon Mint at Chippenham. *WANHM* 46, 100

Square Earthworks at Russley Park, S. of Baydon. *WANHM* 46, 100 – 101

Roman Remains at Burderop Racecourse. *WANHM* 46, 101

Roman Hypocaust at Chiseldon. *WANHM* 46, 101

St. Catherine's Chapel, Wanborough. *WANHM* 46, 101 – 102

An Iron Sword from Baydon. *WANHM* 46, 102

- A Pottery Button from Upham. *WANHM* 46, 102
1933
- A Saxon Saucer Brooch from Mildenhall. *WANHM* 46, 393
- Roman remains from Easton Grey. *WANHM* 46, 270 – 272
- The Giant's Caves, Long Barrow, Luckington. *WANHM* 46, 380 – 386
- Saxon internments at Coleshill, Berks. *Antiquaries Journal* 13, 167 – 169
1934
- A Beehive Chamber at Ablington, Gloucestershire. *Transactions of the Bristol and Gloucestershire Archaeological Society* 56, 95 – 98
The Earthen Hill Top Camps of Wessex. Swindon: privately published
1935
- Internments at Bradenstoke Abbey. *WANHM* 47, 286
- Cricklade Drainage. *WANHM* 47, 286 – 287
- The Roman Road on Hinton Down S.E. of Wanborough Plain Farm. *WANHM* 47, 287
- Earth Circle at Sudden Farm, Burbage. *WANHM* 47, 288
- The Meux excavation at Avebury. *WANHM* 47, 288 – 289
- (with G.W.G. Allen) Earthen circles near Highworth. *WANHM* 47, 114 – 122
1936
- An earthen circle at Stratton St Margaret's. *WANHM* 47, 529 – 530
1937
- A Prick-spur from Wiltshire. *Antiquaries Journal* 17, 76
- Hipposandals. *Antiquaries Journal* 17, 197 – 198
1938
- The Barrow and Discovery of the New Chamber. In Keiller, A. and S. Piggott, Excavation of an Untouched Chamber in the Lanhill Long Barrow, *Proceedings of the Prehistoric Society* 4, 122 – 124
1939
- An unrecorded long barrow at West Kington. *WANHM* 48, 466
- Excavation of a Barrow and Two Earthen Circles at Ashbury, Berks. *Transactions of the Newbury District Field Club* 7, 5
1940
- Barrow No. 2, Wyllye, Wilts. *WANHM* 49, 117 – 118
- Flint Mines at Liddington. *WANHM* 49, 118 – 119
- Notes: A Disc Barrow Containing Curious Flints near Stonehenge, *WANHM* 49, 238
- Notes: Earthwork at Ogbourne St. George. *WANHM* 49, 239
- Notes: Barrow 19 Aldbourne (Goddard). *WANHM* 49, 239 – 240
- Barrow 4 Wroughton (Goddard). *WANHM* 49, 240
1942
- Notes: Roman Burial at Highworth. *WANHM* 50, 99 – 100
- Notes: Bronze Age Pottery from Swindon. *WANHM* 50, 100

- Notes: Chute, Barrow 1. *WANHM* 50, 100 – 101
- Notes: Mound at Compton Bassett. *WANHM* 50, 107
- A Church Chest from Blunsdon. *WANHM* 50, 292
- A skull full of Lead. *WANHM* 50, 292
- An unrecorded Pigeon House. *WANHM* 50, 292
- Notes: Roman Stones at Latton. *WANHM* 50, 293
1943
- A flint implement in a horn handle from near Liddington Castle, Wilts. *Antiquaries Journal* 23, 52 – 53
- Medieval Enclosures at Barbury and Blunsdon. *WANHM* 50, 194
1944
- Notes: Three Coins. *WANHM* 50, 494 – 495
1945
- The Templars' Bath. *WANHM* 51, 116 – 117
- Slitting Cows' Ears. *WANHM* 51, 118
- A Wanborough Seal. *WANHM* 51, 118
1946
- Unrecorded mounds at Wanborough. *WANHM* 51, 349
- John Aubrey's Lost MS, *WANHM* 51, 351
1948
- The Roman Road from Caerleon to Silchester*. Swindon: Twitcher & Co
- Notes: Two Jugs of Wiltshire Interest. *WANHM* 52, 393
- Notes: The Cricklade Mint. *WANHM* 52, 393 – 394
- A Roman Discus? *WANHM* 52, 394
1949
- Bronzes from the Duke collection once at Lake House. *WANHM* 53, 257 – 258
- The Double Celt Mould in the Pitt Rivers Museum, Farnham. *WANHM* 53, 258
- Another 'Witch Relic.' *WANHM* 53, 259 – 260
1950
- The Rudge Attis. *WANHM* 53, 332

Appendix 2: Locations of Objects from the Passmore Collection and Related Archival Material

The Alexander Keiller Museum

High St, Avebury, Marlborough, Wiltshire SN8 1RF

Correspondence¹⁵:

c. 97 letters between ADP and Keiller from the 1928 to 1937.

The Ashmolean Museum of Art and Archaeology

Beaumont Street, Oxford OX1 2PH

Department of Antiquities:

Objects: The present author has prepared a catalogue of the Passmore Collection, which is too extensive to be published here.

A copy of his field notebook.

Two envelopes of photographs:

Envelope 1: Aerial photos from Vol. 2 of the Passmore Collection. Most, if not all, of these photos were taken by Major G.W.G. Allen. Sites include: Port Farm, Latton; Blunsdon Circle; N. of Blunsdon; Ashmead Brake; Lower Burytown; Hannington; Common Farm, Highworth; Sevenhampton Circles; North Leaze; Dudgrove; Inglesham; Silbury Hill; East Kennet; Beckhampton; Avebury; Waden Hill; Overton Hill; Castle Eaton; Whitefield, near Ogbourne St. George; SW Barbury; Four Barrows Hill, Dorset; Liddington Hill Barn; and N of Liddington Castle.

Envelope 2: Photographs of Avebury from the Passmore Collection, including photographs of individual stones at Avebury; an excavation of the south ditch c. 1920 and c.1922; the ditch; the outer ditch; the north circle; the south circle; the Avenue; Devil's Coits; the longstones at Beckhampton (before one fell); the re-erection of 'Adam' and Silbury Hill.

Correspondence:

c.100 letters; some of which are Passmore's personal letters between himself and various contacts relating to objects in his collection that came to the Ashmolean; and others between Passmore and departmental staff discussing his collection coming to the Ashmolean, visits to Callas House, visits to Oxford, etc.

*Heberden Coin Room*¹⁶:

English coins: Anglo-Saxon and Norman pennies; Aethelred II, type IIIa of Wilton, moneyer Saewdne; Edward the Confessor: type XI of Bedwyn, moneyer Cild. Eustace Fitzjohn, Lion type (BMC (N) type B), penny (broken); engraved piece AE English halfpenny, engraved 'Mary Colclutt Oxon 1762'.

*Department of Western Art*¹⁷:

WA1956.31 Porcelain table centre of stag hunt, Sèvres, c. 1775.

WA1956.32 Porcelain table centre of boar hunt, Sèvres, c. 1775.

WA1956.33 Porcelain table centre of wolf hunt, Sèvres, c. 1775.

Correspondence:

c.90 letters between Passmore and departmental staff about his collection, particularly his Chelsea cream jug.

Athelstan Museum¹⁸

Town Hall, Cross Hayes, Malmesbury, Wiltshire SN16 9BZ

1977.645 Roman potsherds. White Walls, Fosse Way, Easton Grey. 1931.

1977.646 - 7 Medieval Minety Ware mug.

Bristol City Museum and Art Gallery¹⁹

Queen's Road, Bristol BS8 1RL

139/1953 Diana & dog [F3598]

Two column bases [F3599, F3600]

Archaeologia volumes 1 - 93 (45 missing)

17/1954 Four figures representing the Four Elements (Earth, Air, Fire, Water) in Champion's Bristol Porcelain. [Sold to the Bristol Museum and Art Gallery in 1954]

Correspondence:

File: 5:30 BM&AG November 1917, 1918

16 Letters between Bolton and Passmore from Wood Street, Swindon and from when Passmore was stationed at R.E. Henbury Gloucestershire, about a Bristol Delft posset pot and archaeological finds.

File: 3606 June 1953 M Acc. No. 139/1953

Notes by Grinsell to other museum directors on the visits to Passmore to discuss the possible bequest of his collection to Bristol and a summary of his collection; 14 letters from Passmore to Wallis (Director of Museum) about the bequest.

The British Museum

Great Russell Street, London WC1B 3DG

*Department of Egyptology*²⁰:

1906.0514.855 Granite Vase, 18th Dynasty.

1947.1016.1 Green Glazed Shabti, 30th Dynasty.

Correspondence:

4 letters between ADP and E.A. Wallis Budge, discussing the vase and the subsequent purchase of the vase by the museum.

*Department of Japanese Antiquities*²¹:

1957.1216.1 Japanese porcelain jug with lid, 18th Century.

Department of Oriental Antiquities:

1917.1109.1-2 Buttons from Tibet, 19th Century.

1930.1021.1-62 A collection of terracotta figurines (etc.) from Khotan, China.

1957.1216.2-20 A collection of Chinese porcelain, Ming and Qing Dynasties.

Department of Ethnography:

Oc1919,-.10 Maori adze haft, from Kusai Island, Caroline Islands.

1900.0721.1 Maori canoe prow.

*Department of Prehistory*²²:

1913.1206.1 Bronze stirrup, 15th Century, from the New Forest, Hants.

1930.1021.1 Earthenware tile, 15th Century, from the Lower Severn.

1942.0504.1-2 Clay kiln supports, 18th Century, from Temple Meads, Bristol.

1957.1201.1-.62 A collection of fine British ceramics and porcelain²³, 15th to 19th Centuries.

*Correspondence*²⁴:

About 150 letters spanning 1903 – 1953, between Passmore and Hercules Read, Reginald Smith, C.F.C. Hawkes, T.D. Kendrick, J.W. Brailsford about a variety of the objects in his collection, fieldwork and current archaeological issues.

*Department of Coins and Medals*²⁵:

1936-4-4-1 A medal.
1936-4-4-2 A medal.
1936-4-4-3 A 17th C. token.

*Archives*²⁶:

Trustees' Minutes for 14 December 1957: mention of items of ceramics and glass listed in a report from the Keeper of British and Medieval Department, and from Oriental Antiquities recording a selection of Chinese porcelain.

Two letters sent to the Director's Office: Sept 1937, containing a photograph of a cheque sent as a gift. July 1945, offering a trade band from a barrel organ.

Cheltenham Museum and Art Gallery²⁷

Clarence Street, Cheltenham, Gloucestershire GL50 3JT

1925.19 Plaster cast of a Romano-Celtic relief of Mars, found at Stow on the Wold (ADP retained original relief).
1929.32 Loaf stamp for the Royal North Gloucestershire Militia.

Correspondence:

1 letter.

Colchester Museum²⁸

Museum Resource Centre, 14 Ryegate Road, Colchester, Essex CO1 1YG

COLEM1919.3836 Carinated Roman grey ware pot, from near Colchester, 1919.

COLEM1919.3837 Roman grey ware jar, from near Colchester, 1919.

COLEM1919.3838 Roman stylus, from near Colchester, 1919.

Horniman Museum and Gardens

London Road, Forest Hill, London SE23 3PQ

A collection of pottery fragments, flints and bones, found in the large disc barrow at Chiseldon, Wiltshire. Purchased at Sotheby's sale 16 June 1959, for £13.

The Institute of Archaeology²⁹, University of Oxford

36 Beaumont Street, Oxford OX1 2PG

1157 Glass lantern slides, subjects include: Swiss Alps and the Matterhorn, Rome, Venice, Pompeii, various

Italian sites, coins, Greece, Bronze Age Britain, Sudan, Nubia, Egypt, Pergamon.

54 negatives

Lewes Museum³⁰

The Sussex Archaeology Society, Barbican House, 169 High Street, Lewes, East Sussex BN7 1YE

LEWSA 1937:16 Three flint tools, Piddinghoe (1) and Eastbourne (2).

Correspondence:

1 letter.

The Natural History Museum, London

Cromwell Road, London SW7 5DB

Mineralogy Department:

Objects: Undetermined at time of publication.

Correspondence:

Reference: DF1/ 33 8 letters

Palaeontology Department:

RS871 Fossil of a 'turtle' (Tholemys passmorei).

BMNH G17467 6 natural casts of Pleurotomaria.

[unknown acc. no.] 1 human skeleton, incomplete. Late Neolithic or Early Bronze Age. found in Portland, Swindon.
[unknown acc. no.] Mass of echinoids (Holoaster planus) in flint. Cretaceous. From Liddleston [*precte* Liddington], Wiltshire

Correspondence:

Reference: DF100/ 175 23 letters

*Anthropology Department*³¹:

PA SK 4 The remains of a child's skeleton, Neolithic, transferred from the Royal College of Surgeons in 1955. (Ex-RCS 4.00.13) From Lanhill, field 4, excavated 1926, donated to RCS by A.D. Passmore in 1940.

Natural History Museum, University of Oxford

Parks Road, Oxford OX1 3PW

*Correspondence held in Archives*³²:

9 letters from Passmore to W.J. Arkell, between the years of 1938 and 1943.

Geology Department:

J.1583 – J.1729 Jurassic specimens

K.401 – K.415 Cretaceous specimens

PY.11 – PY.12 Pliocene specimens

Q.925 – Q.933 Pleistocene specimens

Correspondence:

19 letters between Passmore and J.M. Edmonds, mostly

from 1954 – 1955 when Passmore was donating the above specimens.

Newbury Museum³³

West Berkshire Heritage Service, The Wharf, Newbury RG14 5AS

1932:79 [Room 10/31] Golden Eagle (shot c1865), Ashdown Estate.

1934:99 Fragments of Roman pottery, East Hendred.

OA:124 Cast of Palaeolithic flint axe head, Wash Common.

OA:154 [Room 12] Roman bronze tweezers, Newbury. [not located] Finds from excavation at Ashbury, 1933.

Nottingham Brewhouse Yard Museum

Castle Boulevard, Nottingham NG7 1FB

?Pieces of carriages – not formally accessioned, but returned to their former places on the carriages [NCM 1921-1/NIM 1977-24; NCM 1920-18/NIM 1984-20; NCM 1920-19/NIM 1984-21; NCM 1920-20/NIM 1984-22]

Archive³⁴:

NCM 1921-18, 19 4 letters from Passmore about the 17th century 'Baskerville' carriages.

The Pitt Rivers Museum

South Parks Road, Oxford OX1 3PP

1954.12.B 1 A cinerary urn from South America.

Correspondence:

2 letters concerning the purchase of the urn.

Reading Museum Service³⁵

Museum of Reading, Blagrove Street, Town Hall, Reading RG1 1QH

1936.55.1 Flint flake, Ashmansworth.

Royal Anthropological Institute [Archives]

Museum of Mankind, 6 Burlington Gardens, London W1S 3EX

Correspondence³⁶:

Passmore's letters to the RAI were not retained. There are 18 letters listed that were sent to him by the RAI, from 1910 to 1924. The subject matter ranges from his membership to discussion of his articles published in MAN.

Royal College of Surgeons

35 – 43 Lincoln's Inn Fields, London WC2A 3PE

Specimens: Transferred to Natural History Museum, London.

Correspondence³⁷:

HLRA/02/29 1934 3 letters, a postcard, and a report on bones from Chute Barrow, (?Wilts).

HLRA/05/28 1932 6 letters and a report on bones from Luckington, Wilts.

HLRA/S01/16 1940 Report on Romano-British remains from Wiltshire.

MLA/002676 3414 1927 Discussion of Bronze Age bones.

MLA/002689 3415 1927 Discussion of bones from Northleach, Glos.

MLA/002317 3416 1927 ADP requests return of bones from Swindon.

Salisbury & South Wiltshire Museum³⁸

The King's House, 65 The Close, Salisbury SP1 2EN

SBYWM:1939.239 Incense cup.

SBYWM:1913.49 Plaster cast.

Correspondence:

Correspondence between ADP and Frank Stevens, and R.S. Newall.

Somerset Archaeological and Natural History Museum³⁹

The Castle, Castle Green, Taunton, Somerset TA1 4AA

A.2353 Hollow flint scraper. Blagdon, Somerset, 1926.

A.2354 2 thumb scrapers. Blagdon, Somerset, 1926.

A.2475 Worked flint flakes. Blagdon, Somerset, 1926.

A.3080 17th century Donyatt bucket pot with green glaze. North Cadbury, 1910.

A.5238 Flint core. Taunton, Somerset, 1926.

A.5239/ ?A.2551 Flint knife with dorsal ridge. Trull, Somerset, 1926.

A.5240 5 flint scrapers. Norton Fitzwarren, Somerset, 1926.

Swindon Museum & Art Gallery⁴⁰

Bath Road, Swindon SN1 4BA

B 1977/247 Neolithic flint, found 1919 at Liddington Camp.

B 1979/765 4 Roman box tile fragments, found 1897 at Roman building, Mill Lane.

B 1988/67.1 Flint borer, found 1905 field walking at Liddington Castle.

B 1988/67.2 Unprovenanced flint blade.

Wiltshire Archaeological and Natural History Society Museum (Wiltshire Heritage Museum)⁴¹

41 Long Street, Devizes, Wiltshire SN10 1NS

DZSWS:1961.16 Jug handle, from Liddington, Wiltshire.

DZSWS:1968.42.1 Sword found in a well, 17th C., Zeals, Wiltshire.

DZSWS:1968.42.2 Sword, 17th C., Malmesbury, Wiltshire.
 DZSWS:1968.42.3 Sword, 17th C., Broad Town, Wiltshire.
 DZSWS:1968.42.4 Sword, 17th C., Stratton St Margaret, Wiltshire.
 DZSWS:1968.42.5 Sword, 17th C., South Cerney, Wiltshire.
 DZSWS:1968.42.6 Sword, 17th C., Cleverton, Wiltshire.
 DZSWS:1968.42.7 Sword, 17th C., Wood Street, Swindon, Wiltshire.
 DZSWS:1968.42.8 Sword, 18th C., Seagry, Wiltshire.
 DZSWS:1968.42.9 Sword, ?17th C., ?Great Somerford, Wiltshire.
 DZSWS:1968.42.10 Sword, 17th C., Great Somerford, Wiltshire.
 DZSWS:1968.42.11 Sword guard, 17th C., Nettleton, Wiltshire.
 DZSWS:1968.42.12 Basket hilt, 17th C., Chelworth, Cricklade, Wiltshire.
 DZSWS:1968.42.13 Sword guard, 16th C., Broad Town, Wiltshire.
 DZSWS:1968.42.14 Sword blade.
 DZSWS:1975.152 Tile, 20th C., Bishopstone, N. Wiltshire.
 DZSWS:1995.89 Hand axe, Knowle Farm, Little Bedwyn, Wiltshire.
 DZSWS:1995.90 Hand axe, Knowle Farm, Little Bedwyn, Wiltshire.
 DZSWS:1995.91 Hand axe, Knowle Farm, Little Bedwyn, Wiltshire.
 DZSWS:1995.92 Hand axe, Knowle Farm, Little Bedwyn, Wiltshire.
 DZSWS:1995.93 Hand axe rough out, Knowle Farm, Little Bedwyn, Wiltshire.
 DZSWS:1995.94 Hand axe, Knowle Farm, Little Bedwyn, Wiltshire.
 DZSWS:1995.95 Hand axe, Knowle Farm, Little Bedwyn, Wiltshire.
 DZSWS:1995.96 Hand axe, Knowle Farm, Little Bedwyn, Wiltshire.
 DZSWS:1995.97 Hand axe, Knowle Farm, Little Bedwyn, Wiltshire.
 DZSWS:1995.98 Chopper, Knowle Farm, Little Bedwyn, Wiltshire.
 DZSWS:1995.99 Hand axe, Knowle Farm, Little Bedwyn, Wiltshire.
 DZSWS:1995.100 Scraper, Knowle Farm, Little Bedwyn, Wiltshire.
 DZSWS:1995.101 Hand axe, Knowle Farm, Little Bedwyn, Wiltshire.
 DZSWS:1995.102 Hand axe, Knowle Farm, Little Bedwyn, Wiltshire.
 DZSWS:1995.103 Hand axe, Knowle Farm, Little Bedwyn, Wiltshire.
 DZSWS:B27a Cast of bronze axe head from original found near Wootton Bassett, original in private collection.
 DZSWS:DM.42 Cast of silver mount from Cricklade,

original in A.D. Passmore collection.

DZSWS:DM.2487 Sherds, Giants Cave long barrow, Luckington, Wiltshire.
 DZSWS:DM.2488 Flints, Giants Cave long barrow, Luckington, Wiltshire.
 DZSWS:DM.2885 Iron arrowhead from Silbury Hill⁴², West Kennett, Wiltshire.
 DZSWS:DM.2886 Stones from Shaft No.6, Silbury Hill, West Kennett, Wiltshire.
 DZSWS:DM.2887 Iron pyrites from Silbury Hill, West Kennett, Wiltshire.
 DZSWS:DM.2888 Bones from Silbury Hill, West Kennett, Wiltshire.
 DZSWS:DM.2889 Hand bones from Silbury Hill, West Kennett, Wiltshire.
 DZSWS:DM.2890 Stones from Silbury Hill, West Kennett, Wiltshire.
 DZSWS:DM.2891 Bones from Silbury Hill, West Kennett, Wiltshire.
 DZSWS:DM.2892 Bones from Silbury Hill, West Kennett, Wiltshire.
 DZSWS:DM.2893 Clay specimens from Shaft No.6, Silbury Hill, West Kennett, Wiltshire.
 DZSWS:DM.2894 Stones from layer of Shaft No.5, Silbury Hill, West Kennett, Wiltshire.
 DZSWS:DM.2895 Stones from layer of Shaft No.5, Silbury Hill, West Kennett, Wiltshire.
 DZSWS:DM.2896 Unknown pieces from Shaft No.5, Silbury Hill, West Kennett, Wiltshire.
 DZSWS:DM.2897 Specimens from Shaft No.3, Silbury Hill, West Kennett, Wiltshire.
 DZSWS:DM.2898 Charcoal from layer of Shaft No.5, Silbury Hill, West Kennett, Wiltshire.

Archival material:

AA Box 22: A.D. Passmore notebooks, photograph albums etc:
 Passmore's field notebook, purchased by WANHS in January 1961 from R.C. Hatchwell.
 A plan of stones at Swindon and a note.
 A book of photos.
 A map of Salisbury Plan with long barrows marked.
 Photo and notes of Tinhead Barrow.
 An album with survey measurements, photos and excavation histories for archaeological sites at Brattom; Amhill barrow; Ovendean; Bowle's barrow; Imber; Pertwood Down; Cold Kitchen Hill; Sutton Veny; Sherrington; Corton; Stockton; Norton Down; Middleton; Heytesbury; Knook Barrow; The Old Ditch Barrow; Tilshead Lodge; Kill Barrow; White Barrow; Ell Barrow; Winterbourne Stoke; Uffington White Horse.
 A book of aerial photos, presented by G.W.G. Allen & Passmore.
 The Devil's Den, by A.D. Passmore: an album of photos from when he watched the work at Devil's Den 12 September 1921 to 5 October 1921.
 A manuscript containing miscellaneous short observations and notes to himself.

A manuscript containing his notes of walks, purchases for his shop, flints etc.

Victoria and Albert Museum⁴³

Cromwell Road, South Kensington, London SW7 2RL

Department of Furniture & Woodwork:

W.33-1935 Oak bench end, 15-16th century.

W.8-1958 Oak bench end, 15-16th century.

W.9-1958 Oak bench end, 15-16th century.

W.10-1958 Oak bench end, 15-16th century.

Department of Ceramics & Glass:

C.14 to 14B-1936 Fragments of stained glass.

Victoria and Albert Museum Archives:

Blythe House

23 Blythe Road

London

W14 0QF

Correspondence:

MA/1/P497 and MA/1/P496:

Around 70 letters between Passmore and curators of various departments about objects in his collection, particularly carved wooden bench ends and some porcelain figurines; and a selection of photographs of objects in his collection. Letters span the years 1917 to 1957.

Notes to Appendix 2

¹⁵ Access kindly provided by Ros Cleal.

¹⁶ Information kindly provided by Roz Britton-Strong.

¹⁷ List kindly provided by Catherine Casley.

¹⁸ List kindly provided by Roberta Prince.

¹⁹ List kindly provided by Gail Boyle.

²⁰ Information kindly provided by Patricia Usick.

²¹ Information kindly provided by Catherine Edwards.

²² Formerly the Department of British and Medieval Antiquities.

²³ Included in this collection is the porcelain Chelsea cream jug, finely decorated with strawberries and butterflies, that Passmore accused the Western Art Department at the Ashmolean of having damaged.

²⁴ Information kindly provided by Eva Oledzka.

²⁵ Complete list of all Passmore objects in the British Museum kindly provided by David Ward.

²⁶ Information kindly provided by Gary Thorn.

²⁷ Information kindly provided by Steve Blake.

²⁸ List kindly provided by Stephen Yates.

²⁹ Information kindly provided by Debi Harlan.

³⁰ Information kindly provided by Hannah Crowdy.

³¹ Information kindly provided by Rob Kruszynski.

³² Information kindly provided by Stella Brecknell.

³³ List kindly provided by Jane Burrell.

³⁴ Information kindly provided by Michael Cooper.

³⁵ List kindly provided by Jillian Greenaway.

³⁶ Information kindly provided by Sarah Walpole.

³⁷ Information kindly provided by Sarah Pearson.

³⁸ Information kindly provided by Martin Wright.

³⁹ List kindly provided by Mark Davis.

⁴⁰ List kindly provided by Isobel Thompson.

⁴¹ List kindly provided by Paul Robinson.

⁴² These objects from Silbury Hill are likely those that were donated through Passmore by Flinders Petrie, and are from their excavation in the summer of 1922 (Anon 1927, 572).

⁴³ Information kindly provided by Lynn Young.

Notes and Shorter Contributions

A Medieval Pilgrim Badge from West Knoyle

by Nick Griffiths

Chaucer's *Canterbury Tales* paint a vivid picture of a group of pilgrims making a leisurely pilgrimage to England's premier shrine, that of St Thomas Becket. The leisure, and holiday atmosphere, of the group are explained by their largely middle- or upper class status; they were pilgrims with money and time to spare. What of labourers and farm-hands, and the like, who might have little money and only a day or two to spare, yet who felt the same desire to visit a shrine, seek intercession or salvation, and perhaps return with a metal badge, as both souvenir of the trip, and amulet? (Spencer 1990, 7f.)

Local shrines, which might be reached on foot in a day or two, fulfilled the needs of the less well-off; in Wiltshire, three such were to be found in Salisbury and its vicinity. These were the shrines of Our Lady of Salisbury, and St Osmund, both centred on the Cathedral, and St Edith at Wilton Abbey.

Badges of all three cults have been recognised and published, most notably the Salisbury Museum collection (Spencer 1990). Several badges relating to St Osmund have been found in London, as well as those found in Salisbury, perhaps reflecting the great interest prompted by his canonisation in 1457 (Spencer 1990, 13f., cat. Nos. 1-7). Those of Our Lady of Salisbury (Spencer 1990, 33f., cat. Nos. 58-63) are found almost exclusively at Salisbury, a single example being known from Canterbury. The popularity of Our Lady may have been purely local.

St Edith of Wilton, daughter of King Edgar, died in 984, and miracles were soon reported at her tomb. Her cult was well established before the

Conquest, and Edith was one of the few English saints to be acknowledged by the Norman church (Darbyshire 2003; Stroud 1984).

Spencer identified a badge showing the upper part of the figure of a nun, holding a book, as appropriate to St Edith (Spencer 1990, 48, cat. no. 99 and fig. 132 : reproduced here as Figure 1a.) A similar head and shoulders, in a circular knobbed



Fig. 1a Pilgrim badge of St Edith from Salisbury

frame, found at Salisbury, was attributed to 'Mother Julian' of Norwich (Mitchiner, 1986, 178), but is much more likely to be another badge from St. Edith's shrine (Spencer, 1990, 48).

A more complete badge, again showing a nun holding a book and also a crozier, found at Westbury, is now in the Wiltshire Heritage Museum (Figure 1b); Brian Spencer suggested that this too could be attributed to St. Edith's shrine. The crozier perhaps alludes to the story of her refusal to become Abbess of one of her father's royal foundations, and of the nuns bestowing on her the



Fig. 1b Pilgrim badge of St Edith from Westbury



Fig. 1c Pilgrim badge of St Edith from West Knoyle

honorary title of Abbess! (Darbyshire, 2003, 8, and fig., p. 14.) The attribution of these badges, all perhaps 15th century in date, to St Edith's shrine allows the addition of a fourth (Figure 1c).

Found some years ago at West Knoyle, its design is similar to that of the Westbury badge, though they are clearly from different moulds. This is perhaps an indication of increased demand in the 15th century, Wilton probably benefiting from the increased interest in Salisbury following St Osmund's canonisation.

The relatively local findspots, Salisbury, Westbury and West Knoyle, might also suggest that St Edith's was a shrine appealing to devout Wiltshire folk whose circumstances did not permit leisurely pilgrimages to greater shrines.

Acknowledgements

I am grateful to Mr T Biss for allowing me to record the West Knoyle badge, and to the curators of both Salisbury and the Wiltshire Heritage Museum for their permission to publish objects in their collections.

Bibliography

- DARBYSHIRE, G., 2003, *The Life of Saint Edith of Wilton*
 MITCHINER, M., 1986, *Medieval Pilgrim and Secular Badges*
 SPENCER, B., 1990, *Pilgrim Souvenirs and Secular Badges*. Salisbury: Salisbury Museum Medieval Catalogue Part 2
 STROUD, D., 1984. Edith of Wilton (c.961-984): the Millenary of a Saint. *Hatcher Review* 2, no. 18, 352-8

The Arundell's London Estate

by *Barry Williamson*

In my article, 'The Ruin of a Great Wiltshire Estate: Wardour and the Eighth Lord Arundell' (*WANHM* vol. 94, 2001), I mentioned that family legend blamed the ninth Lord's second marriage (to a Protestant) in 1806 as the rock on which the Arundell ship finally foundered. The eighth Lord had previously inflicted permanent damage on the

estates by amassing one of the largest recorded debts of the 18th and early 19th centuries, to the extent that by the time of his death in 1808, he had reduced the estates to one-seventh of the size they were when he inherited in 1756. They were simply too small to provide an income sufficient to maintain Wardour Castle, the largest Georgian mansion in Wiltshire.

Two things puzzled me. What had happened to the Arundell's London estate, brought into the family by Elizabeth Panton on her marriage to the future fifth Lord in 1691? There were no records relating to it in the family archives (WSRO 2667). Only a single sketch map indicated that half the London property was sold in 1810 leaving just over one acre near Piccadilly Circus remaining in family ownership. There were no rent books or agent's accounts and it had to be assumed that the 'Disastrous Dowager', Anne Lucy, widow of the twelfth Lord, had sold the estate during the Great War and destroyed all the papers. Secondly, what was the truth behind the family legend that the ninth Lord was as much to blame for the decline and fall of the family as the eighth? When I asked

Mrs Fagan, sister of the 16th and last Lord Arundell why she thought the estates had been ruined, she insisted that the eighth Lord, or 'Old Piety' as he was known in the family, had caused much of the problem, but that the *coup de grâce* was administered by the marriage of the ninth Lord. I asked for more details, but she could give none. I should have taken such family legend more seriously.

Mr Alan Miller of Bournemouth has been researching Dorset landowning families recently and he came across the details of the sale of the Arundell's London estate. Mrs Fagan was correct. In May 1816 the ninth Lord made a will leaving the Panton estate 'in the parishes of St James and St Martin in the Fields' in trust for his sons Henry and

Robert, children of his second marriage to Mary Burnet Jones. The children of his first marriage, to the eldest daughter of the eighth Lord, simply received the Wardour estates. The annual rental value of the London estate was greater than all the other Arundell estates. At a stroke, the ninth Lord had ensured that the palatial mansion at Wardour could never be maintained as the seat of a great lord.

Henry's only child, Rudolphus, died in 1841, leaving the children of the second son, Robert, as the beneficiaries of the London estate. For some reason which is not clear, the children of Robert's second marriage were omitted from the Trust. By 1913, one of Robert's children, Edith, was still alive and the six children of her sister Aeddán. The Trustees decided to apply for an Act of Parliament to close Panton Street and Arundell Square and this was obtained in August 1913. The *Estates Gazette* reported the sale of the whole estate in July 1915 for £250,000 (about £12 million at today's values). The reporter commented: 'The Arundell Estate occupies one of the finest positions in the West End, immediately contiguous to Piccadilly Circus and the Haymarket . . . its future, whether as a West End palace of pleasure or for other purposes will be watched with great public interest'.

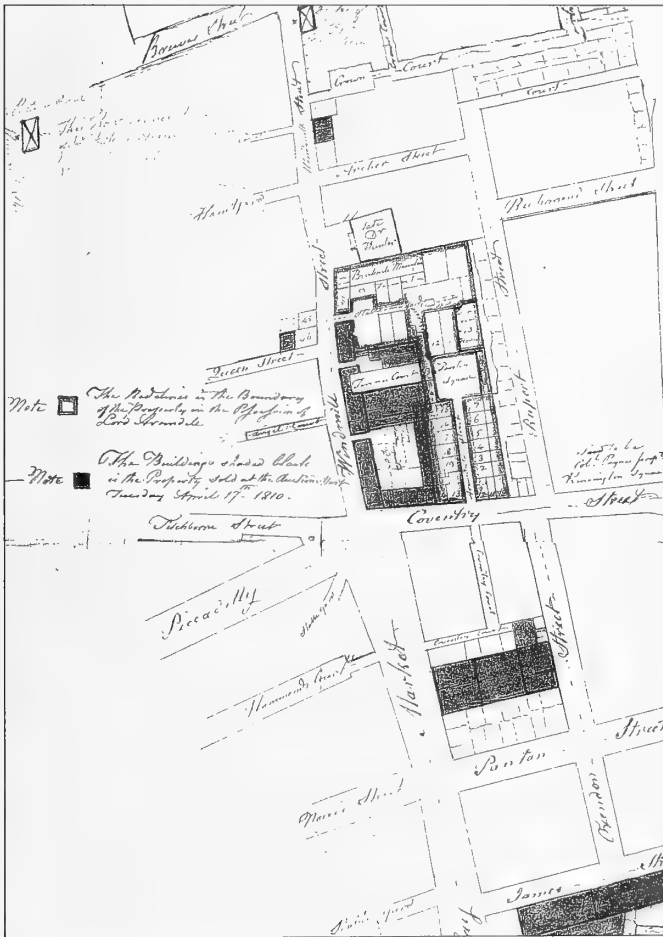


Fig.1 The Arundell Piccadilly estate (WSRO 2667/24/6). The dark shading indicates the land sold in 1810; the area shaded at the edge was retained until 1915.

The Minerva Plaque from Charlton Down

by *Paul Robinson*

The late Roman bronze plaque depicting the goddess Minerva (accession no.354 – fig. 1, left), found in the 19th century at Charlton is arguably the best known object of Roman date in the Society's collection, and has recently been described as 'surely one of the most interesting and attractive figural bronzes from Britain' (Henig 2001, 110f). This note is inspired by the recent donation to the museum by Mrs Elizabeth Williamson of an early lead cast of the plaque

(accession no.2003.6 – fig. 1, right) which she had originally purchased from an antiques shop in Chippenham. It provides the opportunity of confirming the findspot of the original plaque about which there has been confusion in the past as well as considering how and when it entered the museum collection.

The first known reference to the plaque is a brief account of the exhibition by the Revd Edward Wilton of a cast of it on 6 June 1851 at a meeting of



Fig. 1 The bronze original (left), and the lead replica (right)

the Archaeological Institute in London (*Archaeological Journal* 8, 1851, 318), the original of which 'had been brought to him by a shepherd who said he had found it lying on the green sward in one of the "tinings" or enclosed pasturages on Salisbury Plain in the neighbourhood of an ancient encampment . . . Numerous coins and a bronze figure about 3 inches in height had been found near the spot which is situated on Charlton Down, near Devizes, the property of Lord Normanton. A large tract of the Downs at this place seems to have been covered by habitations; vestiges of buildings are clearly to be traced upon it.' The settlement in question is the well-known Romano-British settlement recently surveyed by the R.C.H.M. and published by English Heritage (McOmish *et al*, 2002). At times it has been incorrectly stated to lie in the adjacent parish of Rushall. The encampment which is mentioned is, of course, Casterley Camp hillfort; the bronze figurine is probably to be equated with the 2¾ inches high figurine of Mercury published as from Rushall Down, at one time in the Society's museum (accession no.362) but missing since 1940.

Although there is no certainty, the cast of the plaque in lead recently acquired by the museum may well be either the same as that exhibited by the Revd E Wilton, or it may be another cast from the same mould. It is most unlikely that a lead cast would have been made of this plaque after it entered the museum collection, while it is perhaps unlikely to have been cast on more than one occasion in the period before the museum acquired it. It is possible that the cast was made perhaps at a time when the Revd. Wilton did not own the original, or because he wished it to be better known and appreciated by other antiquaries or collectors.

It is uncertain whether or not the Revd Wilton already owned the plaque in 1851 or indeed in 1853 when he exhibited it at the temporary museum set up at the inaugural meeting of the Society (*WANHM* 1, 1854, 62) but it is probable that he did do so. He is recorded as the plaque's source in the early catalogues of the collections (Cunnington and Goddard, 1911, 352; 1934, 215). There is, however, no record of his donation of it to the Society either in the list of donations published each year in the Society's journal or in the early manuscript list of donations to the Society's collections. It is probable that the plaque was included among the 'greater part of the collections of the late Revd Wilton'

acquired in 1871 and recorded almost casually in *WANHM* (13, 1872, 222). Possibly the collection was *purchased* although there is no record of this in the Society's minutes.

In spite of the importance of the plaque it was not properly published for many years and by then its original findspot had been forgotten. Presumably because Revd Wilton owned an important collection of finds from West Lavington, the parish of which he was the incumbent, it was assumed that the plaque too came from the same area (Goddard 1909, 173f; Cunnington and Goddard 1911, 354). This error was later corrected by Goddard (1914, 377) but by accident was repeated in the second catalogue of the Society's collections (Cunnington and Goddard 1934, 215). Although correctly published as from Charlton Down by L V Grinsell (1957, 55), the incorrect findspot has nevertheless occasionally been perpetuated, for example, by Toynbee (1964, 333) and Green (1976, 22). At the present day the findspot is invariably correctly given.

It is beyond the scope of this note to discuss either the iconography of the Minerva plaque or its artistic importance, both of which aspects have been considered elsewhere and surely will be again in future studies of the archaeology of the Roman period in Wiltshire.

Bibliography

- CUNNINGTON, M. E., and GODDARD, E. H., 1911, *Catalogue of Antiquities in the museum of The Wiltshire Archaeological and Natural History Society at Devizes, part 2. Devizes: WANHS* [2nd edition 1934]
- GODDARD, E. H., 1909. Notes on some Roman Objects found in Wiltshire. *The Reliquary and Illustrated Archaeologist* 15 (3), 169-175
- GODDARD, E. H., 1914. A list of Prehistoric, Roman and Pagan Saxon Antiquities in the County of Wilts arranged under Parishes. *WANHM* 38, 153-378
- GREEN, M., 1976, *A Corpus of Religious Material from the Civilian Areas of Roman Britain*. Oxford: British Archaeological Reports 24
- HENIG M., 2001, 'Art in Roman Wiltshire,' in Peter Ellis (ed.), *Roman Wiltshire and after: papers in honour of Ken Annable*, 107-126. Devizes: WANHS
- McOMISH, D., FIELD, D., and BROWN, G., 2002, *The Field Archaeology of the Salisbury Plain Training Area*. Swindon: English Heritage
- TOYNBEE, J.M.C., 1964, *Art in Britain under The Romans*. Oxford: Oxford University Press

The Rugged Oil Beetle (*Meloe rugosus* Marsham) discovered in Wiltshire

by Michael Darby

I was recently asked to determine a small collection of beetles made by Godfrey and Michael Smith, the well-known lepidopterists, who live near Trowbridge. To my surprise several rare beetles were present including *Ischnomera caerulea* (L.), which they had found in a rotten elm – its normal habitat – on their farm (3 specimens 5 April 1987), a surprising location for a species which is almost exclusively confined to ancient broadleaved woodland. But the most exciting discovery was undoubtedly a single specimen of the Rugged oil beetle, *Meloe rugosus* Marsham, picked from a Sainfoin plant on Bratton Hill on 24 September 1984. This rare beetle, not previously recorded from Wiltshire, is classed as Red Data Book 3 being known from only a handful of southern localities, and none at all since 1904 when a single female was noted at Upper Lypiatt in Gloucestershire. Interestingly a second specimen turned up on 12 December 1984 at Broadway in Worcestershire (Whitehead 1987) and since then there have been two further records.



Meloe rugosus Marsham

M. rugosus is immediately distinguishable from the Black Oil Beetle, *M. proscarabaeus* L., the only other member of the family recorded from the county, by virtue of its smaller size (max. 18mm), matt greyish-black colouring (never shiny), and the proportionately much broader pronotum. Another factor aiding identification is the time of emergence. *M. proscarabaeus* is always found in the Spring whereas *M. rugosus* does not emerge until September and has been recorded to breed throughout the winter (Whitehead 1990). Late

emergence may account for the beetle having been overlooked.

What marks out oil beetles as of particular interest is their fascinating life history. All are parasitic on bees of the genera *Andrena*, and *Anthophora*. In most species the female beetle, after making some small holes in the ground, deposits in them from two to four batches of tiny yellow eggs, some thousands at a time, glued together. After an interval of three to six weeks these hatch out into tiny larvae with long legs terminated in a single claw. The larvae climb on to low plants, chiefly Ranunculaceae or Chicoraceae, from which they attach themselves to visiting bees, sometimes in large numbers. Once in the bee's nest they devour the bee's eggs and change into a second form, arched, cylindrical and with toothed mandibles and stout legs. These feed on the food deposited by the bee for its young. After a time this second form changes its outer covering, which is not entirely shed but remains wrinkled and attached so looking like a 'false pupa'. From this a third form emerges like the second, before the adult beetle finally appears usually in the early Spring. *M. rugosus*, however, differs from this pattern in that adults are able to survive the winter even when temperatures drop to as low as -15°C . Furthermore, Whitehead's observations suggest that it favours the bee *Anthophora plumipes* exclusively as its host species.

What gives oil beetles their name is the ability to secrete when disturbed an oily substance called cantharidin from their joints. This is highly toxic and acts as an anti-predation device. (Ramsay, 2002). However, cantharidin has also been recorded as strongly attractive to species of midge (*Atrichopogon* spp.) and anthicid beetles, which suck the blood from the adult beetles.

Nine species of oil beetle have been recorded from Britain but nearly all are now extinct or in serious decline. Ramsay suggests that the reasons are unclear but it is possible that climatic change,



M. violaceus Marsham

loss of grassland and heath to arable and forestry, agricultural improvement and stabilisation of cliff grasslands may all have contributed to their demise. It is pleasing to know, therefore, that *M. proscarabaeus* continues to be regularly recorded in Wiltshire (more records in 2002 than any previous year) and that we can now add *M. rugosus* to our list

too. Interestingly, *M. violaceus* Marsham, the third and most widespread of the species still recorded from Britain, has not been found in Wiltshire but is very likely to occur here. In size it resembles *M. proscarabaeus*, but it is usually distinctly bluish-violet in colour and has a distinct dip at the base of the pronotum, missing in *M. rugosus*.

Bibliography

- RAMSAY, A. 2002. British oil beetles. *British Wildlife*, 14 (1), 27-30
- WHITEHEAD, P.F. 1990. Further observations on *Meloe rugosus* Marsham (Col. Meoidae) in Worcestershire. *Entomologist's monthly Magazine*, 126, 110

Excavation and Fieldwork in Wiltshire 2002

Aldbourne

Transco Gas pipeline between Wanborough and Aldbourne (SU 2340 8080 to SU 2670 7665); Romano-British

A programme of archaeological recording by Cotswold Archaeology was undertaken during construction of the 5.4km-long pipeline. Three sites were located. Ditches indicative of Romano-British field systems were identified centred on SU 2524 7889, as was the site of a midden and possible structure, which was preserved *in situ*. Further evidence of Romano-British field systems was recorded at SU 2607 7759 and SU 26247739.

Amesbury

Earl's Farm Down (SU 173 418); Prehistoric to Post-medieval

The evaluation and subsequent excavation of six Bronze Age ring ditches, a series of linear ditches and other features on land at Solstice Park, Folly Bottom, Amesbury, was undertaken by AC archaeology during the summer of 2002. Most ring ditches were generally of typical construction and profile, comprising generally steep-sloping sides and a flat base. There was no evidence in any ring ditch for mound material or a buried soil horizon which would have pre-dated construction of the barrows. Many burials and cremations were, however, present, including cremations in collared urns, one of which contained beads of faience, jet, amber and shale. The large vessel containing these objects may have been brought into this area from the South-West of Britain. There were four inhumations in pits within one ring ditch, with the remains comprising a woman and three children. One of the skeletons was within a charred wooden container or coffin. Based on the presence of Iron Age and Romano-British pottery in the upper fills of all the ring ditches, it is likely that the barrow mounds were completely removed as a result of ploughing during this time. There are indications in the immediate vicinity of an expansion in arable

cultivation at the end of the prehistoric period, based on the extensive evidence for field systems of this date, which possibly includes the linear features investigated as part of this exercise.

Amesbury

Land adjacent to 42 Beaulieu Rd (SU 1630 4095)

Archaeological evaluation of land adjacent to 42 Beaulieu Road, Amesbury, was undertaken by Wessex Archaeology, but recorded no archaeological features or deposits.

Amesbury

Skye House, Stonehenge Road (SU 145 415); Iron Age

An archaeological watching brief undertaken by Michael Heaton during groundworks associated with an extension to Skye House at Amesbury, located within and immediately adjacent to the ramparts of Vespasian's camp Iron Age hillfort, revealed a single archaeological feature. Though lacking dating evidence, the feature is interpreted here as a post-setting of prehistoric date contemporaneous with the initial use of the hillfort.

Amesbury

Stonehenge Visitors Centre (SU 15500 42600); Prehistoric-Medieval

Wessex Archaeology carried out archaeological mitigation prior to ground investigation works of land proposed for development near Countess Road, Amesbury. The site is bordered to the east by the River Avon, to the south by the A303, to the west by the rear of properties fronting on to the A345 Countess Road and to the north by Totterdown Clump. Previous archaeological works identified prehistoric, Romano-British, Saxon and medieval activity. A series of hand and machine dug 1 × 1m testpits confirmed the presence of a relict channel identified in earlier archaeological works. The channel was aligned roughly east to west along the southern boundary of the 'paddock'. The upper fills of this channel produced worked flint and late

prehistoric pottery. Colluvial hillwash containing worked flint was also identified in the 'paddock', an area previously uninvestigated.

Ashton Keynes (and Somerford Keynes, Gloucestershire)

Cotswold Community (SU 033 963); Prehistoric–Medieval

The excavations at Cotswold Community 2002 and 2003 in advance of gravel extraction at the Hill's Minerals and Waste's quarry is revealing an important multi-period landscape. Archaeological features from the Neolithic to the medieval period have been recovered. During the 2002 fieldwork, Neolithic pits containing flint tools (including several axes) and Peterborough and Grooved Ware pottery were dotted across the site. Also scattered across the site were pits and burials dated to the late Neolithic – early Bronze Age period. From these features came flint tools and comb decorated Beaker pottery (including two nearly complete Beaker vessels and a wrist guard from inhumations). These features are important because the early prehistoric era in this area is poorly represented. The Neolithic and early Bronze Age activity found across the landscape may represent evidence of land clearance, markers or possibly a funerary landscape, especially as three Beaker burials were also located on this site. These excavations also uncovered a substantial early Iron Age settlement that was well organised into areas with circular post-built and square to rectangular structures. Settlement patterns of this period have not been seen on this site before, and this fills in the missing gap between the middle Bronze Age and middle Iron Age settlements located in previous excavations. Further sections of Roman trackways, seen in previous fieldwork, were excavated and would have served as communication links between associated field systems and rural communities such as the Romano-British farmstead currently under excavation this year. Excavations this year have uncovered a dense and complicated web of archaeological remains, rather more than expected from the air photography and evaluation. Already two small Roman cemeteries have been exposed, one of which is truncating a ring ditch. Also of particular interest is a possible squarish Roman shrine situated close to a trackway. Evidence of middle to late Iron Age remains, possible Roman stone structures (such as corn dryers and a well) are under investigation. As expected, a pit alignment made up of a double row of pits has made a reappearance after having been

recorded during fieldwork carried out in 1999. This feature is thought to be late Bronze Age to early Iron Age in date, consisting of 280 pits, avoids a ring ditch and snakes across the top half of the site. An 'L'-shaped ditch, yet to be excavated, may be associated with circular post-built structures, fences, pits and waterholes situated within the vicinity.

Avebury

Avebury Park (SU 099 701); Medieval and Undated
Observation by Michael Heaton and Bill Moffatt during construction of new sewerage across Avebury Park indicates that earthworks north of Avebury Manor are not based upon interpretable structural deposits. The platforms that are clearly visible on the surface represent localised enhancement of subsoils, nonetheless likely to have been cultural in origin. Within the car park area to the west (behind the great Barn), is a group of north–south aligned ditches, gulleys and banks, intensively intercut and disturbed by modern features. Dating evidence is limited to medieval pottery in the upper layers sealing these features; they could be prehistoric, Roman or medieval in date. Though apparently lacking in dating evidence, this group of features is varied in deposit type, well stratified and sealed and of high archaeological potential.

Avebury

Beckhampton Avenue, (SU 087 690); Prehistoric

In March 2002 a magnetometer and earth resistance survey were conducted by the geophysical survey team from the Centre for Archaeology in an area to the south of Longstones long barrow, Beckhampton, Avebury, in attempt to further locate the line of the Beckhampton Avenue south of the standing stones, Adam and Eve. Unfortunately there appeared to be no obvious trace of buried stones or burning pits in this area, a fact later confirmed by excavation.

Avebury

Falkner's circle (SU 109 693); Prehistoric

In March and May of 2002, geophysical surveys were conducted by the geophysical survey team from the Centre for Archaeology around a standing stone believed to be the last remnant of Falkner's Circle, near Avebury, Wiltshire. Several discrete anomalies lying on an arc approximately 44m in diameter were identified and found, when excavated in the summer of 2002, to be either post-medieval destruction pits or possible stone sockets.

Avebury/Bishop's Cannings

Horton Down, Beckhampton (SU 080 670); Pre-historic, Early Medieval, and Post-medieval

A small area of surviving pasture, on either side of the boundary between the civil parishes of Avebury and Bishop's Cannings, was investigated and earthworks analytically surveyed by English Heritage. The area contains four round barrows and the banks and lynchets of a 'Celtic' field system which has been positioned up to and around the mounds, but post-medieval quarrying has damaged the critical interface, making the relative chronology uncertain. A linear bank and ditch cut over the apex of one of the barrows curves for a considerable distance across the surrounding downland cutting through 'Celtic' field boundaries *en route*. Its curved plan implies an enclosure from contemporaneously unenclosed land. As it not only marks the parish boundary, but more significantly the boundary of the Selkley Hundred it probably dates to the mid-to late Saxon period.

Berwick St John

Church Street (ST 9465 2237); Post-medieval

An evaluation by means of trench excavation was carried out by AC *archaeology* during February 2002. The evaluation consisted of a single machine-excavated trench measuring 15m long and 1.8m wide. This trench uncovered a 600mm depth of soils that sealed the remains of a probable pond which appeared to have been partially infilled with silt and demolition rubble during the 18th or 19th century.

Blunsdon St Andrew

Groundwell Ridge (SU 141 894); Roman

Roman masonry was unexpectedly discovered at Groundwell Ridge to the north of Swindon in 1996 when building work for a new housing development started, close to earthworks thought to be of medieval date. Geophysical survey by the Ancient Monuments Laboratory and subsequent limited excavations suggested a high status establishment such as a villa of some pretension or a religious complex. As a result, the remains were scheduled as an Ancient Monument, and the site was purchased and transferred to Swindon Borough Council. An area of some 5.7ha is now protected from development and it is proposed that the site be preserved as a public open space. As a result, the geophysical survey team from the Centre for Archaeology was asked to return to the site and extend the geophysical survey to cover

this entire area. The survey results suggest that, whilst Roman activity in the form of masonry buildings, enclosures and ditches was concentrated towards the centre of the site, archaeological remains are likely to extend across other parts of the protected area. However, the magnetometer and earth resistance surveys appear to be responding to different features, often superimposed, hinting at more than one phase of activity on the ridge.

REFERENCE

Linford, P and Martin, L. 2002. *Groundwell Ridge, Blunsdon St Andrew, Swindon: Report on Geophysical Survey, March-April 2002*. English Heritage Centre for Archaeology report series, 44/2002, (unpublished)

Blunsdon St Andrew

Groundwell Ridge (SU 141 894); Roman

A limited trial GPR survey by the geophysical survey team from the Centre for Archaeology was conducted over well preserved building remains revealed during a previous geophysical survey (see above) covering an apparent complex of Roman activity discovered, unexpectedly, at Groundwell Ridge to the north of Swindon in 1996. Despite unfavourable, clay-rich soil conditions the GPR survey provided a detailed plan of the Roman remains to a depth of approximately 1m, confirming their survival in the very near surface. The GPR results complement the previous earth resistance and magnetic surveys and together the data suggest the presence of a high status Roman building possibly incorporating thermoremanent features, for instance associated with a hypocaust system.

REFERENCE

Linford, N., 2002. *Groundwell Ridge, Blunsdon St. Andrew, Swindon. Report on ground penetrating radar survey, July 2002*. English Heritage Centre for Archaeology report series, 83/2002, (unpublished)

Bradford-on-Avon

Barton Grange Farm (ST 8230 6045); Post-medieval and Modern

Archaeological works undertaken over a period of five years between 1998 and 2003, prior to and during renovation of the West Barn and within the Barton Grange Farm Scheduled Monument recorded significant data regarding the establishment and development of the farm

buildings. The West Barn was constructed in the late-18th century, incorporating part of the foundations of a larger building of medieval date identified and published in 1978 by Jeremy Haslam. The two building episodes were separated by several centuries, represented by sequences of limestone pavements and culverts that sealed the earlier building and were cut into by the 18th-century barn. See Heaton and Moffatt this volume.

Broad Chalke

Blick's Yard (SU 257 038); Undated

Monitoring of groundworks during the machine excavation of footings trenches for a new house was carried out by AC *archaeology* between April and May 2002. No archaeological features or deposits were present.

Calne Without

Water pipeline, Sandy Lane ST971 673; Romano-British

A watching brief was undertaken during the laying of a replacement water pipeline to the north of the Roman settlement of *Verlucio*. Occasional sherds of Romano-British pottery and iron slag were recovered in the section of the pipeline route in fields north of the A3102 around ST97206734. Where the pipe trench was cut along the carriageway of the A3102 to the east of the entrance to Wans Cottage (around ST971673) a series of archaeological deposits was exposed and recorded. These included wall footings, a paved area, an undated ditch and occupation and demolition spreads. Pottery associated with these features is predominantly AD 1st to 2nd century in origin. A more detailed report is in preparation.

Codford

Kitchen Wing, East Codford Farm (ST 975 398); Post-medieval and Modern

Observations and photographic recording by Michael Heaton of fabric affected by demolition and rebuilding of the kitchen wing of East Codford Farm were made during February 2002. Collation of the observations suggests that the part of the kitchen wing and the stack it enclosed represented an earlier 17th-century phase of the farmhouse building that had been largely destroyed by fire during the mid-20th century.

Coombe Bissett

St Michael and All Angels Church (SU 1080

2635); Post-medieval and Modern

A watching brief was maintained by AC *archaeology* during trenching for the laying of services across the north side of the churchyard. A total length of some 30m of hand-dug trench running to the north transept was observed, within which excavation encountered only redeposited and disturbed soils. Small quantities of post-medieval tile were noted immediately below the turfline, but no other dating evidence was recovered. Disarticulated human bone was present at one location, but was left at the base of the trench. The depth of the excavations (600mm) was insufficient to disturb any *in situ* burials, and no evidence concerning the construction and development of the church or any archaeological features was forthcoming.

Crudwell

Goldhill Quarry (ST 93700 92500)

Wessex Archaeology carried out an archaeological evaluation of land at Goldhill Quarry in response to proposals for an extension to the existing quarry. The c. 1 ha was evaluated by means of four randomly located trenches, each 30m long and 1.8m wide and aligned generally east-west and north-south. No archaeological features, deposits or artefacts were recorded.

Donhead St Andrew

Old Wardour House (ST 9383 2622); Medieval

An evaluation was carried out on the site of a proposed extension to Old Wardour House, in February 2002. The evaluation consisted of three machine-excavated trial pits located within the footprint of the proposed extension. These excavations generally revealed layers of redeposited soil and building rubble. One trial pit exposed the footings of an ashlar wall, possibly associated with an outbuilding to the south of the medieval stable block on the north east side of the house. Layers of clay visible in the sections of the other two trial pits may be part of general levelling up of the site for landscaping. No datable artefacts were recovered.

Easton Grey

Whatley Manor Hotel (ST 8975 8715); Undated

A watching brief undertaken by Cotswold Archaeology during groundworks associated with the development of a spa complex identified no features of archaeological interest other than an undated well.

Latton

Latton Lands (SU 085 961); Bronze Age, Iron Age, Roman and Medieval

Gravel extraction by Cotswold Aggregates continued to be monitored by Oxford Archaeology to the south of the quarry between the old and new A419 roads. From excavations and watching briefs carried out from 2001 to 2003 significant archaeological remains have been revealed (see Stansbie and Laws this volume).

Longbridge Deverill

Kingsdown Farm (ST 8830 3972); Undated

An evaluation by means of trench excavation was undertaken by AC archaeology during February 2002. The evaluation consisted of the machine-excavation of four trenches, each 20m in length and 1.60m wide, and all located within or on the edge of areas likely to be affected by development. The work provided wholly negative results, with no features or finds identified.

Malmesbury

Saxon House, 39 High Street (ST 9333 8707); Medieval and Later

A building recording survey was undertaken by Cotswold Archaeology during renovation of the upper two storeys of the main facade. Removal of render exposed poorly preserved but clearly historic structural timbers, indicating that the building is of greater antiquity than its current tripartite windows of c. 1900 suggest. Its origins appear to date from c. 1500 (since confirmed by dendrochronology), when two similar timber-framed gabled houses were built, with a single window located centrally to each of the close-studded, jettied upper floors. Three carved quatrefoils surviving on a stud suggest that these façades were highly decorated.

In the 18th century the jetties, windows and gables were removed, the frames were set back into a common alignment, and the studs were rearranged to accommodate pairs of segmental-headed sashes throughout, creating a single, typically Georgian, facade. Further alterations to the timbers were made when the current windows were inserted, and a brick parapet was probably also added at this time. This parapet was removed as part of the renovation works.

Malmesbury

Former Cinema Site, Market Cross (ST 933 874); Medieval and Later

A watching brief and excavation were undertaken by Cotswold Archaeology prior to residential

redevelopment. The site lies immediately adjacent to the south transept of the 12th-century Benedictine Abbey Church. A graveyard was revealed, from which 76 burials were excavated and removed for analysis. The graveyard had been intensively used, with little space between the burials. The inhumations, all aligned east-west, were associated with 14th to 15th-century pottery and tile fragments, and included evidence both for wooden coffins and simpler interments in woollen shrouds. The presence of both males and females, and adults and children, suggests that this was a burial ground for the medieval townspeople rather than the religious or lay community. Structural remains were also revealed, including mortar and flagstone floor surfaces, robbed stone walls and an associated buttress. These may relate to a medieval chapel, possibly that of St Michael or St Lawrence, which was reputedly sited immediately adjacent to the south transept of the abbey.

Mere/ Chicklade

A303 Chicklade Bottom to Mere Improvement (ST 9390 3434 to ST 8210 3286); Prehistoric-Medieval

Wessex Archaeology carried out an archaeological appraisal of 11km of land along the line of the present A303 between Chicklade Bottom and Mere. This stretch of road is proposed for improvement, which is likely to include dualling and diversion of the road to the south of Chicklade. Boundary and enclosure ditches and field systems cover up to 60% of the study area, which also contains long and round barrows and a Roman Road and adjacent ditch. A number of post-medieval and modern features, such as listed buildings and milestones, are also recorded. Six Scheduled Ancient Monuments including Neolithic and Bronze Age barrows and medieval lynchets are located within the study area, two of which are within a few metres of the proposed improvements. Eleven Grade II Listed Buildings, mostly consisting of milestones and farm/coaching buildings, lie adjacent or close to the proposed improvements or within Chicklade itself. The major impact of both the preferred route and two suggested variations will be on the various field systems within the study area. Although no information is currently available on the likely depth of any impact, it is possible that any penetration below existing made or disturbed ground will damage surviving traces of earlier archaeological deposits, which are likely to be of significant importance.

Salisbury

20 Bedwin Street (SU 1450 3025); Medieval, ?Post-medieval, Undated

An excavation was carried out by Cotswold Archaeology prior to the redevelopment of the site for housing. The excavation demonstrated that the majority of the site was covered by a series of accumulated medieval soil deposits, the earliest of which is dated to the 13th century or later. A single undated pit or posthole cutting one of the earliest of these layers was found. Wall foundations were identified along two sides of the site, with a series of floor surfaces butting against one of them. Although the original date of construction is uncertain, the latest of the surfaces dates to the 15th to 16th centuries.

Salisbury

Bishop Wordsworth's School (SU 1427 2929); Post-medieval and Modern

An archaeological watching brief was maintained by AC archaeology during the construction of a new classroom block at Bishop Wordsworth's School, Salisbury. The site was previously the subject of an evaluation (WANHM 96, 235). No additional archaeological information was obtained.

Salisbury

Castle Street (SU 14375 30364)

Wessex Archaeology carried out an archaeological watching brief during the installation of a cable duct along Castle Street and Mill Stream Approach. No archaeological deposits or features were recorded within the trench. The single archaeological find of note was a Purbeck limestone block (at least 0.22m(+) wide and 0.55m long) found in the very base of the trench, which did not appear to be in situ. It was roughly dressed at both 'ends' and unmortared. It was not removed after being recorded. The block was found immediately adjacent to No.3 Castle Street (part of the Hussey's Almshouses complex) to where the medieval Castle Gate coat of arms was removed in 1908. It may be a remnant of the medieval Castle Gate, probably constructed in the 15th century, partially demolished in 1788 and totally demolished in 1906. However, it could also be derived from other medieval or post-medieval structures in the vicinity.

Salisbury

Grasmere Hotel SU139 290; Post-medieval and Modern

A watching brief was undertaken during the demolition of an existing extension and construction of a new four-storey extension to the hotel, along with the formation of additional parking areas and associated drainage. Much of the area in the vicinity of the hotel exhibited modern disturbance. Elsewhere garden soils and clayey subsoils were exposed. No pre-modern features or finds were recovered.

Salisbury

Salisbury District Hospital (SU 15200 27500)

Seven evaluation trenches were excavated within a single plot of land of 1.25ha at Salisbury District Hospital in advance of development of car parking area. No significant archaeological features or deposits were discovered. The work was undertaken by Wessex Archaeology.

South Marston

Land adjacent to the A420 (SU 1915 8675); Medieval, Post-medieval and Undated

An evaluation was carried out by Cotswold Archaeology to accompany an application for planning consent for development of the site. Three ditches were identified; one was medieval in date, one post-medieval and the other undated. It is likely that the medieval and post-medieval ditches represent activity directly associated with the adjacent farm, which is believed to be part of a shrunken medieval settlement. The undated ditch may represent cultivation activity also connected with the farm.

Staverton

Land between New Terrace and Marina Drive (ST 8580 6035); Late Neolithic/Early Bronze Age, Iron Age, Romano-British and Post-medieval

An evaluation was undertaken by Cotswold Archaeology in advance of the proposed construction of a link road. A number of significant features were revealed in trenches situated near the top of a south-facing slope, which appeared to have been exploited for settlement and agricultural purposes since the Late Neolithic. Features of Late Neolithic/Early Bronze Age date were recorded, including a pit or gully containing Beaker-type pottery and flint artefacts indicative of domestic, rather than funerary, activity. Iron Age pits and postholes, Romano-British ditches and shallow linear features and a post-medieval pit were also recorded. Further downslope, a small number of undated features were identified.

Steeple Langford

Corpus Christi Barn, Duck Street (SU 03740 37389); Modern

A photographic, drawn and written description of a military heraldic device situated on the inner face of the south gable of Corpus Christi Barn was made by Michael Heaton prior to partial destruction of the feature during building conversion. The device – an inverted pyramid of 15 red bezants over the logo “One and All” – was used by a Reserve Battalion of the Duke of Cornwall’s Light Infantry, one detachment of which was training at nearby Codford during the early years of World War I.

Southwick

Cutteridge Farm (ST 843 533); Romano-British

Two evaluation trenches dug by Michael Heaton, representing 7% of the footprint of a proposed large country house adjacent to Cutteridge Farm at Southwick in West Wiltshire, revealed a shallow gully containing a sherd of Romano-British pottery and a fragmented human femur, sealed beneath artefactually sterile subsoils. The pottery and disarticulated human bone within it are considered to be residual material derived from earlier disturbances of Romano-British graves known to have existed approximately 100m north-west of the site.

Swindon

Great Western Railway Works, (SU 143 850); Post-medieval and Modern

An archaeological assessment of the former GWR works was undertaken by Cotswold Archaeology. Subsequent field evaluation, prior to redevelopment, revealed extensive and well-preserved 19th- and 20th-century structural remains including floors, footings and other below-ground remains of the 1847 Smiths Shops, the 1861 Rolling Mill and Central Boiler Station and the 1896 Points and Crossings Shop, Iron Store and Stamping Shop. While the truncated remains of these structures in isolation are not of particular archaeological value they do have significance by virtue of being intrinsic elements of the GWR site, the largest integrated railway works in Britain at the end of the 19th century.

Swindon

Hreod Parkway School (SU 1285 8670); Iron Age

In August 2003 Oxford Archaeology (OA) carried out a field evaluation at Hreod Parkway School, North Swindon, on behalf of Swindon Borough

Council. The evaluation followed an earlier phase of work at the same site carried out by OA in March 2003. Five trenches measuring 50 m in length were opened in the course of the works, targeting anomalies identified by geophysical as being of archaeological significance. The evaluation revealed significant archaeological remains in one trench only, suggesting localised Iron Age activity in the form of postholes. An undated hollow was also recorded. The majority of the site exhibited extensive layers of imported soil, ‘made ground deposits’, of recent date. Ten abraded sherds of pottery were recovered from one postpipe, for which an early to middle Iron Age date is suggested. These will be held by Oxford Archaeology and will be deposited with Swindon Museum and Art Gallery in due course.

Trowbridge

The Conigre/Broad Street (ST 8540 5814); Medieval and Post-medieval

An archaeological evaluation by Bristol and Region Archaeological Services at the Conigre and Broad Street in the centre of Trowbridge revealed a number of Lias limestone walls typical of the many 17th- and 18th-century houses that covered the site until as recently as 1934. A number of these structures were traceable on the 1887 and 1937 Ordnance Survey plans. A significant amount of 11th- to 13th-century pottery was also recovered, associated with a linear feature that could perhaps represent a boundary ditch of the early medieval town.

Trowbridge

Ushers Brewery (ST 8550 5800); Medieval and Post-medieval

In March 2002, an archaeological evaluation was undertaken by Bristol and Region Archaeological Services on land formerly owned by the Ushers Brewery. Work at the main brewery buildings on Manvers Street revealed no significant archaeology. However, excavations at the former bottling plant, to the north of Church Street, revealed a number of postholes and linear features associated with the expansion of the medieval town in the 12th century. The foundations of the 17th-century Conigre House were also identified.

Urchfont

Manor Farm (SU 0408 5715); ? Late Neolithic/Bronze Age

An evaluation was undertaken by Cotswold Archaeology. Two ditches and a gully were excavated

to the east of the farm buildings. A small assemblage of Late Neolithic or Bronze Age worked flints was recovered from the fills of the above features.

Warminster

Warminster School (ST 870 453); Iron Age, Roman and Post-medieval

A single trench dug by Michael Heaton, represented 6% of the footprint of a proposed new science block at Warminster School in West Wiltshire. The cutting revealed a number of features of post 18th-century date within generally artefactually sterile soils from which a single sherd of late Iron Age or early Roman pottery was recovered.

Westbury

Kendrick's Garage (ST 87280 51490); Medieval–Post-medieval

Wessex Archaeology undertook a preliminary archaeological evaluation of land at Kendrick's Garage, Westbury where it was proposed to demolish three garage buildings and construct thirteen houses. Three trenches were mechanically excavated while the site was still in use as a garage and second-hand car lot. Archaeological remains were encountered in all three trenches, demonstrating the survival of occupational remains from the medieval period onwards. In trench 1, fronting on to West End, was an area of made ground, possibly representing the remains of a house platform. Post-holes and a beamslot suggest that a later building was constructed. Although none of these features was directly dated, post-medieval pottery was recovered from the area. Trench 2, running alongside Edward Street, contained two ditches and three pits of medieval and post-medieval date. Stone footings for a sleeper beam overlay the ditches suggesting a timber-built structure, while both stone and brick foundations were identified against the western edge of the trench. These probably date to the last two centuries, although the stone foundations may represent an earlier phase of building. The third trench with a property fronting on to Maristow Street, contained a medieval ditch, aligned north-north-east to south-south-west, the fills of which had been cut by a post-medieval pit.

Westbury

Madbrook Farm (ST 872 497); Mesolithic to Modern
Fieldwalking by Mark Corney and Michael Heaton of five plots totalling an area of 38ha along parts of the proposed eastern route of the Westbury by-pass recovered significant patterns of artefact distribution

indicating the presence of human activity from the Mesolithic to the present day. The most significant groupings were of prehistoric date, mainly lithic scatters, and evidence of an actively weathering Late Bronze Age/Iron Age midden site near Beggars Knoll.

Westbury

Storrige Farm (ST 8530 5245); Medieval and Post-medieval

A field evaluation on land adjacent to Storrige Farm was carried out by AC *archaeology* during November 2002. The work comprised a detailed survey of surface features and the machine-excavation of eleven 30m x 2m trenches. The site contains the well-preserved remains of a water meadow system of the common and widespread 'ridge and furrow' type. The associated structural elements indicate a 19th-century date for its construction. Excavation of trenches provided profiles through these earthworks, but also revealed evidence for earlier activity in the form of linear ditches containing finds of early medieval date. In one of these ditches, located in the NW corner of the field next to Storrige Farm, the quantity of pottery recovered and the large unabraded size of individual sherds, suggests that settlement of this date must be close by, either immediately to the east, or most probably beneath the existing farm complex. Other ditches identified on the site are likely to relate to early field boundaries pre-dating the construction of the water meadows.

Winterbourne Monkton

The Cottages (SU 0970 7190); Medieval

In November 2002 Oxford Archaeology (OA) carried out an archaeological watching brief at 'The Cottages', Winterbourne Monkton. The work was commissioned by Bybrook Developments in advance of a barn conversion and renovation to cottages. The watching brief revealed two undated features pre-dating the cottages. The barn dates to the post-medieval period. A fragment of medieval carved limestone basin was recovered from the disturbed soil underneath the barn floor, which will be held at Oxford Archaeology and finally deposited at WANHS Museum, Devizes.

Winterbourne Stoke

A303 Stonehenge: Areas R and T (SU 112 416–138 419); Prehistoric

Wessex Archaeology undertook the archaeological evaluation of the Preferred Route of the A303

Stonehenge Improvement in Wiltshire, Areas R and T, which lie south of the A303 and include Stonehenge Bottom, King Barrow Ridge and land as far east as Stonehenge Road. The northern part of Area R contains a Scheduled Monument (long barrow, SM 10314), and the remains of a milestone (Listed Grade II, Amesbury 5/7) are situated adjacent to the A303 within Area T. The underlying geology comprises Middle Chalk. Periglacial and colluvial deposits are known to exist in Stonehenge Bottom. Evaluation comprised the excavation of 29 trial trenches. Features of archaeological interest were found in only four of these. A sequence of periglacial and colluvial deposits was recorded in Stonehenge Bottom. A buried ditch previously recorded from cropmark evidence as Site 518 was recorded in Site R and produced Bronze Age worked flint. Other features consisted of an undated gully and an irregular linear feature thought to be a former hedgeline in Area R, and a former hollow way and associated cart ruts, together with traces of the former Stonehenge airfield, in Area T. Only a few worked flints and animal bones were recovered and no pottery. Trenches were variously targeted to examine features predicted by geophysical anomalies or cropmark evidence but only one trench successfully encountered a cropmark feature. In only three trenches were the anomalies found to represent buried archaeological remains; otherwise they represent natural features or variations in the chalk substrata.

Winterslow

Roman road, Middle Winterslow SU237 331; Modern A watching brief was undertaken during the excavation of wall foundation trenches for two new houses close to the presumed course of the Roman road in Middle Winterslow. Observations of the trench sections observed a thin topsoil overlying 800mm of silty clay which in turn sealed natural clay-with-flints and bedrock chalk. No pre-modern archaeological features, deposits or individual finds were noted.

Wroughton

Swindon Data Centre (SU 1600 7935); Modern The Oxford Archaeological Unit (OA) carried out a field evaluation at the Swindon Data Centre on

behalf of Watkins Gray International LLP in July 2003. A line of postholes and a pit were found beneath the remains of modern levelling of the site and subsequent deposits of made-ground indicating possible modern construction of the World War II hospital. These are considered to be modern and no finds were recovered.

Wylve

A303 Wylve to Stockton Wood Improvement (ST 9910 3654 to ST 9600 3538); Prehistoric–Medieval

Wessex Archaeology carried out an archaeological appraisal of land along the line of the present A303 between Wylve and Stockton Wood in advance of proposed road improvements. The area contains a large number of archaeologically significant features, ranging from boundary and field systems, possible barrows, and a Roman road and settlement. Two scheduled monuments lie close by: the 70ha complex of Stockton Earthworks (WA 7) 200m to the north of the road corridor and a section of the substantial bank and ditch of Grim's Ditch (WA 8), which is crossed by the route of the proposed improvement. An 18th-century milestone (WA 22) lying 200m to the west of the western end of the proposed road improvements is included on the Register of Grade II Listed Buildings. A Roman Road is projected as running through the western half of the study area and is crossed by the current line of the A303. Recent fieldwork found no surviving traces at the estimated crossing point, although the road and associated features may be recoverable elsewhere. Undated field systems and enclosures/boundary ditches cover a large area of the eastern half of the study area (up to 40%), bisected by the A303 (WA 9-14 and 19). While some of these field systems have suffered damage from ploughing, a number of elements have survived in good condition. Two cropmarks denoting the sites of possible barrows (WA 3 and 4) have also been identified close to the road corridor. The potential for the survival of early archaeological evidence, both on the line of the present A303 and in its immediate surroundings, must be considered very high, with the potential for surviving remains of regional or national importance.

Index

by Philip Aslett

NOTE: Wiltshire places are indexed or referenced under civil parish. Page numbers in italics refer to figures; page numbers in bold refer to tables.

- A303 Trunk Road (Stonehenge Improvement), 307–8
- Aberystwyth (Ceredigion), 87n
- Abingdon (Oxfordshire), 123
- Abury *see* Avebury
- Abyssinia, 275
- AC *archaeology*: evaluations, 302, 304, 307; excavations, 300; watching briefs, 303, 305
- Academy of Natural Sciences (Philadelphia), 27, 33
- Accipiter nisus* (Sparrowhawk), 262, 270
- Accum, Friedrich Christian (1769–1838), 5
- Acer campestre* (Field Maple), 16, 23
- Acer cappadocium* (Coliseum Maple), 23
- Acer platanoides* (Norway Maple), 23
- Acer pseudoplatanus* (Sycamore), 15
- Aceraceae (maples), 22, 23
- acetolysis, 71, 135
- Acheulian culture, 273, 275
- Act of Indemnity (1674), 101
- Acton (Greater London), 123
- acts of Parliament, 295
- Adams, Richard, **40**, **42**, **47**, **48**, 53; accounts, 56, 57, 58; cloth marks, 61
- Addington, Henry, 1st Viscount Sidmouth (1757–1844), 4, 8, 9, 10
- Addison, Joseph (1672–1719), 2
- Adlam, George, **39**, **42**, **47**; accounts, 50–1
- Adlam, John, **39**, **47**, **48**, 50; accounts, 59, 60
- Adlam, Robert, **38**, **39**, **42**, **47**, **48**; accounts, 46–7, 59, 60; activities, 49
- Adlam, Robert, the younger, 53
- Adlam, William, **37**, **39**, **40**, **47**, **48**, 53
- Adlam, William, the elder, **39**, **48**; cloth mark, 61
- Adlam, William, the younger, **39**, **48**, 54
- Adolphus, Gustavus (1594–1632), 2
- Adoxa moschatellina* (Town-hall Clock), 263
- Adrena* spp. (bees), 298
- adult literacy, 1
- Aegithales canolatus* (Long-tailed Tits), 270
- Aegopinella nitida* (mollusc), 127
- aerial photography, 236, 239, 262, 280, 301
- Aesculus carnea* (Red Horse Chestnut), 17; diseases, 18
- Aesculus carnea* 'Briotti' (Red Horse Chestnut), 18, 24
- Aesculus hippocastanum* (Horse Chestnut), 17, 24
- Aeshna cyanea* (Southern Hawker), 266
- Aeshna grandis* (Brown Hawker), 266
- Aeshna mixta* (Migrant Hawker), 266
- Aethusa cynapium* (Fool's Parsley), 97
- Affanwell, Nic., 47
- Afghanistan, 276
- Africa, 276
- agricultural essays, 5
- agricultural labourers, 34n, 274
- agricultural machinery, 4–5, *see also* ploughing
- agricultural riots, 34n
- agricultural societies, 4
- agriculture, 133, 137, 140–1, 245; Bronze Age, 187, 243; improvements, 4–5; mixed, 130, 131–2, *see also* cultivation
- air raids, 280
- aircraft, 252
- airfields, 308
- Albania, 17
- Alcedo atthis* (Kingfisher), 269
- Aldbourn, 275, 300; Chandler's Farm, 275; North Farm, 276; Sugar Hill, 275
- Aldeburgh[?] (Suffolk), ships, 58
- alders, 16, 261, 262, 263; pollen, 71, 135, 137, 177, 231, 232
- ale, 43, 53; measures, 62
- Alexander Keiller Museum, 287
- Alexander Turnbull Library (New Zealand), 27
- Alfred, King, 280
- Alkins' Royal Menagerie, 10
- All Cannings: All Cannings Cross, 189, 191; Tan Hill, 10, 92, 93, 198
- Allen, G. W. G., 280
- Allen, Michael J.: note on Folly Bottom, 234; note on land molluscs from Earl's Farm Down, 238–41; note on land snails from Whitesheet Down, 171–4; note on land snails from Whitesheet Quarry, 191–2; note on stratigraphy of Avon Valley, 228–9; paper on millennium re-investigation of the Corton Long Barrow, 63–77; report on archaeological and environmental study of Avon Valley/Durrington Walls environs, 218–48; report on investigation of the Whitesheet Down environs, 144–96
- Allen, William, **40**, **49**, 53; cloth mark, 61
- Allerod Interstadial, 231
- Allington, 237
- alluvium, 72, 219, 228, 233
- almanacs, 2
- Alnus* spp. (alders), 176, 231, 232
- Alnus glutinosa* (Common Alder), 16, 135, 261, 262, 263
- Alton: Knap Hill, 258; Walker's Hill, 258
- Alway, John, **40**
- Alwen, Mr, **80**
- Amati family, 6
- Amazing Pig of Knowledge, The, 10
- Amazonian rainforests, 17
- amber objects, beads, 200, 300
- Ambers, Janet, 154
- America, 5
- America's Cup, 249
- Amesbury, 219, 242; Beaulieu Road, 300; Boscombe Down, 243; Boscombe Down West, 189; Coneybury Anomaly, 227; Countess Road, 300–1; Earl's Farm Down, 219, 220, 234–41, 243, 245, 300; Fargo Plantation, 275, 276; Folly Bottom, 219, 220, 234, 243, 300; King Barrow Ridge, 71, 224, 226, 238, 243, 308; Longbarrow Clump, 220, 234, 243, 245; milestones, 308; Ratfyn, 244, 245; Skye House, 300; Solstice Park, 300; Stonehenge Bottom, 308; Stonehenge Road, 300, 308; Totterdown, 244; Totterdown Clump, 300; Vespasian's Camp, 300; Woodhenge, 232, 233, 242, 243, 244, 245; Woodlands, 244, *see also* Stonehenge
- Amesbury Hundred, 92
- Amiens, Peace of (1802), 9
- AML (Ancient Monuments Laboratory), 302
- ammonites, 33
- Ammonites benettianus*, 25
- amphibians, bones, 238
- Anabaptism, 101
- Anacardiaceae (cashews), 22
- Anagallis tenella* (Bog Pimpernel), 265
- Ancient Monuments Directorate, 278
- Ancient Monuments Laboratory (AML), 302
- Andersen, S. T., 135
- Anders, Leonard, 58
- Anover (Hants), Old Down Farm, 189
- Andrews, Charles William (1866–1924), 284n
- Andrews and Dury, map (1773), 2, 87n
- Angelica sylvestris* (Wild Angelica), 259, 260, 262, 268
- Angle Ditch (Dorset), 139
- Anglers' Co-operative Association, 249
- Anglesey (Wales), 80, 82, 86
- angling, 249, 250, 252–3
- Angling Times*, 253
- Anglo-Saxon Chronicle*, 280
- Anguilla anguilla* (Common Eel), 238
- animal bone *see* bone, animal
- animal husbandry, 133
- Anisus leucostoma* (mollusc), 33n, 127, 128
- Anisus vortex* (mollusc), 33n
- Annals of Agriculture, The* (1784), 4
- Anne, Edward, 6
- Anne Fortune* (ship), 59
- Annual Register, The*, 5
- Anstie, Amelia, 6
- Anstie, Benjamin, 2, 6
- Anstie, John, 2, 4–5
- Anstie, Samuel, 6
- Anstie family, 5
- anthicid beetles, 298
- Anthocharis cardamines* (Orange-tip), 266–8
- Anthophora* spp. (bees), 298
- Anthophora plumipes* (bee), 298
- Anthropological Institute, 203
- antiquarianism, 82
- antiquarians, 25, 30, 80; France, 199; Wiltshire, 99
- antique dealers, 274
- antlers, 128, 167, 169, 170, 185, 227; fragments, 130, 132; worked, 109, 140, 227, 244
- Antonye* (ship), 57
- Antwerp (Belgium), 35, 43, 50, 54; Bourse, 36; cloth marts, 36
- Aphantopus hyperantus* (Ringlet), 268
- aphids, 17; predators, 98
- Apodemus flavicollis* (Yellow-necked

- Mouse), 270
Apodemus sylvaticus (Woodmouse), 270
 apothecaries, 5
 apprentices, 36, 54, 101, 102
 apprenticeships, 35
 aquaria, 253
 aquatic plants, 138
 Aquifoliaceae (holly), 21
 Arable Weed Survey of South Wiltshire (1999), 98
 Arable Weed Survey of South Wiltshire (2003), 95–8
 arable weeds, 232; surveys, 95–8
Araneus diadematus (spider), 266
Araneus marmoreus (spider), 266
 Araucariaceae (Chile pine trees), 19
Archaeologia, 65
 Archaeological Institute, 297
Archaeological Journal, 297
 archaeological societies, and social class, 281
 archaeology: amateur, 273; professionalisation, 273
 Archer, Robert, 45
Ardea cinerea (Grey Heron), 270
 Arkell, William Joselyn (1904–58), 281, 282
 Armitage, P. L., 128
 arms (heraldry), 30, 306
 Army, in World War I, 306
 arrowheads: Neolithic, 164; Late Neolithic, 226; chisel, 226, 244; Clark's type C, 226; Clark's type D, 244
 artefacts, transport, 166
 arthritis, 32
 artisans, 10
 artists, 6, 250, 252–4
 arts, 11, 12; in 18th century, 5–7, *see also* music; paintings; theatres
 Arundell, Aeddán, 295
 Arundell, Edith, 295
 Arundell, Henry, 295
 Arundell, Henry, 5th Lord Arundell, 295
 Arundell, Henry, 8th Lord Arundell of Wardour, 294, 295
 Arundell, James Everard, 9th Lord Arundell of Wardour, 294, 295
 Arundell, John Francis, 12th Lord Arundell of Wardour (1831–1906), 295
 Arundell, John Francis, 16th Lord Arundell of Wardour (1907–44), 295
 Arundell, Robert, 295
 Arundell, Rudolphus (d. 1841), 295
 Arundell family, estates, 294–5
Arocolita terrestris (Water Vole), 270
 ash, 151, 152
 ash trees, 15, 24, 262, 268; charcoal, 174, 192, 245; felling, 175; pollen, 232
 Ashbee, P., 66
 Ashbury (Oxfordshire), 277, 280
 Ashdown, Battle of, 280
 ashlars, 216
 Ashlocke, Thomas, 39, 40, 47, 48; accounts, 58; cloth mark, 61
 Ashmolean Museum, 200, 273, 275, 277–8, 282, 283, 284n, 287–8
 Ashton Keynes, 108, 301
 Askins, Martin, 271; note on spiders at Vera Jeans Nature Reserve, 266
 Assizes, 8
 Astley, Sir John Dugdale (1828–94), 34n
 Athelstan Museum, collections, 288
 Atkinson, Richard John Copland (1920–94), 82
 Atlantic, 231
Atrichopogon spp. (midges), 298
 Aubrey, John (1626–97), 84, 85, 87, 204; *Monumenta Britannica* (1980), 207; on stone circles, 199
 aughting, 71, 72, 219, 220, 234, 237; advantages, 74; barrows, 63, 67; ditches, 66; logs, 76; procedures, 68; soil samples, 69
 aulnagers, 50, 52
Austroptamobius pallipes (White-clawed Crayfish), 259
 Avebury, 79, 82, 87, 205, 282; agriculture, 4; Alexander Keiller Museum, 287; Avebury Down, 197; Avebury Manor, 280, 301; Avebury Park, 301; Barn, 301; Bath Road, 278; Beckhampton, 203, 278, 302; Beckhampton Avenue, 301; Beckhampton Road, 71; church, 198; excavations, 274; Falkner's Circle, 301; flintwork, 282; henge monument, 72; Horslip Long Barrow, 69, 70, 71; Horton Down, 302; Kennet Avenue, 84–5, 278, 281; Longstones, 301; Marlborough Road, 86; Morganwg on, 79–80; Overton Hill, 82, 83; Sanctuary, 206, 207, 278; sarsens, 84–5; South Street Long Barrow, 69, 70, 71, 177; standing stones, 301; stone circles, 197, 202, 206, 207, 278–9; West Kennet Avenue, 226; West Kennet Long Barrow, 69, 70, 71; wireless tower, 280, *see also* Silbury Hill; Windmill Hill
 avenues, 200, 203, 207
 Avon, River (North), 211
 Avon, River (South), 255, 257, 300; habitats, 258–65, 267
 Avon Valley, 37; archaeological and environmental studies, 218–48; geology, 219, 228–9; vegetational history, 228–34, 242
 axe-hammers, 276
 axes: Neolithic, 74, 164, 166, 301; flint, 160, 220, 226, 275; Graig Lwyd type, 244; sarsen, 275; stone, 275; volcanic rock, 185, *see also* hand-axes
 Ayre, John, 58
 Ayre, William, 47
 Azores, 249
 backword contests, 10
 bacteria, intracellular, 17
 badgers, 253, 271
 badges, pilgrim, 293–4
 Bagshot Beds, 206
 Baker, John, 39, 47, 55–6n
 Baker, John (fl. 1526–35), 49
 Baker, John (fl. 1814–50), 26, 33n
 Baker, Mr, 7
 bakers, 3, 9
 Baldwin, Thomas, 7
 ballads, 6
 balls (dances), 8, 9, 12
Bamis mart, 36, 46, 50, 54
 bands, 9
 bankers, 5
 Banks, Benjamin (1750–95), 6
 banks, 139, 302; Neolithic, 151
 Banwell, Edward, 40, 48; accounts, 57, 58; cloth mark, 61
 Banwell, Richard, 60
 Banwyn, John, 60
 Barbados, Archdeacon of, 29
Barbor (ship), 60
 Barclay, Alistair, note on fired clay from Lutton Lands, 126
 bardic ceremonies, 85
 bards, 79
 bark beetles, 18
 Barking, ships, 45
 Barle, John, 53
 barley, 192
 Barnes, J. O'N., 284n
 Barnes, Symond, 45
 Barnes Collection, 282
 barns, 211–17, 302–3, 307; tithe, 211, 216
 Barr Stone, 30
 Barrow *see* Bergen-op-Zoom (Netherlands)
 Barrow Hills (Oxfordshire), 179
 barrows, 199, 220, 274, 300, 308; prehistoric, 93; Neolithic, 63–77, 234, 304; Bronze Age, 71, 74, 139, 187, 243, 304; bowl, 146; disc, 219; discovery, 278; excavations, 275, 276–7, 280; long, 63–77, 177, 200, 245, 275, 280, 281, 301, 304; ovoid, 66; round, 71, 123, 139, 146, 197, 200, 208, 220, 302, 304; siting, 72–4; viewsheds, 72–4
 Barry, Robert, 45
 Bartington MS2B meter, 68
 Bartlow Hills (Essex), 277
 Bartram, Bennett, 58
 Barwis, William, 6
 basins, limestone, 307
 Bath, 6, 7, 11, 30, 211; coach roads, 83; coaches, 26; florists' feasts, 3; social events, 8; stone quarries, 80
 Bath and North East Somerset *see* Stanton Drew
 Bath Road, 83, *see also* Old Bath Road
 Bath Stone, 12
 Bath and West Society, 5
 Bathe, Joan, 40, 49, 51–3; cloth mark, 62
 Bathe, Richard, 39, 48; *alias* Whitacker, 51, 52, 55n; cloth mark, 61
 Bathe ([Baythe]), Robert, 39, 40, 47
Bathyomphalus contortus (mollusc), 33n
 Batte [Bates], Richard, 37, 38, 39, 42, 44, 47, 48; accounts, 43, 45, 51, 56, 57, 58, 59, 60; activities, 52; defective cloth, 50; goods, 54
 Baxter, William, 57, 58
 Bayley, Thomas, the elder, 40, 43, 45, 48, 53, 54; accounts, 42
 Baylyff [Bayley], Thomas, 40; accounts, 59, 60
 Baynton, Sir Edward, 46, 49
 BBC (British Broadcasting Corporation), 254
 beads, 275; Saxon, 275; amber, 200, 275, 300; faience, 300; glass, 93; jet, 300; shale, 300; stone, 276
 beakers, 200; collared, 180, 187; decorated, 301
 Bear Club, 6; Feast (1784), 9
 bears, 244
 Beaumont, Francis (1584–1616), 2
 beavers, bones, 222, 227, 228
 Becker, B., 231
 Becket, Thomas à (1118–70), 293
 Beckington (Somerset), 38
 Bedfordshire *see* Whipsnade
 bedstraws, 179, 261
 beeches, 16, 23, 65–6, 69, 176, 177
 beef calcite, 157
 beer, 43, 53; measures, 62
 bees, 262, 271, 298; leaf-cutter, 266
 beetles, 18, 262, 266, 269, 271, 298–9
 Belgium *see* Antwerp
 bells, horse, 200, 275
 belted Galloway cattle, 257, 259, 260, 263, 265, 270
 Beminster, Miss, 26, 33n
 Benett, Catherine, 25
 Benett, Etheldred (1775–1845): *A Catalogue of the Organic Remains of the County of Wiltshire* (1831), 26; 'Catalogue of Wiltshire Fossils' (1831), 25, 26; correspondence, 25–34; illnesses, 27; obituary, 32; silhouette, 30
 Benett, John (1773–1852), 26, 27–9, 34n
 Benett, Thomas (1729–97), 25
 Bennet, William, 55n
 Bennett, John, 40, 48, 53; accounts, 56, 57; cloth mark, 61
 Bentinck, William Henry Cavendish, 3rd Duke of Portland (1738–1809), 3
 Bergen-op-Zoom (Netherlands), 35, 44, 50, 52, 53; cloth marts, 36
 Berkeley(?) (Gloucestershire), 59; ships, 52, 53, 58
 Berkshire Archaeological Society, 274

- Berula erecta* (Lesser Water-parsnip), 262
 Berwick St James: Bakes, 97; Big Pasture, 97; Lamb Down, 97; Langford Down, 97; Langford Hill, 97; Night Pasture, 97; Rag Bake, 97; Well Down, 95, 97, 98; Well House, 97; Yardfield, 97
 Berwick St John, Church Street, 302
Betula spp. (birches), 137, 231
Betula pendula (Silver Birch), 16
Betula pubescens (Downy Birch), 16
 Betulaceae (birches), 20
 Bevan's Quarry (Gloucestershire), 123
 Biam/njs, William, 57, 60
 Bible, 2
 Bignoniaceae (bignonias), 22, 24
 Binckes, Almon, 57
 biodiversity, field margins, 95
 birch trees, 16, 20, 137, 231
 bird watching, 252
 birds, 269–70, 271; migratory, 269
 Birks, H. J. B., 135
 Bishops Cannings: Easton Down Long Barrow, 70, 71; Horton Down, 302
 Bishopstrow, clothiers, 39, 42, 47, 48, 59, 61
 bivalves, 32
 black canker, 18, 19
 black pines, 16
 blackberry, 183
 Blackburn, Elizabeth, 2, 4, 6
 Blackdon, William, 40, 48, 54; accounts, 57, 58, 59, 60; cloth mark, 60
 Blackmoor Vale, 146, 184
 blackthorn trees, 17, 175
 blades, flint, 161, 163, 164–5, 166
 Blagdon, John, 39, 47
 blue-green algae, 17
 bluebells, 263
 Blunsdon St Andrew, Groundwell Ridge, 302
 Board of Agriculture, 82
 boars, 132, 170
 Boehme, Jacob (1575–1624), 102
 Boer Wars (1899–1902), 275
 Boessneck, J., 128
 bogs, 265
 Bolton, Herbert (d. 1936), 276, 282
 bone:
 animal, 140, 183, 185, 187, 200, 244 (prehistoric, 308; Neolithic, 150–1, 153, 154, 166, 167–71; Late Neolithic, 220, 221, 222, 223, 226–8; Late Neolithic/Early Bronze Age, 155; Bronze Age, 118; Middle Bronze Age, 109, 115, 128–33; Late Bronze Age, 238; Iron Age, 188; Romano-British, 237; ageing, 128; analysis, 128–9; erosion, 167; metacarpals, 130, 167; phalanges, 167, 170, 227; taphonomy, 128, 132–3; tibias, 131, 132, 133, 227); burnt, 108, 128, 134, 151, 180, 275; disarticulated, 223, 303; fossilized, 275; human (Neolithic, 63; Middle Bronze Age, 133–5; Early Anglo-Saxon, 89, 90; analysis, 133; burnt, 64; crania, 115, 125, 133, 140; femurs, 89, 90, 115, 125, 134, 140, 306; lumbar vertebrae, 90; metacarpals, 89, 133; pelvic bone, 89; thoracic vertebrae, 89, 90); mammals, 167; radiocarbon dating, 89, 90, 150–1, 186, *see also* cattle bones; pig bones; sheep/goat bones; teeth
 bone nodules, 90
 bone objects, 244
 bonfires, 9
 book clubs, 2
 book collecting, 1–2, 11
 book collections, sale, 2–3
 book sales, 2–3
 book societies, 2
 Book of Trades, The (1818), 2
 bookplates, 200
 books, 5; subscribers, 2
 booksellers, 3; sheet music, 6
 bookshops, 1, 2
 Boreal, 231, 233
 boreholes, 228
 Bos primigenius (aurochs), 170
 Botanical Magazine, 3
 botanists, 4, 25
 botany: studies, 5, *see also* flowers; plants; trees
 boundaries, 308; Romano-British, 93; Middle/Late Saxon, 302; field, 140, 220, 307; hundred, 91, 92, 93, 302; parish, 92, 203, 302; ranch, 241
 Bourne, River, 92
 Bournemouth (Dorset), 123, 295
 bowling greens, 10
 bowls: Neolithic, 126; Early Neolithic, 157–8; Middle Bronze Age, 109; Iron Age, 124; Early Iron Age, 125; Early/Middle Iron Age, 189; carinated, 157–8, 189, 238; wooden, 107, 109, 126, 138, 140
 Bowood, 5
 boxing, 10
 Boyton: Barrow Hill, 63; Corton, 63, 70, 72, 73, 74; Corton Long Barrow, 63–77; Tenant Field, 63
 Braaid (Isle of Man), 203
 Brabant, Dr, 11
 Brabant family, 8
 bracken, 71, 233, 263; spores, 135, 177
 Bradford-on-Avon: Barton Grange Farm, 211–17, 302–3; fossils, 26; geology, 211; Great Tithe Barn, 211, 216; West Barn, 211–17, 302–3
 Bradley, R. J., 140, 241
 Brailsford, John William (1918–88), 277, 281, 282
 Braithwaite, William, 103
 brambles, 261, 270
 BRAS (Bristol and Region Archaeological Services), 306
 Bratton, Bratton Hill, 298
 Bray (Windsor and Maidenhead), 123
 Brede, John, 37, 39
 Brett, Colin, paper on Thomas Kytson and Wiltshire clothmen (1529–39), 35–62
 breweries, 279
 brewers, 4, 5, 43–4, 53
 brewing, 55n
 bribes, 49–50
 brickearth, 2
 bricks, 216, 304; hand-made, 215
 Bridges, Robert, 40, 48; accounts, 56, 57
 Bristol, 5, 6, 87n, 276; Back Street, 80; Baker's Yard, 80; coach roads, 83, 85; Henbury Camp, 276; motorways, 206; Orchard Street, 80, *see also* Clifton; Henbury
 Bristol City Museum and Art Gallery, 276, 282, 284n, 288
 Bristol Journal, 80
 Bristol and Region Archaeological Services (BRAS), 306
 British Broadcasting Corporation (BBC), 254
 British Magazine, 11
 British Mineralogy, 4
 British Museum, 31; and Passmore, 275, 276, 281, 282, 284n, 288–9; radiocarbon dating, 154
 British Numismatic Society, 273
 British Trust for Ornithology, Common Bird Census, 269
 Brittany (France), 207
 Britton, John (1771–1857), 202, 204; *Beauties of Wiltshire* (1800), 2
 Brixton Deverill, Cold Kitchen Hill, 146
 Briza media (Quaking Grass), 265
 Broad Chalke, Blick's Yard, 303
 Broad Hinton, 93, 198
 Broad Town: Broad Town Field, 92; inhumation, 89–94; Little Town, 92; Thornhill Lane, 93
 Broad Town Archaeological Project (BTAP), 89
 Broad Town–Broad Hinton Road, 93
 broadcloths, 43, 55n; exports, 37–40, 46–7, 48–9; prices, 42–3; purchases, 37–40, 50–4; sales, 39; sources, 37
 Broadway (Worcestershire), 298
 Bromham, 4; clothiers, 40
 Bromus secalinus (Rye-brome), 192
 bronze objects: figurines, 297; plaques, 296–7
 Broome Heath (Norfolk), 159
 Browne, Harry, 57, 58
 Bruce, Robert (1274–1329), 250
 Brutton, William, 2, 5
 Bryn Gwyddon, identification, 86
 bryophytes, 135, 271
 bryozoa, 121, 123
 BTAP (Broad Town Archaeological Project), 89
 Buckingham, Duke of, 35
 Buckland, William (1784–1856), *Reliquiae Diluvianae* (1823), 27, 33–4n
 Budge, Sir Ernest A. Wallis (1857–1934), 282
 Buffon, Georges Louis Leclerc, comte de (1707–88), *L'Histoire Naturelle* (1749–1804), 2
 builders, 7, 30
 building materials: medieval, 304; post-medieval, 304; 19th century, 304; timber framing, 304, 307, *see also* bricks; chalk blocks; tiles
 buildings: Roman, 200, 275, 302, 303; Romano-British, 92; ?medieval, 211–17; medieval, 303, 304, 305, 307; post-medieval, 305, 307; 17th century, 306; 18th century, 303, 306; 19th century, 306; Georgian, 304; lacustrine, 203; listed, 211, 304, 308; post-built, 301, *see also* barns; farmhouses; houses; round-houses; villas; walls
 Bulford, Bulford Down, 234
 bull baiting, 10
 Bulla fontanalis (mollusc), 27, 33n
 Bumbargym, Anthony, 50
 Burbage, 258
 Burford (Oxfordshire), 55n
 Burgh Castle (Norfolk), 277
 burials *see* cemeteries; cremation burials; inhumations
 Burl, Aubrey, paper on A. D. Passmore, 197–210
 Burnham, B. C., 284n
 Burrough, Thomas, 3
 Bury Hill (West Sussex), 185
 Bury St Edmunds (Suffolk), 35
 butchery, 167, 169, 170; Late Neolithic, 227; Middle Bronze Age, 129, 130, 131, 132; marks, 167, 170
 Buteo buteo (Buzzard), 269
 butterflies, 266–8
 buzzards, 269
 Byams, William, 60
 Bybrook Developments, 307
 Byng, John, 5th Viscount Torrington (1743–1813), 11
 Byron, George Gordon, 6th Baron Byron of Rochdale (1788–1824), *Don Juan* (1819–24), 2
 CA *see* Cotswold Archaeology (CA)
 cabinetmakers, 274
 cabinets, 3
 Caerleon (Gwent), 277
 cairns, 80, 83; flint, 66
 Cairo (Egypt), 275
 Calais (France), ships, 45, 52, 59
 calicicles, 255, 265
 calcifuges, 255, 265
 calcite, 157

- calcium carbonate, 224
Callimorpha dominula (Scarlet Tiger), 268
 Calne, 103; clothiers, 40, 61; cricket matches, 10; parish registers, 102
 Calne Without: Bowood, 5; Sandy Lane, 303; *Verucio*, 303; Wans Cottage, 303
Calopteryx splendens (Banded Demoiselle), 266
Caltha palustris (Marsh Marigold), 231, 260–1
 Cambridgeshire *see* Etton
 Camden, William (1551–1623), 83, 87; *Britannia* (1586), 87n
 Campbell, Thomas, 11
 Camperdown, Battle of (1797), 9
 canals, 108, 216, 257, 258, 266; excavations, 4
 canker, chestnut trees, 18
Cannabis spp. (hemp), 137
 Cannon, Jon, paper on Iolo Morganwg, 78–88
 Canterbury (Kent), 293
 cantharidin, 298
 canvas, 44, 47, 49, 55n
 Cape Town (South Africa), 275
Capreolus capreolus (Roe Deer), 170, 271
 Caprifoliaceae (elders), 22
Capsella bursa-pastoris (Shepherd's Purse), 97
 Carboniferous, limestone, 215
 card playing, 8, 11
Cardamine pratensis (Cuckooflower), 261, 268
Carex spp. (sedges), 135, 259, 264
Carex acutiformis (Lesser Pond Sedge), 260, 262
Carex disticha (Brown Sedge), 265
Carex nigra (Common Sedge), 265
Carex panicea (Carnation Sedge), 265
Carex paniculata (Greater Tussock-sedge), 262
Carex pulicaris (Flea Sedge), 265
Carex riparia (Greater Pond-sedge), 264
Carex rostrata (Bottle Sedge), 261, 265
Carex stricta (Tussock Sedge), 262
 carination, 157–8, 189, 238
 Carn Brea (Cornwall), 158, 166, 184
 Carnation Feast (Devizes), 3
carvedau (cairns), 80, 83
 Carpenter, Miss, 2
 carpenters, 276
 carpets, Turkish, 49
 carriages, 30, 31, 32
 carriages (ducts), 255, 257
 carriers, 54
 cars, 176, 255, 257, 258, 259, 261–3; Durrington, 231, 232
 cart ruts, 237, 308
 Carter, Howard (1873–1939), 284n
 Carus-Wilson, Eleanora Mary (1897–1977), 37, 45
 Carver, Martin, 92
Carychium spp. (molluscs), 171, 183
Carychium tridentatum (mollusc), 127, 171, 183, 239
 Case, Humphrey John (1918–), 273, 282
Castanea sativa (Sweet Chestnut), 17
 Castilly (Cornwall), 208
 Castle Combe, 55n
 Castlecombs (cloth), 37, 38n, 43, 55n
Castor fiber (European Beaver), 227
Catalpa bignonioides (Indian Bean Tree), 24
 caterpillars, 265, 268
Catherine (ship), 45, 52
 cattle, 133, 139, 186, 264; age data, 130; belted Galloways, 257, 259, 260, 263, 265, 270; draught, 130, 131; teeth, 130, 167
 cattle bones, 185, 227, 244; Neolithic, 151, 167, 169, 170, 171; Late Neolithic, 220, 222; Middle Bronze Age, 109, 118, 129–31; Iron Age, 188
 Cave, Alexander James Edward (b. 1900), 282
 Caxton, William (c.1422–91), *Chronicle* (1480), 3
Ceciloides acicula (mollusc), 127
 Ceirog Du, Mr, 80
 Celastraceae (spindle trees), 22
 cellos, 6
 cellulose, 71
 Celtic (language), 203
 celts, 275
 Cementation Skanska, excavations, 81–2
 cements, 83, 87n
 cemeteries: Bronze Age, 139; Roman, 301; Early Anglo-Saxon, 90; medieval, 304; round barrows, 22, *see also* execution cemeteries; inhumations
 Cenococcum geophilum (fungus), 192
 census returns, 284n
Centaurea spp. (knapweeds), 177
Centaurea cyanus (cornflower), 231
 Centre for Archaeology, 301, 302
Cepaea spp. (molluscs), 127
Cepaea nemoralis (mollusc), 33n
 ceramics *see* pottery
Ceratocystis novo-ulmi (fungus), 18
 cereals, 245; pollen, 137–8, 177, 232; remains, 135, 178, 179, 192
 Cerney Wick (Gloucestershire), 107
Certhia familiaris (Treetreeper), 270
Cervus elaphus (red deer) *see* deer
Chaenorhinum minus (Small Toadflax), 98
 chains, gold, 46, 49
 Chalk, 30, 157, 223, 224, 255, 257–8; burnt, 151; fossils, 26; soils, 71, 95, 150, 177, 179; woodland clearances, 232, *see also* Middle Chalk; Upper Chalk
 chalk blocks, 68, 76
 chalk downland, 15, 74
 chalk pits, 4
Chamaecyparis lawsonia (Lawson's Cypress), 16
 chandeliers, 6; Grecian, 8
 chapels, 304
 Chapman, John, 59, 60
 Chapman, Richard, 58
 Chapman, Robert, 58
 charcoal, 109, 115, 116, 118, 135, 185; Avon Valley, 228, 232, 234; Durrington Walls, 220; Stonehenge, 242; Whitesheet Hill, 151, 166, 174–5, 179–80; Whitesheet Quarry, 187
 Charleston, Robert Jesse (1916–94), 277, 282
 Charlton, Charlton Down, 296–7
 charters, Anglo-Saxon, 203
 Chaucer, Geoffrey (c.1345–1400), 3; *Canterbury Tales*, 293
Cheilosia pubera (hoverfly), 271
 Cheltenham Museum and Art Gallery, 289
 chemical apparatus, 5
 Chenopodiaceae (goosefoots), pollen, 135, 137, 231
Chenopodium album (Fat-hen), 97
Chenopodium quinoa (Quinoa), 98
 cherry trees, 15, 16, 17, 18; girth, 24
 Cheshire, cloth, 37
 chestnut trees, 15, 17, 24; diseases, 18; girth, 24
 Chichester (West Sussex), ships, 60
 Chicklade, 304
 Childrey, Joshua (1623–70), 83–4
 Chimney Sweeps Bill (1841), 30
 chimneys, maintenance, 30–1
 Chippenham, 296; and Muggleton, 99–105; parish registers, 102; St Andrew's Church, 102
 Chippenham Without, Lanhill Long Barrow, 281
 Chipping Sodbury (South Gloucestershire), 55n
 Chiseldon, 201, 203, 276; Burderop, 204;

- Burderop Wood, 204–5; Coate, 197, 200–4, 205, 206, 274, 277, 278; Coate Farm, 201; Coate Reservoir, 200–1, 203, 206, 207; Day House Farm, 200, 201–4, 207; Day House Lane, 203, 204, 210; Fir Clump stone circle, 204–5, 206–7, 210; Hodson, 200, 201, 204, 205, 206, 207, 210, 278; parish boundary, 203; Station, 205; Theobalds Cottage, 277
 chisels, flint, 275
 Cholderton, Beacon Hill, 237
 Christchurch (Dorset), 26, 33n
 Christian Kingship, 92
 Christianity, 93
Christofer (ship): of Aldeburgh[?], 58; of Milton Shore[?], 57
Chrysosplenium oppositifolium (Golden-saxifrage), 263
 Chub (fish), 250
 church festivals, 10
 churches, Perpendicular, 30
 Churn, River, 107, 108, 139, 140
 Cichoriaceae (chicory family), 298
 cinders, 215, 217
 Circle of Concord, 85
 circuses, 10–11
 Cirencester (Gloucestershire), 108, 284n
 civil wars (1642–51), 208, 275
 Clare, Robert, 10
 Clarke, Bob, paper on Early Anglo-Saxon burial at Boker Trow, 89–94
 Clarke, John, 45
 class (social), and archaeological societies, 281
 classification systems, 4
 clay, 151, 152; burnt, 115; calcareous, 234; fired, 108, 126, 188; sandy, 188; silty, 68–9, 109, 111, 112, 115, 116, 126, 135, 215, 220–1, 223
 Cleal, Rosamund M. J.: note on pottery from Durrington Walls, 223–4; note on pottery from Whitesheet Down, 155–60; report on archaeological and environmental study of Avon Valley/Durrington Walls environs, 218–48
 cleavers (plants), 97, 179, 260
 Cleevely, R. J., paper on the correspondence of Etheldred Benett, 25–34
 cleg flies, 271
Clethrionomys glareolus (Bank Vole), 167, 270
 Clevedon, John, 38, 54; accounts, 45, 57, 58, 59, 60
 Clevelode, T., 53
 Clifton (City of Bristol), 8
 climate, 208; prehistoric, 231
 clinker, 215
 clocks, musical, 6
 cloth: drying machines, 5; exports, 45, 46–7, 48–9; faulty, 50; marks, 51, 52, 60–2; measures, 62; prices, 42–3; woollen, 38n, *see also* broadcloths
Cloth Acts (1514, 1536), 43
 cloth fairs, 35
 cloth marts, 36
 cloth-finishing industry, 36
 clothiers, 4–5, 8; marks, 51, 52, 60–2; spatial distribution, 41; Wiltshire, 35–62
 clover, 258
Cludarr Cyvrongon (Mound of the Conventions), 86
 Clutton-Brock, J., 128
 Clyffe Pypard, 198; Cuff's Corner, 92, 93; Vicarage, 206
 Cnoc Fillibhir (Western Isles), 207
 coach roads, 83, 85; archaeological damage, 146, 148–9, 151, 185
 coaches, 26–7, 83
 coal miners, 79, 81
 coats of arms, 305
Cochlicopa spp. (molluscs), 127
 Cock Hill (West Sussex), 139

- cock-fighting arenas, 208
 cocks spur thorns, 18
 Cockyshed, William, 36
 Codford, 63, 145, 306; Codford Down, 63;
 East Codford Farm, 303
 Codford St Mary, Lamb Down, 74
coed (wood), 203
Coenagrion puella (Azure Damselfly), 266
 coffins, 223; wooden, 300, 304
 coins, 3, 197, 280; Roman, 200, 237, 238
coit (wood), 203
 Coke, John, 39, 48
 Coke, Thomas William of Holkham, Earl
 of Leicester (1752–1842), 5
 cockettes, 53
 Colchester (Essex), 277
 Colchester Museum, 289
Colchicum autumnale (Autumn Crocus), 4
 Cold Martins, 36, 54; 1531, 53; 1533, 50;
 1535, 45, 51, 58; 1536, 44, 56, 58; 1537,
 43; 1538, 43, 52
 Coldwell, William, 58
 Coleridge, Samuel Taylor (1772–1834), 11
 Coles, B., 227
 collecting: 18th century trends, 4;
 obsessive, 282
 collections, Passmore's, 274, 275, 278, 280,
 281–2, 287–92
 Collins, John, 2–3
 colluvium, 192, 219, 234, 243
 Collins, George, 36
 Colt Hoare, Sir Richard *see* Hoare, Sir
 Richard Colt (1758–1838)
 combs, Late Neolithic/Early Bronze Age,
 301
 Common Eel, 254
Complete Body of Gardening, A, 3
Complete Tutor to the Violin, The, 6
 Compositae (flowering plants), 177, 192,
 231
 concerts, 6, 11
 conchology, 25, 27
 conduit money, 44
 conduitors, 44
 conduits *see* culverts
 Congo, 249
 conifers, 16, 262
Conopodium majus (Pignut), 178, 179, 265
 Constantine, Mary-Ann, paper on Iolo
 Morganwg, 78–88
 consumer society, rise of, 1
 conversations, 8
 Conwy (Wales), Aberconwy, 80
 Cooke, Richard, 57
 Cooke, W., *The Way to the Temple of True
 Honour and Fame* (1773), 2
 cooking, 140
 Coombe Bissett, St Michael and All Angels
 Church, 303
 Cooper, John, 39, 42, 47; accounts, 36
 coopers, 6
 Cope, Alice, 46, 49
 coppicing, 175
 copying machines, 5
 coral, fossil, 121
 Corallian, 188, 211
 cores: flint, 161, 162, 223, 224, 225, 238, *see also*
 flintwork
 corn *see* grain
 corn dryers, 301
 Cornaceae (dogwoods), 22
 Corney, Mark, 307; note on survey of
 Whitesheet Down, 146–8
 Cornish (language), 203
 Cornwall, 81, 207; hundreds, 93; pottery,
 158, 159; tin, 44, 45–6, *see also* Carn
 Brea; Castilly; Lizard Peninsula
Corylus spp. (hazels), 231, 232
Corylus avellana (Hazel), 15–16, 137, 176–7
 Cotswold Aggregates, 304
 Cotswold Archaeology (CA): archaeo-
 logical recording, 300, 304; evaluations,
 305, 306–7; excavations, 305; watching
 briefs, 303, 304
 Cotswold Community (Gloucestershire),
 107–8, 140, 301
 Cotswolds, 107, 123, 211
 cottons, 37, 44, 49, 55n
Cottus gobio (Bullhead), 259
 Coulston, East Coulston, 51, 55n, 61, 62
 Counsell, Dominic, 271
 country pursuits, 10
 Countryside Stewardship Scheme, 95, 98
Courrier de l'Europe, 199
 Courts of Assistants of the Mercers, 35
 Cowbridge (Vale of Glamorgan), 86
 cows' ears, 200
 Crakeman, Thomas, 60
 Cranborne Chase: barrows, 68; pottery, 123
Crataegus spp. (thorns), 18
Crataegus monogyna (Hawthorn), 15, 18,
 261, 262
 Crawford, Osbert Guy Stanhope (1886–
 1957), 281; *The Long Barrows of the
 Cotswolds* (1925), 280
 crayfish, 259, 270, 271
Creel (magazine), 253
 cremation burials, 134, 244, 300; Middle
 Bronze Age, 139, 179
 Cretaceous, fossils, 25, 32, 33n
 cricket, 10
 Cricklade, 107, 199, 204; Weaver's Bridge,
 108
 criminals, inhumations, 89
Cristopher (ship): of Feversham, 45; of
 Maidstone, 45
 Crocker, Philip (1780–1840), 65
 cromlechs, 207
 cropmarks, 220, 237, 245, 308
 crops, arable, 139
 Cross, Richard, 40, 48; accounts, 59
 cross-roads, inhumations at, 89–94
 croziers, 293
 Cruciferae (herbs), 231
 Crudwell, Goldhill Quarry, 303
 crystallography, 4
 cubits, 197
 cuckoos, 269, 270
Cuculus canorus (Cuckoo), 270
 Cucumber Feast (Devizes), 3
 cultivation: prehistoric, 146; Middle
 Neolithic, 233
 culture, 2, 11; Acheulian, 273, 275;
 cosmopolitan *vs* popular, 1; Rinyo-
 Clacton, 226; urban, 1
 culverts: stone, 214, 216, 303; stone-lined,
 119, 141
 Cunnington, Edward Benjamin Howard
 (1861–1950), 280–1
 Cunnington, Maud Edith (née Pegge)
 (1869–1951), 243, 280–1, 289;
 excavations, 244, 245; fieldwork, 65–6,
 68, 74
 Cunnington, William (1754–1810), 26;
 excavations, 63, 66; fieldwork, 64–5, 68;
 survey error, 66
 Cupressaceae (cypresses), 19
 currency: English, 62; Flemish, 54, 62
 Curtis, Samuel (1779–1860), 3
 Curwen, E., 274
 Curwen, E. Cecil, 284n
 Curwen, Eliot, 284n
 Cutler, D., 174
 cyanobacteria, 17
Cydonia spp. (Quince), 18
Cylich Cyngnar (Circle of Concord), 85
 Cyperaceae (herbs), 231, 232
 cypresses, 16, 19, 24

 d-factors, 18
Dactylorhiza fuchsii (Common Spotted-
 orchid), 261, 264, 265
Dactylorhiza praetermissa (Southern Marsh-
 orchid), 261, 262–4

Daily Mirror, 252
 Dalton, Richard, 59
 dams, 257
 damselflies, 266
 dancing, 8, 11
 dandelions, 71, 135, 138
 Danebury (Hants), 189, 236
 Daniell, J. J.: *History of Chippenham* (1894),
 99; and Muggleton, 99, 100, 103, 104
 Danube basin, 36
 Darby, Michael, 271; note on beetles at
 Vera Jeans Nature Reserve, 269; note on
 other notable species at Vera Jeans
 Nature Reserve, 271
 Darby, Paul, 271
 Dark, Ken, 93
 Dartmoor (Devon), 197, 207; hut-circles,
 208
 dating (radiocarbon) *see* radiocarbon
 dating
 daubs, 188
 Davis, James, 3, 11–12
 Davis, Thomas, 5
 Davison, Harry, 57, 58, 60
 Davy, Thomas, 37
 Davy, Thomas (of Horningsham), 39, 48;
 accounts, 56, 57, 58
 Davy, Thomas (of Warminster), 47;
 accounts, 37
 Davy, Thomas (of Westbury), 39
 Dayll, Thomas, 60
 DCM (Distinguished Conduct Medal), 275
 de Harden, Anastasia, 255
 Deane Water, 258
 DED (Dutch elm disease), 18, 19
 deer: antlers, 109, 128, 132, 167, 169, 170,
 185; bones, 109, 128, 129, 130, 132, 227,
 244
 DEFRA (Department for Environment
 Food and Rural Affairs), 98
 demoiselles, 266
 dendrochronology, 304
Dendrocopos major (Great Spotted
 Woodpecker), 270
 denizens, 38n
 Denmark, King of, 44
 Department for Environment Food and
 Rural Affairs (DEFRA), 98
 Depetter, Lenard, 50
 Derby, Drury Lowe Arms, 104n
 Derbyshire, Muggletonians, 104n
Deroceras spp. (slugs), 191
Description of Antiquities of Wilton House, 2
 Devensian, 231, 233, 234; gravels, 137, 228
 Devil's Dyke (Suffolk), 277
 Devizes, 37, 297; *The Bear*, 2, 10; *The Black
 Swan*, 10; Book Society, 2; clothiers, 39,
 40, 42, 47, 48, 61; Corporation, 9;
 County Court, 8; cricket matches, 10;
The Crown, 9; Drew's Pond, 7; *The Elm
 Tree*, 3, 10; The Green, 10; gunsmiths,
 10; late Georgian social life, 1–14;
 Market Place, 9; Monday Market Street,
 7; New Park, 3, 8, 9, 10; publications, 2;
 Roundway House, 8; St Mary's church,
 1; Southbroom House, 9; theatres, 7;
 Town Hall, 7 (Assembly Room, 7, 8); *The
 White Bear*, 3; *The White Hart*, 10, *see also*
 Wiltshire Heritage Museum (WHM)
 Devizes Gardening Club, 3
 Devizes Mercer Company, 6
 Devizes Museum *see* Wiltshire Heritage
 Museum (WHM)
 Devizes Prison, 5
 Devon: manors, 35, *see also* Dartmoor;
 Exeter; Hembury; Plymouth; Tawstock
 diamonds, 8
Dictionary of National Biography, *The*
 (DNB), 100, 101, 103; historical
 background, 104n
 diet, Middle Bronze Age, 131, 132
 Dimbleby, G. W., 175, 177, 228

- dinner parties, 9
disci, Roman, 200
Discus spp. (molluscs), 171
diseases, trees, 18–19, 24
Distinguished Conduct Medal (DCM), 275
Distinguished Service Cross (DSC), 249
ditches, 234–7, 258; prehistoric, 92, 223; Neolithic, 63, 66, 67, 68, 74, 146–87; Early Neolithic, 185; Late Neolithic, 227; Late Neolithic/Early Bronze Age, 306–7; Bronze Age, 108, 180, 220, 300; Early Bronze Age, 107; Middle Bronze Age, 108–9, 111, 116, 121, 123, 124, 126–8, 130, 132, 133, 244; Late Bronze Age, 238; Iron Age, 116, 140; Early/Middle Iron Age, 187; Roman, 302; Romano-British, 300, 305; medieval, 107, 119, 305, 307; post-medieval, 107, 119, 305, 307; undated, 232, 301, 305; boundary, 304; causewayed, 150–1, 161, 171; linear, 107, 119, 139, 180–4, 219, 300; ring, 107, 108, 116, 118, 139, 140, 244, 300, 301, *see also* gullies; linears; pits
- 'Divine Songs of the Muggletonians' (1829), 100
DNB *see* *Dictionary of National Biography, The* (DNB)
doctors, 1, 11, 249
dogs: bones, 109, 128, 129, 132, 139, 140; teeth, 132
Dolerus spp. (sawflies), 271
Dolerus bimaculatus (sawfly), 271
Dolerus megapterus (sawfly), 271
dolmens, 199
Domesday Book, 258
Domesday Survey, 255
Don Juan, 7
Donhead St Andrew, Old Wardour House, 303
Dorchester (Dorset): Allington Avenue, 180; Maumbury Rings, 208; Mount Pleasant, 180
Dore, Edward, 3
Dorset, 5, 232; fossils, 25, 26; landowning families, 295; manors, 35; pottery, 123, *see also* Angle Ditch; Bournemouth; Christchurch; Dorchester; Gussage St Michael; Hambledon Hill; Maiden Castle; Portland; Shaftesbury; Shearplace Hill; South Lodge; Stepleton; Weymouth
Douglas (Isle of Man), 203
Douglas, James (1753–1819), *Nenia Britannica* (1793), 87n
Dowse, Robert, 4
dragonflies, 266
drainage channels, 255
drains: French, 214, 215, 216; stone-lined, 214
drawns (drainage channels), 255, 257
Drepanites striatus (ammonite), 33
drilling experiments, 5
Druids, 3, 78, 79, 197–8, 202; monuments, 80, 82, 85, 199, 201, 203
Dryopteris spp. (ferns), 71, 177
DSC (Distinguished Service Cross), 249
ducks, stuffed, 10
ducts, 255
Duffell, John, 40, 48; accounts, 43–4, 59, 60
Duke of Cornwall's Light Infantry, Reserve Battalion, 306
Duke, Edward (1779–1852), 198
Duncan, Adam, Viscount Duncan (1731–1804), 9
Duncan, Isadora (1877–1927), 250
dung, 255, 271
Durmast oak *see* *Quercus petraea* (Sessile Oak)
Durocornovium, 277, 284n, *see also* Wanborough
Durrington: Durrington Pipeline, 226; Durrington Walls, 219, 220–8, 232, 233–4, 238, 242–5; Larkhill Married Quarters, 244; Larkhill Road, 244; Packway Enclosure, 219–20, 244; pollen analyses, 231–3
Dursley (Gloucestershire), 55n
Dutch elm disease (DED), 18, 19
dyed cloth, 36, 43
Dyers, Richard, 40
Dyett[t], John, 39, 48
- Eagles, B., 68, 72
earth resistance surveys, 301, 302
earth-nuts, 178
earths *see* soils
earthworks, 74; Romano-British, 185, 187; ?medieval, 302; cross-ridge, 145, 146, 147, 179, 180–4, 185, 187; surveys, 146, *see also* ditches; enclosures; hillforts; mounds; Wansdyke
Easkyngs, John, 60
East Indies, freemasons, 10
East Kennett, Langdean Bottom, 200, 207–8
East Sussex *see* Lewes; Ranscombe Camp; Whitehawk Camp
Easter mart, 36
Easton Grey, Whatley Manor Hotel, 303
economic trends, 18th century, 1
Edgar, King, 293
Edgar, Thomas, 46, 49, 55n
Edinburgh Annual Review, 2
Edinburgh Monthly Review, 2
Edinburgh Quarterly Review, 2
Edington, 36; clothiers, 39, 42, 51–2, 61, 62; Tinhead, 52
Edward (ship), 45
Edwards, Brian, paper on Sir Peter Scott and Bernard Venables, 249–54
Edwards, Captain, 278
eels, 254; bones, 238
egg collecting, 253
Egypt, 273, 275, 284n; Pyramids, 79
Eight Acre Field (Oxfordshire), 140
elder trees, 16, 262
elections, 8
electricity, early experiments, 5
Eledona agricola (beetle), 269
elephants, 10
élite *see* upper classes
elle (measure), 55n
Elliot, C., 284n
elms, 21, 298; diseases, 18, 19; pollen, 137, 231, 232
Emberiza citrinella (Yellowhammer), 269
Emberiza schoenicus (Reed Bunting), 270
Ena montana (snail), 70
Enallagma cyathigerum (Common Blue Damsel), 266
encarnation, 134
enclosures, 208, 304; Neolithic, 145–87; Late Neolithic/Early Bronze Age, 107; Middle Bronze Age, 108, 115, 116, 119, 123, 245; Iron Age, 108, 219–20, 235; Roman, 302; ?Romano-British, 223; causewayed, 74, 145–87; mortuary, 66, 207; multivallate, 146; univallate, 146–8, *see also* hillforts; settlements
encyclopaedias, 2, 5
English Heritage, 66, 68, 211, 297; surveys, 302
English Nature, 271
engravings, 2–3
entertainments, 7–10
environments: Upper Palaeolithic, 242; Mesolithic, 242; Neolithic, 71–2, 186, 242–3; Bronze Age, 187, 243; Romano-British, 243, *see also* landscapes
Epipactis phyllanthus (Green-flowered Helleborine), 264
Episyrphus balteatus (hoverfly), 98
Equisetum spp. (Horsetails), 262, 269, 271
Equisetum palustre (Marsh Horsetail), 260, 261
Equisetum telmateia (Great Horsetail), 262, 263
Erdtman, Holger (1902–89), 71
Ericaceae (rhododendrons), 21
Eriaceae europaeus (Hedgehog), 270
Eriophorum angustifolium (Common Coiton-grass), 261, 265
Erlestone, clothiers, 40, 59
Erll, Richard, 38, 39, 42, 47
Ermine Street, 108
Erysimum cheiranthoides (Treacle Mustard), 97
escarpments, 92
Eskyns, John, 55n
Essex *see* Bartlow Hills; Colchester
Essington (Staffordshire), 55n
Estates Gazette, 295
Estcourt, James, 9
Ethiopia, 275
Etton (Cambridgeshire), 126, 161, 186
Eubria palustris (water beetle), 269
Eupatorium cannabinum (Hemp-agrimony), 262, 268
Eupithecia trisignaria (Triple-spotted Pug), 259–60, 268
Eurodryas aurinia (Marsh Fritillary), 265, 268
Euthrix potatoria (Drinker Moth), 268–9
Evans, J. G., 191, 228, 233, 238
Evans, John, 71, 72
Everleigh, Everleigh House, 34n
Everyman *his own Gardener*, 3
Excel (software), 121, 128
Exchequer Enrolled Accounts, 38
execution cemeteries, Early Anglo-Saxon, 92
executions, 92
Exeter (Devon), 166
Exmoor, 207, 208
exostosis, 130
export permits, 53
Eyer, William, 39
Eynsham (Oxfordshire), 126
- Fabaceae (beans and acacias), 22
fabrics *see* textiles
factors, 35, 54
Faegri, K., 135
Fagaceae (trees and shrubs), 20, 23
Fagan, Isabel Mairi (née Arundell), 295
Fagus spp. (beeches), 176
Fagus sylvatica (Beech), 16
Fagus sylvatica 'Purpurea' (Copper Beech), 16; girth, 23
fairs, 10, 44
Falkner, John, 278
Fallopia convolvulus (Black Bindweed), 97, 231
Fancourt, Samuel, 1
fans, gravel, 234, 243
fardells, 44, 45, 52, 53, 55n
farm buildings, 304, 307
farm machinery, 4–5
farmers, 4, 5
Farmer's Magazine, The (1776), 4
farmhouses, 17th century, 276, 303
farming *see* agriculture
farms, 305
farmsteads: Middle Bronze Age, 139; Romano-British, 301
farriers, 82
fashion, 8; cosmopolitan, 1
fauna, 266–71
Faversham (Kent), ships, 45
Fayal Islanders, 249
feasting, 140, 186, 228
feasts, 9
Fellowship of Mercers, General Court, 35, 44, 55n
fences, Middle Iron Age, 139
fens, 137, 255, 258, 259–61, 263–5;

- Durrington, 231, 232
 Fenton, Mr, 80
Ferdinandea cuprea (hoverfly), 271
 ferns, 71; spores, 177
 Ferrara, Andrea, 275
 ferreting, 249
fêtes champêtres, 7–8
 fiddles, 6, 11
 Field, David, 68, 72, 81
 field boundaries, 140, 220, 307; post-medieval, 223; Celtic, 302
 field maples, 16
 field margins, biodiversity, 95
 field systems, 220, 304, 308; ?prehistoric, 147; prehistoric, 84; late prehistoric, 300; Bronze Age, 85; Roman, 220; ?Romano-British, 147; Romano-British, 239, 300; medieval, 106–43; medieval/post-medieval, 106–43; Celtic, 302, *see also* ridge and furrow
 fields, recovery, 255
 fieldwalking, 307
 Figheldean, 243; Robin Hood's Ball, 179
 figurines, bronze, 297
Filipendula ulmaria (Meadowsweet), 231, 232, 234, 260, 262, 263
 Fille, Thomas, 58
 fireworks, 9
 Firestone, Thorny Down, 123, 139, 140
 First Terrace river gravels, 107
 First World War *see* World War I
 fish, 250, 259; paintings, 252–3; sharks, 249, *see also* eels
 fishing, 249, 250, 252–3
 Fitchew, Charles, 5
 flakes, flint, 125, 148, 160, 237; Neolithic, 161, 163, 164, 165; Late Neolithic, 224–6; retouched, 222, 226, 238; serrated, 166, *see also* flintwork
 Flanders, 35, 43; cloth imports, 46–7; cloth marts, 36, 54; cloth trade, 44
 Flandrian, 231, 233; gravels, 228
 flax, 49
 Flay, Walter, 10
 Fletcher, John (1579–1625), 2
 flies, 98, 265–6, 271
 flint cairns, 66
 flint fragments, 152, 154; in pottery, 157
 flint implements, 203
 flint mines, 224, 244, 245
 flint tools: Neolithic, 301; Late Neolithic/Early Bronze Age, 301
 flints: burnt, 125, 151, 160, 165, 166, 169, 185, 186, 188, 220, 221, 223, 238; chalk, 125; knapping, 166, 226; nodules, 150, 151, 160, 180, 183, 224, 234; raw materials, 160, 224; scattered, 107, 220, 307; struck, 160, 238, 244; tabular, 150, 153, 160; Whitesheet Hill, 160–6
 flintwork, 220, 273, 300, 301; Palaeolithic, 275; Mesolithic, 107, 125, 242; Neolithic, 74, 151, 161–6, 180, 183, 185; Late Neolithic, 220, 221–3, 224–6; Late Neolithic/Early Bronze Age, 125, 305, 307; Bronze Age, 308; Early/Middle Iron Age, 188; burnt, 160; collections, 276, 282, 284n; edge gloss, 165–6; retouched, 163–4, *see also* arrowheads; axes; blades; cores; flakes, flint; hammerstones; knives; scrapers; tools
 flooding, controlled, 255, 257
 floodplains, 72, 140, 211, 219; sediments, 228–34
 floors, 216; medieval, 304
 flora, 271
 florists' feasts, 3
 flowers: collecting, 4; wild, 252
 Fluellen, Mores, 60
 Flushing (Netherlands), ships, 53
 flutes, 6
 Fojt, Wanda, 271
 food: 18th century, 9; Neolithic, 186; carbonised, 189
 food waste, 185
 foraminifera, fossil, 121
 fords, 93
 fossil shells, in pottery, 121–4, 157
 fossils, 203, 284n; collecting, 4, 275; collections, 282; early studies, 25–34
 Foster, Andy, 271
 Foster, Thomas, 57
 foundations, 212–15
 Fowler, P., 87n
 Fox, B., 271
 Fox, George (1624–91), 100
 foxes, 271
 France, 3, 276; antiquarians, 199, *see also* Brittany; Calais
Francis (ship), 45
 Fraunces, Robert, 40, 49
Fraxinus spp. (ash trees), 137, 232
Fraxinus excelsior (Ash), 15, 262
 freemasons, 9–10; membership, 10
 French, C. A. I., 68
 French (language): medical tracts, 2; works, 3
 Fresell, John, 58
 friezes, 37, 55n
 frogs, 270
 Frome, freemasons, 10
 Frome, River, 37
 Froud, Pat, 271
 fruits, 179
 fulling mills, 11
Fumaria officinalis (Common Fumitory), 97
 funerary monuments, 146
 funerary rituals, 134
 fungi, 18, 24, 192, 269, 271
 fustian, 47, 49, 50
 Fyfield, 4; Fyfield Down, 82, 83, 84–5
 Gage, Robert, 45
 Gale, John, 5
 Gale, Rowena, 176; note on charcoal from Whitesheet Down, 174–5
Galeopsis tetrahit (Common Hemp-nettle), 260
Galium spp. (herbs), 179
Galium aparine (Goose Grass), 97, 260
Galium uliginosum (Fen Bedstraw), 261
Galium verum (Lady's Bedstraw), 179
Gallinago gallinago (Snipe), 269
 gambling, 10
 game certificates, 10
 Game Laws, 10
 gamekeepers, 10
 Gandy, Ida, 257
 Gansse, Robert, 57, 58
 Garden, Alexander (c.1730–91), 5
 garden engines, 4
 gardening: books, 3; as leisure activity, 3
 gardens, 24, 31–2; nursery, 4; town, 3
 Gardiner, Julie, paper on millennium re-investigation of the Corton Long Barrow, 63–77
 Garrick, David (1717–79), 2
 Garth, Charles, 9
 Garth, John (d. 1764), 1
 Gastredes, John, 59, 60
 Gastredes, Mistress, 57
 Gault, 188
 Gay, Robert, 83
 Geake, Helen, 93
 gean *see* *Prunus avium* (wild cherry)
 Gent, James, 4
 Gent family, 9
Gentleman's Magazine, *The*, 2, 3, 5
 geological maps, 33n
 Geological Society, 26
 geologists, 4; early, 25–34
 geology: Avon Valley, 219, 228–9; Bradford-on-Avon, 197; Latton, 107; Salisbury Plain, 234; Stonehenge, 308; Vale of Pewsey, 257–8; Whitesheet Down, 145, *see also* fossils; palaeontology; soils; stratigraphy
 geophysics: Avebury, 237, 301; Blunsdon St Andrew, 302; Swindon, 306; Whitesheet Hill, 149; Winterbourne Bassett stone circle, 198
 George III, King, 9
George (ship), 57, 58, 59
 German (language), medical tracts, 2
 German traders, 36
 Germany, 138; scientists, 5, *see also* Ulm
Geum rivale (Water Avens), 263, 265
 Gibbes family, 9
 Gibbon, Edward (1737–94), 8–9
 Gibson, Edmund (1669–1748), 87n
 Gillam, Beatrice, 271
 Ginkgoaceae (ginkgo trees), 19
 Gisborne, Thomas, 1–2, 5, 8
 Glamorgan, 82, 86
 Glantane (Ireland), 199
 glass, 93; Saxon, 275
 Glasyer, Richard, 35
 glauconite, 157, 188
 gleans, 6, 10
 Glendarragh (Isle of Man), 203
 gliding, 249
 globes, 5
Glomerella miyabeana (fungus), 18
 Glorious Revolution (1688–9), 9
 Gloucester, 284n; florists' feasts, 3
 Gloucestershire, 5; clothiers, 38n, 43, *see also* Berkeley; Cerney Wick; Cirencester; Cotswold Community; Dursley; Hazleton North; Horcott; Lechlade; Neigh Bridge; Preston; Roughground Farm; Shornote; Siddington; Slimbridge; Somerset Keynes; Stroudwater; Temple Guiting; Upper Lyptiatt; Witpit Copse; Worms Farm; Wotton-under-Edge
Glyceria maxima (Reed Sweet-grass), 260, 262, 263, 268–9
 goat willows, 16, 17
 goats: teeth, 167, *see also* sheep/goat bones
 Goddard, Ambrose, 9
 Goddard, Edward Hungerford (1854–1947), 93, 278, 297; correspondence, 206
 Godwin, Thomas (1587–1643), 102
 gold objects: chains, 46, 49, *see also* jewellery
 Goldsmith, Oliver (1728–74), *History of the Earth and Animated Nature* (1774), 4
 goldsmiths, 11
 Goodlad, John, 56
 Goodwyn, William, 60
 Gordon, Alexander (1841–1931), 101, 102, 103–4, 104n
 gorse, 266
gorsedd (bardic ceremony), 85
Gorsedd Bryn Gwydion, 86
 GPR (ground penetrating radar), 302
 Graig Lwyd (Wales), 244
 grain, 192; identification, 135; pollen, 137
 Gramineae (grasses), 177, 231
 granite, 85
 Grant, A., 128
 Grantham, John, 45, 55n, 56, 57, 58, 59, 60
 grass-heaths, 266; restoration, 255
 grasses, 71, 95, 258, 264; early, 255; pollen, 135, 137, 231
 grasslands, 137, 186, 258, 263; environments, 133, 139, 174, 177; snails, 127, 171, 182, 183, 191–2, 239, 241
 grave cuts, 89–90
 gravel extraction, 107, 108, 301, 304
 gravel quarries, 275, 301
 gravel terraces, 140
 gravels, 111–12, 115, 116, 118, 133, 275; Devensian, 137, 228; First Terrace, 107; Flandrian, 228; valley, 219
 graveyards *see* cemeteries
 graylings, 249

Great Bath Road *see* Old Bath Road
 Great Oolite, 157
 Great Shefford (West Berkshire), 275
 Great War *see* World War I
 Great Western Railway (GWR),
 Locomotive and Carriage Works, 306
 Greater London *see* Acton; London;
 Southwark; Stoke Newington
 Greece, 17
 Green, M., 297
 green lanes, 258
 Green Park (Reading), 134
 Green Street, 87n
 greenhouses, 4
 Greensand, 157, 188, 232, 255, 258, 259;
 fossils, 26
 greywethers, 80, 83, 85, *see also* sarsens
 Griffiths, Nick, note on a medieval pilgrim
 badge from West Knoyle, 293–4
 Grigson, C., 171
 Grime's Graves (Norfolk), 277
 Grim's Ditch, 308
 Grinsell, Leslie V. (1907–95), 146, 207, 208,
 279, 282, 297
 grocers, 10
 Grose, Donald, *The Flora of Wiltshire* (1957),
 98
 ground penetrating radar (GPR), 302
 Grove, Thomas, 53
Grypus equiseti (weevil), 269
 gullies: Late Neolithic/Early Bronze Age,
 306–7; undated, 308, *see also* ditches
 gun volleys, 9
 gunboats, 249
 guns, 10
 gunsmiths, 10
 Gussage St Michael (Dorset), Down Farm,
 139, 140
 Gwent *see* Caerleon
 GWR (Great Western Railway), 306
 Gygges, Thomas, 57, 58
 Gyles, Frans, 54
Gyraulus alba (mollusc), 33n
Gyrophana angustata (beetle), 269
 habitats, Vera Jeans Nature Reserve, 257–
 66
 haematite-coating, 189
Haematopota crassicornis (horse fly), 271
 Halcomb, William, 8
 Haliday, Mr, 205
 Hambledon Hill (Dorset), 145, 148, 154,
 158, 160; animal bone, 169, 170;
 artefacts, 166; ditches, 184; monuments,
 185; pits, 185; snails, 174
 Hamilton, Julie, note on animal bone from
 Latton Lands, 128–33
 Hamilton-Dyer, Sheila: note on animal
 bone from Durrington Walls, 226–8;
 note on animal bone from Earl's Farm
 Down, 238
 hammers, 161, 224
 hammerstones: Neolithic, 161, 164; sarsen,
 166
 Hampshire, 232; execution sites, 92;
 pottery, 189, *see also* Andover;
 Danebury; Hordle; Kimpton; Ladle
 Hill; Lee-on-the-Solent; Little Som-
 borne; Martin Down; Milton Shore;
 New Forest; Silchester; Southampton;
 Test, River
 hand-axes, 200; Acheulian, 273, 275
 Handel, George Frederick (1685–1759), 6
 Handy, Mr, 203
 hanging, 92
 Hannam, Edm., 47
 Hannam, Edward, 39
 Hanseatic traders, 36
 Harden, Donald Benjamin (1901–94), 277–
 8, 282
 Harding, Philip, note on flintwork from
 Durrington Walls, 224–6
 Hardy, General, 281
 hares, 270
 Harford, Thomas, 43, 44, 55n; accounts, 45,
 57, 58, 60
Harleian Miscellany (1744), 99, 100, 101
 harpoons, 249
 harpsichords, 6, 11
 Harris, James, 6
 Harrison, William, 6
 Harte, Walter (1709–74), *History of the Life*
of Gustavus Adolphus of Sweden (1759), 2
 Harwood, Richard, 53
 Haslam, Jeremy, 211, 212, 216, 303
 Hather, Jon, 178
 hawkers, 266
 Hawkes, Charles Francis Christopher
 (1905–92), 282
 Hawley, W., 280
 hawthorns, 15, 18, 171, 183, 261, 262, 266;
 charcoal, 175, 245
 Haycock, Lorna, paper on social life in late
 Georgian Devizes, 1–14
 Haydn, Franz Joseph (1732–1809), 6
 hazel trees, 15–16, 71, 137, 171, 179, 266;
 charcoal, 174, 192, 245; coppicing, 175;
 pollen, 177, 231, 232
 hazelnuts, 171, 179; charred, 185;
 radiocarbon dating, 151, 153; remains,
 155, 176–7, 192; shells, 174, 177, 178,
 180
 Hazleton North (Gloucestershire), Long
 Barrow, 177
 Healy, Frances, 185; note on flint from
 Whitesheet Down, 160–6; note on
 ground stone from Whitesheet Down,
 166; report on investigation of the
 Whitesheet Down environs, 144–96
 hearths, 188, 215
 Heath, Beverley, paper on Vera Jeans
 Nature Reserve, 255–72
 Heathcote, Josiah Eyles, 4
 Heaton, Michael, 301, 303; evaluations,
 306; excavations, 307; fieldwalking, 307;
 report on excavations at Barton Grange
 Farm, Bradford-on-Avon, 211–17;
 watching brief, 300
 hedgehogs, 270
 hedgerows, 266, 271
 Hedge, John, 39, 43, 48
 hedges, 15, 179
Helicella spp. (snails), 183–4
Helicella uala (snail), 71, 183, 238–9
 Helicellids, introduced, 183
Helix spp. (molluscs), 27
Helix alba (mollusc), 27, 33n
Helix annularis (mollusc), 27, 33n
Helix contorta (mollusc), 27, 33n
Helix genti (fossil shell), 4
Helix hispida (mollusc), 27, 33n
Helix palustris (mollusc), 27, 33n
Helix planorbis (mollusc), 27, 33n
Helix spiroboris (mollusc), 27, 33n
Helix stagnalis (mollusc), 27, 33n
Helix vortex (mollusc), 27, 33n
 Hembury (Devon), 145, 158, 159
 hemp, 49; pollen, 137, 139
 Henbury (City of Bristol), 276
 henge monuments, 197–210, 219, 220;
 Neolithic, 72, 221
 Hengrave (Suffolk), 36, 49; Hengrave Hall,
 35
 Henry VIII (1491–1547), 35, 44
Heracleum sphondylium (Hogweed), 259–60
 heraldic devices, military, 306
 heraldry, 30
 herbicides, 95; resistance, 97, 98
 herbs, 175, 177, 234
 Herefordshire: cloth, 38n, *see also* Weobley
 Heritage Lottery Fund, 257
 Heryot, Robert, 39, 48
 Heytesbury, Baron, William A'Court
 (1779–1860), 31
 Heytesbury, 63, 66; barrows, 72, 73;
 clothiers, 39, 40, 58, 61; fossils, 26
 Hidges, John, 45
 Highland chief, dress, 3
 Highworth, 280
 Hill, Christopher, 103
 Hill, D. J., 271
 hillforts, 197; Iron Age, 145, 148, 182, 184,
 187, 300, *see also* enclosures; *specific sites*
 Hillman, Mrs Stephen, 7
 Hills Minerals and Waste Ltd., 301
 Hillson, S., 128
 hillwash, 187, 188, 191, 301
 Himalayas, 260, 276
 Hinton, Pat, 176; note on plant remains
 from Whitesheet Down, 177–9; note on
 plant remains from Whitesheet Quarry,
 192
 Hippocastanaceae (chestnuts), 22
 historical mythology, 79
History of Fossils, A, 3
 Hoare, Sir Richard Colt (1758–1838), 65,
 145, 146, 202, 204; *The Ancient History of*
South and North Wiltshire (1812; 1821),
 64; collections, 280; fieldwork, 68; *The*
Modern History of South Wiltshire (1831),
 26; on stone circles, 198
 Hobbes, Thomas (1588–1679), 102
 Hogarth, William (1697–1764), 3
 Holbrok[e], William, 40, 48; accounts, 56,
 57
 Holcroft, Thomas (1745–1809), *The Road to*
Ruin (1792), 7
 Holland *see* Netherlands, The
 holland-cloths, 47, 49, 55n
 hollow ways, 82, 83, 87n, 91, 146, 150, 308
 holly trees, 16, 24
 Holmes, Richard, 45, 57
 Holocene, 231, 242
 holts, 271
 Home Guard, 277
 Honey, William Bowyer (1889–1956), 282
 honeydew, 17
 hops, 44; measures, 62; pollen, 137
 Horcott (Gloucestershire), 123
Hordeum vulgare (barley), 192
 Hordle (Hants), 33n
 horn, 128
 horncores, 130, 131
 hornets, 271
 Horningsham: Brims Down, 33n;
 Brims Grove (field), 26; Chute Farm, 26,
 33n; clothiers, 39, 48, 56; Longleat, 26;
 Picket's Field, 33n
 horse chestnut trees, 17; diseases, 18; girth,
 24
 horse flies, 271
 horses, 278; bells, 200, 275; bones, 109, 128,
 129, 132, 139, 238; white, 16, 280
 hospitals, 308
 houses: Norse boat-shaped, 203, *see also*
 villas
 Housz, Jan Ingen (1730–99), 5
 hoverflies, 98, 271
 Huckerby, Elizabeth, note on pollen from
 Latton Lands, 135–8
 Hughes family, 8
 Hume, David (1711–76), *History of England*
 (1754–62), 2
 humic acids, 231
Humulus spp. (hops), 137
 humus, 76
 hundreds: boundaries, 91, 92, 93, 302;
 origins, 93
 Hungerford (West Berkshire), 253
 Hunt, Henry, 10
 hunting, 132; with hounds, 10
 Hurlock, John, 52
 hut-circles, 207–8
Hyacinthoides non-scripta (Bluebell), 263
 Hyde, Abbot of, 255
 hydrochloric acid, 71, 135

- hydrofluoric acid, 71, 135
Hypericum tetrapetrum (Square-stalked St John's-wort), 262
Hypophites pseudofalcatus (ammonite), 33
 hypocast systems, 302
- ice skating, 249
Ichthyosaurus spp. (aquatic reptiles), 275
 Idmiston, Gomeldon, 92, 93
 Ilchester (Somerset), 145
Ilex aquifolium (Holly), 16, 24
Impatiens glandulifera (Indian Balsam), 260
 implements: flint, 203; stone, 200, *see also* tools
 imports, 35
Inachis io (Peacock), 268
 Inaugural Mayor's Feast (1774) (Devizes), 9
 incense cups, 275
 Independent movement, 101, 102
 India, 276
 industrial sites, 192
 Inferior Oolite, 157
 inhumations, 244, 275, 300; Neolithic, 63, 66, 72; Late Neolithic/Early Bronze Age, 301; Beaker, 108; Middle Bronze Age, 133–5, 139, 140; Late Bronze Age, 107, 115–16, 134; Early Iron Age, 134; Middle Iron Age, 134; ?Roman, 219; ?Romano-British, 223; Romano-British, 92, 306; Early Anglo-Saxon, 89–94; medieval, 304; alignment, 89, 90, 93, 133, 223, 304; disarticulated, 107, 115, 133, 134, 223, 306; rituals, 134, 135
- injuries, horse-related, 90
 Innes, Edward, 4
 innkeepers, 10
Inoceramus spp. (bivalve), 32
inquisitions, 255
 insect remains, 135
 insectivores, 270
 insects, 98, *see also specific insect genera*
 inventions, 5
 inventories, 6
 invertebrates, 265, 271
 Ipswich (Suffolk), ships, 57
 Ireland: stone circles, 199, *see also* Glantane; Millstreet
Iris pseudacorus (Yellow Iris), 261, 262, 263
 Irish Sea, 207
 iron grains, 122
 iron objects: nails, 183; spears, 93
 iron oxides, 157, 188, 223
 iron slag, 188, 192; Romano-British, 303
Ischnomera caerulea (beetle), 298
Ischnura elegans (Blue-tailed damselfly), 266
 Isle of Man, 203
 Isle of Wight, 232
 Italian traders, 36
 Italy: trade, 36, *see also* Rome
 IW & DRE, 276
- jackdaws, 30
 Jackson, John Edward (1805–91), and Muggleton, 99, 100, 101, 103, 104
 Jacob, Simon, 57
 James, Harry, 53–4, 59
James (ship), 45, 57
 Japanese cherry trees, 17, 18
 jars: Middle Bronze Age, 121, 123, 125; Early/Middle Iron Age, 189
 Jeans, Vera, 257
 Jeans family, 257
 Jefferies, Richard (1848–87), 201, 202–3
 Jessopp, Augustus (1823–1914), 'The Prophet of Walnut Tree Yard' (1884), 101
 jet objects, 300
 jewellery, 8; Roman, 197, *see also* beads; gold objects
 Joes, Thomas, 54
John Baptist (ship), 45, 53, 56, 57
John Evangelist (ship), 45
- Jones, David Ceri, 87n
 Jones, Ffion, 87n
 Jones, G., 133
 Jones, Inigo (1573–1652), 83, 85
 Jones, Mary Burnet, 295
 Jones, Owen, 82, 86
 Jonson, Benjamin (1572–1637), 2
Journals of the House of Commons, 3
 journeymen, 36, 102
 Juglandaceae (walnuts), 20
 jugs, Chelsea, 282
 Julian, Mother, 293
Juncus effusus (Soft Rush), 260
 Jurassic, 123, 157; calcareous deposits, 188; limestone, 211
- Karamzin, Nicolai Mikhailovich (1766–1826), 11
 Kay, Humphrey, 271; note on moths at Vera Jeans Nature Reserve, 268–9
 Keene, Stephen (fl. 1668–1719), 6
 Keevil, clothiers, 40, 42, 61
 Keiller, Alexander (1889–1955), 273, 280, 281
 Kendrick, Sir Thomas Downing (1895–1979), 282
 Kennet, River, 15, 16, 22, 23, 252, 253
 Kennet and Avon Canal, 257, 258, 266
 Kennet Valley, 83
 Kent: cloth, 37; masons, 82, *see also* Canterbury; Faversham; Maidstone; Mayfield; Sandwich
 Kerridge, E., 255
 kersies, 37, 43, 51, 52, 55n
 Kesselor, George, 54
 Kester, George, 50
Kickxia spuria (Round-leaved Fluellen), 97
 Killeen, Ian, 271
 Kilmington: clothiers, 40, 61, *see also* Whitesheet Down
 Kimmeridge Clay, 275
 Kimpton (Hants), 123
 Kingsbridge Hundred, 89, 91, 93
 Kingston upon Hull, ships, 45, 57
 Kingswood (South Gloucestershire), 55n, 87n; Kingswood Coalmines, 79, 81, 87n
 Kinnes, I., 68
 Kirk Marown (Isle of Man), 203
 Kirkdale Cavern (North Yorkshire), 33–4n
 Knight, John, 2, 6, 42
 Knight, Richard, 2, 6
 knives: flint, 165, 222, 226, *see also* blades
 Knook, 63; Knook Barrow, 72, 73
 Knyght, John (of Bishopstrowe), 39, 47, 48; cloth mark, 61
 Knyght, John (of Devizes), 39, 47, 48; accounts, 57, 58
Koudmarkt, 36
 Kromer, B., 231
 Kytson, Robert, 35
 Kytson, Sir Thomas (1485–1540), 35–62; biographical notes, 35
- Lackington, James, 1
 Lacock, clothiers, 39, 40, 42, 53, 56, 61
Lactuca serriola (Prickly Lettuce), 98
 Lactuceae (dandelions), 71
Ladies' Library, The, 5–6
 Ladle Hill (Hants), 281
 Lake, Jeremy, 211–12
 Lambe, Aldhelm, 40, 48, 55n; accounts, 57, 58; activities, 51–3; cloth marks, 61, o2
 Lambert, Aylmer Bourke (1761–1842), 25, 31, 63, 64
 Lambourn (West Berkshire), 275, 284n; Seven Barrows, 282
 Lamdin-Whymark, Hugo, note on flint from Lotton Lands, 125
 Lamont, William, 101, 103
Lampetra fluviatilis (River Lamprey), 259
 Lancashire: manors, 35, *see also* Warton
 Lanckford, Edward, 48; accounts, 56, 57
- land division, 187
 land drainage, 4
 land-use patterns, 187, 231, 232, 233–4, 238–41, 243–5
 landscapes: prehistoric, 147–8, 218–48; Neolithic, 218–48; Late Bronze Age, 241, *see also* environments
 Lane, Edward Arthur (1909–63), 282
 Langford, Alexander, the elder, 49, 53
 Langford, Alexander, junior, 40, 49; cloth mark, 61
 Langford, Alexander, senior, 40; cloth mark, 62
 Langley, *Botany*, 4
 Langley Burrell Without, 99
 Lansdowne, 1st Marquis of, 5
 lantern slides, 280
 larch trees, 16
Larix decidua (Larch), 16
 larvae, 298
 Last, Barbara, paper on an arable weed survey of a farm in South Wiltshire, 95–8
Lathyrus spp. (vetches), 178
Lathyrus montanus (Bitter Vetch), 179
Lathyrus pratensis (Meadow Vetchling), 261
 Lattton, 107, 123, 275; Beggars Field, 107; Creamery Field, 107; Field Barn, 108; geology, 107; Lotton Lands, 106–43, 304; Roman Pond, 137, 138; Westfield Farm, 107
 Lattton Creamery, 107
 laudanum, 79
 Lauraceae (laurels), 20
 law books, 2, 3
 Lawrence, John, 38, 39, 42, 47, 48, 54; accounts, 57, 58, 59; cloth mark, 60
 Lawrence, Thomas, 2
 Lawrence, Thomas Edward (1888–1935), 250
 Laws, Granville, 304; report on excavations at Lotton Lands, 106–43
 lawyers, 1, 6
 lead casts, 296
 leaf litter, 174, 186, 259, 260
 leafhoppers, 271
 leats, 255–7, 259, 260
 Leche, John, 45, 57
 Lechlade (Gloucestershire), 133
 lectures, 5, 280
 Lediard, Rev., 10
 Lee-on-the-Solent[?] (Hants), ships, 45, 52, 57, 58
 Leeds, Edward Thurlow (1877–1955), 282
 Leeds, 11
 Legge, John, *A Treatise on the Art of Grafting and Inoculation* (1780), 3
Legousia hybrida (Venus's Looking-glass), 95, 97–8
 Leguminosae (legumes), 22
 leisure activities, 1, 10–11
 Lenycke, Philip, 50
Leonard (ship), 60
 Lepidoptera *see* butterflies; moths
 lepidopterists, 298
Leptura quadrifasciata (Longhorn Beetle), 266
Lepus capensis (Hare), 270
 Lerde, William, 53
 Leslie, G. D., 205, 282
Lestes sponsa (Emerald Damselfly), 266
Leucozona laternia (hoverfly), 98
 Levallois technology, 224, 226
 Leversage, John, 49
 Levine, M. A., 128
 Lewes (East Sussex), Lewes Museum, 274, 289
 Lewis, A. L., 203
 Lewis (Western Isles), 207
 ley lines, 198
 Leylandii hedges, 23
 Lias, 145, 306

- Libellula quadrimaculata* (Four-spotted Chaser), 266
- libraries, 5–6, 27, 79, 87n, 280; circulating, 1, 2; private, 2, 3; sale catalogues, 2
- lichen, 271
- Liddington: Liddington Castle, 275; Warren Farm, 274
- lighters (ships), 53
- lighting, public, 11
- Liguliflorae (sunflowers), 135, 175, 177
- Limacidae (keelback slugs), 183, 191
- lime trees, 17, 23, 71, 137; pollen, 177, 231, 232
- limestone, 124, 125, 157, 224; blocks, 305; burnt, 109, 112, 115, 116, 118, 125, 139; Carboniferous, 215; carved, 307; Jurassic, 211; ooliths, 121, 123, 124; Oolitic, 157, 212, 215; pavements, 214
- limpets, 244
- lina aspersa*, 90
- linears, 220, 234–7; Bronze Age, 235; Iron Age, 187; medieval, 306, *see also* ditches
- lions, 10
- Listed Building status, 211, 304, 308
- literacy, 11; in 18th century, 2; adult, 1
- literary and scientific institutes, 11
- literature, 2
- lithology, 26
- Little Somborne (Hants), 189
- Liverpool Literary and Philosophical Society, 101
- Livingstone, David (1813–73), 249
- Lizard Peninsula (Cornwall), 157, 159
- Locke, John (1632–1704), 5; *An Essay Concerning Human Understanding* (1690), 2
- Locke, Wadham, 2, 4, 5, 9
- Locke family, 8
- Locustella naevia* (Grasshopper Warbler), 269
- London, 6, 11, 26, 27, 32, 86; Archaeological Institute, 297; Arundell family estate, 294–5; Arundell Square, 295; Bishopsgate, 99–100, 102; Castle Baynard, 55n; Clerkenwell, 102; cloth trade, 43, 44, 52; coach roads, 83, 85; Coleman Street, 35; Court of Aldermen, 55n; Court of Hustling Roll, 55n; Covent Garden, 3; Cripplegate, 9; exports, 36; farriers, 82; Haymarket, 295; Horniman Museum, 289; masons, 82; mercers, 37; merchants, 35; Milk Street, 35; motorways, 206; and Muggleton, 99; Natural History Museum, 253, 284n, 289; Newgate Prison, 101, 103; Panton estate, 295; Panton Street, 295; Passmore's visits, 277; Piccadilly Circus, 295; Primrose Hill, 85; Russell Square, 274; St Botolph's (Bishopsgate), 99–100; St James, 295; St Martin in the Fields, 295; St Mary Magdalen, 35; sales, 274, 275; shearmen, 54; ships, 45, 52, 53, 56, 57, 58, 59, 60; slums, 101; Soho, 5; theatres, 6; tradesmen, 37; Victoria and Albert Museum, 276, 277, 282, 291–2; watercress markets, 257; Welsh societies, 82; West End, 295; Zoo, 253, *see also* Acton; British Museum; Southwark; Stoke Newington
- London Magazine*, *The*, 5
- London, Master Recorder of, 49
- London–Bristol Road, 87n
- Longbridge Deverill: clothiers, 39; Cow Down, 192; Kingsdown Farm, 304
- Long[e], Thomas, 40, 48; accounts, 56, 57
- Longford [Lanckforth], Edward, 39
- longhorn beetles, 266, 269
- Longworth, I. H., 224, 226
- Longworth traps, 271
- Look (television series), 254
- loomweights, clay, 108, 126, 188
- Looney, J. J., 11
- Lord Chief Justice, 101
- Lotus pedunculatus* (Greater Bird's-foot-trefoil), 260, 268
- Low Countries, 3, 49
- lower classes *see* working classes
- Lower Cretaceous, 26
- Lower Greensand, 206
- Lucas, Leigh, 89
- Lucas, Tony, 89
- Luckington, 200; Giant's Long Barrow, 276–7
- Lucy, Anne, 295
- Ludlow (Shropshire), 38n
- Lukis, William Collings (1817–92), 198
- Lunne, Nicholas, 36, 45; accounts, 50; activities, 51–2
- Luscinia megarhynchos* (Nightingale), 269
- Lutra lutra* (Otter), 271
- Luxor (Egypt), 275
- Luzula multiflora* (Heath Wood-rush), 265
- Lycæna phlaeas* (Small Copper), 268
- Lychnis flos-cuculi* (Ragged Robin), 261
- Lygephila pastinum* (Blackneck), 268
- Lymnaea* spp. (molluscs), 127
- Lymnaea palustris* (mollusc), 33n
- Lymnaea stagnalis* (mollusc), 33n
- lynchets, 146, 237, 304
- Lyversidge, John, 40; cloth mark, 61
- M4 motorway, construction, 205, 206
- Maas, River, 36
- Macaulay, Thomas Babington, Baron Macaulay (1800–59), 101
- McKinley, Jacqueline, 90
- McOmish, D., 72; note on survey of Whitesheet Down, 146–8
- Macrolepidoptera (moths), 268
- madder, 4
- magazines, 5, 11
- magnetic susceptibility profiles, 63, 67, 68, 69, 70, 77
- magnetometer surveys, 301, 302
- Magnoliaceae (magnolias), 20
- Maiden Castle (Dorset), 145, 158, 159, 160, 165, 277; animal bone, 170; causewayed enclosure, 186; ditches, 184; middens, 185; querns, 166
- Maidenhead (Windsor and Maidenhead), 123
- Maidstone (Kent), ships, 45
- maize, 266
- Malmesbury: Athelstan Museum, 288; clothiers, 39, 40, 43, 60; former cinema site, 304; High Street, 304; Malmesbury Abbey, 304; Market Cross, 304; Saxon House, 304; trees, 22
- Maltby, J. M., note on animal bone from Whitesheet Down, 167–71
- Malus* spp. (apples), 18
- Malus x purpurea* (Purple-leaved Hybrid Apple), 18
- mammals, 270–1; bones, 167, 170, 238
- Man, Isle of, 203
- man-traps, 200, 275, 284n
- manganese nodules, 151
- Maniola jurina* (Meadow Brown), 268
- manners, 12
- manors, 35
- Mantell, Gideon Algernon (1790–1852), 27, 28, 30, 31, 32; on Bennett, 25, 26; fossils, 33
- maple trees, 16, 22, 23
- maps, 3; geological, 33n; sale of, 3; subscribers, 2; of Wiltshire, 2
- Margate* (ship), 57
- mariners, 53
- Market Lavington, 3
- markets, 36
- marks, cloth, 51, 52, 60–2
- Marlborough, 4, 80, 253; Barton Dene, 16; cricket matches, 10; Field Cottage (Barton Dene), 16; George Lane, 17, 23; High Street, 15, 23; Hyde Lane, 15, 17; Littlefield House, 23; trackways, 91; turnpike roads, 83; West Woods, 252
- Marlborough College: College House, 15; Cotton House, 18; Duelling Lawns, 15; establishment, 15; gardens, 24; Kennels, 23; Master's Garden, 23; Mound (Mount), 15; New Pavillion, 23; Science Block, 22; trees, 15–24; Trout Ponds, 23
- Marlborough College Nature Reserve, Nature Trail, 15, 16, 17, 18, 24
- Marlborough Downs, 80, 84, 85, 123, 252; excavations, 89; sarsens, 208; trackways, 91
- marsh, 228
- Marsh, John (1750–1828), 6
- Marsh, Mr., 80
- marshes, 266
- Martin Down (Hants), 123
- Marvell, Andrew (1621–78), 199
- Mary (ship), 60
- Mary & John* (ship), 45
- Mary Anne* (ship), 57
- Mary Fortune* (ship), 52, 57
- Mary Gabryell* (ship), 45, 52
- Mary Mychell* (ship), 59–60
- Mary Thomas* (ship), 45
- masonic emblems, 10
- masons *see* stonemasons
- Mathe, Robert, 36
- Matricaria* spp. (herbs), 192
- mauls, sarsen, 166
- Maurice, Thomas Richardson ('Dick') (1915–2000), 249
- Maurice, Timothy Kindersley ('Tim') (1912–), 249
- Mawdelyn* (ship), 60
- May, Thomas, 55n
- Maye, Robert, 39, 40, 42, 47, 48; defective cloth, 50
- Mayfield (Kent), 100
- Meaden, Terence, 207
- meat, 131, 132; sources, 133, 139
- Mechanical Transport Corps, 276
- medals, 3
- medical tracts, 2
- medicine, 179
- medlars, 18
- megalithic monuments, 197–210, 280; linear, 200, 203, 207
- Meles meles* (Badger), 271
- Melksham: agriculture, 4; clothiers, 38, 39, 40, 42
- Mellen, Paul, 34n
- Meloe proscarabaeus* (Black Oil Beetle), 298, 299
- Meloe rugosus* Marsham (Rugged Oil Beetle), 298–9
- Meloe violaceus* Marsham (Violet Oil Beetle), 299
- melons, 3, 4
- Members of Parliament, 8, 9, 27–8, 29
- memorial inscriptions, 25; 18th century, 1
- Mendip Hills (Somerset), 81
- Mentha aquatica* (Water Mint), 261
- Menyanthes trifoliata* (Bogbean), 261, 264
- Mevanthes, Lorraine, notes on finds from Earl's Farm Down, 237–8
- Mercer, R. J., 185, 187
- mercurs, 35, 36, 37
- Mercer's Company, 35
- Merchant Adventurers Company, 35, 36, 44, 51; rules, 52
- merchants, 35, 36
- Mercury (god), figurine, 297
- Mere: Chicklade Bottom, 304; Mere Down, 179–80, 182–4, 187, *see also* Whitesheet Down
- Mespilus* spp. (medlars), 18
- metalworking, 140
- Meux, Sir Henry Bruce (1857–1900), 274
- mica, 122

- mice, 266, 270–1; bones, 238
 Michelangelo di Lodovico Buonarroti (1475–1564), 3
 microdenticultures, 226
Micromys minutus (Harvest Mouse), 270
 microscopy, 135, 175, 177
Microtus agrestis (Field Vole), 167, 180, 270
 middens, 185; Late Bronze Age, 134–5; Late Bronze Age/Early Iron Age, 307; Romano-British, 300
 Middle Chalk, 63, 145, 234, 308; flints, 160
 middle classes, 6, 10
 Middle Thames Valley, 134
 Middlecotts, Richard, 60
 miles, Roman, 284n
 milestones, 304, 308
 military service, 275
 militia, 8
 milk, 131
 millennium celebrations, 66
 Miller, Alan, 295
 Miller, Philip (1691–1771), *The Gardener's Dictionary* (1731), 3
 Mills, John, 9
 mills, 255–7; fulling, 11
 Millstreet (Ireland), 199
 Milton Shore[?] (Hants), ships, 57
 mineralogy, 86
 Minerva, 296–7
 mines, flint, 224, 244, 245
 Minety, pottery, 124
 minimum number of individuals (MNI) method, 130
 mink, 270, 271
 mints, Saxon, 200
 miracles, 293
 mires, 264; lowland, 259
 mitochondrial RNA (mRNA), 18
 MNI method, 130
 Mobsby, Piers, 271
 'A Modest Account of the Wicked Life of That Grand Imposter Lodowicke Muggleton' (1676), 101, 104n
 Moffatt, L., 179
 Moffatt, William, 301, 303; report on excavations at Barton Grange Farm, Bradford-on-Avon, 211–17
 Mohawk Indians, 5
 moles, 270
Molinia caerulea (Purple Moor-grass), 265
 mollusc remains: Avon Valley, 242–4; Earl's Farm Down, 238–41; Latton Lands, 126–8, 139; Mere Down, 183–4; Whitesheet Down, 145, 150, 186, 187, 191–2
 molluscs, 27, 70, 71, 233, 234; analyses, 234, 238; bivalves, 32, *see also* shells; snails
 monuments, mortuary, 74
 Moon, worship, 205, 206
 Moore, P. D., 135
 Moore, Thomas (1779–1852), 7, 9, 11
 More, Hannah, 12
 Morganwg, Iolo (1746–1826), 78–88; antiquarianism, 82; biography, 87n; letters, 86; *Poems, Lyric and Pastoral* (1794), 85
 Morris, Elaine L.: note on finds from Whitesheet Quarry, 188–91; note on pottery from Durrington Walls, 223–4
 Morrison, Peleg, 3
 Morse, Robert, 45
 Mortimer, Neil, 207, 208
 mosses, 264, 266
 moths, 252, 253, 259–60, 268–9, 271
 moulds, 294, 297
 Mound of the Conventions, 86
 mounds, 275
 Mount Murray (Isle of Man), 203
 Mozambique, 249
 Mozart, Wolfgang Amadeus (1756–91), 6
 'Mr Cherry', 253
 'Mr Crabtree', 249, 250, 252, 253
 mRNA (mitochondrial RNA), 18
 Muensterberger, W., 282
 Muggleton, John, 99–100
 Muggleton, Lodowick (John) (1609–98), 99–105; *The Acts of the Witnesses of the Spirit* (1699), 101, 102, 104; 'The Answer to William Penn' (1673), 100; in *DNB*, 100, 101; 'The Looking Glass for George Fox and other Quakers' (1668), 100; 'The Neck of the Quakers Broken' (1663), 100
 Muggleton, Margaret (b. 1605), 99–100
 Muggleton, Mary (d. 1612), 102
 Muggleton, Ruth (b. 1607), 100
 Muggletonians: beliefs, 100, 102–3; distribution, 100, 104n; revival, 101
 Murchison, Sir Roderick Impey (1792–1871), 25–6
 murders, 197
 Murray, Tim, *Encyclopaedia of Archaeology: The Great Archaeologists* (1999), 273
Muscardinus avellanarius (Dormouse), 266, 270–1
 museums: collections, 282; private, 276, *see also specific museums*
 music, 11, 12; in 18th century, 5–6; Continental influences, 6; martial, 8
 music festivals, 6
 musical clocks, 6
 musical instruments, 6
Mustela erminea (Stoat), 271
Mustela vison (Mink), 270, 271
 Mychell (ship), 57, 58
 Mydlecote, Richard, 39, 47, 48; accounts, 59
 Myfyr, Owain, 82
Myosotis scorpioides (Water Forget-me-not), 261
 Myrtaceae (myrtles), 22
 nails: ?Roman, 183; ?Romano-British, 223
 Napoleon I (Bonaparte) (1769–1821), 9
 Nash, Sarah E., 27
 Nashe, John, 53
 National Library of Wales (NLW), 79, 87n
 National Monuments Record (NMR), 207
 Native Americans, 5
Natrix natrix (Grass Snake), 264
 natural history: 18th century trends, 4; books, 5; botany, 5, *see also* geology
 natural philosophy, 5
 Nature Conservancy Council (NCC), 271
 Navy, 44
 NCC (Nature Conservancy Council), 271
 Neate, John, 10
 Neate, Stephen, 3, 10
 Neate, William, 2
 necklaces: Saxon, 275; glass, 200; stone, 276
 Neigh Bridge (Gloucestershire), 108
Neomys fodiens (Water Shrew), 270
Nesovitreia hcmmonis (mollusc), 183
 Netherlands, The, 49, *see also* Bergen-op-Zoom; Flushing
 nettles, 268
New Botanic Garden, 4
 New Forest (Hants), 265; pottery, 238
 New Sarum *see* Salisbury
 New Zealand, 31, 138, *see also* Alexander Turnbull Library; Wellington
 Newall, R. S., 282
 Newbury (West Berkshire), 281; Museum, 289; pottery, 123
 Newbury and District Field Club, 274
 Newcastle, florists' feasts, 3
 Newman, Caron, report on archaeological and environmental study of Avon Valley/Durrington Walls environs, 218–48
 Newmarket (Suffolk), Devil's Dyke, 277
 newspapers, 1, 5, 11
 nightshades, 178, 179
 Nile, Battle of (1798), 9
 nitrogen compounds, 17
 NLW (National Library of Wales), 79, 87n
 NMR (National Monuments Record), 207
 Noakes, Philip (d. 1979), 100
 nonconformism, 5
 Norfolk, 27, *see also* Broome Heath; Burgh Castle; Grime's Graves; Spong Hill
 Norman Conquest (1066), 293
 Normanton, Lord, 297
 Norrington, John, 37, 39, 40, 44, 47, 48; accounts, 42, 49, 54, 58; cloth mark, 61
 North America, plants, 34n
 North East Wiltshire Home Guard, 277
 North West Frontier, 276
 Northumberland, Duke of, 80
 Norton Bavant, 26, 27; All Saints Church (Benett Chapel), 25; rebuilding, 29–30; barrows, 72, 73; Borrow Pit, 189; Manor House, 25; Scratchbury, 74; vicars, 29
 Norway spruces, 16
 Norwich, 276, 277, 293; florists' feasts, 3
 Nottingham Brewhouse Yard Museum, 290
 nuns, 293–4
 Nymphalinae (butterflies), 268
 OA *see* Oxford Archaeology (OA)
 oak dieback disease (ODBD), 16, 18
 oaks, 15, 16, 137, 262, 265, 268; charcoal, 192, 245; diseases, 16, 18; felling, 175; girth, 23; pollen, 177, 231
 OAU (Oxford Archaeological Unit), 308
Ochloides venata (Large Skipper), 268
 ODBD (oak dieback disease), 16, 18
 Ogbourne St Andrew, 276; Man's Head, 91; Smeathe's Ridge, 276
 Ogbourne St George, 276
 Ogilby, John (1600–76), *Britannia* (1675), 83
 oil, measures, 62
 oil beetles, 298–9
 Old Bath Road, 82; traces, 83, 87n
 Old London Way, 87n
 Oleaceae (olives), 22
 olive oil, 49, 55n
 Oliver, Jack, paper on trees of Marlborough College, 15–24
 Olymphia? Agricultural Co., 278
 Olympic Games, 249
 oolites, 121, 123, 124, 157, 188
 Oolitic limestone, 188, 212, 215
 operas, 6
Ophiostoma novo-ulmi (fungus), 18
Oplodontha viridula (soldier fly), 266
 oral history, 103
Orchesia minor (beetle), 269
 Orcheston, agriculture, 4
 Ordnance Survey, 146, 257, 306
 organic materials, 109
 organs, 6, 11; self-acting, 6
 orgeries, 5
 Orwell (Suffolk), ships, 45
Oryctolagus cuniculus (Rabbit), 270
 Osborne, Walter, 55n, 58
 osiers, 17
 osteoarthritis, 90
 Oswald, A., 184
 otters, 271
 Outer Hebrides, 207
 Overton, T. C., *Original Designs of Temples* (1766), 2
 ovicaprids: bones, 180–2, 188, *see also* goats; sheep
 Owen, Edward, 84
 Whyhee, Chief of, 3
Owse (ship), 45
 oxen, fattening, 5
 Oxendean-Heytesbury valley, 72, 73, 74
 Oxford: Research Laboratory for Archaeology and the History of Art, 90, *see also* Ashmolean Museum
 Oxford Archaeological Unit (OAU), 308

- Oxford Archaeology (OA), 107; evaluations, 306; watching briefs, 304, 307
- Oxford Clay, 145
- Oxford University, 278, 282, 289; Museum of Natural History, 282, 289
- Oxfordshire: clothiers, 38n, 43; pottery, 238, *see also* Abingdon; Ashbury; Barrow Hills; Eight Acre Field; Eynsham; Pusey; Rollright Stones; Uffington; Wallingford; Watkins Farm; Wayland's Smithy; Woodstock; Yarnton
- Oxycera nigricornis* (soldier fly), 266, 271
- Oxycera trilineata* (soldier fly), 266
- Oxychilus cellarius* (mollusc), 127
- oysters, 4
- Paasmarkt*, 36
- Pacifastacus leniusculus* (American Signal Crayfish), 259
- paddocks, 140
- Paine, Thomas (1737–1809), *The Rights of Man* (1791–2), 79
- paintings, 6; collections, 2–3, *see also* watercolours
- palaeoenvironmental materials, Neolithic, 69–71
- palaeontology, 26; collections, 4, 274, *see also* fossils
- Palmer, Thomas, 58, 60
- palynology, 135, 137–8
- 'Pantheon' (1821), 6
- Panton, Elizabeth, 295
- Papaver argemone* (Prickly Poppy), 98
- Papaver hybridum* (Rough-headed Poppy), 98
- Papaver rhoeas* (Common Poppy), 97
- paper hangers, 274
- Papilionaceae (legumes), 231
- Paracymus scutellaris* (water beetle), 269
- Parastiches ypsilon* (Dingy Shears), 268
- parish boundaries, 92, 203, 302
- parish registers, 99–100, 102
- parsley, 263
- Parus ater* (Coal Tit), 270
- Parus caeruleus* (Blue Tit), 270
- Parus montanus* (Willow Tit), 269
- Parus palustris* (Marsh Tit), 270
- Pask mart, 36, 44
- Passmore, Arthur Dennis (c.1877–1958), 273–92; biographical notes, 274–8; collections, 274, 275, 278, 280, 281–2, 287–92; critique, 282–3; fieldwork, 274–7, 278–9; interests, 273–4; publications, 286–7; stone circle studies, 197–210; and WANHS, 279–81
- Passmore, Hercules (bc. 1874), 274
- Passmore, Jane (bc. 1852), 274
- Passmore, Richard Keylock (bc. 1850), 274
- Pastinaca sativa* (Wild Parsnip), 97
- pasturages, 241, 297, 302
- paths, permissive, 257
- Patyens, Roger, 59
- pavements, limestone, 214, 215, 216–17, 303
- Pawmer, Thomas, 58
- Payne, Keith, 271
- Payne, Robert, 55n; accounts, 57
- Payne, S., 128
- Paynes, Robert, 57, 58
- Pearce, Mr. 9
- peat, 137, 219, 228, 231, 255, 264
- pebbles, polished, 125
- pedogenesis, 232
- Pedunculatae Oak *see Quercus robur* (English oak)
- Pegge, Maud Edith *see* Cunningham, Maud Edith (née Pegge) (1869–1951)
- Peglar, S. M., 135
- penestones, 37, 44, 55n
- Penn, William (1644–1718), *The New Witnesses Proved Old Heretics* (1672), 100
- Penruddock, Charles, 9
- Penselwood (Somerset), Encie Farm, 192
- Pentecost Fair, 36
- pepper, 47, 49, 50; measures, 62
- Pepys, Samuel (1633–1703), 84, 85
- Perch (fish), 253
- Peremans, John, 60
- perfumes, 12
- Perrett, Thomas, 45
- Persicaria maculosa* (Redshank), 137
- Peshwar (India), 276
- Peter (ship), 52, 57, 58, 59, 60
- Petersburg, University of (Russia), 32
- Petrie, Sir (William Matthew) Flinders (1853–1942), 280
- petrol, rationing, 277
- Petter, Robert, 37, 39, 47
- Petty, William, 1st Marquis of Lansdowne, Lord Shelburne (1737–1805), 5
- Pevsner, Sir Nikolaus Bernhard Leon (1902–83), 207
- Pewsey: Dursden Lane, 257, 258; Jones's Mill, 255–72; Jones's Mill Mead, 255, 257, 260, 261, 265; Kepnal, 257; Kepnal Drove, 257, 259, 261; Knowle, 258; Martinsell, 257, 258; mills, 255–7; origin of name, 258; Pains Bridge, 258; Sunnyhill Lane, 257, *see also* Vera Jeans Nature Reserve (Pewsey)
- Pewsey Downs, 257, 268
- Pewsey, Vale of, 92, 245, 255; geology, 257–8
- Peyett, Ryse, 53
- pH, 259
- Philadelphia (US), 27, 33
- Philip of Macedon, 280
- Phillips, Laura, 200; paper on the life of A. D. Passmore, 273–92
- Phillips, Nathaniel, 6
- Phipps family, 9
- photography, 276; aerial, 236, 239, 262, 280, 301
- Phragmites australis* (Common Reed), 137
- Physa fonninalis* (mollusc), 33n
- Phytophthora* spp. (fungi), 18
- pianos, 6
- Picea abies* (Norway Spruce), 16
- picks, antler, 167, 222, 227
- Picus viridis* (Green Woodpecker), 270
- Pieris napi* (Green-veined White), 266–8
- pig bones, 180, 185, 187, 226–7, 238, 244; Neolithic, 150–1, 153, 154, 167–71; Late Neolithic, 222; Middle Bronze Age, 109, 128, 129, 132; Iron Age, 188
- Piggott, Stuart (1910–96), 146, 184–5, 186, 207, 280, 281
- pignuts, 171, 178, 179, 265
- pigs, 186; as feasting animal, 228; pannage, 186; teeth, 132, 169, 226–7
- pilgrim badges, medieval, 293–4
- pilgrimages, 293, 294
- Pinaceae (pines), 19–20
- pine trees, 16, 19, 137, 176, 231, 242
- pineapples, as status symbols, 3
- Pinus* spp. (pines), 137, 176, 231
- Pinus nigra* (Black Pine), 16
- Pinus sylvestris* (Scots Pine), 16
- Pinxten* mart, 36
- pipelines, 148, 180, 185, 187, 192; gas, 220, 300; water, 145, 219–48, 303
- Piptaella virens* (hoverfly), 271
- pirates, 44, 55n
- pitchstones, 214, 215
- pits, 149; Mesolithic, 71; Neolithic, 66, 107, 151–4, 166, 185, 219, 301; Late Neolithic, 220–3, 226, 227, 244; Late Neolithic/Early Bronze Age, 301, 305; Beaker, 145, 179–80, 187; ?Bronze Age, 116–18; Bronze Age, 125; Middle Bronze Age, 107, 108, 112–15, 116, 121, 128, 130, 133, 140; Late Bronze Age, 107, 140; Late Bronze Age/Early Iron Age, 301; Iron Age, 107, 116, 118, 140, 305; Early/Middle Iron Age, 187–8; medieval, 307; ?post-medieval, 301; post-medieval, 305, 307; modern, 308; undated, 305; amorphous, 116; location, 134–5, *see also* ditches; postholes
- Pitt Rivers Museum (Oxford), 290
- planctaria, 198
- Planorbis planorbis* (mollusc), 33n
- plant remains, 135, 177–9, 192; charred, 166, *see also* pollen
- Plantago* spp. (plantains), 233
- Plantago lanceolata* (Ribwort Plantain), 137, 177, 231, 232
- Plantago major* (Greater Plantain), 231
- Plantago media* (Hoary Plantain), 231
- plants: aquatic, 138; carr, 259, 261–3; collections, 4; fen, 259–61, 263–5; germination, 95, 97; imported, 3; propagation, 3–4; rare, 95; self-pollination, 95, 97, *see also* flowers; trees; weeds
- plaques, Late Roman, 296–7
- Plaster, Roman, 200, 275
- plates, porcelain, 200
- Plateumaris affinis* (leaf beetle), 269
- Platycnemis pennipes* (White-legged Damselfly), 266
- play-houses, 208
- Pleiosaurus* spp. (aquatic reptiles), 275
- Pleistocene, 234
- Plesiosaurus* spp. (aquatic reptiles), 275
- ploughing, 95; medieval, 76; archaeological damage, 65, 139, 146, 244, 300, 308; matches, 5
- ploughs, 4
- plum trees, 17
- Plymouth (Devon), theatres, 7
- Poaceae (grasses), 71, 135
- poetry, 2, 82, 86
- Poets Laureate, 11
- Pollacia saliciperda* (fungus), 18
- pollen, 63, 66, 71, 135–8, 139; analyses, 135, 137, 175–7, 228, 229; Avon Valley, 229–33; preservation, 175; samples, 109, 135, 166, 175–6, 229; sequences, 219, 242–3; Whitesheet Hill, 150, 175–7
- Polter, Richard, 57
- Polygonaceae (docks and knotgrasses), 233
- Polygonum aviculare* (Knotgrass), 137, 231
- Polyommatus icarus* (Common Blue), 268
- Polypodium* spp. (fern), 71, 177
- Polypodium interjectum* (fern), 123
- Polypodium vulgare* (fern), 71
- Pomatia elegans* (snail), 171, 239
- Pomoideae (apple/medlar/quince sub-family), 174, 175, 192
- ponds, 139, 257, 258, 262, 266; post-medieval, 302; trout, 15
- pondweeds, 138
- Poor Laws, 9
- Pope, Alexander (1688–1744), 2
- poplars, 15, 17, 23, 265; hybrids, 24
- poppies, 97, 98
- Populus* spp. (poplars), 17
- Populus x canadensis* 'Regenerata' (Railway Poplar), 15, 23
- Populus x canadensis* 'Serotina' (Black Italian Poplar), 23
- Populus x jackii* (Hybrid Balsam Poplar), 17
- Populus nigra* (European Black Poplar), 17, 265
- porters, 53
- Portland (Dorset), fossils, 26
- Portland Stone, 29
- Portugal laurels, 17, 18
- postholes, 151; Neolithic, 154; Middle Bronze Age, 111–12, 116, 139; Iron Age, 305, 306; medieval, 306; post-medieval, 307; modern, 308; undated, 305, *see also* pits
- potassium hydroxide, 71, 135
- potatoes, 5
- Potentilla erecta* (Tormentil), 265

- Poterium sanguisorba* (Salad Burnet), 177
 Poterne, 189; Furzehill, 10; Hartmoor, 4
 pottery, 200; prehistoric, 154; prehistoric, 220, 308; late prehistoric, 300–1; Neolithic, 74, 151, 153, 179, 223–4, 242; Early Neolithic, 148, 151, 154, 155–60, 185, 224; Late Neolithic, 221, 222; Late Neolithic/Early Bronze Age, 305; Beaker, 301, 305; Bronze Age, 237; Middle Bronze Age, 108, 109, 112, 115, 116, 118, 119, 121–3, 140; Late Bronze Age, 237–8; Late Bronze Age, 189, 237, 245; Late Bronze Age/Early Iron Age, 189; Iron Age, 108, 116, 119, 123–4, 237, 300; Early Iron Age, 125, 188, 189; Early/Middle Iron Age, 188–91, 306; Middle Iron Age, 188, 189; Middle/Late Iron Age, 90, 92; Late Iron Age, 92; Late Iron Age/Early Romano-British, 155, 157, 159, 307; Roman, 220, 228, 232, 237; Romano-British, 154, 275, 306; Romano-British, 90, 92, 188, 237, 300, 303; Saxon, 108; medieval, 108, 119, 124, 301, 304, 306, 307; post-medieval, 119, 124, 307; modern, 229; analysis, 119–21; Black Burnished ware, 238; 'British', 203; chaff-tempered, 93; Chelsea ware, 282; coarse flint-tempered ware, 122; coarsewares, 238; Collared Beakers, 180; collections, 282; Decorated Style, 159; Deverel-Rimbury type, 107, 120, 121–3, 138, 140; Durrington Walls sub-style, 224; fine flint-tempered ware, 122–3; fine micaceous ware, 188; flint-tempered wares, 122, 123, 188, 237; fossil shell-tempered ware, 121; gabbroic, 151, 157, 158, 159, 160, 185; Grey Wares, 188; grog and fossil shell-tempered ware, 122; grog-tempered ware, 121–2, 124, 183, 188; Grooved Ware, 221, 223–4, 226, 227–8, 244, 245, 301; Hembury type, 158, 159; New Forest ware, 238; Oxfordshire ware, 238; Peterborough ware, 154, 155, 157, 159, 164, 186, 301 (Mortlake-style, 151, 159, 186); petrological analyses, 155, 157; pitting, 189; Samian, 200, 238, 275; sandy wares, 188; shell and limestone-tempered ware, 121, 188; shelly wares, 121, 123–4, 157; slipwares, 189; South-Western Style, 158, 159, 185; trumpet lugs, 158, 159; Windmill Hill type, 148, 159, *see also* beakers; bowls; jars; jugs; tiles; urns
 Pottery Record Numbers (PRNs), 159
 pounders, sarsen, 166
 Powell, John, 58
 Powell, Mr, 99
 Powell, Nathaniel, 101
 Powell, Richard, 58
 Prehistoric Society, 274, 276
 Presbyterianism, 102
 Preshute: tennis courts, 23; White Horse, 16
 Preston (Gloucestershire), 108
 Priestley, Joseph (1733–1804), 5
 primroses, 263
Primula vulgaris (Primrose), 263
 printers, 6
 prints, collections, 2–3, 11
 PRNs (Pottery Record Numbers), 159
 processions, 9
 Protestants, 294
 proto-saucepan pots, Early/Middle Iron Age, 189
Prunella modularis (Dunnock), 270
Prunus spp. (plum/cherry/sloe), 17; charcoal, 174, 175
Prunus avium (Wild Cherry), 16, 17, 18; girth, 24
Prunus cerasifera 'Pissardii' (Pissard's Plum), 24
Prunus x fruticans (Plum), 17
Prunus laurocerasus (Cherry Laurel), 17
Prunus lusitanica (Portugal Laurel), 17, 18
Prunus serrulata 'Kanzan' (Pink Japanese Cherry), 18, 24
Prunus spinosa (Blackthorn), 17, 178
Prunus spinosa var. *microcarpa* (Small-seeded Sloe), 178
Pteridium aquilinum (Bracken), 71, 177, 233, 263
 pterodactyls, 200
Psilinus pectinicornis (wood borer), 269
 public lectures, 5
 publications, 2
 Pughe, William Owen (1759–1835), 78, 81, 86; *Elegies of Llywarc Hen* (1792), 85
 pugilism, 10
 Pullen, William, 278
 punting, 249
Pupilla muscorum (snail), 71, 171, 183, 191, 238, 239
 Purbeck Beds, 145, 157, 305
 Puritans, 102
 Pusey (Oxfordshire), 284n
 Pyarde, Christopher, 38n
 Pyarde, Katherine, 38n, 40, 49
 Pymmells (agents), 50, 54
 Pyramids (Egypt), 79
Pyrochroa coccinea? (cardinal beetle), 269
Pyrochroa serraticornis (cardinal beetle), 269
 Quakerism, 101, 102
 Quakers, 100, 104n
 quarries: post-medieval, 302; abandoned, 146, 187–93; evaluations, 303; gravel, 275, 301, 304; stone, 80, 83, 85
 quartz, 122, 124, 157, 224
 quartzite, 125
 quatrefoils, 304
Quercus spp. (oaks), 137, 176, 231, 268
Quercus borealis (American Red Oak), 23
Quercus petraea (Sessile Oak), 18; diseases, 19
Quercus petraea x robur *see Quercus x rosacea* (Hybrid Native Oak)
Quercus robur (English Oak), 16, 19, 262, 265; diseases, 18; girth, 23
Quercus robur 'Fastigiata' (Poplar Oak), 23, 24
Quercus x rosacea (Hybrid Native Oak), 18; diseases, 19
Quercus rubra (American Red Oak), 23
Quercusia quercus (Purple Hairstreak), 268
 querns: saddle, 166, 188; sarsen, 152, 166, 188
 Quick, John, 102
 quinces, 18
 quinine, 32
 quinos, 211, 216
 rabbits, 270
 Rack, Bernard, 282
 radicals, 99
 radiocarbon dating, 89, 90, 154–5, 184, 231; bone, 150–1, 153, 186, 244; charcoal, 242; Lutton Lands, 138–9
 Radiocarbon Dating Laboratory (New Zealand), 138
 Radmund, John, 39, 47
 railways, 32, 306
 rainforests, 17
Rallus aquaticus (Water Rail), 269
 Ramsay, A., 298–9
 Ranscombe Camp (East Sussex), 175
 Ranters, 102
 Ranunculaceae (buttercups/crowfoots), 298
Ranunculus spp. (buttercups), 137, 177
 rattles, watchmen's, 275
 Rawlings, Christopher, 58
 Rawlings, John, 57
 Rawlings, Mick, report on investigation of the Whitesheet Down environs, 144–96
 Rawlins, George, 40, 48, 60
 Rawlins, John, 40, 48; accounts, 57, 58, 59
 RCHME (Royal Commission on the Historical Monuments of England), 66, 67, 68, 297
 RDB (Red Data Book), 269, 271, 298
 Read, Hercules, 275, 276, 282
 Reading (Berks), theatres, 7
 Reading Museum Service, 290
 reading (books), 1–2
 recipe books, 9
 recreations, 10–11
 Red Data Book (RDB), 269, 271, 298
 red deer *see* deer
 Rede, Richard, 45, 56, 57
 reeds, 137, 269
 Reeve, Henry, 102
 Reeve, John (1608–58), 99, 100, 101; in *DNB*, 101; and Muggleton, 102–3, 104
 Reeve, John Henry, 102
 Reeve, John, and Muggleton, Lodowick, *A Transcendental Spiritual Treatise upon Several Heavenly Doctrines* (1651/2), 99, 101, 104n, 105n
 Reeve, Walter, 102, 103
 Reeve, William, 101, 102
 Reeve, William (1757–1815), *Don Juan* (1787), 7
 Reeve family, 102, 103, 104
 Reevites, 102
 Reevonians, 102
 refuse disposal, 226
 Regan, Charles Tate (1878–1943), 253
Regulus regulus (Goldcrest), 270
 Reiss, Richard, 202
 religious sites, 302
 Rembrandt Harmensz van Rijn (1606–69), 3
 Remenham (Wokingham), 158
 rendzinas, 175, 187, 219; humic, 68, 70, 76
 reservoirs, 219, 220, 221
 Revelation, Book of, 102
 revolutionary politics, 79
 Reynolds, Andrew, 91, 92
 Reynolds, John, 39, 42, 50; accounts, 47–9
 Reynolds, Sir Joshua (1723–92), 3
Rhagozycha translucida (beetle), 269
 Rhamnaceae (buckthorns), 22
 Rhine, River, 36
 ridge and furrow, 147, 307; medieval, 107, 119, 124, 140, 141; post-medieval, 107, 119, 124, 141
 Ridgeway, 280
 Rinyo-Clacton culture, 226
 rituals: and animal bone, 227–8; funerary, 134, 135
 river crossings, 93
 rivers, 258
 Rivet, Albert Lionel Frederick (1915–93), 284n
Rivington's Annual Register, 2
 Roach–Rudd hybrids, 253
 roads: Roman, 108, 277, 304, 308; turnpikes, 83, 87n, *see also* coach roads; trackways
 Robert the Bruce (1274–1329), 250
 Robertson, Ian Gow (1910–83), 282
 Robins, John (fl. 1650–2), 102
 Robinson, Paul, 283; note on Minerva plaque from Charlton Down, 296–7
 roebucks, 244
 Rollright Stones (Oxfordshire), 208
 Roman Conquest, 80
 Roman Empire, 87n
 Rome (Italy), 87n
 Rosaceae (roses and fruit trees), 17–18, 21–2
 Rose, Charles, 4
 Roughground Farm (Gloucestershire), 133
 roundhouses, 207–8; Middle Bronze Age, 111, 112, 139; Celtic, 203; post-built, 107, 108

- Roundway, 4; farms, 5; Roundway Down, 6
rowan trees, 18
Rowde, 6; agriculture, 4
Rowlands, Henry (1655–1723), 79, 80, 82, 86
Royal Anthropological Institute, 276, 290
Royal Anthropological Society, 273–4
Royal Archaeological Institute of Great Britain and Ireland, 274
Royal College of Surgeons, 282, 290
Royal Commission on the Historical Monuments of England (RCHME), 66, 67, 68, 297
Royal Society, 5
Royal Society for the Encouragement of Arts, Manufactures and Commerce, 4
Royal Wiltshire Yeomanry (RWY), 275
rubbish, stone, 166, 185
rubbish pits *see* middens
Rubus fruticosus (Bramble), 261
Rudd (fish), 252
Rudd–Bream hybrids, 253
ruderals, 232
Rumex spp. (docks), 231, 268
Rumex hydrolapathum (Water Dock), 264
Rushall, 297; Rushall Down, 297
russets, 37, 55n
Russia, 5, 32
Russia, Emperor of, 32
RWY (Royal Wiltshire Yeomanry), 275
rye, 192
Ryngland, Robert, 58
- SACs (Special Areas of Conservation), 258
sailing, 249
sainfoin, 298
St Edith, 293–4
St Osmund, 293, 294
St Thomas Becket, 293
Salicaceae (poplars and willows), 20–1, 22–3
Salisbury, Our Lady of, 293
Salisbury: Bedwin Street, 305; Bishop Wordsworth's School, 305; Castle Gate, 305; Castle Street, 305; circulating library, 1; clothiers, 40, 56; coaches, 26; Grasmere Hotel, 305; Hussey's Almshouses, 305; Little Woodbury, 189; Mill Stream Approach, 305; music festivals, 6; publications, 2; shrines, 293; theatres, 7
Salisbury Cathedral: Our Lady of Salisbury's shrine, 293; St Osmund's shrine, 293, 294; shrines, 293, 294
Salisbury District Hospital, 305
Salisbury Museum *see* Salisbury and South Wiltshire Museum
Salisbury Plain, 63, 80, 85, 145, 219, 258; barrows, 72, 73; butterflies, 268; geology, 234; pasturages, 297
Salisbury Plain Training Area (SPTA): Bowl's Barrow, 72, 73, 74; Robin Hood's Ball, 179
Salisbury and South Wiltshire Museum, 282, 290; pilgrim badges, 293
Salix spp. (willows), 16; diseases, 18–19
Salix alba (White Willow), 16, 17, 19, 24; girth, 22–3
Salix alba var *vitellina* (Golden Willow), 19
Salix caprea (Goat Willow), 16, 17
Salix cinerea (Grey Willow), 262, 268
Salix fragilis (Crack Willow), 261, 262; disease, 16, 17, 18, 19; girth, 22
Salix matsudana "Tortuosa" (Corkscrew Willow), 18
Salix x sepulcralis (Weeping Willow), 19
Salix viminalis (Osier), 17
Salmo gairdneri (Rainbow Trout), 259
Salmo trutta (Brown Trout), 259
Salmon, Mrs, 6
Salmon, William Wroughton, 2, 4, 5, 6, 9, 10
Salmon family, 10
Sambucus nigra (Elder), 16, 262
SAMs *see* Scheduled Ancient Monuments (SAMs)
Samuel, Raphael, 103
Sanctuary, 206, 207, 278
Sandes, John, 45
sands, 109, 112, 115, 118; glauconitic, 228; in pottery, 157; quartz, 223
sandstones, 166, 188; burnt, 187
Sandwell, Frederick, 2
Sandwich (Kent), ships, 57
sap, 17
saplings, 15, 16
sarsens, 83–5, 200, 201, 203, 204, 205, 206; at Broome, 278; at Langdean Bottom, 207; axes, 275; in barrows, 66; burnt, 166, 202; fragments, 153, 166; and inhumations, 92, 93; on Marlborough Downs, 208; origins, 79, 83–4, 85; querns, 152, 166, 188
Sarus *see* Salisbury
satire, 11–12
Saturn (planet), 198
saucupans, Early/Middle Iron Age, 189, 191
saurians, 275
Savernake, Tottenham Park Estate, 24
Savernake Forest, 252; Arboretum, 24; trees, 15, 17, 23, 24
Savior (ship), 56
sawflies, 271
saws, flint, 226
Scabiosa spp. (scabious), 177
Scaeva pyrastris (hoverfly), 98
Scaife, Robert G., 137, 178, 242; note on pollen from Whitesheet Down, 175–7; note on pre-Roman vegetation in Avon Valley floodplain sediments, 228–34; note on soil pollen at Corton Long Barrow, 71
scallops, 244
Scandinavia, migrant birds, 269
Scandinavians, pirates, 44
Scaphisoma boleti (beetle), 269
Scheduled Ancient Monuments (SAMs), 74; Bradford-on-Avon, 302; hollow ways, 82, 87n; Latton, 107, 108; Mere, 304; Whitesheet Down, 145; Winterbourne Stoke, 308
Scheldt, River, 36
Schlanger, N., 284n
Schmid, E., 128
schools, music, 6
sciences, 11; books on, 1–2; experiments, 5
scientific lectures, 5
Sciurus carolinensis (Grey Squirrel), 270
Scolopax rusticola (Woodcock), 269
Scolytus multistriatus (Bark Beetle), 18
Scolytus scolytus (Bark Beetle), 18
Scotland: sawflies, 271, *see also* Lewis
Scots, pirates, 44
Scots pine, 16
Scott, Sir George Gilbert (1811–78), 205
Scott, Kathleen (née Bruce), 250–2
Scott, Sir Peter (1909–89), 249–54; ancestry, 250–1; biographical notes, 249; paintings, 251
Scott, Philippa (née Talbot-Ponsonby), 251
Scott, Robert Falcon (1868–1912), 249
Scott, Sir Walter (1771–1832), 101
scrapers, 125; Neolithic, 164; Late Neolithic, 221–2, 225–6; flint, 148, 180, 225–6, 238, 275
sculptors, 250
seals: collecting, 30; lead, 52–3
seaside resorts, 11
Secale cereale (rye), 192
Second World War *see* World War II
sedges, 259, 260, 261, 262, 264, 270, 271; pollen, 135, 231, 233
sedimentary rocks, 26, 27
sediments, floodplain, 228–34
seedlings, 15, 16, 17
seeds, 95, 98, 178–9; collecting, 4; dispersal, 97; impressions, 157
segetals, 231
seismic surveys, 81–2
Selkley Hundred, 91, 93, 302
Sesia bembeciformis (Lunar Hornet Moth), 268
Sessile Oak *see* *Quercus petraea* (Sessile Oak)
settlements, 92, 93; prehistoric, 106–43; Neolithic, 74, 107; Late Neolithic/Early Bronze Age, 305; Early Bronze Age, 140; Middle Bronze Age, 107, 139–40, 301; Late Bronze Age, 140; Iron Age, 108, 140, 237, 275; Early Iron Age, 301; Early/Middle Iron Age, 145, 187–93; Middle Iron Age, 192–3, 301; Late Iron Age, 108; Roman, 108, 303, 308; Romano-British, 237, 297; medieval, 108, 140, 305; post-medieval, 140–1, *see also* enclosures; towns
Seven Years' War (1756–63), 6
Seville oil, 49
Seymour, Lord, 199
Shaffrey, Ruth, note on stone from Latton Lands, 125
Shaftesbury (Dorset), 30
Shakespeare, William (1564–1616), 2
shale objects, 300
Shankey, Awen, 60
Shannon species diversity index, 171
sharks, 249
Sharpe, Matthew, 53–4
Shaw, George Bernard (1856–1950), 250
shearman, 53–4, 59
Shearplace Hill (Dorset), 139
sheep, 133; breeds, 5; economic importance, 255; teeth, 131, 167
sheep shearing contests, 5
sheep/goat bones, 185, 238; Neolithic, 167, 169, 170, 171; Middle Bronze Age, 109, 128, 129–30, 131–2
sheet music, 6
Shelburne, Lord, 5
shells, 157; collecting, 4, 27, 31; fragments, 223; marine, 244; snail, 171–4, *see also* molluscs; snails
shepherds, 297
Sheridan, Richard Brinsley (1751–1816), *The Rivals* (1775), 7
Sherrington, 63; long barrows, 72, 73, 74
ships, in cloth trade, 44, 45, 52, 54, 55n
shooting, 10
Shorncliffe (Gloucestershire), 126, 139–40; Quarry, 134
shrews, 238, 270
Shrewton, Robin Hood's Ball, 179
shrines, 293; Roman, 301
Shropshire *see* Ludlow
shrouds, woollen, 304
shrubs, 24, 171, 179, 259
sickles, 165
Siddington (Gloucestershire), 108
sieving, micromesh, 71
Silbury Hill, 15, 83, 87, 198, 276; excavations, 79–82
Silchester (Hants), 277
silicone oil, 135
silt, 108, 109, 111, 112, 115, 116; alluvial, 228; sandy, 257
Silver, I. A., 128
silver birches, 16
Simpson, Charles, 4
Sinapis spp. (charlocks), 231
singing, 6
Sinxten mart, 44, 45, 46, 52, 53; 1533, 50; 1536, 36, 43, 54
Sison amomum (Stone Parsley), 263
Sites and Monuments Record (SMR), 93, 211, 237
Sites of Special Scientific Interest (SSSIs), 258, 259, 269

- Sitta europaea* (Nuthatch), 270
 Skinner, John, 10
 skulls, lead-filled, 200
 slag, 188, 192, 303
 slates, metamorphic, 215, 216
 Slimbridge (Gloucester), 249
 slip, red, 189
 slopes, 17, 18, 178, 179
 Sloper, George, 3, 6, 9
 slugs, 183, 191
 Smallis, William, 57
 Smeth, Perys, 53
 Smethe, John, 39, 40, 45, 48, 53; accounts, 56, 57, 59, 60; cloth mark, 61
 Smith, Revd. Alfred Charles (c.1823–99), fieldwork, 198, 278
 Smith, Godfrey, 298
 Smith, Harold Clifford (1876–1960), 282
 Smith, I. F., 164
 Smith, Joshua, 3, 8
 Smith, Michael, 298
 Smith, Miss, 276
 Smith, Reginald Allender (d. 1940), 275, 276, 277, 282
 Smith, Thomas, 2
 Smith, William (1769–1839), 4; principle of stratigraphy, 26, 33n
 SMR (Sites and Monuments Record), 93, 211, 237
 snails, 187; extinct, 243; land, 63, 66, 69–71, 166, 171–4, 182, 191–2
 snake worship theory, 206
 snakes, 264
 social class: and archaeological societies, 281; middle classes, 6, 10; upper classes, 5, 8, 9, 10, 11; working classes, 10–11
 social clubs, 11
 social events, 8
 social life, 18th century, 1–14
 social trends, 18th century, 1
 sodium, 268
 sodium hydroxide, 135
 soil horizons, 68–9, 71, 72
 soil pollen, 71
 soils, 3, 151, 157, 234, 258; buried, 66, 68–9, 71, 76, 187, 191–2, 242–3; calcareous, 69, 71, 171, 175, 187, 219, 228; chalk, 71, 95, 150, 177, 179; deflation, 187; disturbed, 95; humic, 175, 187; medieval deposits, 305; pH, 259; pollen preservation, 175; prehistoric, 177, *see also* rendzinas
Solanum dulcamara (Bitter-sweet), 178
Solanum cf. nigrum (Black Nightshade), 178
 soldier flies, 265–6, 271
 soldier hollows, 152–3, 154, 185
 solution pipes, 151, 153
 Somerset Keynes (Gloucestershire), 301
 Somerset, 5; clothiers, 35, 37, 38, 40, 43, 46, 54; manors, 35; water pipelines, 145, *see also* Beckington; Ilchester; Mendip Hills; Penselwood
 Somerset Archaeological and Natural History Museum, 290
Sonchus spp. (sow-thistles), 98
Sonchus arvensis (Perennial Sow-thistle), 97
Sonchus asper (Prickly Sow-thistle), 97
 songs, 6, 10
Sorbus spp. (rowans/whitebeams), 18
 Sotheby's, 282, 284n
 South African Wars (1899–1902), 275
 South Gloucestershire *see* Chipping Sodbury; Kingswood
 South Lodge (Dorset), 123, 140
 South Marston, 305
 Southampton (Hants), 31
 Southey, Robert (1774–1843), 4, 10
 Southwark (Greater London), 99
 Southwick, Cuttridge Farm, 306
 Sowerby, George Brettingham the elder (1788–1854), *The Genera of Recent and Fossil Shells* (1820–34?), 27
 Sowerby, James (1757–1822), 32; *English Botany* (1790–1814), 4; fossils, 4; *Mineral Conchology* (1812–46), 25–6, 33n
 Sowerby, James de Carle (1787–1871), 27
 Sowerby family: correspondence, 27; fossils, 26, 27, 33n
 Sowle, John, 45
 Spalding, Dr. 2
 Spalding, Mrs. 7
 Spanish chestnuts, 17
Sparanium spp. (bur-reeds), 231
Sparanium erectum (Branched Bur-reed), 263
 sparrowhawks, 262
 spas, 11
 spearheads, 140, 200; Saxon, 275
 spears, 93
 Special Areas of Conservation (SACs), 258
Spectator, *The*, 2
 Speechly, William (fl. 1776–1821), 3
 spelt, 192
 Spencer, Brian, 293
Spergula arvensis (Corn Spurrey), 137
Sphaerophoria scripta (hoverfly), 98
Sphagnum spp. (mosses), 232–3
Sphagnum palustre (moss), 264
Sphagnum plumulosum (moss), 233
 spiders, 266, 271
 spinners, 54
 spinning, 42, 50, 51; wool, 49
 Spong Hill (Norfolk), 166
 sponges, 25, 33n
 spores, 71, 175, 229; bracken, 135; ferns, 177
 sporting season, 10
 sports, 10, 11
 springs, 255, 257
 SPTA *see* Salisbury Plain Training Area (SPTA)
 squirrels, 270
 SSSIs (Sites of Special Scientific Interest), 258, 259, 269
 stables, 303
 Stace, C., 135
 saddle-stones, 211
 Stafford, Elizabeth, note on molluscs from Latton Lands, 126–8
 Staines (Surrey), 159, 166
 standing stones, 276
 Stansbie, Dan, 304; report on excavations at Latton Lands, 106–43
 Stanton Drew (Bath and North East Somerset), 203, 206, 207
 Stanton Fitzwarren, 276
 stars, 206
 staters, 280
 stations, 6
 Staverton: Marina Drive, 305; New Terrace, 305
 steam, 5
 Steeple Ashton, clothiers, 39, 42, 47–9
 Steeple Langford: Corpus Christi Barn, 306; Duck Street, 306
Stenus niveus (rove beetle), 269
 Stepleton (Dorset), 170
 Stern, Rod, 271
 Stert, 5
 Stevens, Frank (c.1868–1949), 282
 Stills, Robert, 60
 stinging nettles, 260
 stoats, 271
 Stockton, 72, 73, 74; Stockton Earthworks, 308; Stockton Wood, 308
 Stoke Newington (Greater London), 35
 Stokes, Robert, 53, 56
 Stone, J. F. S. ('Marcus') (d.1957), 92, 146
 stone blocks, 188, 305
 stone circles, 278–9; Broome, 197, 199, 210, 278; concentric, 206–7; destruction, 199, 205, 206, 208; North Wiltshire, 197–210; purpose, 205–6; Swindon area, 197, 274; Winterbourne Bassett, 197–9, 210
 stone curlews, 98
 stone objects, 275
 stonemasons, 79, 82
 Stonehenge, 82, 87, 198, 241; Aubrey Holes, 200; Avenue, 280; bluestones, 207; car park, 242; collections, 273; Cursus, 243; excavations, 280; Friar's Heel, 206; geology, 308; inhumations, 92, 93; Morganwg on, 86; pits, 71; sarsens, 83, 84, 85; stones, 80, 200, *see also* Amesbury
 Stonehenge Environs Project, 224, 242, 243
 Stonehenge Improvement, 307–8
 Stonehenge Visitors Centre, 300–1
 stonemasons, 10, 82, 83
 stones, 80, 277; burnt, 108, 115, 125, 140; capping, 66; ground, 166; polished, 115, 125, *see also* sarsens
 stonework: Neolithic, 166; Roman, 302, *see also* flintwork; hammerstones; querns
 storage pits, 139
 Storey, M. W., 271
 Stott, Jacob, 50
 Stour Valley, 176
 Stourhead collections, 280–1
 Stourhead–Salisbury coach road, 146, 148–9
 Stourton with Gasper: Stourhead, 280–1, *see also* Whitesheet Down
 Stradivari, Antonio (c.1644–1737), 6
Strangalia aurenula (longhorn beetle), 269
Strangalia quadrifasciata (longhorn beetle), 269
 stratigraphy: at West Barn, Bradford-on-Avon, 211–17; Avon Valley, 228–9; Folly Bottom, 234; pollen studies, 135; Smith's principle of, 26, 33n
Stratiomys potamida (Banded General Soldier Fly), 271
 Stratton St Margaret, 205, 275; church, 200
 streams, 257, 258, 264
Strix aluco (Tawny Owl), 270
 Stroudwater (Gloucestershire), 55n
 Stuart, James, 4th Duke of Lennox and 1st Duke of Richmond (1612–55), 30
 Stukeley, William (1687–1765), 79, 83, 85, 87, 202, 204; *Abury* (1743), 197–8, 200; fieldwork, 278; on sarsens, 84; snake worship theory, 206; *Stonehenge* (1740), 200
 Stumpe, William, 40, 43, 48; accounts, 45; cloth marks, 60
 Styllé, Robert, 58, 60
 subscription lists, 2
Succisa pratensis (Devil's-bit Scabious), 265, 268
 Sudan, 275
 Suffolk: manors, 35, *see also* Aldeburgh; Bury St Edmunds; Hengrave; Ipswich; Newmarket; Orwell; Sutton Hoo; Walberswick
 Sully, Maximilien de Béthune, baron de Rosny, duc de (1560–1641), *Memoires des sages et royales* (1638; 1662), 2
 Summers, Audrey, 271
 Summers, Harry, 55n
 Sun, worship, 205, 206
 Sunbury (Surrey), 123
 surgeons, 6
 Surrey *see* Staines; Sunbury
 surveys: barrows, 64–6; Whitesheet Hill, 146–8
Sus scrofa (Wild Boar), 170
 Sussex, 232, 274, 284n; causewayed enclosures, 186
 Sutherland, Carol Humphrey Vivian (1908–86), 282
 Sutton, Eleanor, 9
 Sutton, James, 4, 6, 8, 9, 10
 Sutton, Mrs., 3, 8, 9
 Sutton Hoo (Suffolk), executions, 92
 Sutton Veny, 72, 73, 74

- Swallowcliffe, Swallowcliffe Down, 189
 Swayne, Bennet, 11
 sweet chestnut trees, 15, 17
 Swift, Jonathan (1667–1745), 2
 Swindon, 201, 208, 276, 279, 282, 302; auctions, 275; Black Horse, 278; Broome, 197, 199, 200, 204, 207, 210, 278; Broome Farm, 278; Broome Lane, 199; Broome Manor, 202; Christ Church (New Church), 204, 205, 278; Coate Reservoir, 200–1, 206, 207, 210, 278; Coate Road, 199; Devizes Road, 278; finds, 275; fossils, 284n; Great Western Railway Works, 306; Holy Rood Church (Old Church), 204, 205, 207, 210; Hreod Parkway School, 306; Longstone Field, 278; Longstone Road, 199; Longstones Meadow, 204, 207; Marlborough Road, 204–5; Oakus Quarry, 276; Old Town, 204, 274; stone circles, 197; University of Bath, 89, 90; Weslecot, 275; Wood Street, 274, *see also* Lechlade
 Swindon Borough Council, 302, 306
 Swindon Museum and Art Gallery, 108, 279, 290, 306
 Swindon–Hodson Road, 278
 Switzerland, lacustrine dwellings, 203
 swords, 275
 sycamores, 15
 symbiosis, 17
Sympetrum striolatum (Common Darter), 266
Symphytum officinale (Common Comfrey), 260, 262, 268

Tachybaptus ruficollis (Little Grebe), 269
 tailors, 102
Talpa europea (Mole), 270
 Tamaricaceae (tamarisk), 21
 tanks, 252
 Tanner, Roger, 38, 39, 42, 47, 55n; accounts, 49
 Tany, Thomas (fl. 1649–55), 102
Taraxacum spp. (herbs), 175
 Tawstock[?] (Devon), ships, 58
 Taxaceae (yews), 20
 Taxodiaceae (conifers), 20
Taxodium distichum (Swamp Cypress), 24
Taxus baccata (Yew), 15
 Tayler, Nicholas, 55n; accounts, 57, 60
 Taylor, Adam, *Treatise on the Ananas or Pineapple* (1769), 2, 3
 Taylor, Kay S., paper on Lodowick Muggleton, 99–105
 Taylor, Maisie, note on wooden bowl from Latton Lands, 126
 Taylor, Mr, 80
 Taylor, Thomas, 46, 49
 teeth: analyses, 167; animals, 128, 238; beavers, 222, 226; cattle, 130, 167; dogs, 132; goats, 167; human, 133, 134; pigs, 132, 169, 226–7; sheep, 131, 167
Telesaurus spp. (aquatic reptiles), 275
 telescopes: day and night, 5; reflecting, 5
 Temple of Arts (1821), 6
 Temple Guiting (Gloucestershire), 123
 Tennyson, Alfred, 1st Baron Tennyson (1809–92), 23
 Tennyson Beech, 23
 Test, River (Hants), 271
 textiles: canvas, 44, 47, 49, 55n; cottons, 37, 44, 49, 55n; fustian, 47, 49, 50; holland-cloths, 47, 49, 55n; kersies, 37, 43, 51, 52, 55n; production, 139, 140, *see also* cloth; wool
Thalictrum spp. (meadow-rues), 231
 Thames, River, 140
 Thames and Severn Canal, 108
 Thames Valley, 123, 126, 134, 139–40
 theatres, 11, 208; establishment, 6–7
 Thebes (Egypt), 275
 theological works, 2, 3
Tholemys passmorei (fossil turtle), 284n
 Thom, Alexander (1894–1985), 198, 201
 Thom, Archie S., 198
Thomas Sunday (ship), 57
 threshing machines, 34n, 279
 Thurnam, John (1810–73), 278
 Tibet, 276
 tigers, 10
 tiles, 211; medieval, 304; post-medieval, 303
 Tilgate Forest (West Sussex), 31
Tilia spp. (limes), 71, 176, 231, 232; decline, 137
Tilia cordata (Small-leaved Lime), 17
Tilia x europea (Common (Hybrid) Lime), 17, 24
Tilia platyphyllos (Broad-leaved Lime), 17
 Tilia (software), 135
 Tilia-Graph (software), 135
 Tiliaceae (limes), 21
 Till, River, 95
 tillage, 187
 timber: in buildings, 304, 307; dendro-chronology, 304
 Timby, Jane, note on pottery from Latton Lands, 119–25
 tin, 44, 62; exports, 45–6
 tinings, 297
 Tisbury, 25, 27, 29; fossils, 26; Wardour, 294, 295; Wardour Castle, 296
 tithe barns, 211, 216
 tithes, 29
 tokens, clothiers, 51
 Tonnochy, Alec Bain (d. 1963), 282
 tools: flint, 224, 226; stone, 275, *see also* hallow axes; implements
 Torrens, Hugh, 27
 Touker, Nicholas, 55n
 town gardens, 3
 towns, medieval, 306
 Toynebe, Jocelyn Mary Catherine (1897–1985), 297
 trackways, 91–2, 93, 146, 237, 245; Roman, 301; medieval, 119, 141, *see also* hollow ways; roads
 traders, 36
 Tradescant, John (1608–62), 34n
 tradesmen, 10
 Transco Gas, 300
 transport, 11, *see also* canals; railways; roads
 Treasure Act (1996), 284n
 Treasure Trove, 283, 284n
Treatise on Peace and Soul and Content of Mind (1765), 2
 tree hollows, 145, 154, 185
 Tree Register of the British Isles (TROBI), 23
 tree-throw holes, 116
 trees, 179, 258, 259, 261, 262; common, 15–17; diseases, 18–19, 24; exotics, 15, 24, 257; Marlborough College, 15–24; over barrows, 74; planting schemes, 15; pollen, 135–7; Savernake Forest, 15; special, 22–4; species list, 19–22
 Treherne, John Edwin (1929–89), 284n
Trichia spp. (molluscs), 183
Trichia hispida (mollusc), 33n, 127, 182, 183, 191, 238–9
Trifolium repens (White Clover), 266
Triglochin palustre (Marsh Arrow-grass), 264
Trinité Kydman (ship), 59
Trinité (ship), 45, 52, 57, 58, 60
Tripleurospermum inodorum (Scentless Mayweed), 98
Triticum dicoccum (emmer wheat), 157; seeds, 178, 179
Triticum spelta (spelt), 192
 TROBI (Tree Register of the British Isles), 23
 trout, 253
 trout ponds, 15
 Trowbridge, 275, 298; Broad Street, 306; Church Street, 306; clothiers, 39, 40, 56, 61, 62; Conigre, 306; Conigre House, 306; Manvers Street, 306; Ushers Brewery, 306
 ‘True Account of the Trial and Sufferings of Lodowick Muggleton, A’ (1808), 99
Truncatellina cylindrica (Cylindrical Whorl Snail), 243
 trunk ulcers, 18
 Trusler, John, 11
 trusses, 44, 52
 tubers, 178, 179
 tumuli *see* barrows
 Tunncliffe, W., *Topographical Survey of the Counties of Hants, Wilts, Dorset, Somerset, Devon and Cornwall* (1791), 2
Turdus philomelos (Song Thrush), 270
 Turkish carpets, 49
 turnip fly, 4
 turnips, slicing, 4–5
 turnpikes, 83, 87n
 turtles, fossilized, 284n
 tusks, 197
 Twitney, Thomas, 4
 Tylee, Charles, 2, 4, 5, 10
 Tylee, John, 4
 Tylee family, 8, 9
Typha spp. (cat-tails), 231
Typha latifolia (Greater Reedmace), 261, 262
Tyto alba (Barn Owl), 270

 Uffington (Oxfordshire): Uffington Camp, 280; White Horse, 280
 ulcers, chestnut trees, 18
 Ullyrht, 54
 Ulm (Germany), 49
 Ulmaceae (elms), 21
Ulmus spp. (elms): diseases, 18, 19; pollen, 231, 232
Ulmus glabra (Wych Elm), 18
Ulmus glabra ‘Camperdown’ (Camperdown Elm), 18
Ulmus glabra ‘Lutescens’ (Wych Elm), 18
Ulmus minor ssp *carpinifolia* (Hornbeam-leaved Elm), 18
Ulmus procera (English Elm), 18
 Umbelliferae, 271
 Underditch Hundred, 92
 Unitarianism, 79
 United States (US) *see* Philadelphia
 universalism, 102
 University of Bath, 89, 90
 University of Oxford *see* Oxford University
 University of Reading, 220
 University of Southampton, Department of Geography, 71
 University of Waikato (New Zealand), 138
 University of Wales, Centre for Advanced Welsh and Celtic Studies, 87n
 Upavon, 252, 253, 258; Casterley Camp, 297
 Upper Chalk, 160, 219
 upper classes, 5, 8, 9, 10, 11
 Upper Greensand, 166, 188, 228; fossils, 33n
 Upper Lyptati (Gloucestershire), 298
 Upper Thames Valley, 126, 134, 139
 Upton Lovell, 63
 urban culture, development, 1
 Urchfont, Manor Farm, 306–7
 urine, 12
 urns, 200; Neolithic, 64; Middle Bronze Age, 121–2, 123, 125; Saxon, 200, 275; Belgic, 200; bucket, 122, 123, 124, 140; collared, 300; Deverel-Rimbury type, 107, 121, 140; globular, 122, 123, 124
Urtica dioica (Stinging Nettle), 260, 262
Urtica urens (Small Nettle), 264
 Usher, John, 39, 40, 47, 48; accounts, 56, 57; cloth mark, 61
 Ushers Brewery (Trowbridge), 306

- Valeriana dioica* (Marsh Valerian), 261, 262
Valeriana officinalis (Common Valerian), 231, 261, 262
Vallonia spp. (snails), 71, 127
Vallonia costata (snail), 171, 174, 238
Vallonia excentrica (snail), 191, 238
 van Acland, Henry, 50
 van Clett, John, 50
 van Immersell, William, 54
 van Rotyngham, Garard, 50
 van Wellick, Ayr, 50
Vanellus vanellus (Lapwing), 269
Vanessa atalanta (Red Admiral), 268
 vases, Etruscan, 3
 Vaughan, John, 38–40, 42, 47, 50
 vegetation history, Avon Valley, 228–34
 Venables, Bernard (1907–2001), 249–54;
 biographical notes, 249; *Mr Crabtree Goes Fishing* (1949), 249, 250; paintings, 252, 253, 254
 venison, 53
 Venison Feast (Devizes), 8
Ventriculites benettiae (sponge), 33n
 Venus (planet), 198
 Vera Jeans Nature Reserve (Pewsey), 255–72; Big Forty, 257, 258, 263, 270; fauna, 266–71; habitats, 257–66; historical background, 255–7; Ida Gandy Pond, 257, 258, 266; surveys, 271–2
Verlucio, 303
Veronica anagallis-aquatica (Blue Water-speedwell), 263
Veronica anagallis-aquatica x *catenata* (Pink Water-speedwell Hybrid), 263
Veronica beccabunga (Brooklime), 263
Veronica persica (Field Speedwell), 98
Vertigo moulinsiana (Desmoulin's Whorl-snail), 262, 271
Vertigo pusilla (snail), 70
Vertigo pygmaea (snail), 171, 183
Vespa crabro (Hornet), 271
 vessels: closed, 157–8, 159; South-Western Style, 158
 vetches, 178, 179
Viburnum opulus (Guelder-rose), 262
Vicia spp. (vetches), 178
Vicia sativa ssp. *nigra* (Common Vetch), 178
Victoria History of Wiltshire, archaeological gazetteer, 279
 villas, Roman, 302
Viola arvensis (Field Pansy), 97
 violin makers, 6
 violins, 6
 viols, 6
 Virgil (Publius Vergilius Maro) (70–19 BC), 3
 virginals, 6
Vitrea contracta (mollusc), 183
Vitrea crystallina (mollusc), 183
 volcanic rocks, 185
 voles, 270; bones, 167, 180, 238
 Voltaire, François Marie Arouet de (1694–1778), 2
 voluntary associations, 1
 Von Den Driesch, A., 128
Vulpes vulpes (Fox), 271
 Wace, Alan John Baynard (1879–1957), 282
 Wainwright, Geoffrey John (1937–), 224, 226, 245
 Walberswick[?] (Suffolk), ships, 60
 Walden, H. G., 238
 Wales, 276, *see also* Aberystwyth; Anglesey; Caerleon; Conwy; Graig Lwyd
 Walselle, John, 40
 Walgrave, Richard, 59
 Walker, William, 30
 Wales, John, 49
 Wallingford (Oxfordshire), 126
 Wallis, Frederick S., 282
 walls, 212–15, 216, 305; medieval, 304; limestone, 306
 Waltire, Mr., 5
 Wanborough, 300; Callas House, 276, 277, 278, 282; *Durocornovium*, 277, 284n; Nythe Farm, 277
 WANHM *see* Wiltshire Archaeological and Natural History Magazine (WANHM)
 WANHS *see* Wiltshire Archaeological and Natural History Society (WANHS)
 Wansdyke, 200
 Wardour, Vale of, 145
 warehouses, 35
 Warminster, 33n, 37, 189; Battlesbury, 63; clothiers, 39, 40, 47, 53, 56, 59, 60, 61; fossils, 26; King Barrow, 72, 73, 74; long barrows, 72, 73; Oxendeau Bottom, 72
 Warminster School, 307
 Warner, Richard (1763–1857), *History of Bath* (1801), 10
 Warton (Lancashire), 35
 wasps, 266; nests, 271
 WASHINGTON, Thomas, 36, 42, 43, 52; accounts, 50, 54
 waste, industrial, 226
 watches, 3
 watching briefs, 107, 108, 145
 water meadows, 15, 257, 258; 18th century, 255; 19th century, 307; ditches, 220; floated, 255; nutrients, 259
 water mills, 255
 water pipelines, 145, 219
 water worship theory, 206
 watercolours, 85, 252
 watercress beds, 257
 waterholes: Middle Bronze Age, 107–41; dating, 138–9; location, 134–5; pollen samples, 135, 137, 138
 waterlilies, 138
 Watkin, B., 30
 Watkins, Alfred (1855–1935), *Early British Trackways, Moats, Camps, and Sites* (1922), 199–200
 Watkins Farm (Oxfordshire), 134
 Watkins Gray International LLP, 308
 Watkins, Mr. 80
 Watts, Thomas, 45
 Wayland's Smithy (Oxfordshire), 69, 71, 200, 280
 Waylen, William, 9
 weavers, 54
 weavers marks, 51
 weaving, 42, 51, *see also* spinning
 weeds: arable, 95–8, 232; seed production, 95; seeds, 178–9, 192
 weevils, 269
 weights: clay, 126; stone, 125
 Wellesley, William Pole Tylney Long, 4th Earl of Mornington and 2nd Baron Maryborough (1788–1857), 27–8, 29, 34n
 Wellington (New Zealand), 27
 Wells, R., 275
 wells: Roman, 276, 301; undated, 303
 Welsh (language), 82, 203
 Welsh bards, 79
 Welsh societies, 82
 Weobley (Herefordshire), 38n
 Wessex: barrows, 69, 71, 208; causewayed enclosures, 154; colluvial deposits, 234; downlands, 241; earthworks, 185; hut-circles, 208; inhumations, 92, 93; linears, 235; pottery, 123; settlements, 140; stone circles, 207
 Wessex Archaeology, 90; archaeological mitigation, 300–1; evaluations, 300, 303, 304, 305, 307–8; excavations, 219; recording system, 155; watching briefs, 219, 305
 Wessex Linear Ditch Project, 220, 237, 245
 Wessex Water, 145
 Wessex Water Construction Ltd., 219
 West Berkshire *see* Great Shefford; Hungerford; Lambourn; Newbury
 West Country, wrestling, 10
 West Indies, 29
 West, John, 40, 48; accounts, 56, 57; cloth mark, 61
 West Knoyle, pilgrim badges, 293–4
 West Lavington, 297; Strawberry Hill, 242
 West Overton: 'The Lacker', 251, 252, 253; Lockeridge, 252; Piggledene, 83; West Woods, 252
 West Sussex *see* Bury Hill; Chichester; Cock Hill; Tilgate Forest
 West Tisbury, Pythouse, 25, 27, 34n
 Westbury, 37; Beggars Knoll, 307; By-pass (proposed), 307; clothiers, 38–40, 42, 43, 48, 50–1, 56, 58, 59, 61; cricket matches, 10; Edward Street, 307; Kendrick's Garage, 307; Madbrook Farm, 307; Maristow Street, 307; pilgrim badges, 293, 294; Storridge Farm, 307; West End, 307
 Westwood, Iford, clothiers, 40, 56
 wet flushes, 255, 258, 262, 265
 wetlands, 15, 16, 19, 24
 Weymouth (Dorset), 32; fossils, 26; ships, 57, 58
 whaling, 249
 wheat, grains, 192
 wheel-ruts, 223
 Wheeler, Thomas, 6
 wheelwrights, 4
 Whichcord and Gamble (builders), 7
 Whipsnade (Bedfordshire), 277
 Whitacker, Geoffrey (of Tinhead), 52
 Whitacker, Geoffrey (of Westbury), 39, 45, 48, 52, 54
 White, Gilbert (1720–93), *The Natural History and Antiquities of Selborne* (1789), 4
 white horses, 16, 280
 White, Robert, 57
 whitebeams, 18, 175
 Whitehawk Camp (East Sussex), 186
 Whitehead, P. F., 298
 whites (cloth) *see* broadcloths
 Whitesheet Down: archaeological development, 186–7; archaeology, 146–87; geology, 145; investigations, 144–96; Mere Down, 179–80; Mere Down Linear, 145, 182–4; Whitesheet Hill, 145–79, 184–7, 192; Whitesheet Hill Linear, 145, 180–2; Whitesheet Quarry, 187–93
 Whittle, Alasdair W. R., 157, 164
 WHM *see* Wiltshire Heritage Museum (WHM)
 Wight, Isle of, 232
 wild plants *see* weeds
 Wild TC2000 Total Station (survey equipment), 146
 Wildfowl and Wetlands Trust, 249
 wildfowling, 249
 Williams, D., 191
 Williams, David, 155
 Williams, Edward *see* Morganwg, Iolo (1746–1826)
 Williamson, Barry, note on the Arundell's London estate, 294–5
 Williamson, Elizabeth, 296–7
 Williamson, George, 100
 willow scab, 17, 18, 19
 willows, 15, 16, 17, 261, 262, 266; diseases, 18–19, 24; hybrids, 24
 wills, 10
 Willson, M. W., 279
 Wilsford cum Lake, Wilsford Shaft, 243
 Wilton, Edward, 296–7
 Wilton, 275; clothiers, 39
 Wilton Abbey, St Edith's shrine, 293, 294
 Wiltshire: antiquarians, 99; clothiers, 35–62; cricket matches, 10; flintwork, 273
Wiltshire Archaeological and Natural History

- Magazine* (WANHM), 99, 205, 297; Editors, 206; Passmore in, 200, 274, 275, 276, 279
- Wiltshire Archaeological and Natural History Society (WANHS), 284n, 297; Annual General Meetings, 275, 280; Committee, 279; excursions, 200; field trips, 276, 280; lectures, 280; Library, 280; membership, early, 99, 103; and Passmore, 273, 274, 276, 279–81; snobbery, 281, *see also* Wiltshire Heritage Museum (WHM)
- Wiltshire Band, 8
- Wiltshire Biodiversity Action Plan (2002), 266
- Wiltshire County Archaeological Officer, 89
- Wiltshire County Council, Archaeological Service, 255
- Wiltshire Flora Mapping Project, 261, 263, 264
- Wiltshire Gazette*, 200
- Wiltshire Herald*, 203
- Wiltshire Heritage Museum (WHM), 279, 290–1, 293, 307; collections, 297; donations, 297; Stourhead Collection, 280–1
- Wiltshire Notes and Queries* (1893–1916), 99
- Wiltshire Regiment, 4th Battalion, 276
- Wiltshire Society *see* Wiltshire Archaeological and Natural History Society (WANHS)
- Wiltshire Society for the Encouragement of Agriculture: Annual General Meetings, 5; Committee of Manufactures and Commerce, 5; establishment, 5
- Wiltshire Studies see* *Wiltshire Archaeological and Natural History Magazine* (WANHM)
- 'Wiltshire Tracts', 99
- Wiltshire Trust for Nature Conservation (WTNC), 257
- Wiltshire Wildlife Trust, 271; Vera Jeans Nature Reserve, 255–72
- Windermere Interstadial, 231
- Windmill Hill, 145; animal bone, 169, 170; ditches, 184; flintwork, 164, 166, 282; plant remains, 179; pottery, 148, 158, 159, 242
- windows, 304
- Windsor and Maidenhead *see* Bray; Maidenhead
- wine, measures, 62
- Winslow, Roger, 40, 42, 43, 49; cloth mark, 61
- Winterbourne Bassett: Hoare's Field, 199; stone circles, 197–9, 200, 206, 210
- Winterbourne Monkton: The Cottages, 307; Hackpen Hill, 91
- Winterbourne Stoke, 97, 307–8; barrows, 276
- Winterbourne–Porton Road, 92
- Winterslow, Middle Winterslow, 308
- wireless towers, 280
- witches, 200
- Witkin, Annsophie, note on human bone from Latton Lands, 133–5
- Witpit Copse (Gloucestershire), 108
- wood, 47, 49, 62
- Wolfe, Nicholas, 50
- Wolsey* (ship), 45
- women: musical accomplishment, 6; social events, 8
- wood: Celtic words for, 203; charred, 175; radiocarbon dating, 138
- wood fragments, 135
- wooden objects: prehistoric, 126; bowls, 107, 109, 126, 138, 140
- Woodhenge, 232, 233, 242, 243, 244, 245
- woodland, 132, 133, 137, 174, 176–7, 192, 258; Mesolithic, 242; Neolithic, 186; ancient, 63, 71, 171; beetles, 298; clearances, 232, 234, 243; deciduous, 233; management, 179; mixed, 15; pigs and, 228; regeneration, 234
- Woodstock (Oxfordshire), 278
- Woodward, Horace Bolingbroke (1848–1914), 30
- Woodward, John, 55n
- Woodward, Samuel Pickworth (1821–65), 27, 30, 32
- Woodward family, 30
- woodwork, 14th century, 276
- wool: improvements, 5; spinning, 49
- woollen cloths, 38n
- woollen shrouds, 304
- Wootton Bassett, 91
- Wootton Rivers, 258; Clench, 258
- Worcestershire *see* Broadway
- working classes, leisure activities, 10–11
- World War I, 257, 295; military training, 306; Passmore in, 276
- World War II, 257; Home Guard, 277; hospitals, 308; propaganda, 252
- World Wide Fund for Nature, 249
- Worms Farm (Gloucestershire), 108
- Wotton-under-Edge (Gloucestershire), 55n
- Wren, Sir Christopher (1632–1723), 84
- wrestling, 10
- Wroughton: Ladder Hill, 204, 205, 206; Swindon Data Centre, 308
- Wroughton–Swindon Road, 278
- WTNC (Wiltshire Trust for Nature Conservation), 257
- Wulworth, Thomas, 55n
- Wyatt, James, 8
- Wyatt family, 9
- Wyles, Sarah F., note on land molluscs from Earl's Farm Down, 238–41
- Wylkyns, William, 42, 53
- Wylve, 308
- Wylye, River, 63
- Wylye Valley, 65; barrows, 72–4; Neolithic remains, 63–77
- Xysticus ulmi* (spider), 266
- Yarnton (Oxfordshire), 123, 126
- Yerbyrre, Humphrey, 40
- yew trees, 15, 16, 24, 252
- York, 11
- Young, Arthur (1741–1820), 5
- Young, Edward Hilton, 1st Baron Kennet (1879–1960), 252
- Ysse, William, 53
- Ystradowen (Vale of Glamorgan), 86
- Yucca filamentosa* (Adam's Needle/Silk Grass), 31–2, 34n
- Zambezi, River, 249
- Zonatids, 171
- Zsigmondy system, 133
- Zygaena lonicerae* (Narrow-bordered Five-spot Burnet-moth), 268
- Zygaena trifolii decreta* (Five-spot Burnet-moth), 268

Publications of the Wiltshire Archaeological and Natural History Society

Recent and some earlier issues of the *Magazine* may be purchased from the Society. Volumes 93–95 are available at £15 per copy. For details of earlier volumes apply to the Curator. Other WA&NHS publications may also be purchased, as follows:

- Annable, F.K., and Simpson, D.D.A., *Guide catalogue of the Neolithic and Bronze Age collections in Devizes Museum*, [viii] 133pp, plates, casebound, 1964 (reprinted), £15.00 (+ £3 p&p)
- Dillon, Patrick (ed.), *Mammals in Wiltshire*, xii, 156pp, paperback, 1997, £7.50 (+ £1.50 p&p)
- Ellis, Peter (ed.), *Ludgershall Castle: excavations by Peter Addyman 1964–1972*, ix, 268pp, ill, A4 paperback, 2000 (WANHS Monograph Series 2), £19.95 (+ £4.50 p&p)
- Ellis, Peter (ed.), *Roman Wiltshire and after: papers in honour of Ken Annable*, xii, 240pp, ill, casebound, 2001, £19.95 (+ £4.50 p&p)
- Haycock, Lorna, *Devizes in the Civil War*, 24pp, ill, paperback, 2000, £2.95 (+ £1.00 p&p)
- Thomas, James H. (ed.), *Wiltshire Archaeological and Natural History Society: the first 150 years*, xxxiv, 246pp, ill, casebound, 2003, £12.00 (+ £3.95 p&p)

During 2004 the Society plans to publish a volume on art in Wiltshire; and in its Monograph Series a report on barrow cemetery excavations at Snail Down, 1953–7.





WILTSHIRE HERITAGE

MUSEUM
GALLERY
LIBRARY

Published by
The Wiltshire Archaeological
and Natural History Society

ISSN 0262 6608