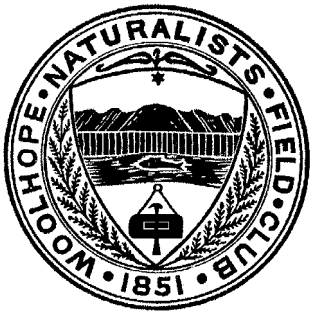
TRANSACTIONS

OF THE

WOOLHOPE

NATURALISTS' FIELD CLUB

HEREFORDSHIRE

"HOPE ON"  "HOPE EVER"

ESTABLISHED 1851

VOLUME 55

2007

Woolhope Naturalists' Field Club 2007

Registered Charity No. 521000

website: www.woolhopeclub.org.uk

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Obituaries

Dr. STAN STANFORD
1927 to 2007

Elected a Club member in 1953 and President in 1961, Stan was one of the founders and the first Chairman of the Club's Archaeological Research Section in 1965, set up in response to a CBA initiative. He was appointed local extra-mural studies tutor for Birmingham University in 1960, and later Senior Lecturer in prehistory. His archaeological interests extended from Neolithic to medieval eras, with excavations of Neolithic and Bronze-Age sites at Bromfield, Roman at Leintwardine, Buckton and again Bromfield, and medieval at Denton Hall, Salop, Hampton Wafre, and Hereford city walls and bastion.

By 1960, however, Stan's enthusiasm lay with Iron-Age hill-forts. He excavated Croft Ambrey (1960-6), Credenhill (1963) and Midsummer Hill (1965-70). This was the heroic era of Herefordshire archaeology. Croft and Midsummer Hill were excavated by bands of 30-40 volunteers each summer. Cooking was undertaken by his wife Yvonne and her sister. Discussion of the day's events was usually at the local, over a glass or two. Lord Croft's stables provided a dormitory. As Stan once remarked, their children, Colin, Claire and Ann, spent their holidays 'on the spoil heaps.'

His Credenhill report was published in the *Archaeological Journal* for 1970. Stan published his own excavation reports of the discoveries at Croft and Midsummer Hill, and could thus develop fully his views on the inturned entrances, timber and stone guard rooms, and 'four-poster' huts, rebuilt up to six times at Croft. These were in a tight rectilinear pattern, from which Stan estimated 70 persons per acre, giving almost 900 inhabitants when the Romans attacked in AD 48. However, the local sanctuary, consisting of a temple terrace where fire ceremonies were conducted, apparently with animal sacrifices, continued to be visited for another century.

Wider aspects Stan considered in 'The Function and Population of hill-forts in the Central Marches' and 'Native and Roman in the central Welsh borderland'. His masterly work on *The Archaeology of the Welsh Marches* (1980, paperback reprint 1991), spanning the period from the Palaeolithic hunters to 'The Area's Post-Medieval Industries', had the most popular impact. It is a remarkable tribute to the width and depth of Stan's enthusiasms.

Joe Hillaby

Dr. ANTHEA BRIAN
1919 to 2007

Dr. Anthea Brian died in July 2007 at the age of eighty-seven. She grew up in Cheshire and Norfolk, studying biology at Bedford College, London, and was later awarded a Ph.D. for her published work in various aspects of natural history.

In 1974 she moved to Herefordshire and taught biology at St. James's School, Malvern, for some years, also joining the Herefordshire Nature Trust— her fourth county Trust membership! She became more and more involved in the work of the Trust becoming its third Chairman in 1980 and again later in 1987, also remaining a Trustee until recently.

Both a historian and a biologist, Anthea always believed in communicating the results of her researches in papers which were wide-ranging: from brick-bonding to the adverse effects of DDT on bees, or the winter roosts of rooks. She also did much research on the older houses in her home village of Bodenham. She was President of the Woolhope Club in 1982, and gave lectures or produced articles for the *Transactions* on various aspects of natural history, including a survey of 100 Herefordshire ponds. Her researches lately dealt with the river Lugg and its reaches from Bodenham to Mordiford.

She wrote several booklets about these historical old meadows or Lammas lands now largely lost nationally, with related walks in the area. Her maps covering the landscape history of the Lugg flood meadows around the Trust headquarters, at Lower House Farm, went back to periods of ownership by the King, the Bishop and the Vicars Choral in Hereford. It was thanks to her that Lower House Farm was located and became the property of the Trust, and also several Reserve sites.

Always concerned with the environment and its protection she was an active member for many years of the Council for the Protection of Rural England, the Friends of the Earth and the Lugg Drainage Board and a supporter of the Green Party. In 2006 Anthea was awarded the M.B.E. for her continuing work in natural history and her care of the environment. Her input at the Bodenham Inquiry led to the defeat of the quarry company's plans to extend their workings; she was also the principal representative of the Trust at the Inquiry about the Hereford bypass which led to the further protection of the Lugg Lammas meadows.

Always enthusiastic, committed and helpful to others in their researches she will be greatly missed by many people in many aspects of local life. The photograph (courtesy Barbara Redwood) captures her recording dragonflies at her home, Bodenham Hall.

Beryl Harding

Dr. PETER CROSS

Peter Cross died in July 2007. He had been a member of the club from 1968. He spent his life as a school teacher, but was well known as a geologist. His research and thesis on the glacial landscape of the Wigmore area earned him a doctorate from the University of London. He acted as a local contact for geologists from all over the country. From 1986 to 1995 he was the Recorder for Geology for the Club.

Proceedings, 2007

SPRING MEETINGS

FIRST MEETING: 13 January: Dr. J. C. Eisel, president, in the chair.
Dr. P. A. Olver gave an illustrated talk on 'Perambulations of early Presidents - Club Geological Visits in the 1850s.' He explained that like a number of other county societies in England, the Woolhope Club was founded in the 1850s when Geology was the 'in' subject. In the early nineteenth century there was no idea of evolution; it was still believed that the world had begun in 4004 B.C. and there had been the Noachian Deluge. The idea of ice sheets was a recent one. There was a clash between the ideas of evolution and geological finds such as trilobites.

In Herefordshire the emergence of the study of geology had strong links with the parson/naturalist, and as a result the Woolhope Club was founded in 1851 with a membership of 40, of whom ten were parsons and six general practictioners. The honorary members included Murchison, a soldier and landowner; Salter of the Geological Survey; Sedgwick, professor at Cambridge and Strickland, an Oxford scholar.

The first three field meetings were to the Woolhope Dome on 18 May 1852, to Whitchurch/Symonds Yat area on 20 July and to the Aymestrey area on 21 September. On the first meeting the weather was appalling, but they saw the landslip at Dormington Wood, Littlehope and Scutwardine quarries. Collecting was the 'big thing' of the time and people were wielding hammers among the Silurian rocks which had been laid down in tropical conditions. Murchison was present at the second meeting, and a visit was made to coal measures near Coleford which were among others responsible for fuelling the Industrial Revolution. Murchison regretted not being able to attend the third meeting. In 1853 the Revd. T. T. Lewis was quite prominent and became the 'grandfather' of the Silurian system. The first indoor meeting was on 24 January 1854 and on 14 August 1855 the members travelled by train.

Dr. Olver emphasised the importance of early members of the club on geology nationally, and with slides illustrated sites of the geological periods in Herefordshire and adjacent counties.

SECOND MEETING: 3 February: Dr. J. C. Eisel, president, in the chair.
Mr. H. Sherlock, B. A., Dip. Arch., M.I.F.A. gave an illustrated talk on 'The Landscape History of the Lower Wye Valley Project.' He explained that this project is funded by the Herefordshire Rivers LEADER+ E.U. Programme, the Heritage Lottery Fund, the Countryside Agency and the Wye Valley AONB with English Nature and English Heritage providing technical support. It seeks to understand the history of the agriculture, woodland, settlement and economy of twelve parishes, *viz.* Ballingham, Bolstone, Brampton Abbotts, Bridstow, Brockhampton, Fownhope, Foy, Hentland, Holme Lacy, How Caple, Kings Caple and Sellack.

There are one hundred volunteers from the local community helping to carry out historical research, archaeological investigation, hedge and woods surveys and collecting and recording artefacts. The project has to be completed in eighteen months.

He said that the Field-Name Survey and the Millenium Survey including the aerial photographs taken by Chris Musson had been invaluable. Ordnance Survey maps and others

found in private collections and various types of documents have been used as a basis from which to investigate the changes which have taken place. Because of the size of the area, sites to be looked at in detail have had to be selected. All buildings mentioned in the *R.C.H.M.* survey of the 1930s were visited and photographed. He referred especially to the Gillow Manor site. Cardiff University is sending a workforce in the summer to carry out an excavation. Much more work has to be done. The archive will be deposited at the Herefordshire Record Office and a full report and a DVD will be published in Spring 2008.

THIRD MEETING: 3 March: Dr. J. C. Eisel, president, in the chair.
This was the forty-fourth F. C. Morgan Lecture, given by Dr. Murray Mylechreest on 'Thomas Andrew Knight (1759-1838) – from gentleman farmer to scientific horticulturalist.' He explained that Richard Knight, a wealthy ironmaster in Worcestershire and also the owner of Bringewood Forge in Burrington parish, died in 1754. He purchased lands in Elton parish in 1710 and the Downton estate in 1727. His son Thomas was rector of Bewdley and Ribbesford for thirty-five years, and in 1745 purchased Wormsley Grange. He was buried at Wormsley in 1764. His two sons were born there. Richard Payne Knight, the elder son, spent most of his life in London. He built Downton Castle in 1774. His younger brother, Thomas Andrew Knight, 1759-1838, attended Balliol College, Oxford, but devoted his life to the countryside and scientific experiments. He married Frances Felton and lived at Elton Hall moving to Downton Castle in 1809.

Many of his experiments were carried out at Elton, where he was visited by the scientists of the day including Sir Humphrey Davy. He was also in contact with Sir Joseph Banks and others. He made a yearly visit to London to the Royal Society of which he was President.

Dr. Mylechreest referred to Knight's detailed work on plant breeding, his experiments with apples and pears as well as his interest in the size and shape of strawberries. The breeding of Hereford cattle and working animals was also one of Knight's interests. He was involved at Pitmaston House in Worcester where there was a nursery with a controlled atmosphere. In 1822 at Downton Castle he developed a curvilinear greenhouse with six iron frames which has been preserved. The Downton Papers at Herefordshire Record Office are a mine of information on his life and work. In 1829 there is evidence of his influence in the United States.

Thomas Andrew Knight was in the forefront of scientific horticulture in the late eighteenth and early nineteenth centuries.

SPRING ANNUAL MEETING: 31 March: Dr. J. C. Eisel, president, in the chair.
The assistant secretary reported that the club now had 751 members.

Dr. Eisel reviewed the activities of the club during the year and gave his address 'Three Local Antiquarians: Duncumb, Bird and Bird' which is printed in these *Transactions.*

FIELD MEETINGS

FIRST MEETING: 5 May: HOLME LACY

This visit was limited to thirty members. The first visit was to Holme Lacy Church dedicated to St. Cuthbert. It is built of sandstone rubble and dates from the early fourteenth century with modifications 1660-70. The late seventeenth-century bowl of the font has acanthus and a cherub's head decoration on it. Two of the benches have Jacobean panels. Of particular interest are the monuments of the Scudamore family. In the south chapel are alabaster effigies of John Scudamore who died in 1571 and of his wife. In the chancel there is one to James Scudamore dated 1688 and Jane Scudamore dated 1699.

After coffee at Holme Lacy House (now a hotel) members were taken on a tour of the ground-floor rooms. The estate came into the hands of the Scudamore family in 1581. In 1672 the second viscount Scudamore added two fronts in red sandstone incorporating part of the old mansion. There exists a contract dated 1674 signed by the builder Anthony Deane who mentions Hugh May who was probably the designer. The porch and balustrades were added in 1828-31 by William Atkinson. About 1910 Sir Robert Lucas Tooth purchased the house and grounds and added the main staircase and ballroom. In 1919 it was bought by Noel Wills of the Wills Tobacco Company and on the death of Mrs. Wills in 1934 it was presented to the Herefordshire County Council. The council converted it into a hospital for ladies and in 1981 the National Health Service handed it back to the council. Since then it has passed through various hands. In 1992 it was purchased by Mr. Tony Hamed from whom in 1995 Warner Holidays Limited acquired a long lease. They have spent some six million pounds restoring it. With advice from English Heritage, the magnificent plaster ceilings which are among the finest in England have been restored to their former glory.

After a picnic lunch Mr. Whitehead conducted members around the gardens. He said that lawns and terraces were laid out in the Renaissance style with yew hedges and a walled kitchen garden. After tea a small energetic group set off into the deer park to view the veteran trees. They probably followed the route taken by members on a 'fungus foray' in October 1868.

Throughout the day Mr. Whitehead explained the history of the area.

SECOND MEETING: 14 June: TEWKESBURY AREA

After coffee at the Farmer's Arms, Lower Apperley, a visit was made to Deerhurst Church. There was an abbey here in the ninth century and about 1100 it became a priory. After the Dissolution it became the parish church. It is one of the finest Saxon churches in England, the other being Brixworth. The lower stages of the 70-ft. tower have Saxon 'long and short work.' It had a steeple which was blown down in 1666. In the eastern wall of the tower is a double-light window which is one of the most interesting windows in England. Each side is formed of a single stone. The font is constructed of local Cotswold oolite and could be as early as the eighth century, and said to be the finest font in existence. It was found in a farmyard and taken to Longdon church, but some twenty-five years later returned to Deerhurst. The ornamentation consists of a spiral vine. There are many theories as to its origin. The roughcast on the outer walls was removed during the 1861-2 restoration. On the north side of the church the foundations of an apse can be seen. A Saxon figure of an angel can be seen on a remaining fragment.

Nearby is Odda's Chapel, which was discovered in 1885 encased in a picturesque farmhouse known as Abbot's Court. The chapel consists of a simple nave and chancel built of local blue lias stone.

During the lunch break in Tewkesbury some members walked into the town, whilst others visited the abbey.

Next visited was Overbury church dedicated to St. Faith. The Norman nave has two arcades, each with four bays. Above the arches is a Norman clerestory. The north and south aisles date from the mid fourteenth century. At that time the clerestory windows were enclosed inside the church and the roof raised. The chancel, dating from the early thirteenth century, has lancet windows and a fine vaulted ceiling. The present late fifteenth-century tower is placed between the nave and chancel; an unusual feature. The font has been repaired, but probably dates from the early twelfth century. The church was not viewed to its best advantage as the lighting system was out of order.

Nearby is Overbury Court, but it is not open to the public. John Martin, a London banker, acquired it with a large area of land. In 1738 the old house was burned down and soon afterwards he built a new house. It is constructed of ashlar-faced Cotswold stone with a fine Georgian façade. The south front has five bays with a central pediment overlooking a formal garden. The west front is of seven bays, three storeys high with a three-bay projection with a pediment. The 1887 entrance gate is by Norman Shaw.

Members were permitted to view the gardens which lie on the west and south sides of the house with gravel paths and lawns. On the west side across the lawn there are two pools with cascades. There is a rock garden and a crinkle-crankle edging in golden gravel.

The final visit was to Beckford Silk Mill Factory where members had tea and saw a demonstration of screen painting on silk.

THIRD MEETING: 5 July: GROSMONT AND CARDIFF

This meeting was the President's choice. On the journey from Ewyas Harold to Grosmont Mr. Charnock referred to the changes in the landscape and pointed out Pontrilas Court dating from the 1640s and the seventeenth-century site of the iron works on the Kentchurch estate. Kentchurch Court was built by a branch of the Scudamore family and was remodelled by Nash in 1824. It has a large deer park. A stop was made by the Bridge Inn before passing over the bridge into Monmouthshire. He explained that the bridge has tunnel voids in the spandrels. These are not for the relief of flood water, but to lighten the load on the abutments, a necessity when not founded on rock. Under the Local Government Act of 1974 Monmouthshire was renamed Gwent and firmly placed in Wales; before that it had a separate existence being neither in England or Wales.

A visit was made to the ruins of Grosmont Castle, the thirteenth-century castle of Hugh de Burgh built on an earlier motte, and later remodelled by the house of Lancaster. He speculated on the significance of the site and why it was chosen by the early builders. He suggested that it and the two associated castles of Skenfrith and White Castle were selected for the control of communications across the Monnow and for political purposes. The site looks north over the Monnow to Archenfield, an ancient Welsh territory bounded by the Monnow, the Wye and in the northwest by the old wet flat lands (the marshy bed of an old glacial lake) extending from Pontrilas through Howton and Allensmore and Rotherwas to join the present Wye at Holme Lacy. Archenfield was claimed (ultimately unsuccessfully) by the See of Llandaff but remained within the See of Hereford. The neighbouring area of Ewyas was

annexed to St. David's. To the east across the Monnow on high land lies Great Corras, an old earthwork, said to be the forerunner of Grosmont. Was Grosmont therefore a 'Frontier Police Station' controlling communications with Archenfield and the Welsh?

After looking around the ruins members travelled to Allt yr Ynys for coffee. Allt means hill and Ynys, island, thus we have 'Island Hill' or hill surrounded by water. The house, now a hotel, was the seat of the Sysill family. The grandson of David Sysill, William Cecil, was chief secretary to Elizabeth I. One room on the ground-floor has one of the best seventeenth-century plaster ceilings in the country.

The afternoon was spent at St. Fagan's, an open-air museum opened in 1948 which is set in 104 acres of woodland and gardens. In 1946 the Earl of Plymouth donated St. Fagan's Castle, a late sixteenth-century manor house. Some forty buildings from all over Wales have been rescued and re-erected. They tell the story of the people of Wales, how they lived, worked and spent their leisure time. The buildings include a school, a chapel, a cockpit, a row of ironworkers' houses, craftsmen's houses, a tannery a toll-house and many farmhouses. Despite the rain members were able to explore the site. The homeward journey was slow due to very heavy traffic.

FOURTH MEETING: 9 August: WILTON HOUSE near SALISBURY

A stop was made at Lacock for coffee. The landscape across Salisbury Plain is rich in prehistoric earthworks. A halt was made at Winterbourne Stoke crossroads to view the barrows lying close to the road. Neolithic long barrows and Bronze Age round barrows were seen as well as the field systems. Four round barrows were excavated when the roundabout at the crossroads was constructed.

Most of the afternoon was spent at Wilton House. From the thirteenth century until the Dissolution a Benedictine nunnery stood on the site. Henry VIII gave the buildings and its estates to William Herbert, the Earl of Pembroke. In 1543 he built a large Tudor house around a courtyard probably incorporating some of the old walls. In 1636 work commenced on the south range by De Caus. In 1647 the interior was damaged by fire, but rebuilding was carried out by John Webb and completed in 1653. Here were seen the single and double cube rooms which are the finest seventeenth-century Palladian examples surviving in the country. The west range was remodelled by Chambers in the 1750s. The Riding School was erected in 1755. Wyatt carried out alterations in the nineteenth century. In 1810 he was dismissed for bad workmanship and a Mr. Fisher was called in to complete the work. In 1914 the north facade was rebuilt. During the First World War the house was used as a military hospital, and during the Second World War it was the headquarters of Southern Command.

There are twenty-one acres of gardens which have changed over the years, but have been influenced by the styles of the times and the interests of the owners.

In the Old Riding School members saw a short film of the Herbert family narrated by Anna Massey. Also seen was an exhibition of costumes, a Victorian laundry and a reconstructed Tudor kitchen. The original exposed timber roof, designed to span the full width of the Old Riding School can still be seen.

The house has been continuously lived in and altered by the Earls of Pembroke, and today is in the hands of the eighteenth earl.

Tea was taken at The Angel at Chippenham.

FIFTH MEETING: 14 September: AYMESTREY and CROFT AMBREY AREA

This meeting was the filming and re-enactment of the Club meeting of 21 September 1852 to the Aymestrey area. That was led by Woolhope member and renowned parson-naturalist, the Revd. T. T. Lewis, and allowed members and their wives to view the landscape, study the outcrops and collect fossils from the newly-designated Silurian System.

It was felt important that Sir Roderick Murchison, then Director of the Geological Survey and founder member of the Woolhope Club in 1851, be featured in the re-enactment although he was unable to attend this particular excursion. Key elements were therefore incorporated from a field visit led for the Club by Murchison in June 1855.

The film emphasised the painstaking work undertaken by local Woolhope members such as the Revd. Lewis in unravelling the local Silurian successions which Sir Roderick Murchison had then carefully incorporated into his *Silurian System* treatise published in 1839. Thus on the day, Sir Roderick specifically thanked 'his fellow Silurians' for all their continued help and support over many years. Members and guests spent the day in the appropriate costumes, borrowed from five theatrical sources.

Figure 1. (above) Sir Roderick Murchison and Richard Banks inspect Sir Roderick's recently published book *The Silurian System*

Figure 2. (right) The party at breakfast

Filming commenced at the Riverside Inn, Aymestrey where a Victorian breakfast was served to the lady guests in one room, while the male Woolhopians breakfasted elsewhere (as then) and were addressed by Sir Roderick (enacted by Prof. Hugh Torrens). Filming of arrivals in pony and trap and landau continued before proceeding to Titley Junction *(in lieu* of Kingsland station) for further filming of steam train arrivals, greetings and pony and trap departures.

Figure 3. Disembarking from the train at Kingsland station

Figure 4. Awaiting the traps at the station

A picnic lunch (complete with hampers) was taken at Croft Ambrey, after which 'Sir Roderick' made a further address regarding the landscape and geological features visible from the Ambrey. (Transport was provided on this occasion to minimise damage to the costumes!)

Figure 5. Sir Roderick Murchison and Richard Banks at Croft Ambrey

Figure 6. Some of the party descending from Croft Ambrey

Finally, a return was arranged to Aymestrey church for the closing addresses by 'Sir Roderick' and the Revd. Lewis (Paul Olver) with the final filming.

The wording of all addresses were as then written in the *Transactions*. Most of the complicated arrangements for costumes, steam trains and the Victorian breakfast were made by Paul Olver, and the filming was carried out by two members of the Geology Section, Tim and Katya Coupland. A DVD will be available for purchase later, which will focus not only on the geology but also on aspects of the social history. It will thus be suitable for school audiences.

Figure 7. The party picnics at Croft Ambrey

Figure 8. Curious yokels watch the geologists at Croft Ambrey.

Figure 9. The Revd. T. T. Lewis and Sir Charles Lyell discuss the principles of geology at Aymestrey church

Altogether it was an enjoyable day with sunshine most of the time. The gentlemen especially looked very distinguished and with due *gravitas*. The ladies provided colour and the parts of the four yokels, or members of the lower orders, were greatly relished by their players.

These proceedings were all part of the celebrations of 150 years since the inauguration of the Geologists' Association and the bi-centenary of the Geological Society of London with many geological societies participating throughout the country. Shropshire and Herefordshire amalgamated with the Shropshire Geological Society having a Symposium in Ludlow with several field trips during September and the Woolhope Club providing a Rock and Fossil show in August and this re-enactment in September.

The Club is celebrating further by making these 2007 *Transactions* a special geology issue, with two major papers and a report by our geology recorder, Moira Jenkins, on the rare fossils which have been found on the Great Doward.

The report on the re-enactment was compiled from notes by Beryl Harding and by Paul Olver. Figures 1 to 6 and 9 were taken by John Payne, 7 and 8 by Moira Jenkins.

AUTUMN MEETINGS

FIRST MEETING: 29 September: Mr. G. Charnock, president, in the chair.

Mr. Andy Boucher, B.Sc., M.I.F.A., gave an illustrated talk on 'Ewyas Harold: a tale of two Castles and a Priory.' He explained that in 2005 the Ewyas Harold History and Archaeology Group obtained a grant from the Local Initiative, and in 2006 he as Director of Archaeological Investigations Ltd. was commissioned to undertake a survey of Ewyas Harold Castle and its environs. This project involved the local community including teachers and pupils of Ewyas Harold Primary School.

The site consists of a motte and an inner and an outer bailey with a ditch between the two baileys called King Street. It commands access to the Dulas Valley.

He gave an historical account of the area which was independent until *c*.1042 when it became part of Mercia. Earl Ralph gave it to Osbern Pentecost who built a castle which in 1052 was pulled down by Godwin. At the time of Domesday, 1066, there were two settlements taxed under the Norman system in carucates.

The priory was founded in 1100 by Harold who gave it to the monks of the church of St. Michael. It was probably situated at Dulas, and after 1120 Robert moved it to Ewyas Harold.

He paid tribute to the records which have survived and been studied by a number of persons. These have provided a base for archaeologists from which to use present-day electronics and technology. As these instruments can establish the presence of stone structures it is not necessary to excavate.

Mr. Boucher said that the survey shows evidence of stone structures within the inner bailey and massive masonry butting the motte which could be the curtain wall.

The site of the priory has not been established and needs further investigation.

He illustrated his talk with a number of slides which showed the methods used and the results of the survey. A detailed account can be found in his book *Ewyas Harold Castle*.

SECOND MEETING: 27 October: Mr. G. Charnock, president, in the chair.

This was the forty-fifth F. C. Morgan Lecture, given by Professor David Dineley on 'A Nibble at the Crust of the Earth: Palaeozoic World Fishing.'

The earth is unique; a blue planet, wet and mouldy. It has supported life for several billion years. In his lifetime a geologist can only hope to add a very little to the sum of knowledge about these phenomena. Nevertheless the last fifty years has seen an enormous expansion of the earth sciences. This geologist's contribution has been concerned with the rocks of the Devonian system and the primitive vertebrate fossils they contain. From a student dissertation on the Old Red Sandstone formations between Ludlow and the Clee Hills sprang a life-long interest in the agnathan fish they contain. These fossils are mostly fragments of the body armour and scales of the tadpole-shaped, finless and jawless little vertebrates. They seem to have lived in the pools and streams of the Old Red Sandstone continent and its coastal waters. In the Welsh borderland the sedimentological evidence for this lies in the red formations familiar to us. In South Devon the Dartmouth Beds are in part of similar aspect and also yield the same kinds of fossils.

One of the earliest ancestral fossils of the vertebrates with their distinctive nervous system comes from the Cambrian Burgess Shale of western Canada and the earliest bony tissues are from tadpole-like forms in Ordovician rocks in North and South America. So far they have not turned up in Britain.

In the far northern archipelago of Spitsbergen Old Red Sandstone formations yield vast numbers of Early Devonian agnatha similar to those in Britain. Collecting specimens there is fraught with problems with the cover of snow and ice and the strong run-off streams during the short summer season.

Similar fossils in rocks amazingly like those of Herefordshire and Worcestershire and with the same kinds of early jawless fishes were discovered in Nova Scotia, Canada, in the late nineteenth century. They were then heralded as a bit of British Old Red Sandstone, but before the days of plate tectonics, or even continental drift, their presence defied explanation. Today we regard all of the outcrops of Old Red Sandstone around the North Atlantic as remnants of a large mountainous continent. There plant life was beginning to emerge from the coastal waters to colonize the wetter realms inland. The vertebrates went too.

In the Canadian Arctic islands (and in Greenland) Silurian and Devonian rocks are widespread. Primitive fishes, found there originally by the Geological Survey of Canada, are locally very abundant. During the later decades of last century several university expeditions have collected large numbers of many different species. Several of these species are now known in anatomical detail and their modes of life hinted at. Again Old Red Sandstone lithologies follow on marine strata and the scenery is spectacular.

High in the Canadian Rockies and in the western high plateaux of the U.S.A. Silurian and Devonian marine rocks contain close relative species of the arctic agnatha. Many of the most prolific sites have to be reached by helicopter, so remote and inaccessible are they.

Meanwhile Devonian localities in Russia, in central and northern Siberia, in China and in Australia and Antarctica have attracted the attention of vertebrate palaeontologists around the world. This has led to the concept of four contemporary early Devonian faunal provinces, each with its own distinctive fossils. Each has agnatha, but none so bizarre and large as the Chinese. The dating of many of these sites has been by reference to associated marine deposits with their conodont fossils. These microscopic tooth-like forms were part of the oral anatomy of creatures akin to, if not actually, primitive vertebrates. A universal chronology based on these fossils now shows us where to mark the top of the Devonian System in various parts of the world and has attracted the attention of vertebrate palaeontologists. The Chinese have erected a fine plaque to celebrate this point in China.

In fifty years or so our knowledge of some of the early strange fishes widespread across the world has grown as other researches in earth sciences have progressed. Technology and better transport helps the field work and the quest to understand the geological past goes on. From Devonian fishes evolved the first tetrapods, but that is another story.

(This report was kindly supplied by Professor Dineley)

THIRD MEETING: 17 November: Mr. G. Charnock, president, in the chair.

Mr. Ken Palmer gave a talk on ‘Houses and Landscape, as shown on the 1588 manorial map of Grosmont.’ He explained that the map dated 1588 measures 34 inches by 23 inches and is deposited at the National Archives at Kew. On it are drawn 137 houses and 6 watermills. It is not signed and has no scale. South is at the top of the map. Are the drawings conventional or as seen, or is it an artist’s impression?

Features depicted on the map include the principal hills and mountains; the main river, the Monnow, and the Tresenny Brook with the leats of three mills on it; two areas of ridge and furrow; Grosmont Wood (60 acres), three areas of common land totalling 46 acres and pasture and meadow land along the Monnow. Also shown is a network of roads and cart tracks, all of

which can today be traced as footpaths and sunken lanes. Also drawn are Grosmont Castle, Grosmont and Llangua churches, two bridges across the Monnow and two smaller bridges crossing mill leats. Allowing for alterations over the centuries both Grosmont and Llangua churches are recognisable.

Concerning the houses and watermills, two-thirds are shown as of timber-framed construction, but no domestic building with external timber-framing is known to exist today. One-third of the buildings seem to be of cob or turf or possibly lime-washed or plastered. The other two-thirds are of timber-framed construction of which two-thirds are single-storied, one-fifth are one and a half storeys and eleven of two storeys. The majority of the houses have two windows. Eighty-eight per cent have thatched roofs and seven of the largest houses have cut-stone roofs. All have chimneys emitting smoke. As Grosmont is a stone area why does the map show the houses being of timber-framed construction?

From studying the landscape of the area Mr. Palmer suggested that the map is a bird's-eye view taken from Garway Hill and probably from high ground at Rowlstone. The map was used to illustrate a legal document concerning a mill dispute in the Duchy of Lancaster. The names of the occupants of the houses shown on the map are probably those of the witnesses in the case.

He also referred to the development of map-making and said that much more research on the map needs to be done.

WINTER ANNUAL MEETING: 1 December: Dr. J. C. Eisel, senior vice-president, in the chair.

Officers for 2008 were appointed. The accounts for the year ending 31 December 2006 were presented and adopted. They are printed at the end of these Proceedings.

Mr. David Lovelace gave an illustrated talk on 'Woodlands of Herefordshire – history, uses and restoration.' He explained that the Ancient Woodlands project was developed by the River Wye Preservation Trust with funding from English Nature's Biodiversity Action Fund, the SITA Trust and the Duchy of Cornwall. The aim of the project is to provide reliable information on the history, location, current status and conservation value of Herefordshire ancient woodlands. These are defined as existing since 1600. Parkland and wood pasture are to be included. The knowledge of their origins will provide information for their future uses and conservation.

The research has involved the use of maps, aerial photographs, field surveys and documents and information from landowners. Surveys of beetles, moths and butterflies will also be carried out. The results will provide a definitive account of Herefordshire native woodlands, wood pasture and parkland

He said that the analysis of pollen grains of hazel, willow, lime and grasses have been a very reliable guide, and shows the decline from the Iron Age to the present day. At Domesday woodland in the county was less than 15%; many boundary banks remain and these tend to have old trees on them. He referred to Haugh Wood being felled in 1639 for the iron industry and to the one at Bringewood, Downton, in the early seventeenth century. Limekilns at Lords Wood on the Doward provided a flux for the iron industry.

From about 1946 the Forestry Commission planted conifers. The 1988 Strategy introduced a broad-leaved policy and the 2005 Strategy states that all Forestry Commission ancient woodlands should be restored. The project ends in April 2008 and the results will be published.

WOOLHOPE NATURALISTS FIELD CLUB

RECEIPTS AND PAYMENTS ACCOUNT for the year ended 31st December 2006

Last Year				
	RECEIPTS			
2868	Interest on Investments- Capital Reserve	2579		
2595	General	2791		
5463			5370	
6864	General Subscriptions	8035		
96	Sale of Publications	267		
	Refunds	939		
98	Sundries	50		
1377	Grants, Donations & Legacies	400		
1348	Herefordshire Taxes account	212		
9960	Victoria County History - Net Surplus			
	Archaeological Research - Net Surplus			
	ARS - Lottery Fund Net Surplus			
1	Field Meetings - Net Surplus	73		
305	Geology Section Net Surplus	267		
12	Natural History - Net Surplus	17		
20059			10280	
			15650	
	PAYMENTS			
745	Insurance	794		
232	Stationery, Printing & Binding	8632		
	Meeting Expenses			
361	Postages & Telephones	981		
281	Subscriptions & Donations	361		
1998	Repairs and Renewals	1998		
300	Honoraria	350		
300	Accountants Fee			
	Refund	200		
	Bank Charge - Statement	5		
229	ARS a/c - Net deficit	49		
	Natural History a/c - Net Deficit			
	Field Meetings - Net Deficit			
		13390		General Surplus
7144	Lottery Grant Account Deficit	2522		2260
	Victoria County Deficit	26208		
11600			42120	
13922	Total Surplus in year Deficit		-26470	

Surplus includes £2,579 for Capital Reserve
hence Deficit of £319 on General Funds

D Haigh
24 June 2007
Independent Examiner

BALANCE SHEET AS AT 31st DECEMBER 2006

Last Year				
	ASSETS			
1040	Herefordshire County Loan			1040
50869	National Savings Investments			52868
	Bank Accounts:			
31240	Business Reserve	34962		
1470	General	2032		
5715	Subscriptions	1572		
312	Natural History Section	330		
1887	Archaeological Research Section	1838		
1290	Field Meetings	1363		
537	Geology Section	823		
1346	Herefordshire Taxes	1557		
43797				44477
95706	Sub Total			98385
119375	Designated Accounts Special Reserve			118954
	Restricted Accounts			
26206	Victoria County History			
3623	29829 ARS Heritage Lottery Fund		1101	1101
244910				218440

Note that the following assets of fluctuating or indeterminate value are not included in this Balance Sheet:-
£933 3 1/2% War Loan current value approx £802
The contents of the library and stock of publications

	CAPITAL			
	General Funds			
90466	Balance brought forward		95704	
8238	98704 Add surplus in year Minus Deficit		319	95385
	3000 less transfer to Capital Reserve			
	Add Transfer from Capital Reserve			3000
95704				98385
	Designated Funds			
113507	Capital Reserve		119375	
2868	Add surplus for year		2579	
3000	Add transfer from Business Reserve			
	Deduct transfer to Business Reserve		3000	
119375				118954
	Restricted Funds			
16248	Victoria County History		26206	
9960	Add surplus in year			
	Less transfer to new Charity		26206	
26208				
10767	ARS Heritage Lottery Fund		3623	
-7144	3623 Less Deficit for year		-2522	1101
244910				218440

Biographical Details of Contributors

Details for Andrew Richards appeared in the 2003 *Transactions*, and those for John C. Eisel and Paul A. Olver in the 2005 *Transactions*, and so they will not be repeated here.

Heather Hurley

Heather Hurley began her working life in public and college libraries, which led her to take an active interest in local history. Since moving to Herefordshire thirty-five years ago, she has written books and guides about Herefordshire and the Wye Valley including *The Old Roads of South Herefordshire* (1992, 2007), *The Story of Ross* (1999), *The Story of Bill Mills* (2001) and several papers for the Woolhope *Transactions* and the Ross Civic Society's Pink Publications.

During 2005 and 2006 her involvement with the Landscape Origins project has enabled her to extend her knowledge of the river's past history, and to contribute chapters on buildings, old roads, river crossings, former industries, river navigation and rail transport for the Landscape Origins of the Wye Valley (2008) which she edited. Over the last eighteen years she has served as Hon. Librarian at the Herefordshire Record Office.

Rosalind Lowe

Roz spent most of her early life in Breconshire, not far from Hay-on-Wye. She has been involved with IT from its early days, and was working as a consultant in the oil industry in Benelux prior to her retirement to Herefordshire. The chance purchase of a house which had belonged to Sir Samuel Meyrick of Goodrich Court led to her publication of his biography in 2003. She used her work experience to edit HAN, the journal of the Archaeological Research Section of the Club, for eight years, and has been the editor of these *Transactions* since the 2003 edition. She is very interested in the history and landscape development of south Herefordshire near to her home at Goodrich.

Presidential Address, 2007

Duncumb, Bird and Bird

By JOHN C. EISEL

The Transactions of the Woolhope Club reflect the interests of its members, and these vary from time to time. Much has been written about such things as churches and other buildings, and also institutions, but perhaps not so much about persons, except when F. C. Morgan was in his prime. This is due in part to the fact that documentation of persons is mainly confined to more recent centuries, with little surviving before that.

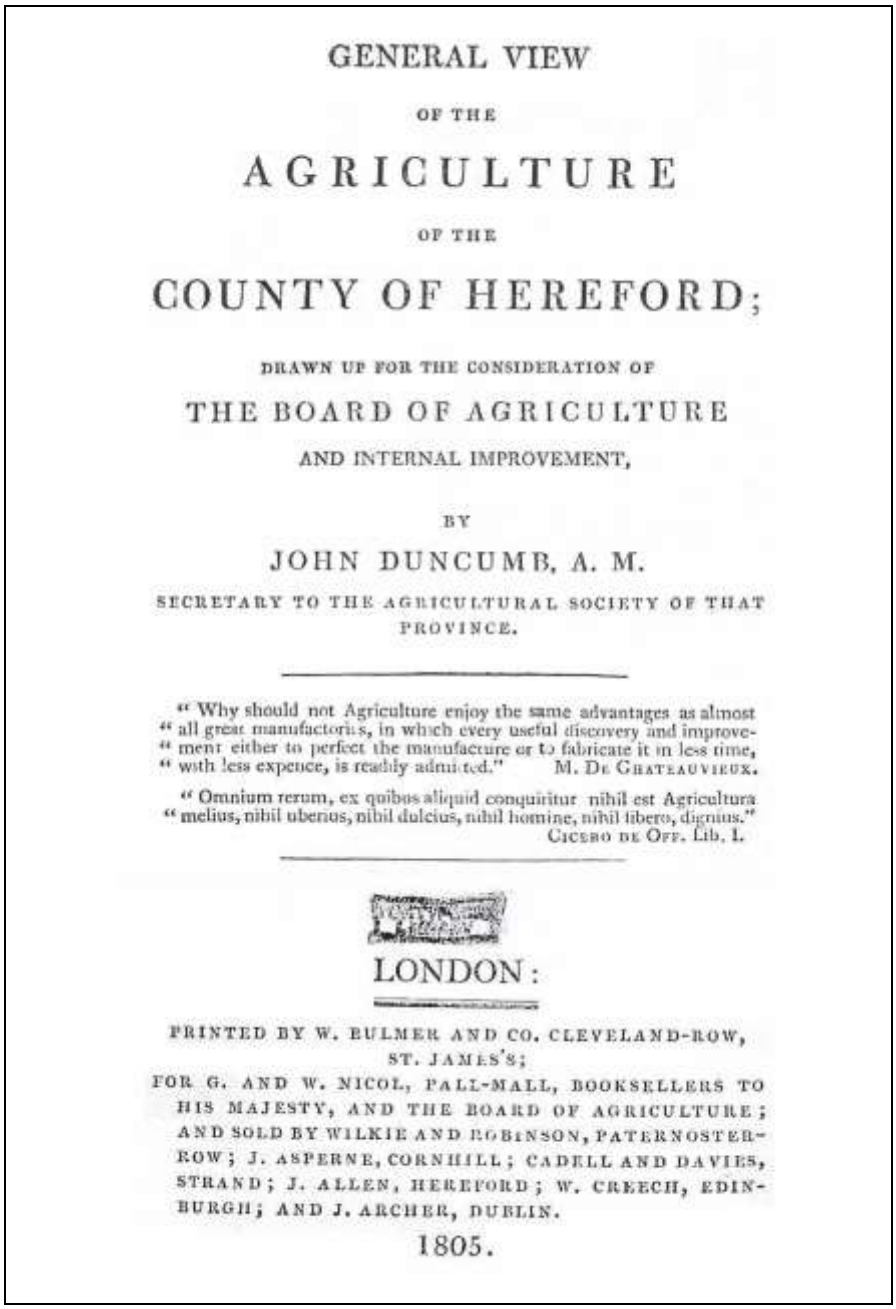
This paper discusses the lives and work of three local historians and antiquaries, all roughly contemporary. The name of the Revd. John Duncumb is very familiar, but the others, those of the brothers Thomas Bird Esq. and the Revd. Charles John Bird, less so. The opportunity has been taken to correct certain misconceptions about the Revd. John Duncumb that, over the years, have appeared in print.

THE REVEREND JOHN DUNCUMB

John Duncumb, as the author of the first two volumes of a county history of Herefordshire, has received much attention, and a short biography appeared in 1890 in Hutchinson's *Herefordshire Biographies*. This was based on another, somewhat longer, that had appeared in the *Dictionary of National Biography*,[1] and Duncumb's work was put in context in the chapter on Herefordshire, written by Dr. Janet Cooper, which appeared in 1994 in *English County Histories, A Guide*, edited by C. R. J. Currie and C. P. Lewis. Here the work of earlier historians was discussed as were the documentary collections used, and also what happened after Duncumb. This chapter was used to provide the background to Philip Riden's much more detailed biography that appeared as an introduction to the reprint of the first part of Volume I of Duncumb's work that was published in 1996. Subsequently the *DNB* entry on Duncumb was revised and appeared, with added errors, in the *Oxford Dictionary of National Biography*. (I hasten to add that it was not revised by any local historian!)

The basic outline of John Duncumb's life has been well documented.[2] He was born in 1764, the second son of Thomas Duncumb, the rector of Shere in Surrey, and was baptised at Shere on 20 September in that year. After education at Guildford Grammar School, he went up to Trinity College, Cambridge in 1783 where he graduated B.A. in 1787. The following year he moved to Hereford to become editor of the *Hereford Journal*, which had been bought through intermediaries by the eleventh Duke of Norfolk.

In 1790 John Duncumb accepted a commission from the Duke of Norfolk to compile and edit a history of Herefordshire. He was to receive two guineas a week for collecting materials with extra payment for journeys further afield and the duke supplied collections of material made by earlier antiquarians, and also access to the Scudamore papers, then held at Holme Lacy. Duncumb's career as an editor did not last long, for he gave it up when he entered holy orders in June 1791. His first living was the rectory of Talach-ddu, near Brecon, where he was instituted in 1793, and he held this living until 1796.[3]



GENERAL VIEW

OF THE

AGRICULTURE

OF THE

COUNTY OF HEREFORD;

DRAWN UP FOR THE CONSIDERATION OF

THE BOARD OF AGRICULTURE

AND INTERNAL IMPROVEMENT,

BY

JOHN DUNCUMB, A. M.

SECRETARY TO THE AGRICULTURAL SOCIETY OF THAT PROVINCE.

"Why should not Agriculture enjoy the same advantages as almost "all great manufactories, in which every useful discovery and improve- "ment either to perfect the manufacture or to fabricate it in less time, "with less expence, is readily admitted." M. De Grateauvieux.

"Omnium rerum, ex quibus aliquid conquiritur nihil est Agricultura "melius, nihil uberius, nihil dulcius, nihil homine, nihil libero, dignius." Cicero de Off. Lib. I.

LONDON:

PRINTED BY W. BULMER AND CO. CLEVELAND-ROW, ST. JAMES'S;

FOR G. AND W. NICOL, PALL-MALL, BOOKSELLERS TO HIS MAJESTY, AND THE BOARD OF AGRICULTURE; AND SOLD BY WILKIE AND ROBINSON, PATERNOSTER-ROW; J. ASPERNE, CORNHILL; CADELL AND DAVIES, STRAND; J. ALLEN, HEREFORD; W. CREECH, EDINBURGH; AND J. ARCHER, DUBLIN.

1805.

Figure 1. The title page of Duncumb's *General View of the Agriculture of the County of Hereford* (1805). (Hereford Reference Library)

In the same year he was presented to the rectory of Frilsham in Berkshire. He was presented to the vicarage of Tortington, Sussex by the duke in 1809, which living he resigned after the duke presented him to the rectory of Abbey Dore in the same year. Finally, in 1815 he was presented to the vicarage of Mansel Lacy by Uvedale Price, Esq., and he held both livings until his death in 1839. The first volume of his history was issued late in 1804 and probably because of this he became a Fellow of the Society of Antiquaries in 1807. The first part of the second volume was published in 1812. Duncumb played an active part in the life of the county, both as a magistrate and as an active member of various societies and organisations. He was secretary of the Herefordshire Agricultural Society from its inception in 1797 until he resigned in 1836. Perhaps because of this involvement he wrote a book entitled *General view of the Agriculture of the county of Hereford*. This was published in 1805 by the Board of Agriculture, and was an extended version of an essay that he had submitted to the board after they appealed for suggestions how corn production could be increased. This book was reissued in 1813.

John Duncumb died in Castle Street, Hereford on 19 September 1839, and a fulsome obituary was published in the *Hereford Journal* six days later. The following note was placed in the register at Abbey Dore.

> John Duncumb, Rector of Abbey Dore departed this life on the 19th of September 1839 aged 74 who while living was beloved and esteemed and now his loss is felt by his affectionate Curate and Parishioners.[4]

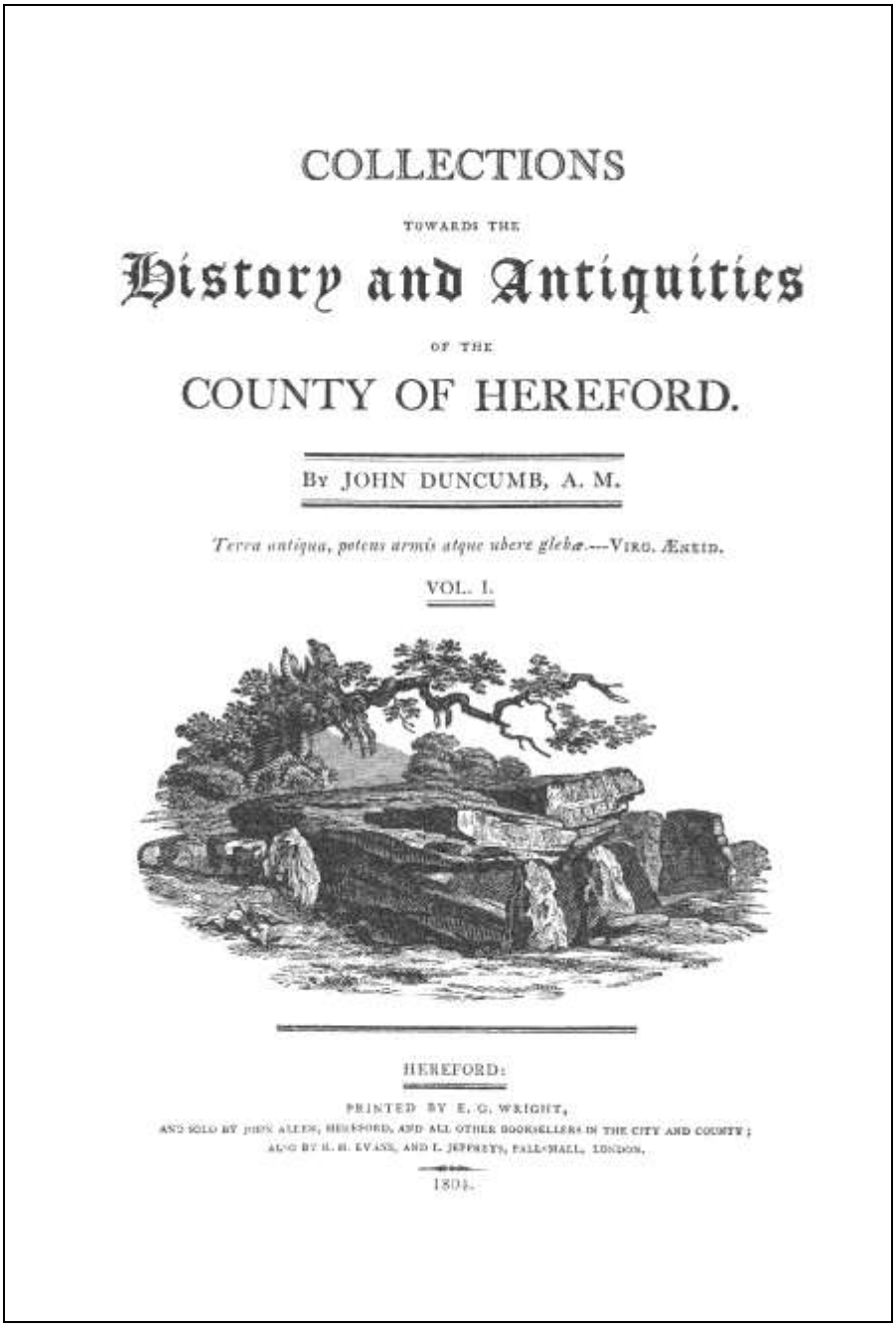
All this is not in doubt, but there are areas where the evidence of what happened is perhaps not so clear cut. It is apparent that there was speculation about the nature of the connection between John Duncumb and the Duke of Norfolk. So much so, that George Strong, in the introduction to his book *The Heraldry of Herefordshire*, published in 1848, felt it necessary to state about John Duncumb:

> 'In his eye, figure, and gait, a likeness no doubt might be traced to his Grace of Norfolk; but he had been much in the company of his patron, and thus a similarity of habit, if not of form and feature, may have been acquired. Such resemblance, joined to the Duke's known gallantry, and his continued patronage of Mr. Duncumb, may have given rise to the ill-founded rumour of his birth, which my researches in the Register of Shere wholly disprove. I have authority for stating that he was introduced to the Duke of Norfolk by Mr. Bray, the Historian of the county of Surrey, as a person well fitted to draw up a topographic account of Herefordshire, and that previous to this introduction his Grace had not the slightest knowledge of Mr. Duncumb's family.'[5]

Strong may well be correct in this, as John Duncumb's parents were well acquainted with William Bray, and John Duncumb himself was mentioned in Bray's diaries. Moreover, Bray was one of a circle of antiquarians which included the Duke of Norfolk, which had much influence in the Society of Antiquaries at this period.[6]

There is also some evidence of the close nature of the contact between Duncumb and the Duke of Norfolk. The issue of the *Hereford Times* of 25 June 1836 contained a paragraph about the duke as a young man, copied from Sir W. W. Wraxall's posthumous *Memoirs*. This reflected badly on the duke, and in the next issue there was a letter strongly rebutting this, written by 'A Citizen of Hereford', which included the following statement:

> 'Neither was the Duke of Norfolk addicted to habitual or hereditary excesses of alcohol. The writer of this article acted as his confidential secretary, and was intimately connected with him during the period of twenty-five years.'



COLLECTIONS

TOWARDS THE

History and Antiquities

OF THE

COUNTY OF HEREFORD.

By JOHN DUNCUMB, A. M.

Terra antiqua, potens armis atque ubere glebæ.—VIRG. ÆNEID.

VOL. I.

HEREFORD:

PRINTED BY E. G. WRIGHT,

AND SOLD BY JOHN ALLEN, HEREFORD, AND ALL OTHER BOOKSELLERS IN THE CITY AND COUNTY;

ALSO BY R. H. EVANS, AND I. JEFFERYS, PALL-MALL, LONDON.

1804.

Figure 2. The title page of the first volume of Duncumb's great but unfinished work

Now if this letter was written by John Duncumb – and there is strong contemporary evidence to prove that it was[7] – then he may well have had a short period as confidential secretary to the Duke of Norfolk before he came to Hereford.

Duncumb's fame rests on his work towards publishing a county history. The first volume of his *Collections towards the History and Antiquities of Herefordshire* was published late in 1804 at a cost of £3 3s. It was 604 pages in length, and was illustrated with maps and plates, which had been issued previously. Interestingly, what may be the estimate for printing the volume survives in the collections in Hereford Reference Library.[8] This was based on the premise that 500 copies of a book of 600 pages of royal quarto size were printed on fine paper and estimated that the cost of each copy was 17s. 2½d. As this was the only book of that number of pages published locally at this period, it is difficult to see what else could be referred to. If so, it gives some idea of how many copies were printed. Part I of the second volume appeared in 1812, a book of 318 pages. Nothing further was published before the death of John Duncumb in 1839, except for an extra 40 pages that were printed in anticipation of the second part of Volume II but not distributed, and these had a continuous pagination with the first part. It is stated that the death of the Duke of Norfolk in 1815 caused John Duncumb to abandon the project as the duke's executor did not honour an expressed wish for the project to continue after his death, to be paid for out of the duke's estate. Indeed, the surviving copies of the book were taken to London where they languished in a warehouse until 1837 when they, and the extra unpublished pages, were bought by Thomas Thorpe, the London bookseller.[9]

There was a long gap between 1790, when he was commissioned to produce the history, and 1804, when the first volume was produced, and another eight years lapsed before the first part of the second volume appeared. This is explained by a note that was added to T. T. Davies' copy of John Allen's *Bibliotheca Herefordensis*, which states:

> 'This Vol. was about 10 years in hand, in consequence of the Author's Delays.'[10]

Supporting evidence is found in an advertisement that appeared in the *Hereford Journal* of 9 July 1806, for an index to the first volume of the history that was to be given *gratis* to the purchasers of the work.[11] This went on to say:

> 'The Second Volume of the HISTORY of HEREFORDSHIRE will be put in the press as soon as the paper, which is now manufacturing, is ready.' [12]

However, this was over optimistic, as the first part of Volume II did not appear for another six years after this. John Duncumb certainly caused part of the delay, but this is not the entire story.

Firstly, there are clear indications that Duncumb did not receive the support that he might have expected. As indicated above, the print run of the first volume may well have been about 500, and it is to be expected that a similar number were printed of Volume II, Part I. But sales seem to have been disappointing and support was lacking within the county. When a notice of a proposed history of Kington appeared in the *Hereford Journal* of 13 March 1844, it included a very telling phrase:

> 'As records of the habits and manners of the "olden time," these county records are amusing and instructing, whilst as an *Addenda* to Duncumb's great work (itself never generally patronised as it ought to have been) they must be invaluable to the antiquarian and the lover of authentic records.'[13]

The anonymous reporter in the *Hereford Journal* was indeed correct, as a few of the original copies of Volume 1 and Volume 2 part 1, printed in 1804 and 1812, were still on offer by the printers Jakeman and Carver in 1915.[14]

Secondly, John Duncumb was more conscientious in his religious duties than may have been previously acknowledged, and the time spent on these would have reduced the amount of time that he spent on his historical researches. In the original article on John Duncumb that appeared in the *Dictionary of National Biography* it was stated that he never resided in any of the parishes of which he was incumbent, a statement that was reproduced uncritically in the *Oxford Dictionary of National Biography* and elsewhere. This is, however, incorrect. It seems likely that he did not reside in the parish of Talach-ddu, as correspondence relating to his preliminary collections for Broxash Hundred, which were compiled mainly by post in 1794-6, was sent to him in Hereford.[15] The situation may well have been the same when he was the incumbent of Frilsham, Berkshire, as on 15 February 1804 he received a licence from the Bishop of Salisbury, in which diocese it was, for leave of absence for two years from Frilsham 'on account of the total want of a competent dwelling house.'[16] This may have been a renewal of a previous licence.

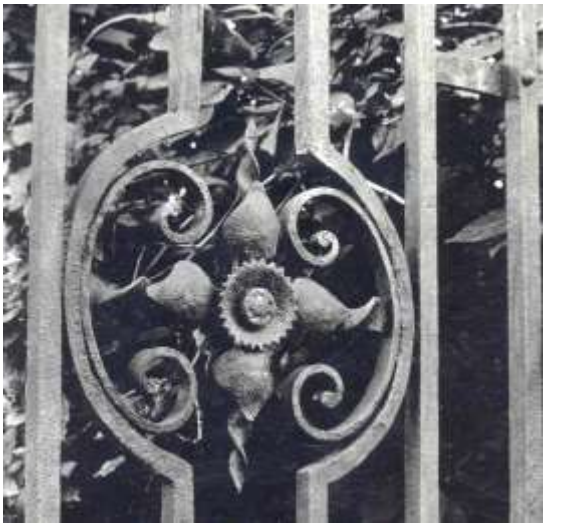


Figure 3 (above). Detail of gate leading from the rectory to the churchyard at Dore Abbey.

Figure 4 (left). The gate, used by Duncumb, leading from the rectory to the churchyard at Dore Abbey. (Hereford Reference Library)

On 26 April 1809 John Duncumb received preferment to the rectory of Abbey Dore, and he read himself in on 7 May 1809.[17] There is clear evidence that for most of the time that he was rector of Abbey Dore he was resident in the parish.[18] From 1810 onwards the Land Tax Returns

show him not only as the owner of the Rectory House, but also the occupier.[19] The Land Tax was a large £14 9s. 8d., although this should not have been too much of a problem, as in 1810 the living was worth £600 p.a., Mansel Lacy, on the other hand, was worth a mere £94 p.a. in the same year.[20] It could of course, be argued that Duncumb, while nominally the occupier, installed a curate in the rectory. However, his name occurs regularly in the Abbey Dore registers as officiating at baptisms, weddings and funerals, alternating with the names of his curates.[21] Although one of the perks of the curate was the use of the Rectory at Abbey Dore,[22] it seems that in practice this may only have been part of the house, as it is certain that Duncumb was in residence most, if not all, of the time, until 1835.

On 13 August 1834 John Duncumb petitioned Bishop Grey for leave of non-residence, and this was granted on 9 February 1835 for a period until 31 December 1836.[23] An advertisement in the issue of the *Hereford Journal* of 17 June 1835 announced the sale by auction at the Rectory House, Abbey Dore, of the furniture of the Revd. J. Duncumb, who was stated to be removing to Hereford. There is nothing to suggest that Duncumb ever moved back to Abbey Dore, and he was resident in Hereford when he died in 1839. An advertisement in the *Hereford Journal* of 6 November 1839 publicised the sale by auction of his effects and library and while no details of the library were given, this sale could well have included his manuscripts. As usual, no report of the sale was published but it is likely that it took place as advertised, and that his library was dispersed at this time.

At present the house where Duncumb lived in Castle Street has not been identified and the rectory at Abbey Dore has been almost totally rebuilt, but the gate between the rectory and the churchyard, used by Duncumb during his ministry, was described in 1931 by the Royal Commission on Historic Monuments in the following terms:

> ‘The wrought-iron gate in the wall between the rectory garden and the graveyard is of *c.*1700. It is hung between two square stone piers and is in two leaves of simple design with a horizontal band of scroll-work across the middle. The shaped overthrow above the gates is of simple scroll-work and has a wrought-iron sun in the middle.’[24]

THOMAS BIRD ESQ.

The name of Bird is synonymous with Drybridge House, as recourse to *Burke's Landed Gentry* shows,[25] and for the period under discussion this was Drybridge House in St. Martin's, Hereford. Benjamin Bird came to Hereford in the first half of the eighteenth century, and was certainly here in 1742 as a datestone at Drybridge House indicates. Benjamin died in 1752 and his eldest son, also Benjamin took over, holding it until his death in 1770, whereupon it passed to his half-brother William. He was an attorney by profession and a substantial citizen, and became Mayor of the city in 1773. His wife was Hannah Boulton, of Sillens, Feckenham, Worcester, and they had 15 children, not all of whom survived childhood. It is two of these, Thomas Bird, born 2 March 1772, and Charles John Bird, born 11 July 1777, who are of interest to this paper, both of whom received some of their education at the Cathedral School in Hereford.[26]

William Bird died in 1795, and as his eldest son, also William, had predeceased him in 1784, his property passed to his next son James. He died without issue in 1798, and the property passed to his third son, Thomas Bird. Like his father William, Thomas Bird was an attorney and it is assumed that he succeeded to his father's practice in law. He seems to have had a slightly chequered career, and the *Hereford Journal* of 22 February 1802 announced that his partnership with James Nicholls had been dissolved. He entered into another partnership with Edmund Phillips Stock but this too was dissolved, in November 1806.[27]

Figure 5.(above) The datestone at Drybridge House

Figure 6. (left) A portrait of Thomas Bird as a younger man. (courtesy William Bird)

Soon after this time he became involved in the proposals to establish a towing path on the River Wye, both as a landowner with property adjoining the river[28] and in a professional capacity, as he was appointed Solicitor to the Bill for a Horse Towing Path.[29] Subsequently he

served for a number of years as Clerk to the company, and also as auditor, positions which he gave up in 1822.[30] As part of his legal practice, in 1817 he was appointed Clerk of the Peace for the county.[31] By 1822 he had taken John Cleave into partnership, with offices in Bridge Street. Although Pigott's *Directory* of 1835 recorded that Thomas Bird had an office in the Shire Hall, and only the name of John Cleave was given at the Bridge Street address, no doubt Thomas Bird still maintained a connection with the practice. After Thomas Bird's death in 1836 John Cleave took over as Clerk of the Peace, continuing the records started by Thomas Bird in 1818.[32]

Figure 7. Drybridge House in the 1920s. (Derek Foxton collection)

Although John Cleave was still in practice on his own in 1844, by 1851 the firm had became Cleave and Symonds. In the 1880s it was titled Symonds and Son, and then became Symonds and Sons. In the early years of the twentieth century the two practices of Symonds and that of W. J. Humfrys, from the opposite side of Bridge Street, amalgamated to form the firm of Humfrys and Symonds. One office was at no. 15 (Thomas Bird's old premises) and the other at no. 34. No. 15 was sold in about 1947 and subsequently the firm moved to 19 East Street, on the corner of Offa Street opposite the Hereford Herd Book Society premises. Later the firm moved diagonally across the road, into the present premises, which were the former public house called the Coffee House.[33]

From what has been said above, it is clear that Thomas Bird was much involved in civic affairs. He was elected to the Common Council of the city in 1798,[34] and became mayor in 1804. Towards the end of his year as mayor the Revd. John Duncumb was made a Freeman of

the city.[35] In his later years he was Treasurer of the city, and his retirement from this post was reported in the *Hereford Journal* of 2 November 1831:

> 'Richard Johnson, Esq. has been appointed Treasurer to this city, in the place of Thomas Bird, Esq. who resigned the situation. It is highly creditable to both gentlemen, that they decline receiving any salary for discharging the duties of the Treasurership, which require great attention, and are attended with considerable trouble.'

Richard Johnson was appointed town clerk of Hereford in the following year, and served until 1868.[36] He was in post when the old Common Council of the city was done away by the Municipal Reform Act of 1835, under which the city was formed into three wards, named Ledbury, Leominster and Monmouth wards. The first meeting of the new town council was held on 1 January 1836 and one of the six councillors for Monmouth Ward was Thomas Bird.[37]

Thomas Bird was also prominent in other activities in the city. When the Hereford Permanent Library was founded in 1815 he was one of the subscribers, while the Revd. John Duncumb was the head librarian, a post he still held in 1838.[38,39] The library was first housed in a room under the gateway leading from Widemarsh Street to the New Market, but soon moved to more suitable premises in St. John's Street. On 8 December 1817 Theophilus Lane, the diocesan registrar, announced in the *Hereford Journal* that his office had moved to St. Owen's Street. This left his former office premises, a single-storey building, vacant, and these were bought by the subscribers to the Hereford Permanent Library. It occupied the St. John Street premises until it was closed in 1900 and the stock transferred to the library in Broad Street.

Thomas Bird was also involved in the Hereford Savings Bank, which was set up in 1816, the very worthy object of which is given in the first rule:

> 'This Savings Bank is formed for the purpose of affording secure means to industrious persons of the labouring classes, and others, of investing and improving such Sums of Money as they may be desirous of depositing therein.'[40]

The printed regulations of the bank, issued in 1816, show that Thomas Bird was one of the panel of 15 managers of the bank, and a member of the committee. Initially the bank, like the Permanent Library, had a room in the gateway to the new market, but Pigot's *Directory* of 1830 shows that by then the business of the bank was being transacted at the buildings on the corner of St. John Street and East Street, formerly the old Coffee House, premises now occupied by the firm of solicitors Humfrys and Symonds. This firm also now occupies the former Hereford Permanent Library building.

Thomas Bird was also a vice-president of the Hereford Auxiliary Bible Society, established in 1814,[41] and evidently took an active role in this, as the *Hereford Journal* of 25 April 1824 reported a meeting of the Bible Association, with Thomas Bird in the chair.

Another activity in which Thomas Bird was prominent was freemasonry. He was a leading member of Palladian Lodge, which was founded in 1762 and is still in existence. The foundation stone of Nelson's column in Castle Green was laid with much ceremony on 2 April 1806 by Thomas Bird, as Right Worshipful Master (as he was then titled) of Palladian Lodge, after which he delivered a short but eloquent speech.[42]

Under the Unlawful Societies Act of 1799, all closed societies were banned, with the exception of Masonic lodges, one possible reason for the exemption being that the Prince of Wales was the Grand Master of the Premier Grand Lodge of the Order.[43] However, a condition of the exemption was that each year a return of members of each lodge had to be made to the local Clerk of the Peace. A few of these returns survive, and it is amusing to note that the

return dated 17 March 1818 was addressed 'To the Clerk of the Peace for the County of Hereford Thomas Bird Esquire.' The fifth name on the list of members of the lodge was that of Thomas Bird, and his profession or business was stated to be 'Clerk of the Peace'! This list was signed by the Right Worshipful Master of the Lodge, John Allen junior, the noted bibliographer.[44]

Thomas Bird became even more prominent in freemasonry as in 1817 he was appointed Deputy Provincial Grand Master for Herefordshire, and he held this position until 1831. In that year the Provincial Grand Master, Richard Philip Scudamore, died. The local lodges were canvassed, and the name of Edward Bolton Clive was put forward as the successor of Scudamore in a letter written to Grand Lodge in London by Thomas Bird on 7 August 1831. Clive declined the offer, and Thomas Bird was surprised to find himself appointed instead.[45] In recognition of his status, the next surviving return of members of Palladian Lodge, sent to Thomas Bird on 17 May 1834, has his name at the head of the list, where it was stated that he was resident at Drybridge House, and that his title was 'Esquire.' The list was signed by William Williams Bird, Thomas's nephew, who was then also living at Drybridge House.[46]

From what has been said above, Thomas Bird was involved in most of what was going on in Hereford at that period. Despite this, he found the time to make a very large collection of material towards the history and antiquities of the county of Hereford, including the work of earlier antiquarians. He himself, while not researching in great depth, collated information mainly from printed sources and this was incorporated in 11 volumes of manuscript. This work seems to have been done in the 1820s—the first two volumes in the series were dated 1826, and the third volume 1827. As relaxation he indexed the *Hereford Journal* up to the year 1800, and this two-volume work is a most useful resource. It is dated 1828. It was no coincidence that he became a member of the Society of Antiquaries at this period, being elected on 25 November 1824, and one of his sponsors was the Revd. John Duncumb.[47] Thomas Bird took little part in the activities of the Society of Antiquaries, but on 10 June 1830 he wrote a letter to the Society on the subject of a Roman pavement at Bishopstone, Herefordshire, which was printed in *Archaeologia* in the following year.[48] The death of Thomas Bird was reported in the *Hereford Journal* of 9 March 1836:

> 'On Saturday evening died, at his house at Drybridge, in this city, aged 64, Thomas Bird, Esq. F.A.S., a Deputy Lieutenant, and Clerk of the Peace for this County.'

Thomas Bird's Trustees wasted little time in sorting out his extensive estate. A sale of the furniture at Drybridge House, and also his manuscript collections, was advertised to take place on 26 April,[49] and this was followed by a sale of the linen and remaining furniture.[50] However, the first sale did not include his literary and historical collections, and these were auctioned at Drybridge House on 8 March 1837. A catalogue was produced and details an amazing collection, including the Scudamore Papers, which seem to have been acquired by Thomas Bird after the death of the widow of the Duke of Norfolk in 1820.[51] Much of the other material in the collection has since been reunited in the local collection in Hereford Reference Library. The catalogue was printed by John Parker, who was also a bookseller.

The introduction to the catalogue stated that the collection was to be offered in a single lot, and if not sold the items would be sold individually. In the event, the whole collection was bought by W. H. Vale, another local bookseller,[52] for £400,[53] and he publicised this with a small advertisement in the *Hereford Journal* of 15 March, with a larger advertisement the following week. In the following month, W. H. Vale spent a week in London, during which he negotiated

the sale of the Scudamore Papers (Lots 73 to 120 in the sale) to the British Museum, a transaction reported in the *Hereford Journal* on 26 April 1837. It seems that while he was away, a communication was sent to him by that noted collector Sir Thomas Phillipps, of Middle Hill, Broadway. Vale wrote back on 22 April, offering him material which included two volumes compiled by Thomas Bird 'with the exception of the two Vols containing the Index to the Hereford Journal, which I am having made complete to the present time…' Vale also stated that the Hill Collections were then in the possession of Robert Phillipps of Longworth, a roundabout way of saying that he had sold them to Robert Biddulph Phillipps.[54] Sir Thomas Phillipps bought the volumes that he was offered by Vale—and possibly other material as well —as they have consecutive Phillipps catalogue numbers, dating from this period. One of them contains a MS letter from the Revd. C. J. Bird to an unknown correspondent, most likely Sir Thomas Phillipps, written on 5 September 1850.[55] After the Phillipps collection was broken up, these two MS volumes passed into the hands of Walter Pilley and then, after his death, were deposited with the rest of the Pilley Collection in the Hereford Reference Library.[56] Vale kept other MS material compiled by Thomas Bird, and in July 1878 presented 13 volumes of his MSS, with other material, to the Free Library (as it was then called). It is likely that the MS index to the *Hereford Journal* came into the Local Collection at this time.[57]

Figure 8. Drybridge House as it is now

To round out the story of Thomas Bird it is necessary to refer to the property that he owned. His Trustees decided to auction most of this, excluding Drybridge House, at the Hotel—the City Arms in Broad Street—on 3 November 1836.[58] There were 30 lots in the sale, including all of Norfolk Terrace,[59] wharfs and warehouses on the river, a timber yard on the south bank of the river, cottages, a farm at Llanveynoe, the Cwm estate at St. Margaret's, and the New Inn at Folly, Marden. The result of the sale was not reported in the *Hereford Journal*, but it was evidently not as hoped for, as most of the property (20 lots) was again offered for sale by auction on 20 September 1837, and yet again a year later, when it was down to 18 lots.

One of those lots that was not offered on the third occasion was the timber yard.[60] This was opposite the Bishop's Palace and Castle Green and was the place where shipbuilding took place.[61] It covered an area of 2 acres 26 perches, and was partly freehold and partly held by lease from the Custos and Vicars Choral (for 29 years from 1829). At the time of the auction it was in the occupation of a Mr. Swift, no doubt Hezekiah Swift, the boatbuilder from Brockweir, who took over the boatbuilding business from John Easton.[62] The timber yard was acquired by the church authorities, and the result was reported in the *Hereford Journal* of 10 July 1839.

> 'We notice with pleasure the striking improvement our Bishop has effected in the appearance of the banks of the Wye below the bridge, and also in the prospect of the Castle Green; the unsightly timber yard opposite the palace no longer exists, and the alteration manifests not only excellent taste, but great liberality of expenditure in effecting the desirable alteration.'

As for the other property, this does not appear to have been advertised again, and either the sale was finally successful, or the idea was given up.

The main property associated with the Bird family was Drybridge House. After the death of William Bird this was held by Trustees under his will, and was occupied by his widow until her death in 1812, and then by a daughter who died in 1819.[63] It seems that Thomas Bird then occupied the house himself.[64] His wife died in October 1825[65] and this may well have unsettled Thomas Bird, as the following year Drybridge House was advertised as being to let.[66] When it was advertised as being to let in 1829, it was stated that it was ready furnished, and that particulars were available from Mr. Cleave.[67] It seems that Thomas Bird lived elsewhere at this period, possibly in Bridge Street where he had his legal practice. However, Pigot's directory of 1830 records that he was then resident at Drybridge House, and he was still resident there at the time of his death. After the death of Thomas Bird, his Trustees made an unsuccessful attempt to sell Drybridge House in 1836 and it was subsequently rented out, and not lived in by a member of the family until the 1890s, when Charles Pavin Bird, a grandson of the Revd. Charles John Bird, took up residence. It was finally sold in 1926. This brings us neatly to the next subject who is

THE REVEREND CHARLES JOHN BIRD

The fourth son of William Bird, he was born on 11 July 1777. Although *Burke's Landed Gentry* states that he was educated at Shrewsbury School, the *Alumni Cantabrigenses* states that he was educated at Mr. Davis's school at Madley[68] and there is good evidence that he received at least part of his education at Hereford Cathedral School.[69] On 9 July 1794 he was admitted to Magdalene College, Cambridge, where he matriculated at Michaelmas 1794. He took his B.A. in 1799 and proceeded to M.A. in 1802. Meanwhile he was ordained a priest on

25 October 1801, the year in which he was presented to the rectory of Dinedor by the Duke of Norfolk. Three years later he was presented to the rectory of Mordiford. The story of the latter is told in his own words:

> 'Mr. Foley was my Godfather, and in fact, my Patron: previous to his death he enjoined M^rs^. Foley to offer to me the first preferment which might become vacant. The Rev. R. H. Onslow being preferred to Newent the Rectory of Mordiford became vacant, and this widow, in strict attention to her husbands wish, prevailed on her son Edw^d^. Tho^s^. Foley, a minor, to present me to the Rectory of Mordiford.'[70]

The Revd. Charles John Bird lived in the rectory at Mordiford, and so was non-resident in his adjoining parish of Dinedor.

He, like his brother, was a J.P. and took his duties seriously. At that time, Sunday was very much a day of rest, and it was not expected that any work or other activity should take place on that day. In the early nineteenth century Herefordshire was on several drovers' routes from Wales, and the drovers would naturally wish to continue on their route on a Sunday. The Revd. C. J. Bird took a dim view of this, and there are reports in the *Hereford Journal* of drovers being convicted before him for profanation of the Sabbath. Thus the issue of 4 October 1820 reported:

> 'On Sunday last four Welsh Drovers were convicted before the Rev. C. J. Bird, at Mordiford, of profanation of the Sabbath, in driving their cattle, and the penalties levied accordingly.'

Another case was reported in the issue of 11 October 1837 where it was stated that a drover had been convicted before the Revd. C. J. Bird for driving on a Sunday, and also one Phillip Williams for driving a higgler's cart on a Sunday.[71] It is no doubt more than a coincidence that a fortnight later that it was reported that a pony had been stolen from the Glebe Orchard, Mordiford, and that C. J. Bird was offering a £5 reward for the conviction of the offender or offenders. It is interesting that the only reports in the *Hereford Journal* of such breaches of accepted behaviour, leading to court cases, were brought before the Revd. C. J. Bird. Either Mordiford was on a well-used drovers' route, or he took the matter more seriously than other magistrates and ensured that the cases were reported as a warning to other drovers.

Like his older brother, the Revd. C. J. Bird was involved in activities in Hereford, but not to the same extent. On 2 December 1836 a meeting was held at the Hotel to consider the possibility of forming what was called the Hereford Natural History, Literary, Philosophic and Antiquarian Society. The Revd. C. J. Bird was one of those who spoke in favour of this proposal, and this was carried at the meeting. He became proprietary member, to qualify for which a total of 50 guineas had to be subscribed in instalments. The first *conversazione* took place on 2 January 1837, where the Revd. C. J. Bird read a short paper - and corrected the report of the previous meeting that had appeared in the *Hereford Journal* of 7 December 1836! Little survives in the way of records for the Philosophical Society,[72] but the Revd. C. J. Bird became librarian. This was more of an honorary position, since there was a paid sub-secretary and sub-librarian to do the actual administration and to run the reading room, library, and museum, which at this time was on the corner of Broad Street and High Street. By 1851 Thomas Theophilus Davies (another great collector of material on Hereford) had taken over. It is also not certain how much the Revd. C. J. Bird involved himself in the activities of the Philosophical Society, but certainly at a Soirée on 20 March 1839 he gave a talk on the fossils of the Woolhope and Fownhope strata. In view of this interest, it is perhaps surprising that he

did not join the Woolhope Club when it was founded in 1851, but it seems likely that his first loyalty lay with the Philosophical Society.

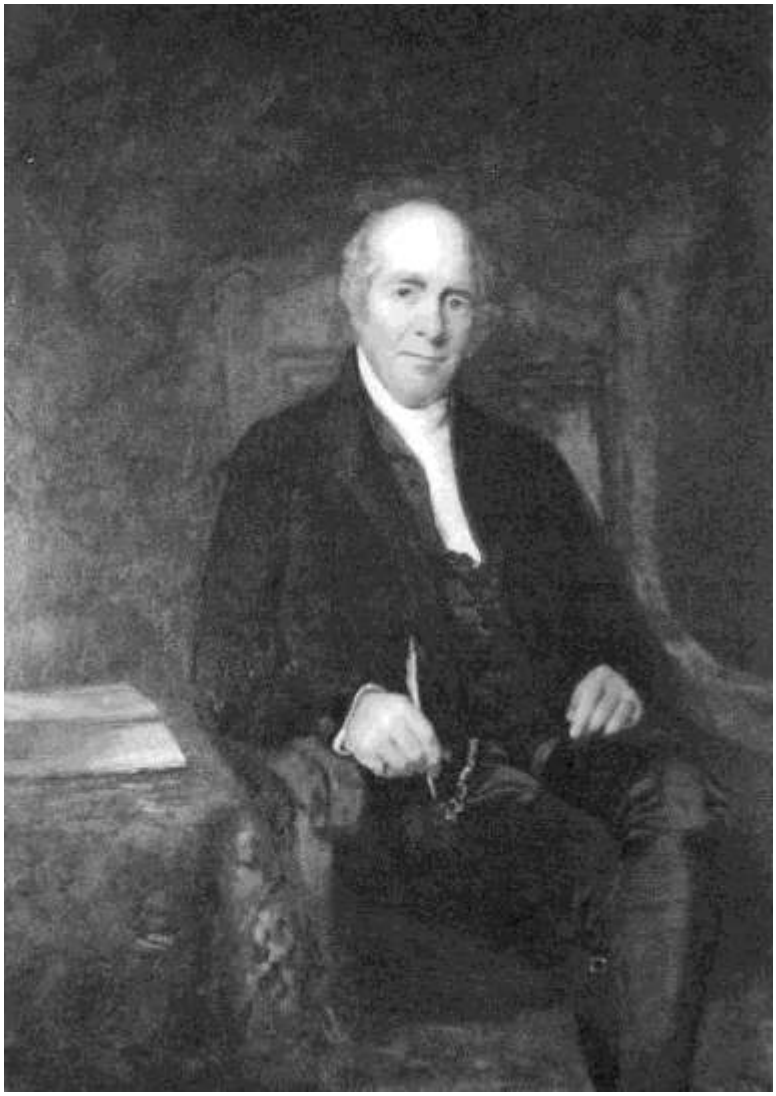


Figure 9. A portrait of the Revd. C. J. Bird as an older man. (William Bird)

CITY OF HEREFORD.

To be Sold by Auction,

BY

Mr. THOMAS COOKE,

AT

Dry-bridge House, in this City,

On WEDNESDAY the 8th of MARCH, 1837,

IN ONE OR MORE LOTS,

THE LITERARY COLLECTIONS

RELATING TO HEREFORDSHIRE,

THE PROPERTY OF THE LATE

THOMAS BIRD, ESQ., F. A. S.

It is impossible to describe, or even to enumerate, all the articles in the above Collections: they consist of Books, Printed and MSS.—Portraits—Views—Maps—Seals—Pedigrees—Coins—Antiquities—MSS. Parchments and Papers, &c. &c. &c.

Many years have been occupied in collecting the above materials at a great cost, and with indefatigable labour. The collections include those of Hill—Roberts—Clarke—Allen and others—and may, with truth, be pronounced rare and unique.

Also a few Pictures and other Articles will be offered for Sale.

Catalogues to be had at Messrs. Simpkin and Marshall's, Booksellers, Stationers' Hall Court, London; at the Auctioneer's St. John's Street, and at Mr. Parker's, High Town, Hereford.

PRICE ONE SHILLING.

JOHN PARKER, PRINTER, HEREFORD.

Figure 10. The title page of the sale catalogue for Thomas Bird's extensive collection of local material. (Hereford Reference Library)

The Revd. Charles John Bird was deeply interested in the history of the county from a relatively young age, and was elected a member of the Society of Antiquaries of London on 24 November 1800, but took no part in the Society's activities.[73] However, he did compile at least 21 volumes of notes on the county on various topics, and one of these was a volume on churches. Internal evidence shows that it was compiled between 2 May 1842 and 19 September 1851.[74] The information that he collected was apparently not intended for publication, as in 1882, in W. H. Cooke's volume on Greytree Hundred in continuance of Duncumb's work, it was stated in reference to the Revd. C. J. Bird that:

> 'He made extensive collections for the history of the county, but not with the intention of publishing them.'[75]

Not only that, he also had a private museum at Mordiford Rectory. After his death on 6 December 1854,[76] his personal representatives decided to sell up his collections, and the *Hereford Journal* of 31 January 1855 announced that the sale of these was to take place on 26 February and several succeeding days. Catalogues of the sale were printed, but so far I have been unable to trace a copy. However, the description that appeared in the advertisement gives an indication of what was sold.

> 'The contents of a highly valuable and interesting MUSEUM, containing a large collection of Coins in gold, silver, and copper, Roman, English, French, American, Venetian, &c., many of which are of great antiquity and in good preservation; numerous Cabinets of Fossils, Shells, antique Jewellery in cases, an extensive assortment of old China, suits of Armour, with a general assemblage of great Curiosities; a number of scarce black-letter Books, with an extensive general LIBRARY; suits [*sic*] of FURNITURE for each department throughout the Establishment, all adequate for the positions required; choice Wines, Cider, Casks, &c.; steady and powerful bay Gelding, two excellent milch Cows, with calves or ready to calve; Hay, Phaeton, Cart, with a number of out-door Effects.'[77]

It was probably at this time that the Revd. C. J. Bird's 21 volumes of manuscript material passed into the hands of W. H. Cooke, either directly or through a third party. Cooke placed his own bookplate in the front.[78]

We are fortunate that we have a personal insight into the life of the Revd. C. J. Bird, in a letter written by one of his grandsons in 1931, and this, while lengthy, is of too much interest to précis, and so is given in full in Appendix I.

ACKNOWLEDGMENTS

The bulk of the research for this paper was done in the Reference Library, Hereford, and I wish to express my thanks to Robin Hill and the rest of the staff who have put up with my demands for obscure material from the local collection. At the time the basic research was done, most of the Bird and other manuscript material was still in the local collection in the Reference library, and so is referenced as such, but this material was transferred to the Record Office on 20 March 2007, just as this paper was being finalized. I should like to thank the staff of Herefordshire Record Office for help during a number of related visits. Finally, I much appreciate all the help and information supplied by William Bird, of Singapore, The Revd. Charles John Bird's great, great, great-grandson.

APPENDIX 1

Letter written by Langton Edward Glover Brown, grandson of the Revd. C. J. Bird, to 'Jack', a great-grandson of another line, transcribed from a photocopy kindly supplied by Mr. William Bird.

6 Ledbury Road
Hereford
May 26, 1931.

Dear Jack

Thanks for your kind letter, now, alas, 2 months ago. I have been meaning to answer it ever since, but first the Lent Services and since then constant weakness & ill health have made me procrastinate all writing, - partly through the fascination of study; partly too because I had so little to say that seemed likely to help you. You are entirely mistaken if you suppose I have a large knowledge of the events of your Great-Grandfather's life; first, almost all before his second marriage is a blank to me, except a few tales of his boyhood (which probably you know) and a few papers of early date, which I will try to look up for you. He was I believe at the Cathedral School as a day-boy while Nell Gwynn's grandson was Bishop, who used to hand him cherries over the wall of Gwynne Street. There is a tale how he preached to his family standing at the top of the stairs into the nursery, - I think in night shirt for surplice. (A rather similar tale is told of Ruskin.) Then he was out for a picnic or visit when he heard the roar of the Cathedral West tower falling, & when the dust cloud cleared away saw that the tower was gone. Next one hears of his refusal to come to table at Cambridge with powdered hair; his arraignment & the confused retreat of the College authorities when they could find no statute ordering it; so, he freed all undergraduates from hair powder. He & his brother became Fellows of the newly founded Society of Antiquaries, - which gave a bent to both their lives. (What led them to become antiquarians I know not. It would be useful to know. Later his porch was garnished with scraps of old heraldic glass, Mr. Bird's devils, the people called them, - possibly associated in his mind with the Mordiford Dragon. He had a cabinet (& some other furniture) made out of yews cut down in Dinedor Churchyard; & at the back of this cabinet was a large cupboard, expressly to hold the Antiquarian Society's Portfolios.)

Besides, he took a live interest in the whole rather confused outlook then fashionable embodied in the old Philosophical & ~~Antiquarian~~ Literary Institute (I am not certain of the exact title,) in St. John Street, which preceded the Free Library. Some of his annual addresses to the Institute are extant, in his fine neat hand (conspicuous for his use of y^e for the.) His many volumes of Antiquarian memoranda (now like his brother's at the Free Library) shew still more strongly this dapper neatness, careful ruling, - & love of archaeology & heraldry & pedigrees. I suspect this Philosophical & Literary movement owed

much impetus to Dean Dawes, but I have no proof that Mr. Bird knew him. Merewether he did know. There are accounts of his dining with him. Venn he loved intimately; & Charles Simeon, who at least once slept at Mordiford. (I have heard how at Prayers he was to expound a psalm: he read it straight through without a word, till the last verse "Whoso is wise will ponder these things, & they shall understand the loving kindness of the Lord." Thereupon he poured forth his comment on the whole psalm, - very memorably, for not a word more reached me.)

One result of the Philosophical & Literary outlook, a modernist love for natural history & any scraps of recent scientific novelty (an outlook, at Penny readings & Mechanics' Institutes, that has been caricatured as "Shakespeare & the Musical Glasses," but is much more kindly depicted in the Prologue of Tennyson's Princess) was Mr. Bird's zeal for Geology. He welcomed Murchison to stay at his Rectory while working out in the Woolhope hills the first historical survey of the Silurian System – a recognition before the public had learned to lionize Geology. To it - & to the waterspout on the Pentlow or Pentaloe brook which had piled Mordiford with fossil debris – as he recorded in a slab now in the Church Porch, - he owed a fine collection of fossils – a rare treasure at that early time, housed, with this archaeological museum in a museum room built on beyond the Rectory; it was most deplorable that this irreplaceable collection was at his death dispersed by auction. His wood carving, another cherished hobby, was lavished on his pulpit, - reared high above the mid aisle of the Church, - & on other fittings, all removed at the restoration; I hear the Pulpit was sold by the Contractors to a Nonconformist Chapel. His other favourite hobbies, pill-making & fiddling – more grandly styled medicine & music – both amateur, & the former I fear amateurish, - occupied much of his evening in the bosom of his family, - those happy country evenings undisturbed by city meetings, committees, theatre, cinemas, or any other distractions except his own monthly Parish Concerts, Missionary Meetings (perhaps quarterly) & occasional Clerical or Bible Soc. meetings (perhaps at Mordiford annual.) On ordinary occasions the evening would, at least in winter, be unbroken leisure, beginning I believe after Dinner at 3 p.m., an hour I never knew (at Dormington it was 5 or 5.30; & there too the whole evening was socially unbroken, except for some rare Midsummer walk or drive at sunset.) Dinner at 3 was <u>the</u> meal of the day; breakfast was early, though long walks before breakfast were disastrously de rigeur – to the ruin of my mother's health – but there was no lunch; from breakfast to dinner was clear space of perhaps 6 hours in which to wander far over the hill perishing, or to go to town, or for long expeditions. But from 3 p.m. came leisure, reading, music, & pills (ugh! the rolling was somewhat of a trial, beneath the ladies' noses) The resultant stores of big podgy pills, stored in the Rector's trouser pockets, were in great repute in the village, - the flock begged pills even more eagerly than tracts - & their violence was accounted merit by an age that valued medicine for the duration of its potency. Probably many Clerical men - & young women, like my Father's sisters – kept up a free distribution of drugs that would horrify a modern Doctor. But they were highly esteemed; it was a Spartan age, and some even survived them.

Meanwhile as the Rector rolled his pills, the ladies, needlework in hand, would be listening to the very best attainable literature of the day, - such books as Motley's Dutch Republic, - for history was in high request in an archaeologist's family, - and art such as Ruskin's Modern Painters, the studies of Mountain outlines in which coloured my mother's ideals all her life. Books were costly then, so not numerous; to the children, a penny reward-book with some quite horrible woodcut on its front was a rare treasure to be dreamed over; but, for the elders, culture was real, & refinement a lovely & delicate blending of art and nature. One must admit, the occasional products of what then passed for poetry (at the lowest laxity of the early romantic stage, the time of ballads and of Friendship Offerings,) were very feeble indeed. None of the Birds had real fertility of literary invention; all the race seem always drawn to art in some form, - music, drawing, painting. Music ranked highest. Mr. Bird was a tolerable writer, but an excellent & feeling violinist. This had gathered round him, long since, a little group of players, - all, I imagine, string-players, one at outset so crude that knowing no stave-notes & playing only 3 strings, he spelt out his airs in a notation of 3 signs, Δ O X, one for each string. But however they might begin, they had come to play very good (bold) music very well; & with such mutual love, that one, Mr. Ogle, bequeathed his music to Mr. Bird. Delightful as these gatherings were, the music of the home evenings was little less so; the younger son, surviving son could also have become a fine violinist, had he cared to

make the sustained effort of practice; at least he could accompany competently; very likely Mrs. Rachel Bird, or her sisters, all keen musicians, would be at the piano, - & later my mother learned to do that with enthusiasm & appreciation. I imagine music was a chief link between father & daughter, especially during the year of widowhood when they became all in all to each other. What then was Mr. Bird's playing like? Not chiefly bravura execution, pace & fluency, but rather the sustained expressive richness of tone, linked sweetness long drawn out, that would draw the soul out of the deep slow solemnity of a saraband, or fill with the passion of a living voice the melodies of Handel. Nearly all, 17th or 18th century music, - chiefly Corelli & Handel, with a lighter merriment of old glees. The ladies indeed were making pleased if wondering acquaintance with such still dubious novelties as the then still half heretical Beethoven (known for his waltzes if not for his sonatas,) & the newcomer Mrs. Bird would always call "Mr. Mendlesome," – whose 'St Paul' they heard rehearsed for its first performance, at a Birmingham hotel. Music saturated the family; to teach it, - in Sol-fa, at the village school they had built, to the young choir Mr. Bird had substituted for the old Nebuchadnezzar band; to play it, as I said, on strings or fiddles or even guitar, - or to hear it, after a hot 4 mile walk, at the week-day Cathedral services; which was to Mr. Bird so intense an artistic delight, that when a party aversion to his Evangelicanism excluded him from the [?] otherwise his probable due, he though Providence merciful in sparing him a temptation that might have enticed him to the idolatry of art. To art, however, he would not surrender principle, & in disapproval of paid (& often operatic) soloists he would never attend the festival, much as the abstinence cost him

Archaeologist, (loving to rule his neat margined MS books,) geologist, amateur physician, violinist, Evangelical, - & very active & conscientious parish Priest, - one might seem to have a sufficiently full & many-sided life, - & he was all this, persistently; & yet have overlooked what perhaps he valued most – at least for its power of practical usefulness; for he would say he had done more good as a J.P. than ever he could as a Parson. Preach - & folk merely listened; but adjudicate – in most paternal privacy – and folk would really act on the counsel that could become cogently penal. In those days the Squarson sat on high as Magistrate; folk brought to him all their quarrels, - & in his presence the quarrels were in fair way to be settled. This was the more natural, as he was a peacemaker who simply couldn't be made an enemy; so forgiving was he that it was a proverb, if you wanted to be friends with Mr. Bird you must do him an ill turn & then he would be sure to be your friend. Not that he found peace at first; the parish raged against him, went to law with him, made him give up his entrance drive to the Churchyard, & spited him in various forgotten - & forgiven – ways; & the outcome was, not one man continued his enemy.

Not all his efforts succeeded; he raided a gang of young roughs, fighting in the field opposite the Rectory one Sabbath afternoon, - & got pummeled [*sic*] for his pains, & his assailant, fleeing the law's wrath, became Tom Cribb champion prizefighter of England. So Mr. Bird would boast, he had made Tom Cribb's fortune.

What was he like? Somewhat after Mr. Pickwick; not very tall; rather stout, bald round-headed, on more attenuated knee-breeches, silk stockings & shoe buckles; at once pompous or at least consequential (& what J.P. was not?) while little adapted to sustain such a role – and at the same time inwardly shy, so nervous that when guests came to dine he would linger seeing to the shutters, fidgeting at doors, shrinking from the moment of facing them. True – but yet, he was a real leader of his party, a Rural Dean of energy power & influence: a Whig – though at his last election he voted Tory; an ardent Evangelical, though so stout a Churchman that he would attend no meeting where the Incumbent disapproved, & spend a world of loving study on the rubrics & canons, publishing a catechism thereon to guide the Clergy. His conscientiousness was shewn in his horror at the marriage of cousins, even of his eldest son, & the stern self denial with which he impoverished most of his later years to pay off this dead son's heavy debts, - for which he was not legally responsible.

In all this I have tried to depict the man, & the manner & colouring of his life; the tale of his former married life I simply have not got, & though my Mother often told me about her early life he hardly ever emerged clearly visible in the anecdotes. This was partly because, in a probably excessive anxiety to do more than justice to the elder children, she was so long as it were suppressed & hidden away among governesses, servants, & her own mother's relations, that I doubt if she was ever really intimate

with her father till after her Mother's death.

There are other things I might tell; how they would make long driving tours, visiting relatives & friends; how his constant nightmare was that he was stranded in London on Saturday night, all coach seats taken, yet he must get home to preach the next day; how alarmed he & others were when they fancied they heard the tramp of Chartists marching to attack Mordiford; how he used to dine - & play cards – with the Duke of Norfolk at Holme Lacy, or Mr. Bodenham at Rotherwas, or Mr. Foley at Stoke; how Mr. Hubbard brother of the founder of All Saints', Margaret Street, rented Sufton. How Mr. Hunt, Cathedral organist, gave music lessons to my mother; how his younger son for a time took pupils at the Rectory; how the daughters grew, married, dispersed; & soon; but all this is around him, not about him.

One old woman at Dormington still – Mrs. Walker – was baptized by him, & remembers him.

I saw the tomb at Mordiford the other day; needing cleaning, if not repainting.

What Arthur Cooper wants is to know what has become of the Welsh home of the family, - Upton Castle, is it not? I suppose that family are still there, but know no details. Also he wants to know all about the earlier history of the family, for a certain Brecon doctor who has I believe married one of his nieces. I am sorry for Arthur; he must be in a sense terribly lonely, though probably with many friends.

I am very sorry you have been so unwell, & hope you are really better. I can only say illness & misfortunes seem to be for many the chief & only values of life. What is man capable of, or worth, except to be, to do, & to suffer? If one can't do anything, or be anything, of much value, practically one's whole value, & possibilities, lie in one's capacity of suffering much, & suffering well. Perhaps that seems little; but consider God, with all heaven to enjoy, only coveted one thing, and that was, to be crucified. To be crucified divinely, is the one glory God is thankful for and rejoices in. Yet He lets you share it; & how do you share it? Believe me, there is nothing for which I respect you a tenth as deeply as for the patient brave cheerfulness with which you have borne so much suffering.

God give you an abundant everlasting overflowing reward for it all.

Now my head, arms & shoulders are tired & fixed with too much writing; I must needs conclude-

Your loving cousin
Langton Brown

NOTES AND REFERENCES

[1] *DNB* Vol. VI, 1921-2 reprint. Volumes 1 – 21 were issued originally over the period 1885-1890.

[2] Summarised, with additions, from Philip Riden's introduction to the 1996 reprint of Duncumb's *Collections*….

[3] In 1793 the patron of the living was William Webb, and as John Duncumb had married in 1792 Ann, the daughter of William Webb of Holmer, it seems likely that these were the same person, who was thus providing for his daughter and son-in-law. In 1796 Duncumb was succeeded by Charles Griffiths, who was also presented to the living by William Webb, of whom it was said

'The right of presentation to this small rectory is now in the reverend Charles Griffiths, the present incumbent; there is a parsonage house, a garden of about half an acre, a barn, beast house, and forty seven acres of tolerable land belonging to it.' See Theophilus Jones, *History of Breconshire* (1898 reprint), p.450.

[4] HRO, MX 101.

[5] *The Heraldry of Herefordshire*, pp.7&8.

[6] *Op. cit.* in Note 2, vii, n.4.

[7] On f.196 Vol. XV of the Revd. C.J. Bird's *Collections* (in Hereford Reference Library –henceforward HRL) among other details of John Duncumb, is the following statement:

'Revd. J. Duncumb wrote a letter to the Edit^{r} of the Hereford Times in defence of the Duke of Norfolk's character as given in the Paper more than 20 years after his Grace's death.'

[8] HRL, Herefordshire MSS Vol. 4.

[9] Thomas Thorpe advertised his acquisition of this stock in the *Hereford Journal* (*HJ*) on 21 September 1836.

[10] Twenty-five copies of Allen's work were printed, and distributed to various libraries and individuals, none being sold. A few extra copies, without title pages, were made up from spare sheets, and given to friends of John Allen. This particular copy was given to Thomas Theophilus Davies, the bookseller (1793-1887) in recognition of the help that he had given to John Allen jun. in compiling the book, and is in the T.T. Davies collection of local material in Hereford Reference Library. Most of the annotations appear to be in Davies's hand. John Allen's own copy is in the Reference Library collection, and is much annotated. It bears the stamp of the Herefordshire Philosophical, Antiquarian and

Literary Society, suggesting that it was part of the donation of Allen's collection of maps and prints that was made to that institution in 1842 by his brother Lieutenant Francis Allen. If so, it was not the copy given by John Allen jun. to Thomas Bird (one of the twenty five primary copies) that was Lot 44 in the sale of Thomas Bird's library that took place on 8 March 1837. The catalogue stated that it contained manuscript notes by both John Allen and Thomas Bird.

[11] The index was printed by E. G. Wright, and is dated 1805.

[12] In Hereford Reference Library is a preliminary MS for parishes in Broxash Hundred, which were covered in Volume II Part I. Internal evidence shows that the main part of this MS was compiled in 1794, with additions in 1795/6. The date at the front of the additional section was altered from 1795 to 1796. Part at least of the 1794 section was printed, for there is a draft page for Much Cowarne ('Cowarne Magna') which has manuscript corrections and additions. However, this page bears only a passing resemblance to what was eventually published in 1812, and much further information was added. Also, the type face is different, so the text was set up in type again. Clearly Duncumb was not happy with his first draft, and added much further information.

[13] This was *The History of Kington*, the publication of which was advertised in the issue of 5 June 1844. However, it was not published until the following year. The title page states that it was written by 'A Member of the Mechanics' Institute', and it is known that this was Richard Parry.

[14] *Op. cit.* in note 2, xxxv.

[15] In HRL

[16] *Op. cit.* in note 7, Vol. XV, f.195.

[17] A.T. Bannister, *Institutions in the Diocese of Hereford* (1923), 135; also *op. cit.* in note 7, Vol. XV f.195.

[18] There is a possibility that he may have spent some time in Hereford in the early 1820s. In 1822 his son the Revd. Thomas Edward Duncumb acted as curate of Abbey Dore, and in the same year John Allen jun. printed his *Bibliotecha Herefordensis*, only 25 copies of which were produced. These were presented to various persons and institutions, including Thomas Bird and the Revd. John Duncumb, who was stated to be of Hereford. The Revd. Thomas Duncumb died in the following year, and was buried at Allensmore. The name of the Revd. John Duncumb does not occur in the registers at this period, the curate the Revd. William Bowen officiating, and does not appear again until 1825. HRO, MX 101,114.

[19] HRO, Q/REL 8/9/1-39.

[20] HRL, T. Bird, *Herefordiana* Vol. 4 f.171.

[21] HRO, MX 114. The period of John Duncumb's incumbency is covered by the Bishop's registers for 1790-1821 and 1822-1841 (HRO, CA 19/2&3). Not all of his curates seem to have been licensed as such, and one Reginald Rabbett, licensed in 1820 at a stipend of £84 p.a. with surplice fees and use of the Rectory House, does not seem to have taken up the position as his name does not appear in the registers as having officiated at any services. William George Duncumb was licensed on the same terms on 17 May 1829, as was his successor, William Walwyn Trumper, licensed on 27 December 1833 when William Duncumb took over as curate at Mansel Lacy. As the name of William Trumper appears in the registers as early as December 1831 this must have been formalising the situation.

[22] HRO, CA 19/2 Bishop's Register 1790 – 1821. See, for example, f.23.

[23] *Op. cit.* in note 7, Vol XV f.195.

[24] RCHM Vol. 1 (1931), 10.

[25] 18th edition, Vol. 1, 1965.

[26] The earliest surviving register for Hereford Cathedral School begins in 1807. See *The Herefordian*, No. 3 (January 1879), p.145. However, in the early nineteenth century there was an annual dinner for former pupils of the school, the stewards of which were also former pupils. In 1810 Thomas Bird was one of the two stewards, while his brother was a steward the following year. See *Hereford Journal* (*HJ*) 10 October 1810 and 5 September 1811. See also Appendix I.

[27] *HJ* 26 November 1806.

[28] *HJ* 27 April 1808, quoted in Victor Richard Stockinger, *The Rivers Wye and Lugg Navigation. A Documentary History 1555-1951*, (1996), 188.

[29] *HJ* 15 February 1809. Also Stockinger, *op. cit.* in note 28, 193.

[30] Stockinger, *op. cit.* in Note 28, 272-3,274,276. Also *HJ* 5 June 1822.

[31] *HJ* 3 December 1817.

[32] *HJ* 16 March 1836.

[33] Ron Shoesmith and John Eisel, *The Pubs of Hereford City* (2004), pp.132-5.

[34] *HJ* 3 October 1798. He become a freeman of the city three years previously – see *HJ* 26 August 1795.

[35] *HJ* 7 August 1805.

[36] Richard Johnson, *The Ancient Customs of the City of Hereford*, second edition, (1882), p.237.

[37] HRL, PC 2273.

[38] HRL, Catalogue of the Permanent Library, 1838. In T.T. Davies, *Collec. Heref.* Vol. 10 (reports).

[39] HRL, Herefordshire Tracts, Vol 4.
[40] *Ibid*.
[41] *Ibid*.
[42] *HJ* 9 April 1806.
[43] *Grand Lodge 1717-1967* (1967), 120, 122.
[44] HRO, Q/RSH/1
[45] Alwyn D. Williams, *A History of Craft Freemasonry in Herefordshire 1727-2000* (2000), p.23.
[46] HRO, Q/RSH/2.
[47] Info. ex Adrian James, Assistant Librarian, Society of Antiquaries of London, per letter dated 30 June 2006.
[48] Vol. 23, 1831, pp.417-8.
[49] *HJ* 6 April 1836.
[50] *HJ* 4 May 1836.
[51] HRL, PC 444.
[52] W.H. Vale advertised his start in business as a bookseller, printer, etc. in the *HJ* of 22 June 1825.
[53] *HJ* 15 March 1837. The report of the sale was repeated in another newspaper, source unknown, which stated incorrectly that the price was 400 guineas. A cutting of this report is pasted into PC 444 in HRL.
[54] Despite the coincidence of names, Robert Biddulph Phillipps does not seem to have been related to Sir Thomas Phillipps.
[55] HRL, PC 445.
[56] During the early preparation of this paper, all the Pilley Collection was still in the Reference Library. However, in early 2007 a decision was taken to deposit all manuscript material in the Reference Library in Herefordshire Record Office, to take effect from 20 March 2007. This has, in effect, damaged the integrity of the Local Collection and will cause difficulties for serious students of local history who use the Local Collection.
[57] HRL, MS note in Vol. I of the Thomas Bird MSS.
[58] *HJ* 12 October 1836. There had been a preliminary announcement of the sale on 14 September 1836 when it was stated that the sale would take place in October.
[59] Norfolk Terrace does not appear on a Wathen sketch of 8 June 1798, see David Whitehead and Ron Shoesmith, *James Wathen's Herefordshire 1770-1820* (1994), unpaginated. It was clearly built in a number of stages, but part at least had been built by 1810, when it was referred to in an advertisement in the *Hereford Journal* of 25 April in that year.
[60] This seems to have been established post 1799 as a sketch of the cathedral and Bishop's Palace from the opposite side of the river, made by James Wathen made in that year, shows no evidence of a timber yard. See David Whitehead and Ron Shoesmith, *James Wathen's Herefordshire 1770-1820* (1994), unpaginated.
[61] *TWNFC* Vol. XXXVI (1958-60), pp.76-9.
[62] *Ibid*.
[63] *HJ* 2 April 1819. Also HRO, Land Tax Returns for Wyebridge Ward, 1797-1831, Q/Rel/12/5/1-11.
[64] HRO, Land Tax Return for 1824, Q/Rel/12/5/8.
[65] *HJ* 19 October 1825.
[66] *HJ* 5 July 1826
[67] *HJ* 28 January 1829.
[68] J.A. Venn, *Alumni Cantabrigienses. Part 2 From 1752 to 1900. Volume 1 Abbey to Challis*, (2001 reprint of 1940 volume), p.268.
[69] See note 20 and Appendix I.
[70] HRL, C.J. Bird MSS, Vol. XXI, f.531.
[71] A higgler is defined in the *Oxford English Dictionary* as 'an itinerant dealer especially a carrier or a huckster who buys up poultry and dairy produce and supplies in exchange for petty commodities from the shops in town.' In this case one can appreciate the urgency on the part of the higgler in case the dairy produce went 'off'.
[72] Annual reports survive for the period 1837-40, also a book of newspaper cuttings of reports of meeting of the Philosophical Society of *c*.1850, all in HRL.
[73] Info. ex Adrian James, Assistant Librarian, Society of Antiquaries of London, per letter dated 30 June 2006.
[74] HRL C.J. Bird MSS, Vol. XII.
[75] William Henry Cooke, *Collections towards the History and Antiquities of the County of Hereford in Continuation of Duncumb's History*, Vol. III (1882), p.78n.
[76] *HJ* 13 December 1854. His second wife had predeceased him, dying on 11 December 1853. See *HJ* 14 December 1853.

[77] One tantalizing glimpse of what was held in this collection can be found in Revd. G.F. Townsend, *The Town and Borough of Leominster* (n.d. *c*.1863), p.147, where he discusses the material collected by Lord Conyngsby in relation to his lawsuits about the manor of Marden, and states in a footnote:
'Some of these volumes, beautifully bound in white vellum, and marked with the coronet, supporters, and arms of Earl Conyngsby, are to be found in the collection of the late Revd. C.J. Bird of Mordiford.'
[78] In reference to a query about a continuation of Duncumb's *History*, a correspondent to *Notes and Queries* in 1875 with the initials C.W.R.C. stated:
'The MS continuation of this History was sold, after the death of the compiler, by his widow, to Mr. Parker, a bookseller in Hereford, of whom one portion was purchased by the Revd. C.J. Bird, of Mordiford, and the remainder by Mr. Robert Biddulph Phillipps, of Longworth. The latter gentleman left his portion of the MS History to the Monastery at Belmont, near Hereford, and the other part was disposed of by the executor of Mr. Bird, and is still in the possession of the purchaser.'
Confirmation that the Revd. C.J. Bird had at least part of Duncumb's MS collection is given by J. Daces Devlin in his book *The Mordiford Dragon*, (1848), p.65, where he states:
'…hence, on lately calling upon Mr. Bird, I had the satisfaction of being allowed to copy from Mr. Duncomb's unpublished materials (the greater part, if not the whole, of which are in the possession of Mr. Bird.)…' In a letter written by the Revd. C.J. Bird on 5 September 1850 (HRL, PC 445) he mentions that he had supplied material to 'Mr. Cook the Barrister' who was intending to complete the section on Greytree Hundred, left unfinished by Duncumb. This may be out of the Duncumb material or from his own collections.

Presidential Address, 2006

Old Red Sandstone: the Herefordshire Stone

By PAUL A. OLVER

Hugh Miller said of the Old Red Sandstone 'The curtain rises, the scene is new. The myriads of the lower formation have disappeared…'[1] Within the same paragraph, his reference to 'shoals of cephalaspides, with their broad arrow-like heads, and slender angular bodies, feathered with fins, sweep past like crowds of cross-bow bolts in an ancient battle' paints an eloquent picture of life in the early Devonian. Both the Revd. T. T. Lewis[2] and the Revd. W. S. Symonds,[3] notable parson-naturalists of the early Woolhope Club, were impressed by Miller's fossil finds and exhorted members to seek out fossil fish within the local Old Red Sandstone. With this address I would like to update our knowledge of this enigmatic formation and hope that, armed with this new data, Woolhope members can continue to research 'Herefordshire's stone.'

With the exception perhaps of the Black Mountain foothills above the Olchon valley, Herefordshire's green and pleasant land successfully hides its geological foundations. From its highest upland plateau to its central water meadows, Herefordshire is very largely a county of Devonian Old Red Sandstone, which controls its characteristic scenery of undulating ridges and its rich clay soils that break down to a fertile red loam (Figure 1).

In fact, Herefordshire is more a landscape of water meadows than steep mountain sides and it is on some of these major water courses that tantalizing glimpses of the underlying rocks can be had. Cutting past Brobury and Monnington-on-Wye, the fast flowing Wye exposes, on the outside of a large meander loop, 30 m. of the topmost Raglan Mudstone Formation. This largely inaccessible 'Brobury Scar' (SO 354 444) is best seen from across the river at Deepwell where it was once described as 'one of the biggest as well as one of the most beautiful exposures of the Old Red Sandstone in Herefordshire.'[4] Although somewhat overstated, this comment underlines the importance of these Wye river sections in unravelling the geology of our county. Further riverside sections at Breinton (SO 4518 3994) and at Redbank Cliff, Holme Lacy (SO 5560 3614) are also key sites for some of our earliest Old Red Sandstone sediments.

For many members in the early days of the Woolhope Club during the 1850s, the Old Red Sandstone, except for its oldest strata, was frustratingly devoid of fossils. The Revd. Thomas Taylor Lewis (Figure 2), in his Presidential address of 1854, remarked that 'few organics have yet been collected from the Old Red Sandstone of Herefordshire, in comparison with what have been found in Scotland and elsewhere.'[5] With the coming of the railways, however, new opportunities for the Club collecting were becoming available—for instance, along the line of the Gloucester and Hereford Railway through Ross-on-Wye.

It was the Revd. T. T. Lewis who, after spending a lifetime unravelling the Silurian stratigraphy in the north of the county around his Aymestrey parish, had also conducted Roderick Impey Murchison in July 1831 on an extended visit to the same area where a continuous section from the Lower Ludlow strata of the Silurian through to the Old Red Sandstone had been examined. From his and others' diligent research, Sir Roderick Murchison

gained a valuable insight into this key period of geological time which culminated in the publication of *The Silurian System* in 1839.

Figure 1. The Iron Age ramparts of the Herefordshire Beacon in the southern Malvern Hills, an upwarp of Precambrian basement which forms the impressive eastern edge of the Siluro-Devonian basin which underlies the county of Herefordshire seen in the distance (Aerial Photo: Derek Foxton)

It was the same Murchison who later championed the Old Red Sandstone as a separate geological entity. In the earliest days of geology, these 'red beds' were thought to be the equivalents of the Permian Rotliegendes of Germany and thus part of the 'New Red Sandstone.'[6] Murchison and the Revd. Adam Sedgwick placed it in its correct stratigraphic position below the Mountain (Carboniferous) Limestone within their newly defined Devonian System erected in 1839.

Figure 2. The Revd.Thomas Taylor Lewis (1801–58) with his eldest daughter Grace taken towards the end of his life when he was vicar of Bridstow. He was President of the Woolhope Club in 1853

The lack of fully marine fossils within the Old Red Sandstone (ORS) drove the two pioneer geologists to survey the pre-Carboniferous marine rocks of Devon which were seen to intercalate with ORS type sequences in North Devon. These rocks could be readily correlated with Rhenish nearshore marine sequences and Bohemian deep water facies, and in fact it was these areas that ultimately provided the finer stratigraphic stages within the Devonian as their sequences were less deformed and more fossiliferous than the rocks of south-west England.[7]

The concept of the Old Red Sandstone continent lying to the north of these marine basins was further strengthened with the recognition of large areas of similar rocks, now widely dispersed due to later continental drift, in North America, Norway, Siberia, Poland and Russia with the latter area containing many of the same early fish genera as found in South Wales and the Welsh Borderland.

The time of the Old Red Sandstone represents a period of considerable geological change. The Iapetus Ocean which had for much of the Lower Palaeozoic separated the northern (Laurentian) continents from the southern (Gondwanan) continents closed as the small Gondwanan continental fragment of Avalonia, containing the present day England and Wales, drifted slowly northwards. The relative positions of these fragments can be estimated by correlating their geological successions (*e.g.* Old Red Sandstone) and by using palaeomagnetic readings to determine their palaeolatitudes. As the south-easterly directed subduction of the Iapetus Ocean floor continued, its eventual closure at the end of the Silurian led to the opening of an essentially east-west oriented Rheic Ocean to the south of England and Wales.

The ORS continent was essentially composed of three components. The old continent of Baltica had collided with Eastern Avalonia, closing the Tornquist Sea, in late Ordovician times and then moved northward together to collide with Laurentia in late Silurian times (about 420 Ma) to close the Iapetus Ocean completely and commence a new geological cycle.[8]

These continental movements and ocean closure generated the major end-Silurian (Caledonian) mountain building. The Old Red Sandstone has long been seen as the stratigraphic response to this collision process representing the first sedimentary erosion products of these emergent mountains, which was either confined to intermontane basins or formed alluvial plains between the mountains and the Rheic Ocean lying to the south.

The Devonian period continued to be one of active plate tectonics with well developed mid-ocean ridges. This process led to the displacement of sea water into continental areas and major transgressions are noted particularly in the late Devonian. Part of this story could be explained by the fact that the number of palaeomagnetic reversals during the Devonian was particularly low, essentially a 'quiet' magnetic period in terms of the Earth's core.[9] This suggests that the core may have lost heat to a series of dynamic mantle plumes which were responsible for generating the high levels of plate tectonic activity. Palaeomagnetic reconstruction places the Old Red Sandstone continent in tropical to sub-tropical latitudes with the Welsh Borders sitting between 5° south and 15° south of the equator.[10] Palaeomagnetic studies on the Lower Old Red Sandstone in South Wales produces a palaeolatitude of 17 +/- 5° south which is in broad agreement and supports the observed calcrete palaeosoils. These are typically produced in a warm to hot, semi-arid tropical to subtropical climate. Rainfall in such areas is confined to a wet season and thus can be equated with a monsoonal type environment.[11]

To the south, the Dartmouth Slates of South Devon represent the furthest southward advance of the alluvial plains of the Old Red Sandstone. Upwards they are overlain by shallow marine clastic deposits (Meadfoot & Staddon Beds) which outcrop across the whole of Devon. Subsequently, in South Devon, the Chudleigh–Torquay–Plymouth limestones represent patch reef development on an extensive carbonate platform associated with back reef lagoons to the north around Newton Abbot and deeper marine basins to the south in Cornwall. These sequences in south-west England are part of the east–west Rheno-Hercynian zone of the Variscan fold belt and form part of the northern margin of the subducting Rheic Ocean to the south. Strong correlation of rock types, including intercalated alkali-basaltic volcanics, and of transgressional episodes can be found further east in the Belgium Ardennes and the Rhenish Schiefergebirge.

Further north and north-west of the Anglo-Welsh Basin, the Lower ORS of Traeth Lligwy on Anglesey's north-east coast suggests a continuous depositional basin across the Welsh Basin prior to the Acadian Orogeny of the early middle Devonian and its concomitant uplift and erosional episodes. However, by contrast, the post-Acadian Upper Devonian Old Red Sandstone outcrops in Cumbria within the Shap Wells and Mell Fell Troughs represent separate intermontane basins within the Old Red Sandstone continent.

An arid, graben-controlled environment characterised by flash flood deposition from neighbouring Caledonian mountains also gives rise to a thick Lower ORS sequence in the Midland Valley of Scotland. Unlike the Anglo-Welsh Basin, these successions are associated with abundant calc-alkaline volcanics, but do show similar Acadian deformation with a thinner Upper ORS sequence resting upon the Lower ORS with marked angular unconformity. Palaeocurrent directions to the east-south-east within the Upper ORS support the view that the basin declined towards a marine North Sea, a fact confirmed by the discovery of middle Devonian reef limestone in the Auk oilfield.

Further north-east, the Orcadian basin made up of the present day Caithness, Orkney and Shetland was isolated from the marine Devonian Sea to the east and was the site of the deposition of 5 km. of freshwater flagstones of Middle Devonian age accumulated within only

10 Ma. Unlike the Anglo-Welsh Basin, Scottish ORS in the Orcadian Basin has yielded abundant evidence of early freshwater fish.[12] It was these discoveries that drove the early Woolhope geologists to redouble their efforts in extracting 'organics' from the Old Red Sandstone in Herefordshire. However, nothing like the richness of the Achanarras Fish Bed and its organic-rich laminae has yet been found.

In addition, the occurrence of the famous Rhynie Chert which represents a series of silicified peats containing primitive vascular land plants, fungi and early insects, provides an excellent insight into the Caithness lakeside vegetation.[13] However, in this case, extensive work on late Silurian and early Devonian floras in South Wales and the Welsh Borderland has yielded equivalent vascular pteridophyte plant assemblages.[14]

Along the Welsh Borders, the identification of stratigraphic boundaries within the Old Red Sandstone has always been hampered by the poor preservation of both its floral and faunal elements. Correlation with the abundant ammonoid, conodont and late graptolite assemblages of south-west England, Belgium, Germany and Bohemia has proved to be very difficult.[15] Spore assemblages offer a way forward to correlate the marine and continental facies and recent work now places the important Silurian–Devonian boundary within the Raglan Mudstone Formation, 30 metres below the Bishop Frome Limestone Member (Figure 3). This defines both the basal Ludlow Bone Bed, the Rushall Formation and most of the succeeding Raglan Mudstone Formations as of late Silurian (Přídolí stage) and equivalent to the highest graptolite zone (*Monograptus uniformis*) found in deep water mudstones of the Czech Republic.[16]

The base of the Lower Old Red Sandstone across Herefordshire is marked by beds assigned to the Ludlow Bone Bed Member consisting of light olive-grey micaceous siltstones and sandstones with thin separated bone beds crowded with fish materials such as thelodont scales and acanthodian spines. The gastropod *Turbocheilus [Platyschisma] helicites* is abundant in the succeeding shales. This basal Formation is named after the yellow arenaceous Downton Castle Sandstone which completes the local sequence in north Herefordshire. Several quarries and a road cutting on the south side of Bradnor Hill have yielded excellent specimens of the eurypterid *Pterygotus sp*,[17] scattered fish material and inarticulate brachiopod *Lingula minima*. Richard Banks's paper on these giant arthropods was read to the Geological Society of London by Sir Roderick Impey Murchison as he was unable to attend in person. Their close collaboration over many years along with other Woolhope members mentioned earlier produced much of the local detail in his second major work *Siluria* published in 1854. In north and west Herefordshire, the yellow sandstones are succeeded by the Temeside Mudstone Formation, a series of olive-green massive mudstones with calcrete glaebules, interpreted as a coastal tidal flat deposit with periodic dessication events. Around Hereford and the south-east of the county, the earlier Lower Old Red Sandstone is referred to as the Rushall Formation (Figure 3) as the divisions outlined above cannot be clearly distinguished in the remainder of the county.

Brown to yellow-brown sandstones are interbedded with argillaceous strata on a less than 1 m. scale and are best exposed adjacent to and in the Perton Lane Quarry (SO 5971 4035). Finely comminuted eurypterid fragments are commonly present and well preserved specimens of *Eurypterus brodiei* were found by several mid-19th century geologists including Brodie and Woodward.[18] Articulate Ludlovian brachiopods survive into the basal 25 cm. of the Formation around the Woolhope Dome.

In this area, the Ludlow Bone Bed is impersistent at the base but is recorded at Hagley Quarry (SO 5603 4089) by both Strickland and Stamp.[19] It has also been found, represented by a basal conglomerate with fish remains, south-east of Tarrington village.

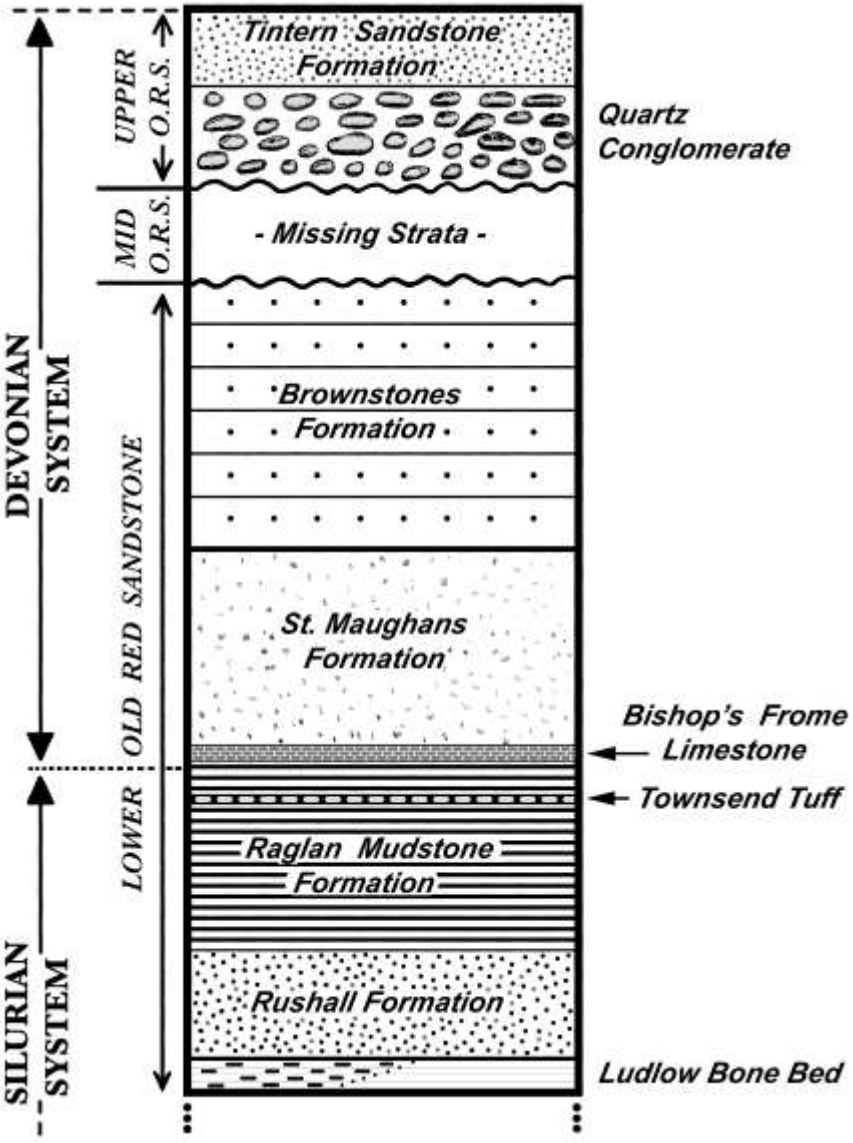


Figure 3. A representative succession of the Old Red Sandstone within Herefordshire. Biostratigraphic analysis places the Silurian-Devonian boundary 30 m. below the Bishop's Frome Limestone Member (Richardson *et al* 2000)[16]

The succeeding Raglan Mudstone Formation (Figure 3) underlies much of the central Herefordshire plain. These easily-erodable sediments are rarely exposed, except within meander loops (see earlier), and to the west of the River Lugg are buried beneath Devensian glacial deposits (Figure 4). Only 10% of the Formation consists of sandstones whose additional content of grains of both feldspar and mica hint at a granite source within the former catchment of the supplying streams. In addition, there are smaller quantities of rarer and heavier mineral species primarily garnet, but also epidote, apatite and tourmaline which could only have originated from metamorphic and igneous rocks within the Caledonian mountains. Scottish and Northern Irish sources are strongly suggested by the orientation of cross-bedding within these thin sandstones. Our picture of the whole sedimentary basin has therefore been severely restricted by the erosion of many ORS deposits after their uplift in the mid-Devonian Acadian Orogeny.

The sandstones occupied the distributaries within the alluvial plain while the intervening back swamps were the location for the development of cornstones (immature calcretes) and occasional thicker bands of limestone (mature calcretes). The origin of these deposits lies in the soil-forming process at or near the surface of the water table. Evaporation takes place at the hot surface of the back swamp encouraging the development of networks of desiccation cracks (or sun cracks) and initiating capillary action which brings deeper groundwater to the surface containing dissolved lime. This is precipitated out as calcareous nodules along sub-vertical branching tubes locally called ‘race’ which was formerly used as a cheap fertilizer in lime-poor areas of Herefordshire. Closely similar deposits form today in tropical areas of seasonal rainfall. Long periods of exposure caused the development of a mature calcrete layer such as the Bishop’s Frome Limestone Member[20] formally called the ‘Psamnosteus’ Limestone from its associated fish remains before its non-biological origin was recognised. The Bishop’s Frome Limestone consists of several stacked calcrete profiles totalling about 8 metres in thickness. Somewhat perversely, the fish remains, now designated as two species of *Traquairaspis*, are not in the calcretes but in the intervening sandstones and shales. The mature calcrete sequence probably represents a period of close on 10,000 years and a major depositional hiatus within the Anglo-Welsh Basin.[21] The Bishop Frome Limestone defines the top of the Raglan Mudstones. Locally, just under 100 metres below this level, outcrops the thickest and most widespread airfall tuff within the Anglo-Welsh Basin namely the Townsend Tuff Bed. Present in Cusop Dingle (SO 2486 4026) close to Hay-on-Wye, the former pyroclastic deposit is now represented by two porcellanites and an intervening crystal dust tuff.[22] Elsewhere in Herefordshire it is either absent or represented by bentonitic mudstones such as those at Munderton (SO 4862 3876). Further exposures are seen at Bosbury and in the Breinton Gorge south of Hereford but the full picture of the airfall distribution is as yet incomplete.

The succeeding St. Maughan’s Formation (Figure 3) is unquestionably of Devonian age, and like the Raglan Formation, displays cycles of sedimentation. However, sandstones now account for 35% of the thickness and the occurrence of metamorphic mineral species within the heavy fraction has declined sharply. The source rocks are again towards the north-west as indicated by palaeocurrent measurements on the cross-bedded sandstones and, by this time, are mainly sedimentary and volcanic in origin probably from within the Welsh Massif itself. The presence of increased apatite, tourmaline and zircon and the decrease in garnet grains indicates the changing nature of the source rocks.

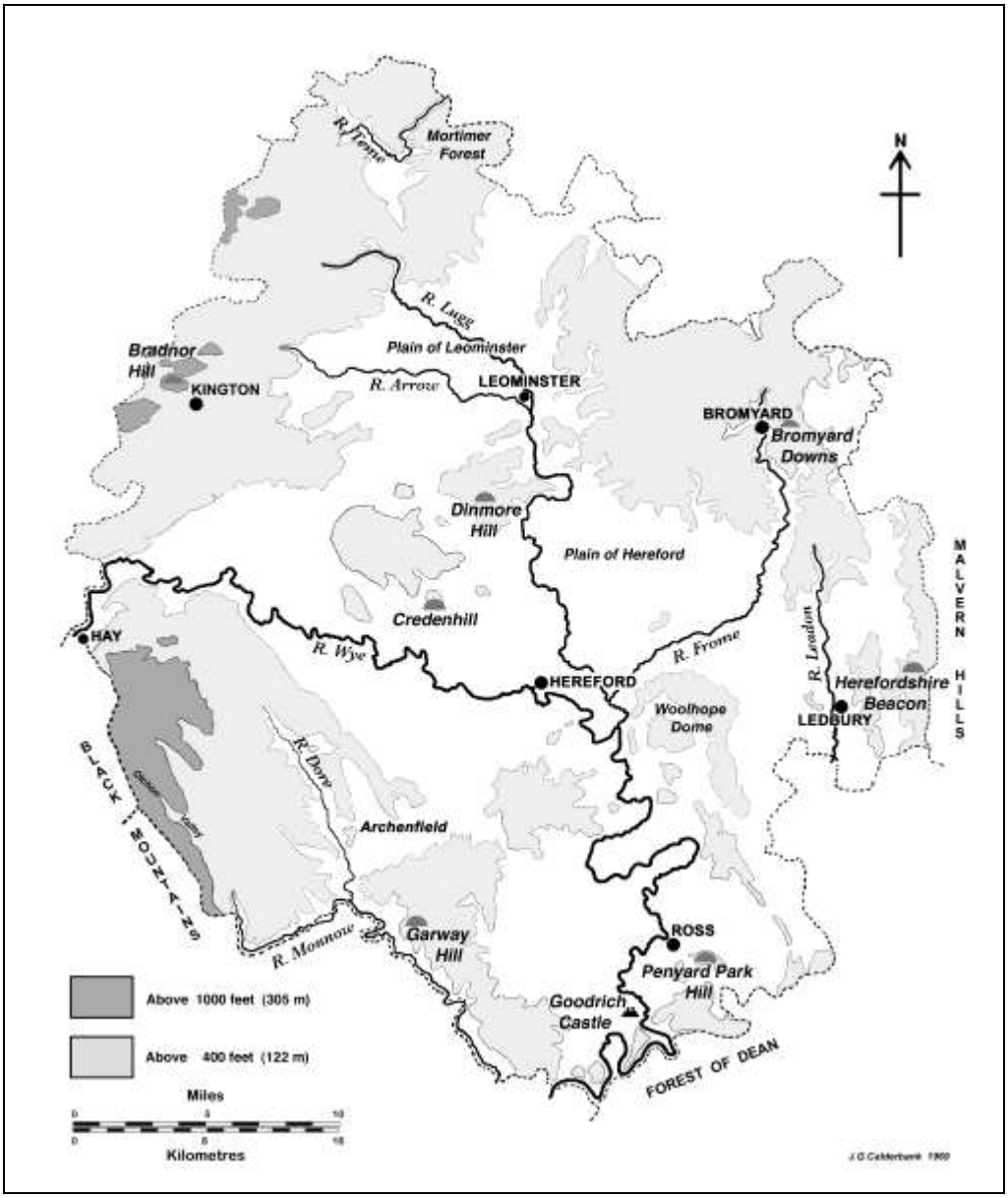


Figure 4. The county of Herefordshire showing its principal physical features, market towns and locations mentioned within the text.

The rocks are more resistant than the Raglan Formation and protect the softer, older ORS Formations in many of Herefordshire's upland areas such as the hills of the Golden Valley, the Bromyard Downs and centrally located range of tabular cornstone hills stretching from

Dinmore through to Wormsley (Figure 4). The latter range, including outlying hills at Credenhill, Garnon's Hill and Merry Hill, represent an area dissected by ice movement during the last Devensian glaciation. The outcrop of the Bishop's Frome Limestone has been quarried for building stone and for lime at Credenhill (SO 4459 4485) and at Garnon's Hill near Bishopstone to the west of Hereford.

Similar limestones of calcrete derivation occur in the St. Maughan's Formation at about 350 metres above its base. This so-called Hackley Limestone outcrops in a discontinuous arc to the south-west of Bromyard. Each fining-upwards cycle within the St. Maughan's Formation, typically begins with an intraformational conglomerate cut into the mudstones of the previous cycle. These can be up to 1 metre in thickness and are rich in calcrete clasts, siltstone flakes and fish remains. Close to Arthur's Stone, above Dorstone at (SO 3145 4297), acanthodian and heterostracan fragments were extracted from a disused quarry.[23] Large tubular burrows, circular to elliptical in shape, have been found in bedding planes within the disused Linton Tile Works near Bromyard (SO 6671 5388). This trace fossil, known as *Beaconites antarticus*, seems to have preferred to live in and close to active river channels but, as yet, the exact nature of the animal has not been determined.[24]

The St. Maughan's Formation, in common with the Raglan Mudstones, shows fining-upwards cycles from coarse intraformational conglomerates at the base, through sequences of fluvial sandstones, to overbank mudstones and associated calcretes at the top. The higher percentage of sandstone indicates a more proximal setting to the sedimentary source rocks.[25] The sandstone units often form small waterfalls on local stream courses, especially in the Bromyard Downs, and subsequent erosion caused by splash pool effects at the base erodes away the softer underlying mudstone. This reveals the underside of the sandstone units and the preservation of perfectly formed desiccation cracks such as at Little Cowarne (SO 6001 5128). Such features are best seen with the judicial use of a mirror and a long stick!

Fragments of heterostracan pteraspid fish (*e.g. Traquairaspis symondsi* and *T. pococki)*, osteostracans (including cephalaspids) and scattered thelodont scales throughout the Přídolí and Dittonian sequences of the Anglo-Welsh Basin (Figure 5) bear witness to the very high diversity of jawless fishes (Agnatha) found within the Lower Devonian. These vertebrate remains are joined by a shallow marine to brackish water fauna of ostracods, bivalves (*e.g. Modiolopsis sp.*), eurypterids and inarticulate brachiopods (lingulids) in the lowest Rushall Formation but gradually these invertebrate groups became scarcer towards the top of the Raglan Mudstones due to the increased overall aridity within the Anglo-Welsh Basin. It is still uncertain whether the agnathan and acanthodian fishes were solely freshwater dwellers or could equally survive within brackish water environments caused by salt water incursions extending up low gradient river courses. The fish, like some modern species, could have lived in marine-to-brackish conditions and then migrated upstream to spawn.

The highest levels of marine influence are seen in the lower 60 metres of the St. Maughan's Formation, just above the Bishop's Frome Limestone.[26] In a former railway cutting at Ammons Hill (SO 700 529) ostracods, gastropods, bivalves, eurypterids and pteraspid fish fragments suggest that, despite the onset of fully continental conditions, the delta complex was still breached by influxes of salt water. Full marine conditions existed further to the east at this time[27] and a marine embayment probably extended north-westwards towards the Worcestershire–Herefordshire border to account for these fauna.

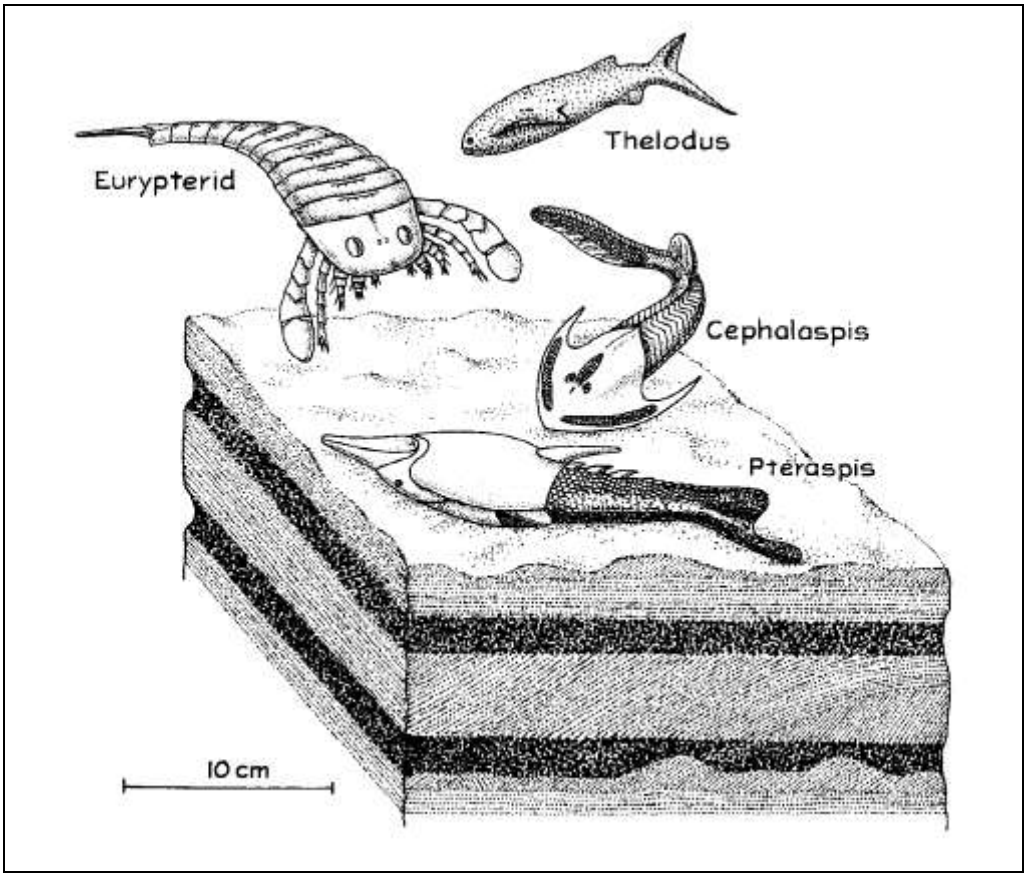


Figure 5. An illustration of the alluvial environments typical of the Lower Devonian in Herefordshire. The most common fish are species of Agnatha together with eurypterid arthropods (Dineley 1984)[28]

The Brownstones Formation (Figure 3), 1200 metres thick, at the top of the Lower ORS in the Herefordshire area is almost exclusively made of pebbly, cross-bedded, red-brown sandstones. Its cyclical sedimentation is well displayed in the capping of the Black Mountains (Figure 4) and good exposures are seen along the Cat's Back, where the harder sandstone bands form most of the steps as the ridge rises towards Black Hill. One very distinctive step exposes one of two very prominent cornstone units. Elsewhere, the Brownstones shows excellent, well-documented sections along the M50 and A449(T) some of which have now been obscured by netting to prevent rock falls.[29] In addition, superb river cliff exposures occur close to the Royal Hotel in Ross-on-Wye and as road sections along the A40(T) near Pencraig (SO 5665 2218).

Overall, the Brownstones become more arenaceous in character in their topmost beds where sandstones and thinner intraformational conglomerates dominate the sequence. The conglomerates are rich in mudstone clasts incorporated by braided streams flowing over former mudflats together with a wide variety of exotic cobbles and pebbles. Analysis of these rudaceous sediments has identified clasts such as vein quartz, jasper, cataclasite, flow-banded

and sometimes porphyritic rhyolite, fine-grained tuffs with poorly preserved graptolites, and a variety of sedimentary sandstones whose fossil contents suggest a Silurian age.[30]

The range of rock types is similar to that observed in the chronologically equivalent Woodbank Series in South Shropshire, although the latter horizon contains mid-Silurian Wenlock Limestone clasts which are absent in the Brownstones. This suggests that, allied with palaeocurrent data, the source area of the Herefordshire conglomerates lay in central and north Wales rather than the north west English Midlands. The incorporation of Ordovician lavas and tuffs and Silurian sandstones together with a smaller proportion of Precambrian cataclasites and jaspers is evidence of considerable erosion of the Caledonian mountains by the end of the Breconian stage.

The Brownstone Formation underlies much of the south central uplands of Herefordshire within what was formerly known as Archenfield, an area now of dispersed settlement, unusually devoid of a market town (Figure 4). The well-developed sandstones form the high ground of Garway Hill and Orcop Hill and are exploited for building in a newly extended quarry at Harewood End (SO 524 278). Further south, the 12th-century Goodrich Castle is built on a Wye river bluff of the Brownstones which has also been extensively used to construct the castle and hence the structure appears to grow out of its own bedrock. Indeed, the moat provided a large quantity of the rock slabs required and Brownstones can be seen dipping at 30° east beneath the 13th-century castle walls. The oldest building within the Castle is the mid 12th-century Norman keep built of grey-green sandstones derived from earlier Lower ORS horizons and blocks of quartz conglomerate which outcrops locally on the Little Doward and on Coppet Hill to the north and across the River Wye from Symonds Yat. On the west face of the keep, the multicoloured kitchen wall is constructed of Devonian sandstones and conglomerates drawn from throughout the local ORS succession.[31]

The largely arenaceous and rudaceous nature of the upper layers of the Brownstones and their deposition from southward-flowing braided streams hints at the onset of the Acadian earth movements which resulted in no further sedimentation in the Herefordshire area until Upper ORS times. During the middle ORS, there was gentle folding and erosion within the Anglo-Welsh Basin and later horizons, beginning with the distinctive Quartz Conglomerate, were laid down unconformably on the newly-created land surface.

These Upper ORS rock formations occur at the southern periphery of Herefordshire, where it merges with the uplands of the Forest of Dean. The basal Quartz Conglomerate (Figure 3) is 4–15 metres thick and outcrops around Chase Wood and Penyard Park within a large abandoned meander of the River Wye south and south east of Ross-on-Wye. Further outcrops are found around the rims of the Howle Hill and Wigpool synclines with a particularly accessible outcrop at Euroclydon, on the Herefordshire border, north of Drybrook (SO 643 187). The rock is made up of red-brown medium- to coarse-grained, pebbly sandstones with beds of quartz pebble conglomerate lying above the unconformity with the Lower ORS. Rounded to well-rounded pebbles mainly of vein quartz (80%) but with subordinate quartzite, jasper and rhyolite lava are characteristic of this deposit, whose cross-bedding and pebble imbrication suggest vigorous, southward-flowing braided streams. The rock is particularly resistant to erosion, but can be undermined by recent river and stream action giving rise to the spectacular fallen boulders at the foot of the cliff beside the forestry track on Huntsham Hill below Yat rocks. Perhaps its best exposures lie just outside the county within the Forest of Dean, where crags such as the Suck Stone and Near Harkening Rock both north of Staunton are typical of this distinctive horizon. The scent of gold has always lured

miners to an area and Herefordshire has not escaped its own mini 'Gold Rush.' Old shafts and trenches within the Quartz Conglomerate in Penyard Park Hill bear testament to some abortive 19th-century investment following on the discovery of small uneconomic deposits in the Forest of Dean.[32]

Unlike the Lower ORS, the Upper ORS essentially represents a fining-upwards sequence with the largely arenaceous, rather than conglomeratic, Tintern Sandstone (Figure 3), capping the succession on Chase Wood and Penyard Park Hill and forming outcrops around the Howle Hill and Wigpool synclines. The sandstones are mainly weakly-cemented pale yellow brown to pale greenish grey and are thought to have been laid down by southerly-flowing streams with the sandstones being channel-fill deposits and finer mudstones and siltstones representing quieter floodplain environments. At the top of the formation, passage beds of thin fossiliferous marine shales and limestones indicate the transgression of the early Carboniferous (Tournaisian) seas over the ORS continent.

Herefordshire's Old Red Sandstone foundations are reflected in Hereford's medieval city walls dating from the 12th and 13th centuries and in its Norman cathedral, where the magnificent columns of the nave are built from a light reddish coloured cross-bedded sandstone. This was probably hewn out from Caplar Quarry near How Caple and brought to the construction site up the river on barges. During later rebuilding the west front of the Cathedral used the more ornamental, pink and cream mottled Triassic Hollington Stone, while recent work restoration work on the tower has drawn on the more resistant white and red banded middle Triassic sandstones of the Helsby Sandstone Formation sourced from quarries at Grinshill in Shropshire. Towards the Worcestershire border the use of Old Red Sandstone competes with the redder Triassic Bromsgrove Sandstone in local parish churches and, in one particular case, at Shelsley Beauchamp just outside the county on the fringes of the Abberley Hills, the earlier tower is constructed of Triassic Bromsgrove Sandstone while the rebuilt Victorian nave is of more local Old Red Sandstone. Interestingly, this is the complete reverse of what is seen at Hereford Cathedral with Devonian replacing the softer Triassic building stone.

Devonian Old Red Sandstone was also much prized by masons of the Herefordshire School of Sculpture active in the second quarter of the 12th century, whose decorated corbels, voussoirs and tympani delicately carved from the red sandstones are such a feature of the Romanesque churches at Kilpeck, Moccas and Peterchurch. Further examples of this work can still be seen in the Shobdon Arches, albeit somewhat weathered, and in Leominster Priory.[33] Unfortunately, the source of the fine-grained Old Red Sandstone used to such good effect in South Herefordshire is not known.

Groundwater percolating through the St. Maughan's Formation in north-east Herefordshire and parts of neighbouring Worcestershire has given rise within the last 10,000 years to another useful building stone, namely calcareous tufa. Lime dissolved by the groundwater within its underground courses is re-precipitated as it emerges along the spring line below the Bishop's Frome Limestone. The calcium carbonate ($CaCO_3$) accumulates on the mosses growing on the rock faces and further deposits of lime are then built up on the tufa, as layers of smooth travertine. The resultant tufa deposits can reach a considerable size; the best known being the Southstone Rock within the Teme Valley (SO 708 639). Tufa has been used extensively as a building stone in the area, as it is easy to carve and relatively light in weight. Its extensive use in churches[34] such as St. Andrews at Shelsley Walsh, in the 13th-century old chapel to the west of Lower Brockhampton House and in the south of the county in the early

Norman church at Moccas also reflects its association with the spiritual properties of holy spring water.

Finally, we need to place our Siluro-Devonian Old Red Sandstone continent into a broader global context. Recent research has seen the late Devonian being identified as the third most important mass extinction event with 21% of marine families becoming extinct.[35] This compares with the well-documented late Cretaceous 'Death of the Dinosaurs' event where only 15% of marine families perished.[36] Maximum extinction seems to have occurred in the latter half of the Frasnian[37] but the whole event can be seen as a broad extinction event with several smaller extinction episodes.

The amalgamation of continental fragments, with the concomitant reduction in the length of available coastlines and their related continental shelves, is one of the main causes of a marked reduction in global biodiversity. By the late Devonian, within the Frasnian–Famennian time interval, the global palaeogeography of only three relatively close major continents was already producing this expected reduction in diversity.

This lower diversity within the late Devonian world would make it very vulnerable to any catastrophic event especially if that event directly affected one or two of the main three continents. With no major period of global volcanism identified, attention has been turned to possible meteoritic impacts especially as the Frasnian–Famennian interval is marked by a distinct iridium anomaly. A crater of at least 150 km. in diameter is required to cause the effects noted on Devonian faunas and two candidates, although both much smaller in diameter, are in the frame. The largest of these is the 52 km. diameter Siljan crater in Sweden dated at 368 Ma which equates well with the Frasnian–Famennian boundary at 367 Ma.[38] Another possibility is the Charlevoix crater in Quebec, Canada but its diameter of 46 km and the fact that the 360 Ma date has a published uncertainty of 25 Ma makes this impact a less likely 'harbinger of doom.'[39]

Certainly, evidence of a huge loss in biodiversity is not disputed and the sharp changes in carbon isotope ratios recorded at the end of the Frasnian again point to a global catastrophe at this time.[40] Unfortunately, Herefordshire with its paucity of both floral and faunal remains within our Old Red Sandstone sequences is unable to shed much light on this event. Since it occurred at the very end of the Middle ORS just prior and probably during the deposition of the Quartz Conglomerate, a distinct lack of local rock horizons of this age is also not helpful.

However, the Woolhope Club and its members have continued to be diligent in their search for fossil remains within the Old Red Sandstone. With the opening of the Abberley and Malvern Hills Geopark and the continuing close collaboration of the Geology Section with the Herefordshire & Worcestershire Earth Heritage Trust, we can all hope that new exposures and new interpretations will be available to shed light on the Old Red Sandstone, Herefordshire's countywide rock.

ACKNOWLEDGEMENTS

I am very grateful to publisher Palgrave Macmillan for their permission to reproduce Figure 5 illustrating the eurypterid and early fish fauna of the Old Red Sandstone environment. I would also like to thank fellow Woolhope members Gerry Calderbank for his expertise in drawing up Figures 3 & 4, Derek Foxton for supplying the aerial photograph featured in Figure 1 and Charles Hopkinson for introducing me to a superb exposure of desiccation cracks in the Bromyard Downs.

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Geology 2007: Malacostraca and Phyllocarida fossils found on the Great Doward

By MOIRA JENKINS

A rare fossil found on Great Doward

An audit of geological sites in Herefordshire was carried out by Herefordshire and Worcestershire Earth Heritage Trust between August 2007 and February 2008, as Stage 2 of a project to develop a Geodiversity Action Plan (GAP) for the county. This was funded by Natural England supported by DEFRA's Aggregates Levy Sustainability Fund. There have been many exciting new discoveries, one of which is described below and others which will be reported in the next edition of the *Transactions*.

In the Wye Gorge area the exposures of limestone belong to the Carboniferous Limestone Super Group. The oldest of these rocks are the Lower Limestone Shale Group. This consists of thinly-bedded limestones, deposited in clear, shallow tropical seas and shales, when muddy sediment from land reached the area.

On the Great Doward, an exciting discovery of fossils of a relatively uncommon crustacean was made by Rollo Gillespie during the survey. These come from the top 3 or 4 metres of the Lower Limestone Shales below its junction with the Lower Dolomite, which consists of massive beds of dolomitic limestone. This is only the fifth site in Britain where these fossils have been found. The preservation of the fine detail of the Doward specimens is outstanding and in some specimens the cuticle is preserved as a haematite layer or as calcite. These specimens are fairly abundant and further research is needed to find out more about this nationally-important site.

These fossils are from the Class Malacostraca and Subclass Phyllocarida. The Malacostraca are the class of crustaceans with hard shells that includes modern crabs, lobsters and shrimps. The body is composed of segments and has three recognisable regions: the head, thorax and abdomen. The segments of the head are fused together in a carapace which almost covers the thorax. The head, thorax and often the abdomen have appendages, which are biramous, composed of two limbs. The inner, the endopodite, functions as a walking limb and the outer exopodite is adapted for swimming. Phyllocarids are distinct from other Malacostracan crustaceans because of two other characteristics considered to reflect the primitive condition, which strengthen the hypothesis of early separation from the main evolutionary line. The first is the presence of a bivalve carapace. The second is an abdomen consisting of seven fully formed segments, somites, and terminating in a telson or rear segment that bears caudal rami or or appendages which form the 'tail fan.'

Malacostraca are rare, particularly of forms older than the Mesozoic, which started 250 million years ago. This makes these Palaeozoic (Pre–Mesozoic) specimens a special discovery. Possibly two types, both subclass Phyllocarida, were found on Great Doward Hill. Initial identification of the better specimen, made by Dr Abigail Brown, suggests that this is *Pseudotealliocaris etheridgei.* The holotype (GSE5919) of this species is 1.83 cm. across and has an abdomen length of 1.64 cm. (Schramm 1979) and is similar to the specimen shown in Figs. 1 and 2 respectively. Schram shows that the representative type from the Glencartholme fauna in Scotland has a head shield diameter of 1.23 cm. and an abdominal length of 1.97 cm.

Figure 1. Upper surface of carapace of *Pseudotealliocaris etheridgei* (identification suggested by Dr Abigail Brown) from the Lower Limestone Shales (Carboniferous) of Great Doward Hill. This shows a midline ridge with valves on each side. Each valve bears anterior tubercules, a lateral ridge and an oblique furrow. The specimen does appear to have the 5 ridges typical of the Phyllocarid crustaceans, but the outer two are not obvious

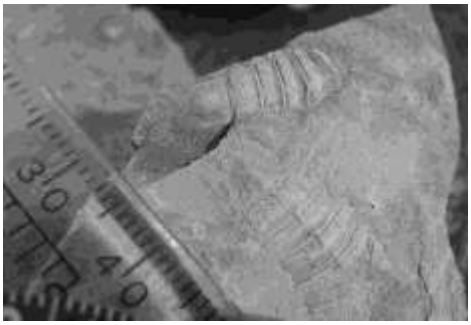

Figure 2. Abdominal segments of *Pseudotealliocaris etheridgei* from the Lower Limestone Shales (Carboniferous) of Great Doward Hill showing the last segment of the body, the telson, which with the last abdominal limb, was much flattened to form the tail fin

Figure 3. Carapace of a Malacostracan Crustacean from the Lower Limestone Shales (Carboniferous) of Great Doward Hill.

The ridges have a series of round protuberances. The carapace is rounded with a margin of about 1/10th of the carapace width, tapering at the anterior to form a triangular shaped rostrum beyond the cervical groove and at the posterior to a round border. To the left of the V shaped projection is a pitted area, not seen well on the right side

The head shield of a larger specimen was found associated with a bivalve. It is generally similar to *Pseudotealliocaris etheridgei*. This specimen has a head shield of 2.7 cm, too large for the published description and with different shape and ridges, and a single poorly preserved abdominal section over 3 cm. long (Fig 4). The maximum abdomen length in the British Geological Survey (BGS) collection is 1.92 cm. and the largest head shield is 1.83 cm. This fits in with the general size of the more common type discovered on Doward. Is this a new species or does there need to be a review of the BGS type and the description?

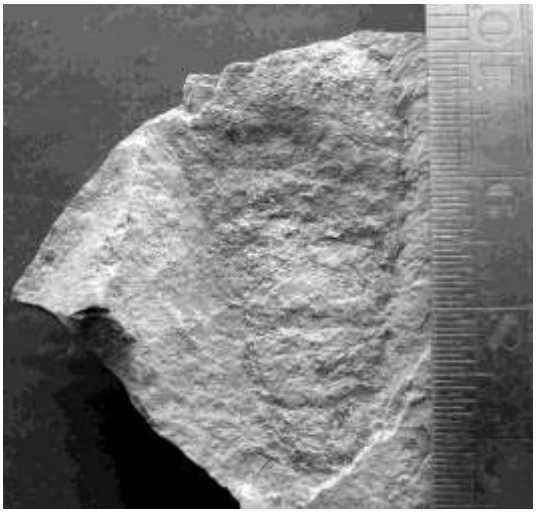

Figure 4. Abdominal segments of a Malacostracan Crustacean from the Lower Limestone Shales (Carboniferous) of Great Doward Hill. This specimen, larger than that in Fig. 2, is incompletely preserved with a length over 30mm. as compared with 18.3 mm.

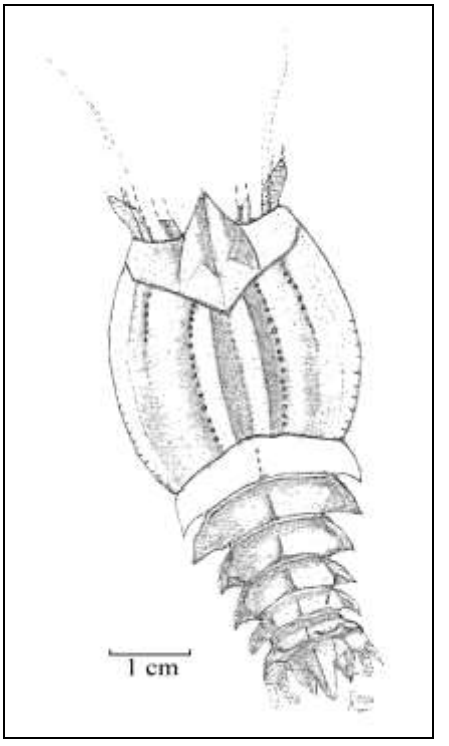

Figure 5 (right). A proposed reconstruction of the fossil with the limbs omitted. (drawing by Rollo Gillespie)

The Geology recorder would be very interested to hear from anyone who has more knowledge about Malacostraca, past or present.

ACKNOWLEDGEMENTS

Thanks are due to Paul Shepherd (BGS) for forwarding pictures of the type specimens of *Pseudotealliocaris etheridgei.* Thanks also to Rollo Gillespie for Figure 5.

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Sedimentological and geomorphological evidence for the development of Herefordshire's river systems

By ANDREW RICHARDS

Herefordshire's landscape has evolved under a variety of geological and climatic influences. As well as responding to underlying lithological and structural influences, Herefordshire's river systems have been subject to ongoing tectonic processes, widespread glaciation and a fluctuating base level driven by sea level change, uplift, subsidence and developments in neighbouring catchment basins. This paper aims to present a range of geomorphological and sedimentological evidence that can be used to infer stages in the development of Herefordshire's rivers during the Late Caenozoic.

Pre-Quaternary landscape development

When trying to infer what the pre-Quaternary landscape of Herefordshire may have been like, one faces a number of problems. Firstly, a vast interval of time—from the Carboniferous to the Pleistocene—is unrepresented in Herefordshire, or in regions to the west. In addition, while massive climatic fluctuations over the last 2 million years or so will have added impetus to exogenic processes and increased incision rates, it is extremely difficult to ascertain how much denudation has taken place in Herefordshire during the Quaternary Era.

The absence of evidence for landscape evolution in the Mesozoic and the bulk of the Caenozoic does not mean that there were few changes in the landscape of Herefordshire during this period. The outlines of the present relief were likely to have been created during this period, but we can only guess at the spatial configuration of the landscape before the Quaternary.

Because of the antiquity of these events, much of the erosional and depositional evidence has been lost, principally because of the action of large ice-sheets in the Middle and Late Pleistocene. However, inferences can be made regarding the form of the landscape with an understanding of underlying geological influences and with reference to events documented from surrounding areas.

The first major influence on landscape development in the region that is still detectable occurred as a result of the Variscan Orogeny. The major extant geological units of Herefordshire were deposited throughout this period, the Welsh Massif was uplifted, and this initiated the trend of uplift centred around north-west Wales and the Irish Sea that persisted through to the Quaternary Era. As a consequence, the active tectonic control on the rivers of the Welsh borderland has promoted a north-west/south-east grain in the drainage network.

It is evident that a large amount of dissection has taken place in Herefordshire, but present valleys, whether concordant or discordant to the dominant structural influences derived from the Variscan Orogeny, have been carved into only moderate relief. The most likely explanation is that the antecedent drainage pattern was subject to periods of local and regional tectonism, phases of marine incursion and stages of widespread deposition and erosion.

The idea that marine incursion resulted in chalk covering Wales was first suggested by Stahan in 1902.[1] He observed that the drainage pattern of south-east Wales is discordant with Variscan structures and suggested that here, the drainage pattern may have derived from superimposition of the drainage initiated on the Chalk cover. Although the evidence is that there was significant Mesozoic sedimentation in the Welsh Massif and adjacent areas, there are no remnants of flint rich gravels (*i.e.* as in the Weald), which may bear testament to the rapidity of erosion of this Mesozoic cover in the Tertiary. Rifting and the opening of the North Atlantic began in the Cretaceous and continued into the Tertiary associated with magmatic underplating beneath the Irish Sea, centred in an area immediately south of the Isle of Man. This initiated the stripping of Jurassic and Cretaceous sediments. Some studies suggests that up to 2 km. of sediments must have been removed during this phase.

In summary, the main influences on the antecedent drainage pattern of the Welsh Borderland would have produced a dominantly radial pattern initiated by Mesozoic to Tertiary uplift in the northern Irish Sea, superimposed onto geological structures derived from the Variscan Orogeny.

Although there has been a significant amount of research into Caenozoic tectonism over the last 50 years, Brown's synthesis of the likely early drainage pattern of Wales in 1960 still bears scrutiny. Tectonic regime has been the overriding control on the long-term stability of the trend of the drainage system in the western part of the Welsh massif and the Welsh borderland. Notwithstanding the major changes that have taken place—*e.g.* the local drainage diversion in response to climatic changes in the Quaternary—the region has remained effectively in the same tectonic setting since the end of the Cretaceous, with uplift to the north-west, the rejuvenation of Variscan structures in the Alpine Orogeny, and the long-term continued down-warping of the North Sea and London Basin. The net effect has been to cause Britain to tilt towards the south-east throughout the Caenozoic. The lithology of early Thames gravels supports this. It appears that the proto-Thames drained much of southern Britain during the Plio-Pleistocene transition, and this area of the Welsh Borderland appears to have formed a significant part formed part of its catchment area.

There are high-level erosion features throughout Herefordshire that may bear testament to these early phases of landscape development. Brown recognises a number of 'peneplains' at different altitudes in the region,[2] and there are a number of high level cols throughout the county. Recent studies by Maddy[3] and Maddy[4] suggest that the last period of peneplanation resulted in a surface at approximately 200 m. OD in the lower Wye Valley. A number of features identified by Brown in Herefordshire (*i.e.* on the western margins of the Middle Teme Valley and portions of the Bromyard Plateau in eastern central Herefordshire) may relate to this surface.[5] Maddy suggests that this surface may be approximately 1.4 million years old, and following its formation incision and valley formation ensued, continuing throughout the Quaternary.[6] He suggests that the incised meanders of the lower Wye started to form as incision proceeded—features that Hey[7] relates to the incised meander of the Lugg at Bodenham. High-level, Silurian-rich gravels at Ankerdine Hill (SO 739 573) that occur at the same level as pronounced cols that occur between Ankerdine and Woodbury Hill (SO 7433 637) may be related to these early events and are likely to represent the oldest Quaternary deposits in the county.

Early to Middle Pleistocene drainage patterns in Herefordshire; The Mathon Valley and Humber Formations

The earliest Quaternary deposits in Herefordshire formed in a cold environment as part of a major, northerly-derived fluvial system. The deposits consist of coarse gravels and sand and have been subdivided into a unit that occurs on the Bromyard Plateau in central Herefordshire; the Humber Formation; and a further unit that occurs in the Cradley Brook Valley on the west side of the Malvern Hills—the Mathon Valley Formation.[8]

The Mathon Valley Formation

The sands and gravels of the Mathon Valley Formation occur as remnants in the northern parts of the Cradley Brook Valley from Suckley (SO 722 503) to Cradley (SO735 475), within a well-defined palaeo-valley at Mathon, and further scattered remnants occur south of Mathon (SO735 455) as far as Clenchers Mill (SO 730 351). The Formation is subdivided into two Members.

The Mathon Member consists of sands and gravels that are up to 5 m. thick. Extensive sections were formerly exposed at The Brays Pit, Mathon (SO 729 441, its Type Section) It includes trough cross-bedded, massive and channelised coarse gravels, sandy gravels and massive, planar cross-bedded, trough cross-bedded sands with rare massive silt and clay lenses. These represent phases of cut-and-fill, flooding and ephemeral channel activity throughout fluvial aggradation.[9] The Member contains the Brays Bed organic sequence (Fig. 1) which was exposed and sampled in 1991. This unit consists of organic silts and sands filling a channel that is partly incised into the underlying Raglan Mudstone. Analysis revealed plant micro- and macro-fossils and insects (*Coleoptera* and *Trichoptera*) within debris washed into an abandoned channel during flood conditions, under climatic conditions not dissimilar to today, during the Cromerian Complex.[10] Thus, the Brays Bed and associated gravels are the oldest Pleistocene deposits in the county. The South End Member overlies the Mathon Member and is dominated by a fining-upward sequence of trough cross-bedded medium- to coarse-grained sands that is up to 4 m. in thickness.

The lithological composition of both Members of the Mathon Valley Formation is dominated by high percentages of Silurian sandstones, siltstones and limestones, with igneous and low-grade metamorphic clasts derived from the Church Stretton area. It seems then, that the Mathon Valley Formation was deposited by a major Cold Stage River system, emanating from the north, which flowed along the western margins of the Malvern Hills, following the Malvern Axis.

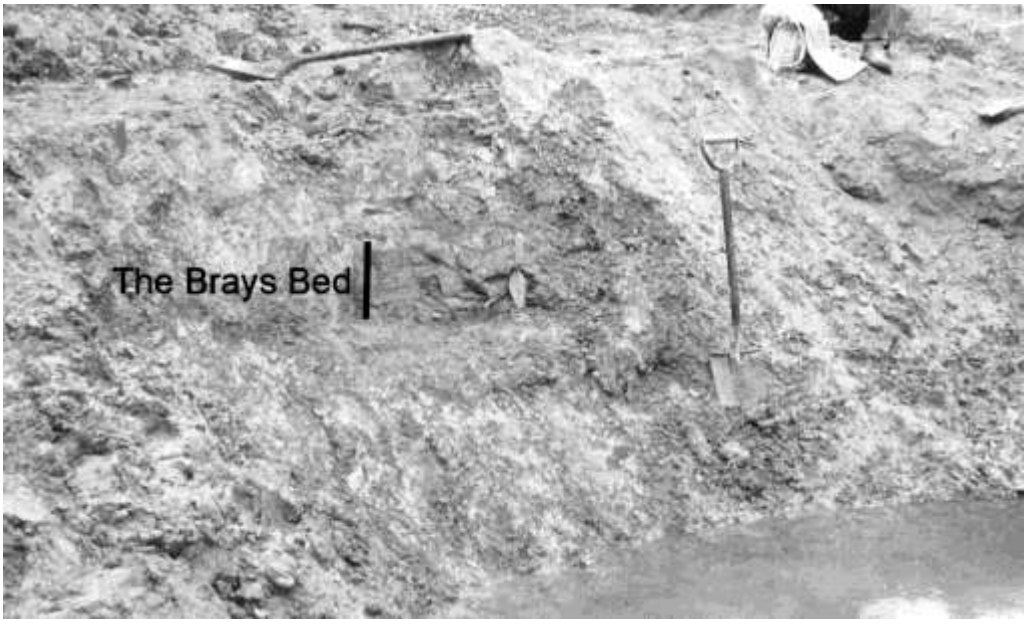

Figure 1. The Brays Bed. An organic rich slack water deposit of an abandoned channel during flood conditions, under climatic conditions not dissimilar to today, during the Cromerian Complex[11]

Palaeocurrents associated with both Members indicate flow from the north-west and north-east. It is difficult to ascertain how long the system was extant, but the marked variability in the altitude of Mathon Valley Formation remnants north of Cradley suggests that the unit may well incorporate a number of separate aggradations, deposited over a significant period of time. Damming and reversal of drainage in the area occurred as a consequence of Middle Pleistocene glaciation (see later section).

The regional geology and structure has had a profound effect on the way that the River Teme has developed. Axial planes of anticlines and synclines and the orientation of major faults in the region show a defined north-north-west/south-south-east orientation. The only large feature that does not conform to this pattern occurs at Knightwick, where a fault plane is oriented from 260-080º. The earliest evidence for fluvial development within the Teme Valley and surrounding areas suggests that Early to Middle Pleistocene drainage patterns followed a north-south orientation that conformed with the underlying geological structure. A number of remnants of high level gravels (~140 m. OD) on the margins of the Teme Valley, notably at Woodbury Hill (SO 7433 637), Ankerdine Hill (SO 737 564) and Collins Green (SO 740 574), contain exotic pebbles that are derived from the north. The gravels are dominated by locally-derived lithologies, but also contain rare Precambrian (Longmyndian), Carboniferous and Triassic clasts. While the Ankerdine deposit is shallow and unexposed, the old Quarry at Woodbury Hill exposed over 5 m. of silts, sands and gravel. Ongoing investigation at Woodbury will yield vital information.

The Humber Formation

The Humber Formation consists of fluvial sands and gravels, deposited under a cold climate, as part of the same northerly-derived drainage system that formed the Mathon Valley Formation. This unit includes locally-derived Devonian and Triassic, Carboniferous, Precambrian and Lower Palaeozoic clasts derived from regions to the north and northwest. At a number of locations, Pudleston (SO 564 591), Westington Court (SO 588 566) and Uphampton Farm (SO 569 579) flint pebbles (<1% of 16-32 mm. fraction) have been recorded.

The Formation caps valley flanks on the high ground of the Bromyard Plateau between 140-220 m. OD, is between 2 and 8 m. in thickness and is locally overlain, or reworked by, glacial deposits derived from Middle Pleistocene glaciation. The occurrence of the Humber Formation high on the flanks of tributary valleys of the River Lugg and on the flanks of the incised meander of the Lugg near Bodenham, conforming to a pre-depositional topography which is broadly in line with the modern relief, bears testament to the antiquity of many of the small valley systems on the Bromyard Plateau.

Isolated patches of lithologically-similar gravel also occur at Lower Upton (SO 544 660) on the flanks of the Teme Valley and at high levels in the Kyre Brook Valley at The Fulhams (SO 627 654), Gatehouse Farm (SO 621 628) and Perry Farm (SO 628 625). Those in the Kyre Brook Valley contain coarse-grained, poorly-sorted orange sandstone (possibly Cornbrook Sandstone from Titterstone Clee/Clee Hill) in addition to the northerly erratics recorded in other samples from the Humber Formation. As with the Mathon Valley Formation, the wide-ranging altitude of these deposits suggests that they may have aggraded in a number of distinct depositional phases. The sedimentology of sections at Risbury Bridge (SO 539 549), Hollywall (SO 536 548), Uphampton Farm, Westington Court and Pudleston suggest deposition in a braided-stream environment.

The Early to Middle Pleistocene drainage pattern.

The occurrence and lithology of the Mathon Valley and Humber Formations allow significant detail to be added to our understanding of the Early-Middle Pleistocene, pre-Anglian drainage pattern of Herefordshire (Fig. 2). Unfortunately, due to the action of the Late Devensian ice-sheet, there is little evidence as to what the drainage pattern in western Herefordshire might have been. However, the similarity of westerly-derived lithologies in the gravel component of both formations suggest that there was little movement from west to east, and that large parts of what is now the Hereford basin may have formed parts of the catchments of other systems rather than the proto-Lugg. The lack of coeval, high-level gravels south of Hereford makes it very difficult to ascertain whether an early Wye system was present at this point. Indeed, the painstaking work of Hey in 1991 does not record any gravels higher than the Holme Lacy Member of the Wye Valley Formation between Hereford and the Severn Estuary.

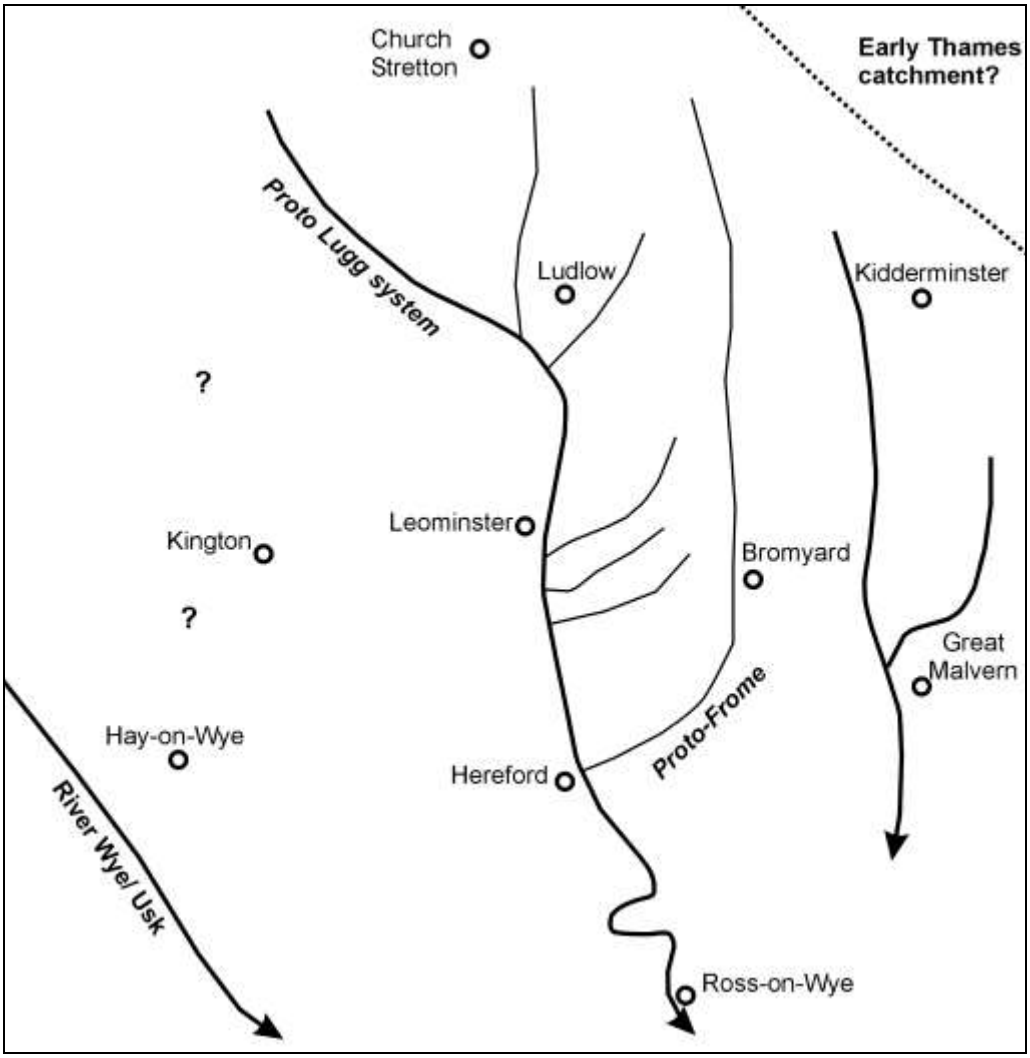

Figure 2. Early-Middle Pleistocene, pre-Anglian drainage pattern of Herefordshire

This terrace is demonstrably younger than the highest, post-Anglian, Sutton Walls Member of the Lugg Valley Formation.[12] However, the incised meanders that characterise the River Wye near Symonds Yat are obviously very old features and may have been initiated in a mid- to late-Tertiary peneplain.[13] The current Middle Teme Valley, between Tenbury Wells and Stamford Bridge, is unlikely to have been present in the early part of the Quaternary as it would have captured any drainage feeding the northerly-derived lithologies into central Herefordshire. It appears that the catchment of the Early-Middle Pleistocene precursor of the River Lugg was expanded from its present form, and drained areas immediately east and north of the current position of its headwaters. A precursor to the River Frome may also have existed.

This is suggested by the presence of high level, northerly-derived gravels on the margins of the Kyre Brook Valley, at The Fulhams (SO 627654), Gatehouse Farm (SO 621628) and Perry Farm (SO 628625). These gravels appear to have been reworked and incorporated into the later Kyre Brook Valley Member of the Risbury Formation (see following section).

A number of authors have suggested that the early Thames catchment extended into the Welsh Borderland and on into north-west Wales during the early parts of the Pleistocene.[14] However, it may be that lithologies derived from these areas were introduced into the Thames catchment by ice-sheets in the Middle Pleistocene:[15] there is certainly little erosional or depositional evidence for drainage flowing to the west or south-west in the county in the Early to Middle Pleistocene.

Middle to Late Pleistocene drainage development; the terrace sediments of the Lugg, Wye and Teme Valley Formations

During the Middle Pleistocene (Anglian) an ice-sheet, emanating from central Wales, flowed eastward across Herefordshire as far as the Cradley Brook Valley, on the western margins of the Malvern Hills. A few areas were not occupied by ice, notably the Woolhope Dome and the Bromyard Plateau. This glaciation had an appreciable effect of the drainage patterns of Herefordshire (Fig. 3). Soon after glaciation, the modern valley systems of the River Lugg, River Teme and lower Wye developed. Each area is now occupied by a flight of river terraces which document the nature of their catchment areas between the Anglian and Late Devensian glaciation. A major consequence of Anglian glaciation was further differential erosion.

Although glaciers act slowly, maybe eroding the landscape in the order of only a few tens of millimetres each year, the landscape is likely to have been occupied by ice for many millennia. The actions of these ice masses would have deepened existing valleys and further exposed underlying geological structures such as the Hereford and Radnor Basins, and would also have centred on lines of weakness, such as faults, that had been previously been the focus of fluvial incision. As well as these passive geological influences, active tectonics continued throughout this phase of the Quaternary, notably the relative subsidence in the position of the present lower Severn Valley and the Bristol area due to increased sedimentation. Obviously, this would have had an appreciable effect on the drainage of the area. It is no coincidence therefore, that the earliest Severn sediments are of Middle Pleistocene era, immediately post-Anglian age.[16] As the River Severn developed into the main river system of the English Midlands, flowing into the basin subsiding near its present estuary, one can imagine the gradual capture of the rivers of Herefordshire to become part of its drainage net.

The River Lugg system

The catchment area of the River Lugg does not seem to have been changed radically by Anglian glaciation. The Anglian glaciation resulted in a number of small-scale drainage modifications in the early Stretford and Humber Brooks. Pre-existing valleys at Blackwardine and Eaton Hill became infilled with glacial sediments, causing the Humber Brook to erode a valley south of its previous course, while the Stretford brook was deflected northwards, following the route that it occupies today. These tributaries to the River Lugg were subject to further modification in the Late Devensian glaciation. Immediately south, a large ice-dammed lake developed in the Humber area, whose water was released catastrophically underneath the Middle Pleistocene ice-sheet (a *jokulhlaup*), incising a steep-sided gorge at Risbury Bridge which is still occupied by the Holly Brook today (Fig. 4).[17]

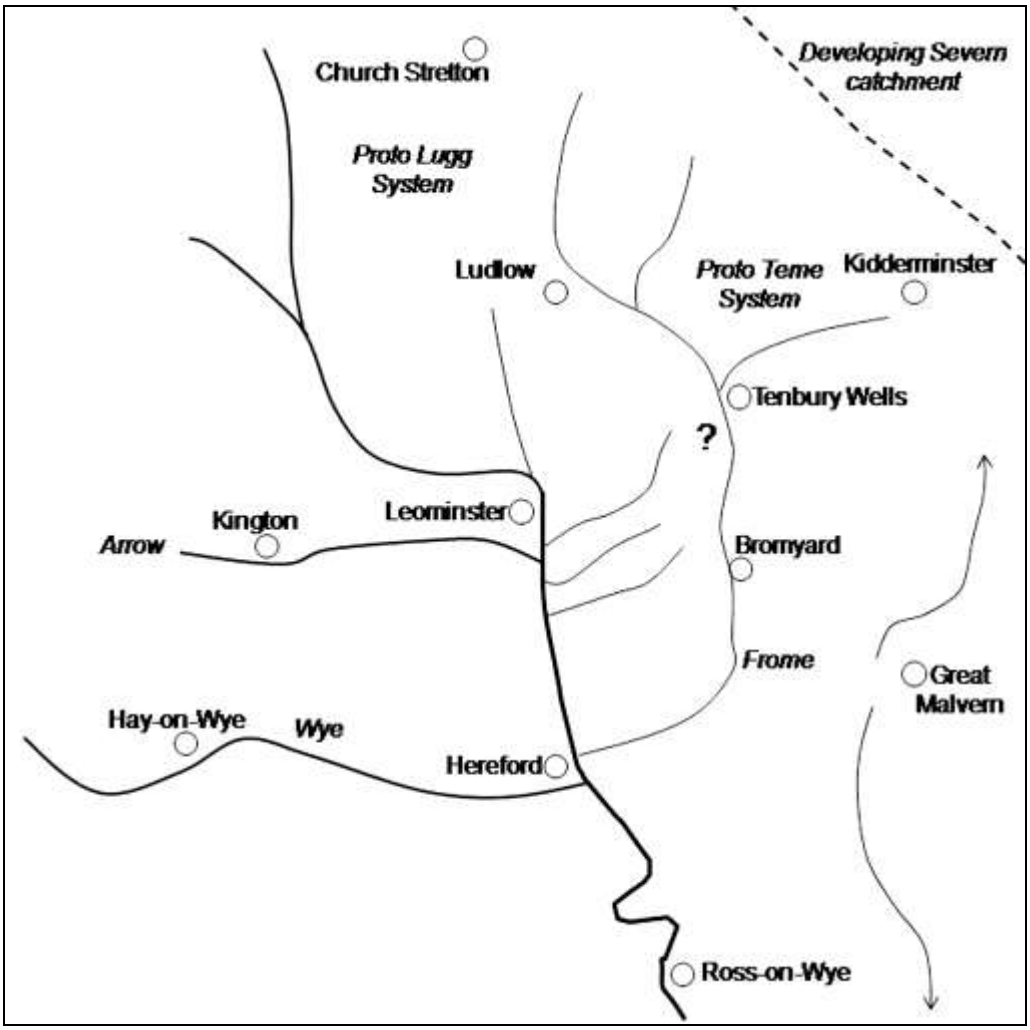

Figure 3. Probable configuration of major drainage routes in Herefordshire between the Middle Pleistocene and Late Pleistocene glaciations

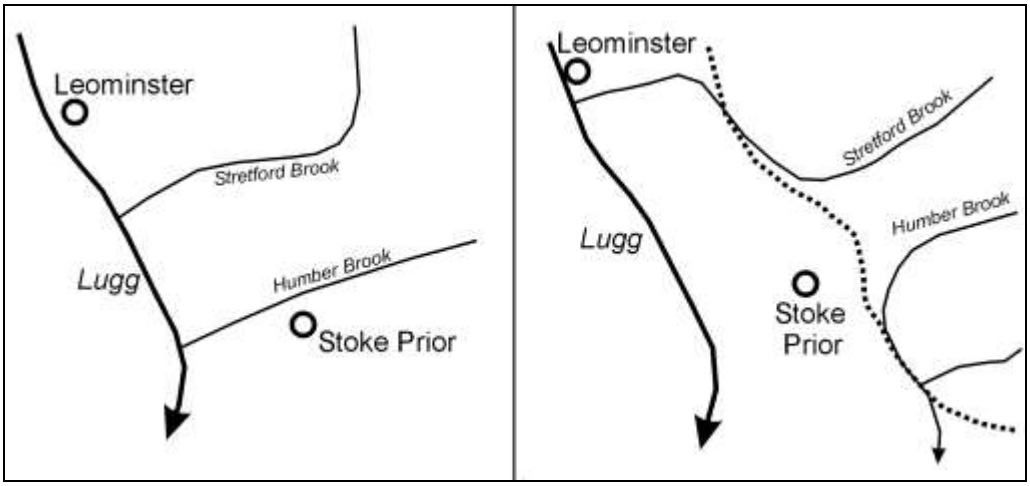

Figure 4. Drainage diversion of tributaries of the River Lugg as a consequence of Middle Pleistocene glaciations

The Sutton Walls Member of the Lugg Valley Formation forms the highest terrace in the Valley (Fig. 5), and is underlain by gravels that were deposited shortly after the retreat of the Middle Pleistocene ice-sheet. The lithological composition of this terrace is very similar to that of the Humber Formation and is dominated by northerly-derived rock types. The Type Section for the Sutton Walls Member is exposed at the margins of Sutton Walls Iron Age Hill Fort (SO 525 464). Three- to four-metre sections are exposed on either side of a trackway and are overlain by ancient earthworks. The deposits consist of tabular, well-rounded sub-rounded gravels (less than 5 cm. diameter) and interbedded sands, with common crossbedding indicating palaeocurrent to south-east/south-west. The provenance of the deposit is undoubtedly from the north, dominantly derived from north; the gravel fraction contains Silurian sandstones and siltstones, Old Red sandstone cornstones and sandstones, Lower Palaeozoic greywackes, rare coal clasts and Longmyndian or Uriconian (from Caer Caradoc) igneous pebbles. Sections in the fourth terrace—presumably correlatives of the Sutton Walls Member—have been described by Symonds[18] and Richardson[19] at Aylestone Hill (SO 521 410), Hagley and Wilcroft (SO 565 416) and Sheepcote (SO 563 404). These gravels appear to be characterised by a similar northerly-derived gravel suite.

No exposures in the third terrace, the Kingsfield Member, have been recorded. However, observations in ploughed fields and augering at Monmarsh (SO 525 495) showed a similar clast composition to the Sutton Walls Member. Brandon also reported a black flint from these gravels.[20] Deposits of the Moreton-on-Lugg Member (second terrace) of the Lugg Valley Formation occur continuously along the east side of the valley. The gravels were exposed at Sutton St. Nicholas (SO 536 452) in 1991-2 in a road-side cutting.[21] Samples were also retained from temporary excavations at Marden School (SO 527478) over the same period. This terrace appears to be marked by increases in locally-derived lithologies and a 20% decrease in Silurian and other northerly derived clasts—notably Longmyndian and Uriconian metamorphic material and Triassic Bunter pebbles. This trend continues in the first terrace, Little Vern Member, of the Lugg Valley Formation, poorly exposed in a disused pit at Little Vern (SO 516 505). Here

again, there is an increase in locally derived materials, any igneous or low grade metamorphic clasts are of Mid Welsh origin and there is a significant proportion of definitive Mid Welsh Silurian clasts (notably greywackes).

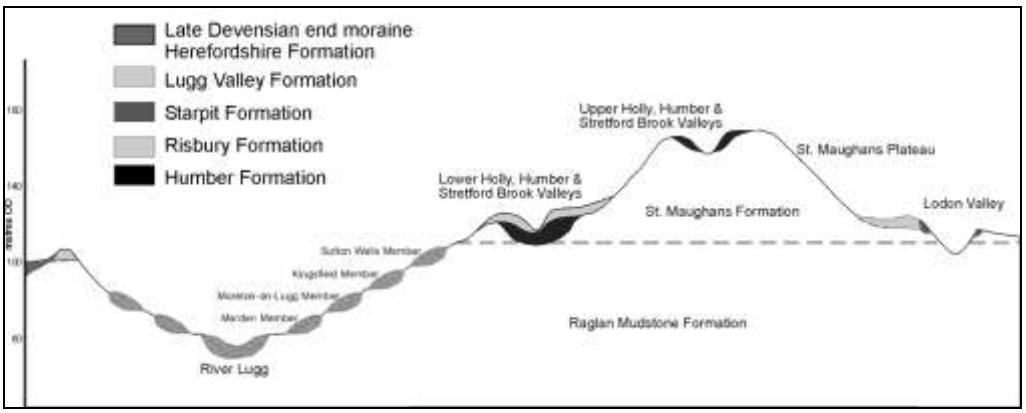

Figure 5. The relationship of Members of the Lugg Valley Formation to other superficial deposits in Herefordshire

The River Wye system

Hey recognised four units of terrace gravel in the Wye Valley below the Lugg confluence and thought that they comprised downstream equivalents of the Sutton Walls, Marden and Kingsfield Members of the Lugg Valley Formation, concluding that they 'all must be younger than the Older Drift (Risbury Formation) of north-east Herefordshire, but older than the Herefordshire end moraine (Late Devensian).'[22] Lithologically, these terraces are largely of Welsh origin, with local Old Red Sandstone material being minor constituents. Characteristic Ludlow sandstones of the Lugg Valley Formation are reported to constitute <10% of the Wye Valley Formation, with the majority of far-travelled pebbles derived from the Lower Palaeozoic outcrops of the Upper Wye basin of central Wales. Like the terrace deposits of the Lugg Valley, the Wye Valley Formation is thought to have largely aggraded under periglacial conditions[23] although some units may have accumulated as distal outwash from glaciers in central Wales.[24]

The Holme Lacy Member of the Wye Valley Formation has a Type Area at Holme Lacy (SO 555 355) where a large undissected terrace remnant occurs. Other deposits, correlated with this Member occur on the southern margins of Hereford City at Bullinghope (SO 507 375), Green Crize (SO 515 372, 517 375) and Dinedor (SO 539 371). The deposits exhibit a large degree of variation. While similar lithologies are present at each location, the sedimentology of the gravels appears to differ. The Type Site is poorly exposed in an old railway cutting near the former site of Holme Lacy station (SO 552 356). Here, well-sorted, subrounded to rounded and often tabular gravels are interbedded with silt and sand. Clasts are predominantly of Welsh origin, with conspicuous vein quartz and greywacke. The terrace remnants at Dinedor (SO 539 371) are not exposed, but augered samples suggest that gravels at this location are composed of the same lithologies, and have the same sorting and shape characteristics to the gravels exposed at Holme Lacy.

The Holme Lacy Member was also exposed during excavations made during the construction of the Rotherwas relief road at Green Crize (SO 515 368). Sections exposed up to 1.5 m. of relatively well-sorted, horizontally-bedded coarse gravels, containing sub-rounded gravels from 20-120 mm. These units are overlain by up to 3 m. of massive, sub-horizontally bedded poorly-sorted gravel, containing angular to subrounded clasts from 50-300 mm. The clasts have a chaotic arrangement, with no defined imbrication or other internal sedimentary structure. Locally, there are intermittent beds and lenses of coarse-grained sands and crudely-sorted gravels with syndepositional active and passive faulting which often distorts apparent trough and planar cross-beds. In general the primary sedimentary structures present indicate low relief bedforms common in sandur deposits. The upper 1.4 m. of the coarse, poorly sorted gravels have been deformed into a range of amorphous features. Finer sediments from underlying gravels have been injected into overlying deposits, and prolate clasts are often vertically-inclined at the margins of crude festoons and ball-and-pillow structures. Such features are typical of cryoturbation under intense periglacial conditions. Both gravel units contain a similar lithological suite to that recorded at Holme Lacy, with a marked increase in the proportion of locally-derived Lower Old Red Sandstone material.

The variation in the sedimentology of the Holme Lacy Member may suggest that the Member may require further stratigraphic subdivision. It is possible that more than one phase of aggradation is recorded in the Member. While the gravels at Holme Lacy and Green Crize both accumulated under cold conditions, the latter are distinct in that their sedimentology may indicate the proximity of an ice-sheet and subsequent, intensely cold conditions—perhaps with a mean annual temperature of less than -6ºC.[25] If the altitudinal correlation of the Holme Lacy Member with the Bushley Green Member of the Severn Valley Formation is correct, the sediments at Green Crize may record the incursion of an ice-sheet into the Hereford Basin during Marine Oxygen Isotope Stage 8, ~350kaBP.[26]

The Hampton Member comprises fluvial sands and gravels that are up to 3 m. in thickness. The Type Area occurs between Hampton Park and Corporation Farm (SO 534 401 to 537 394). Augering here revealed that associated gravels are very similar in terms of lithological composition, sorting and pebble shape characteristics to the Holme Lacy Member at its Type Site. The Bullingham Member (Type Area SO 501 388 to 529 374) was temporarily exposed during excavations for a gas pipeline at Rotherwas (SO 532 378). The 4.5m section exposed tabular, laterally extensive units of massive to planar bedded gravel up to 70 cm. in thickness, and tabular cross-bedded gravel units 10-40cm. in thickness. The upper 1.5 m. of the section includes interbeds of 10-15 cm. thick planar cross-bedded sand. As a whole, the sediments probably represent parts of in-channel unit bar, and later supra-bar and bar tail deposition within a periglacial, braided river system.

The River Teme system

The River Teme occurs on the boundaries of Herefordshire with Shropshire to the north and Worcestershire to the east. Its development, in the Middle to Late Pleistocene, has had a profound effect on the landscape of northern and eastern Herefordshire.

The lithological composition of high-level non-glacigenic gravels (the Humber Formation) on the high plateau immediately south of the Lower Teme Valley suggests that an ancient drainage network introduced northerly-derived lithologies into the region before the development of the Tenbury-Newnham Stretch of the Lower Teme Valley. The gravels in the valley of the Kyre Brook, which now forms a tributary to the River Teme, were originally

deposited by a northerly-derived river system and probably reworked from higher level gravels that now occur as remnants at The Fulhams (SO 627 654), Gatehouse Farm (SO 621 628) and Perry Farm (SO 628 625), as the gravels contain Longmyndian, low-grade metamorphic clasts and characteristic orange sandstones from Clee Hill.[27] A number of authors have suggested that the section of the Lower Teme Valley that conforms with the underlying north-south geological structure between Eardiston and Knightwick may have been part of a system that extended further south along the western margins of the Malvern Hills into the Cradley Brook Valley.[28] In addition, The Teme Valley above Woofferton is likely to have developed as part of this northerly-derived drainage pattern, closely linked with the development of the River Lugg and the deposition of the gravels of the Humber Formation.[29]

Geomorphological evidence surrounding the Lower Teme valley also suggests a complex evolution. In the Knightwick area, there are two major cols. The higher col at Suckley (93 m. OD) is thought to be a remnant of the early course of the Proto-Teme associated with the high level gravels discussed above,[30] whereas the col at Lulsey (SO 552 735) is 20 m. lower and may be either a precursor to the current eastern route adopted by the Teme at Knightwick, or evidence of an ancient tributary system. The eastern margin of the Teme Valley, between Eardiston and Knightwick, is marked by four high-level cols, near Martley (SO 750 593, 750 606) and Shelsey (SO 753 635, 752 662). Adlam suggests that these features formed as a result of superimposition, a model that he also used to explain the orientation of the Tenbury-Newnham stretch of the Lower Teme Valley.[31]

The Lower Teme Valley contains a range of terrace remnants that are composed of fluviatile gravels, slope sediments and lacustrine clays and silts. The relationship of these terrace remnants, and higher level gravels, to Pleistocene deposits of surrounding areas is shown in Fig. 5.

High-level terrace deposits occur near Tenbury Wells (SO 584 469 and SO 608 683) and on high ground above the Ledwyche Brook and river Rea in the northernmost parts of Worcestershire. These high terraces are not exposed, but augering suggests that they are dominated by locally derived materials with rare low-grade metamorphic, igneous, Carboniferous and Silurian clasts. Cross and Hodgson group these deposits as the Bank Farm Terrace, although they occur at a variety of heights (between 100 m. and 125 m. OD) and probably represent a series of discrete aggradations.[32] Adlam[33] and Cross and Hodgson[34] have mapped a further five, well-defined, terraces within the Woofferton-Newnham (the Shackenhurst Terrace), Eardiston-Knightwick, and Lulsey-Worcester stretches of the Lower Teme Valley. The highest of these, the fifth terrace, occurs as small remnants throughout the Woofferton-Newnham stretch of the Valley, and as larger remnants near Whitbourne (SO 704 568) and Tedney Bank (SO 726 588). These larger remnants have a base at ~70 m. OD, have been correlated with the Bushley Green Member of the Severn Valley Formation[35] and are thought to have formed in the same phase as the col at Lulsey.[36] The Fourth Terrace level (the Little Hereford Terrace of the Woofferton-Newnham stretch[37]) is approximately 10-12 m. lower. Like the fifth terrace, augering has proved that the associated gravels are dominated by locally-derived materials. A similar suite of exotic clasts is present; low-grade metamorphic, igneous, Carboniferous and Silurian clasts in each terrace unit. Cross and Hodgson have mapped these units in the Lower Teme Valley and the valleys of the Ledwyche Brook and River Rea.[38] The *thalwegs* associated with each of the terraces suggests that drainage in the Woofferton-Newnham stretch of the Lower Teme Valley flowed from east to west at this point.

The third terrace of the Teme occurs within the stretch from Knightwick to Worcester and the confluence with the River Severn. This terrace is believed to have formed in response to the damming of drainage by the advance of Late Devensian ice and the formation of the Orleton Moraine at the northeastern margins of the Hereford Basin. Cross and Hodgson suggest that this resulted in the formation of a large ice-dammed lake, Glacial Lake Woofferton, that extended through the Lower Teme valley.[39] Overspill from this lake is believed to have cut the steeply-incised gorge that characterises the Teme between Eardiston and Knightwick. This accounts for the absence of all but the lowest two terraces of the Teme system within the gorge, and disparities in the form and sedimentology of the upper terrace units within the Teme valley above and below this gorge.[40] Following the drainage of Glacial Lake Woofferton, the Teme's catchment area expanded into Wales, and drained through the Knightford Gap into the River Severn. Consequently, the lower terraces of the Teme are characterised by westerly-derived exotic clasts, including Silurian and igneous clasts from central Wales.

The events outlined above are also marked in the striking geomorphology of the Teme Valley. The stretch from Newnham to Knightwick is steep and contains common river cliffs, the most impressive of which occur at Kingswood (SO 744 600), Berrow Green (SO 740 585), Whitbourne Ford (SO 725 580) and below Ankerdine Hill (SO 735 567). This stretch of the Teme is joined by many steeply incised tributary valleys, at Shelsey Kings (SO 725 653), Pensax Brook (SO 717 674) and Pensax Brook (SO 701 693). The sudden movement of the Teme eastward at Knightwick, and the formation of the impressive gap and river cliff (SO 738 558) is likely to be partly a result of the exploitation of a major transverse fault in the region. Immediately west of this feature, a further network of steeply incised valleys surrounds the Sapey and Whitbourne Brooks, tributaries of the Teme that drain Bringsty Common and the southern margins of the Bromyard Downs. This network includes a number of impressive dry valleys, and is characterised by frequent, dense terracettes formed by soil creep over steep slopes. Such incision must be associated with an appreciable lowering of base level around the period that the Third Terrace was deposited in the Teme Valley downstream of Sapey Bridge on the Worcestershire border.

The Late Devensian-Holocene drainage pattern

Herefordshire's major river systems—the Lugg, Teme and Wye—were all extant before the Late Devensian, but the expansion of an ice-sheet into the Hereford Basin during this phase resulted in radical changes in their catchment areas and was the last major influence on the drainage of Herefordshire.[41]

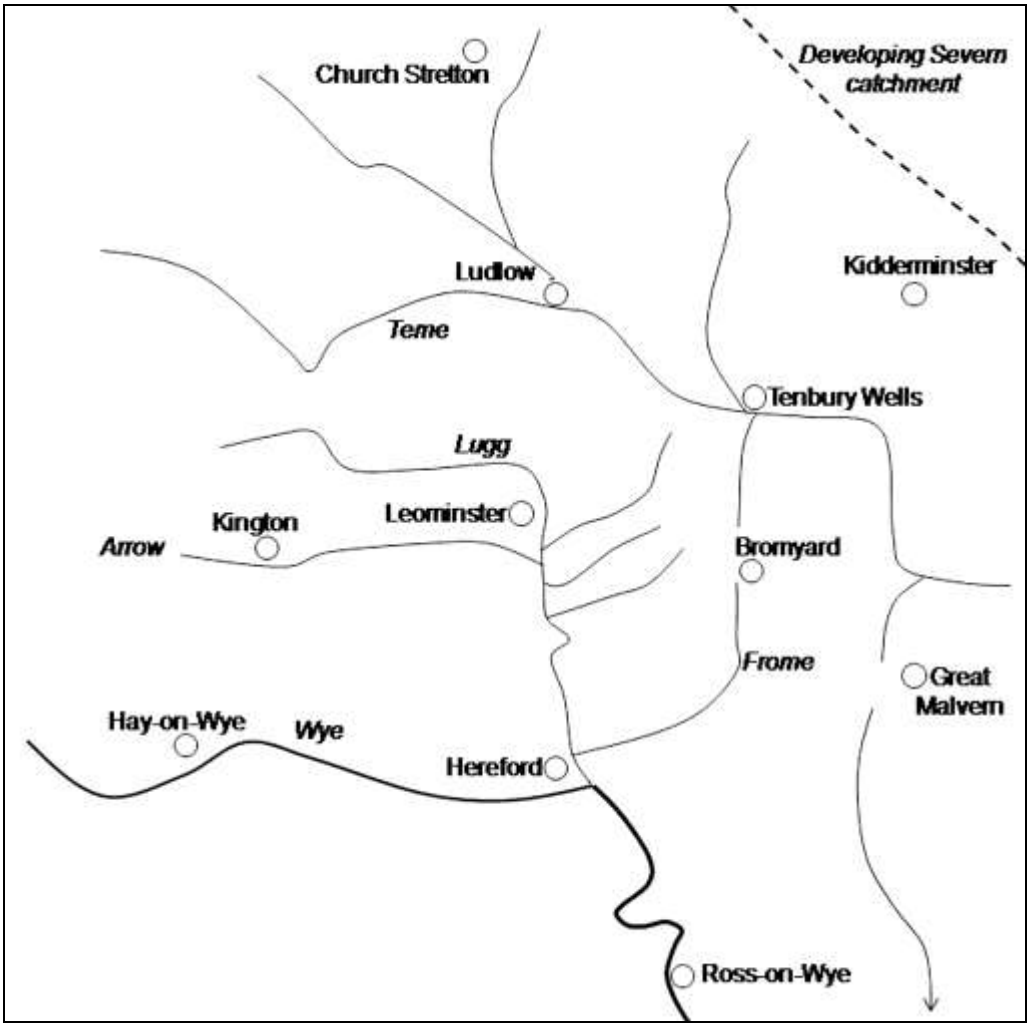

Figure 6. The Late Devensian-Early Holocene drainage pattern in Herefordshire

Glacial Lake Wigmore occupied a basin north of the gap in the Silurian ridge at Aymestrey and Glacial Lake Orleton formed immediately behind the Orleton end moraine in the Woofferton area during Late Devensian glaciation, and had a profound influence on the subsequent development of the Rivers Lugg and Teme.[42] Glacial Lake Wigmore formed as meltwater from the ice-sheet within the Hereford Basin spilling through the gap and into the Wigmore Basin. Topsets in the glaciodeltaic sequence suggest that the level of Glacial Lake Wigmore reached a height of 128-131 m. before the lake overflowed, cutting the present gorge of the Teme to Downton.[43] Subsequently, the upper catchment of the River Lugg was captured by the River Teme, which then flowed eastwards into its current middle course between Tenbury Wells and Stamford Bridge and on into the Severn Valley. Following capture, the River Lugg occupied a

contracted network, with its headwaters derived from the hills west of Presteigne. From here, the Lugg flowed through the gap at Aymestrey; also probably formed by an overspill from Glacial Lake Wigmore, to meet its ancient, middle, course just north of Leominster (Fig. 7).

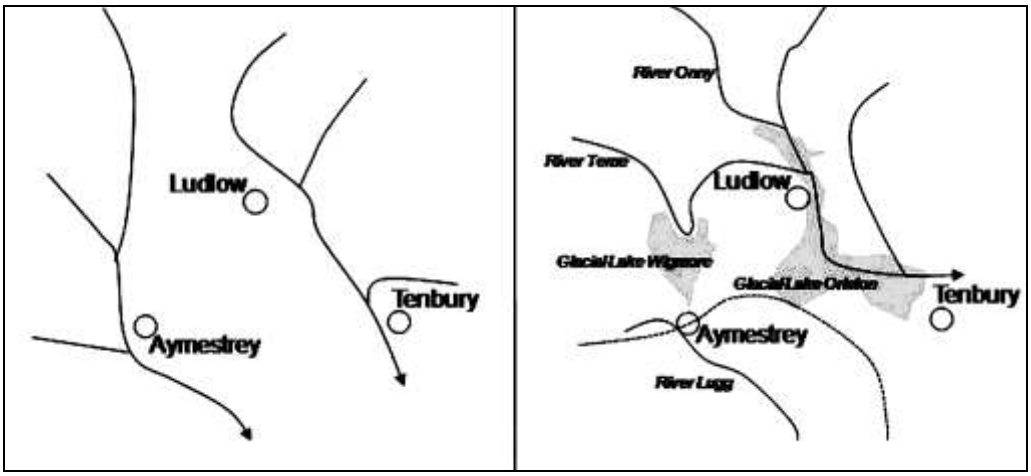

Figure 7. Drainage diversion in northern Herefordshire as a consequence of the Late Devensian glaciation

The lithological characteristics of the pre-Late Devensian Members of the Wye Valley Formation suggest that the catchment area of the river system was very similar to that occupied by the current River Wye drainage basin. The major effect of Late Devensian glaciation seems to have been further excavation of the Wye and its tributary systems, with the Wye becoming the dominant river system in the area as a result of drainage diversions in the northern parts of the county.

The tributaries of these major river systems either developed or underwent marked diversions as a consequence of Late Devensian glaciation. The occurrence of morainic sediments in the base of the Arrow valley beneath Hergest Ridge as far east as Newchurch (SO 215 505) suggest that the river formed a tributary to the river Lugg in the later stages of the Pleistocene, and maintained a similar route after glaciation due to its valley being the focus of significant meltwater routing. Many of the River Arrow's northerly tributaries stand in channels incised by meltwater at the northern margins of the Late Devensian ice-sheet. There is no evidence to suggest that the Arrow's precursor flowed westwards from the Bromyard Plateau as suggested by Dwerryhouse and Miller.[44] South of the Arrow, the Wellington, Tillington and Yazor Brooks may also occupy pre-Late Devensian drainage routes, but their current routes were certainly initiated during incision and aggradation by meltwater from the Late Devensian ice-sheet.

The significant coverage of 'dead ice' topography associated with the kettle-kame moraine has resulted in deranged drainage patterns in the minor tributaries of the River Wye in the Kenchester and Madley areas, while larger tributaries to the Wye, flowing from eastern Herefordshire, such as the River Frome, and the smaller systems emanating from the Bromyard Plateau and Woolhope Dome appear to have remained largely unaltered by glacial activity in the Hereford Basin.

CONCLUSIONS

Herefordshire's river systems have had a long and interesting history. They have developed in response to a variety of passive and active geological processes and, in the last 2 million years, have been subject to the influence of a wildly-fluctuating climate. The lower course of the River Lugg appears to be at least 400,000 years old, while the Lower Wye may be even older— possibly in excess of 1 million years. Much can be told from the sediments and forms associated with fluvial archives of the Lugg, Wye and Teme valleys. However, due to poor exposure and the need for concerted study, associated organic sediments are rare. In addition, there is tantalising little evidence of the use of these river systems by man, apart from during the last few thousand years. Although exposures in Pleistocene sediments are becoming increasingly rare due to changes in the aggregates industry, with more fieldwork and academic study, Herefordshire could provide one of the best records of landscape development in the British Isles.

GLOSSARY

Alpine Orogeny	The phase of tectonic plate activity which built the Alps.
clasts	Fragments of pre-existing rock.
exogenic	Originating from outside the Earth *e.g.* tides, sea level fluctuations and climate change.
festoons and ball-and-pillow	Features formed by the expansion and contraction of ground ice.
imbrication	Orientation of clasts such that they overlap one another in a consistent fashion, rather like a run of toppled dominoes.
jokulhlaup	A *jökulhlaup* (or glacier burst) is a subglacial outburst flood.
kettle-kame	A kettle (or kettle hole) is a shallow, sediment-filled body of water formed by retreating glaciers or draining floodwaters. A kame is a geological feature, an irregularly shaped hill or mound composed of sand, gravel and till that accumulates in a depression on a retreating glacier, and is then deposited on the land surface with further melting of the glacier. Kames are often associated with kettles, and this is referred to as *kame and kettle* topography.
peneplains	A peneplain is the final stage in fluvial or stream erosion.
sandur	Glacial outwash is generated when streams of meltwater flow away from the glacier and deposit sediment to form broad outwash plains called sandurs.
syndepositional	Deposited at the same time.
tectonism	Features resulting from the action of tectonic plates.
thalweg	The deepest continuous line along a valley or watercourse.
Variscan Orogeny	The Variscan (or Hercynian) orogeny is a geologic mountain-building event caused by Late Paleozoic continental collision between Laurasia and Gondwana to form the supercontinent of Pangea.

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[21] Richards, (1994).
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[24] Hey, (1991).
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[30] Hey, (1969).
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[35] Oxygen Isotope Stage 8; Maddy *et al.* (1995).
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Further notes on Godwins of Lugwardine

By JOHN C. EISEL

The interesting and detailed account of the Godwin tile manufactories in the last part of the Club *Transactions* can be amplified by advertisements from the Hereford newspapers. Although later advertising material states that the firm was begun in 1848, another source states that William Godwin leased an existing brickworks in 1849.[1,2] No announcement of this takeover appeared in the Hereford papers in 1848, and it may well be significant that the first advertisement for the tile works that has been found occurs in the *Hereford Journal* of 7 February 1849.

LUGWARDINE BRICK AND TILE WORKS

WILLIAM GODWIN

BEGS to inform the Nobility, Gentry and Agriculturalists generally that he has now on Sale at the above place, and at the CANAL WHARF, HEREFORD, a quantity of DRAINING PIPES and TILES, at Reduced Prices

Apply to Mr. Bamford, Commercial-road, Hereford, or at the Works, Lugwardine.

The same advert but with (correctly) Bomford *vice* Bamford, appeared in the *Hereford Times* of 10 February 1849. Both advertisements were repeated several times. This suggests that the true date is 1849.[3]

An entry in Lascelles and Co.'s *Directory and Gazetteer of Herefordshire* (1851) records that William Godwin, brick and tile manufacturer, was resident at Woodbine Cottage. At the time of the *Post Office Directory of Herefordshire* (1856) William Godwin was noted as being at the brick and tile works, but there was also an Eleazer Godwin living at Middle Court, Lugwardine, described as a brick and tile manufacturer. This presumably was the brother of William Godwin who was named as a beneficiary in William's will provided he was in William's employ at the time of his death, but here the entry implies that Eleazer was in business on his own account. These two entries were repeated in Cassey's *Directory of Herefordshire* (1858) but subsequently Eleazer Godwin's name disappears from directories, and he was not resident in Lugwardine at the time of the 1861 census. No explanation has so far been found.

Since the main theme of the article was the production of encaustic tiles, the other products can easily be under-emphasized, whereas it is clear that they made an important contribution to the business, demonstrated in the following advertisement from the *Hereford Times* of 6 February 1864:

DRAINING PIPES FOR THE MILLION

W. GODWIN

Begs to inform Landed Proprietors, Agriculturalists, and others, that he has in stock a large
Quantity of DRAINING PIPES, of excellent quality, at the undermentioned places, viz:-

HAMPTON PARK NEW BRICK AND TILE WORKS, EIGN-HILL, HEREFORD
LUGWARDINE ENCAUSTIC TILE WORKS; NEWTOWN BRICK AND TILE WORKS YARKHILL;

OCLE PITCHARD BRICK AND TILE WORKS, mid way between Bromyard and Hereford.
Prices, &c. can be obtained on application to W. GODWIN, LUGWARDINE, HEREFORD, or of the Foremen at the abovementioned places.

However, it is evident that subsequently this side of the business was run down, and by the time that Littlebury's *Directory & Gazetteer of Herefordshire* was published in 1876 the company was only manufacturing bricks and drain-pipes at Lugwardine and the New Town brick works.

The processes that were used in the manufacture of the encaustic tiles were well described in the lengthy newspaper cutting quoted in the text of the article. This news cutting is preserved in a book of newspaper cuttings in the Local Collection in Hereford Reference Library, and was compiled in the 1920s. The cuttings are mostly of that period, but include earlier material. Internal evidence in the text of the news cutting indicates that this was probably written in the middle of 1867, giving a *terminus post quem* for publication. There is no guarantee, of course, that it appeared immediately it was written. It is stated in the paper that this news cutting did not come from a Hereford paper[4] but this is incorrect as it appeared in the *Hereford Journal* of 3 November 1868, where it occupies 2½ columns: comparison of the cutting with the microfilm of the newspaper proves without doubt that this newspaper was the source. Indeed, part of the heading which has been cut off from the cutting shows that it was the second in a series of articles entitled 'Hives of Herefordshire.'

NOTES AND REFERENCES

[1] See, for instance, an advertisement in the *Hereford Journal*, 3 September 1898.
[2] 'The Godwins and the Tile Works', in *Lugwardine in the Ninteenth Century*, (1988), 63. The lease that is referred to is not in Herefordshire Record Office, and has not so far been located.
[3] While start dates of businesses given in publicity material are generally accurate, there are notable exceptions. In publicity material issued over the years by the Bustin studio in Hereford the date of commencement of the business is variously stated as 1853, 1856, 1857 and 1858! The correct date is probably 1858.
[4] *TWNFC*, (2006), p.27.

A survey of the River Wye from Lucksall to Wilton

by HEATHER HURLEY

In the autumn of 2006 the 'Landscape Origins of the Wye Valley' (LOWV) project undertook a two-day survey of the Wye by canoe to locate and produce a photographic record of all documented crossings, weirs, wharfs and industrial sites between Lucksall and Wilton. During the survey it was hoped that previously unknown sites would be identified for further research.

Introduction

In the past the Wye has been known as a means of transport, a source of power and a provider of food and water. Despite its meandering course and former obstructions between Lucksall at Fownhope and Wilton in Bridstow, this stretch of the river became navigable, its waters powered mills and an iron forge, and provided fisheries. Communication between settlements was along a network of roads and tracks, which crossed the Wye at numerous ford and ferry sites before the bridges at Wilton, Foy, Sellack, Hoarwithy and Holme Lacy were built. It was not until the mid-19th century that a direct route through the valley was made by the construction of a railway which crossed the river four times between Ross and Hereford.

Former Surveys

Due to continual conflict between mill and fishery owners and those seeking trade on the river, a number of surveys have been undertaken in the past, and Acts of Parliament passed to resolve the situation.

The first recorded survey of the Wye was in 1301 to 'Survey the weirs, dykes and stakes in the water of Weye between Hereford and Monemuth,' but the results are not known.[1] This was followed by an unofficial journey in 1641 by John Taylor, the Water Poet, who recorded his 'painful travel' being 'debard of all passage with boates' by weirs at Wilton, Ingestone, Carey and Fownhope.[2] After the Navigation Acts of 1662 and 1695 a survey, attributed to Daniel Denell, was ordered by the navigation trustees, but his results of 1697 showed a series of obstructions caused by decayed and ruined mills, weirs, locks, floodgates.[3]

At the beginning of the 18th century the Wye between Ross and Hereford was barely navigable, so further attempts were made to improve the navigation by an Act of 1727 and surveys made by Taylor in 1763 and Whitworth in 1799. Their detailed plans depict weirs, islands, crossings and industrial sites together with proposed improvements.[4] In 1805 Henry Price surveyed a proposed route for a horse towing path which led to a later plan of 1808 and the Horse Towing Path Act of 1809.[5] Navigation on the Wye ceased above Ross due to the completion of the Hereford and Gloucester Canal in 1845 and the opening of the Hereford, Ross and Gloucester railway in 1855. After this, the Wye was promoted as a boating and fishing river by Edwin Stooke on his map of 1892,[6] and in 1948 C. R. Shaw produced a report on the navigability of the river after sailing from Hereford to Redbrook.[7] Today canoeists may use a specialist guide produced for them in 1990.[8]

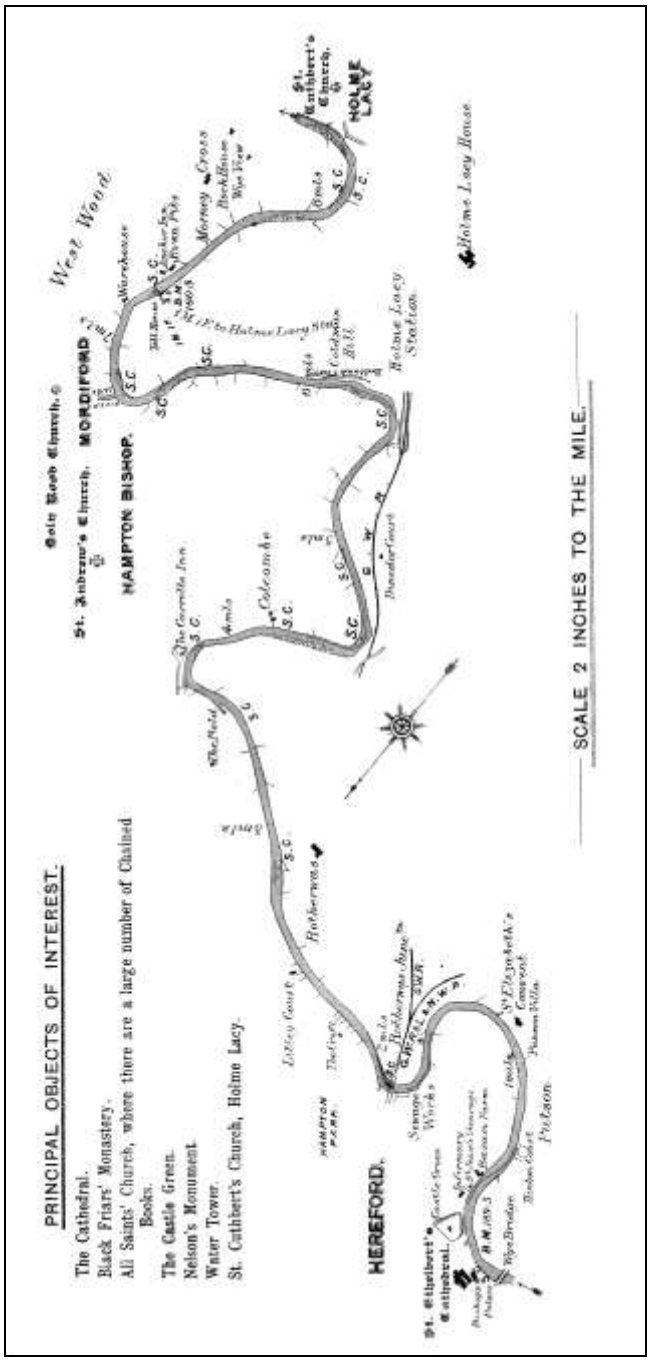

Figure 1. Edwin Stooke's map of 1892, section 1.

2006 Survey - *Lucksall to Hoarwithy*

On the first day of the survey the river was low and shallow with a few fast rapids, but on the second day, a week later, the river had risen due to rain, and flowed very swiftly over dark and deep depths. One of the problems encountered by the bargees and travellers crossing the river has always been the variability of the flow.

Above Lucksall, but within the project area, was a crossing known as the 'Oxford' named after its use by livestock on a former 'team road from Hampton Bishop Church' to Holme Lacy.[9] On the Fownhope side of the river the remains of a warehouse were visible which together with a wharf was tenanted by the Wheatstones of Even Pits in 1774.[10] A former bark house stands nearby, and a site opposite on the Holme Lacy bank was considered to be associated with fishing.[11] The ferry at Even Pits was replaced by a bridge built by the Fownhope and Holme Lacy Bridge Company after an act of 1857. The original iron and stone bridge was replaced in 1973 by the existing one; the tolls ceased in 1935 when the bridge was purchased by the County Council.[12] Below the bridge is the Lucksall Caravan and Camping Park where canoes are launched from a site recorded as a wharf leased to Nathanial Purchas in 1775.[13]

Figure 2. Canoe launch site at Lucksall, formerly a wharf leased by Purchas

Purchas established his brewery in Fownhope around 1771 when brandy, rum and other liquors were for sale at the Brew House. In 1783 his 'new house, Brewhouse Yard, Brewhouse Cellars Etc.' were built on land giving him access to 'Shiplee boat' from where he shipped tons of bark to Chepstow, returning with pipes and casks of wine on his barges.[14] The brewer's house, known as Rock House by 1874, can be recognised from the river, but at Shipley on the opposite bank in Holme Lacy the Net House of 1840 was not seen.[15] A possible wharf site was identified near a ferry crossing known as Shipley or Hom Ferry in 1754.[16]

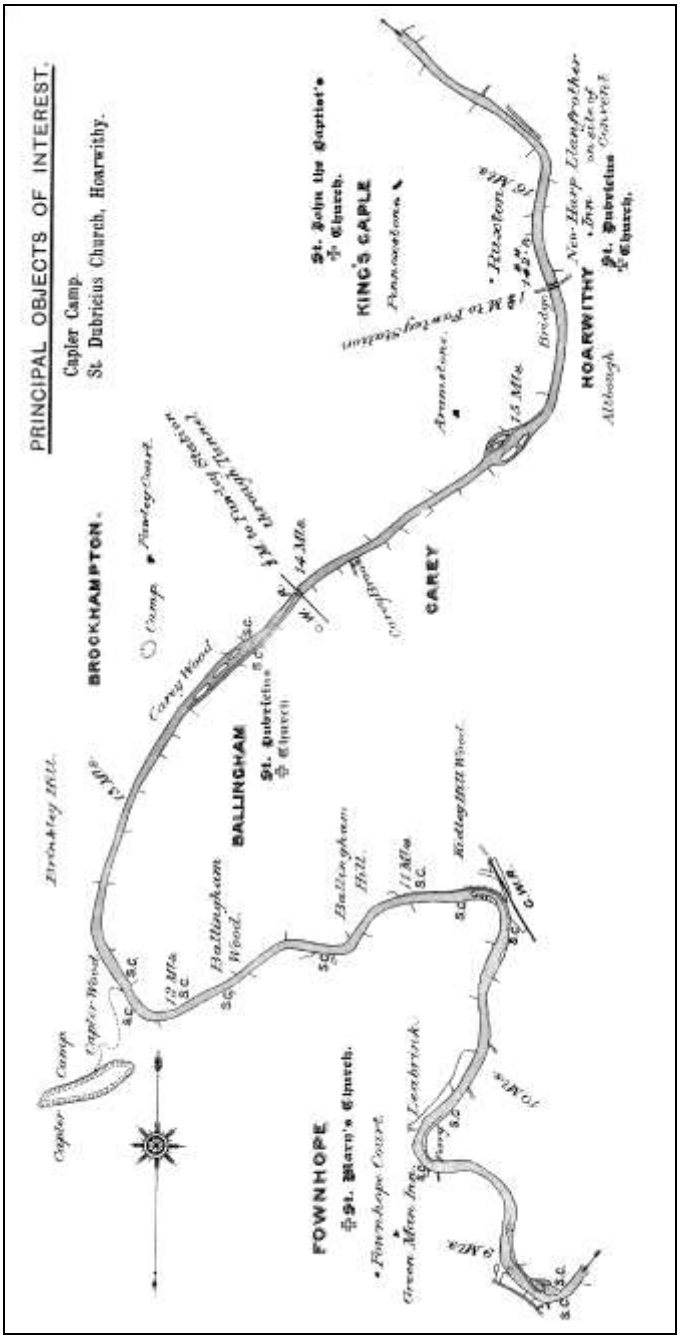

Figure 3. Edwin Stooke's map of 1892, section 2

Further downstream, substantial remains of a wharf were found along the bank adjacent to Church Road, but surprisingly there is little evidence of it in the barge accounts of river trade at Holme Lacy, except for goods conveyed in the 1790s, and lime, wheat and barley freighted to Bristol in 1809.[17]

Returning to the Fownhope side of the river, the former Bark House, buildings and yard at Lechmere Ley were visible. This was where bark would have been stacked and shipped, and a boat kept to steer barges around a dangerous bend. The site of Fownhope Mill was identified—it was 'in good repair' with a weir 'in all of 7½ feet high' in 1697.[18] At low water old timbers have been seen but there are no remains of the mill, though overgrown islands still exist as shown by Taylor in 1763. The mill and fishery of 1266 at Holme Lacy may have been sited on the opposite bank.[19] Several islands and rapids were encountered along the course of the river, which appeared to coincide with the siting of former mills and weirs.

Fownhope Mill was also the site of the Old Mill Ford, which together with the 'Even Pitt Ferry, the Shipley Boat Ferry, and the Ox Ford through and across the River' were discontinued under the terms of the Holme Lacy Bridge Act in 1857. The Fownhope Ferry crossing and a former Coal Yard at the Locken Stock field were not seen from the river, although the ferry was one of the last in use along this stretch of the Wye.[20] The coal wharf was probably the one referred to in the sale advertisement of a 'Limestone Quarry, of excellent quality, near a good Turnpike-road' where 'a Wharf may be had for landing the Coal free of expense.'[21]

Figure 4. Hancock's Weir in 1763 (I. Taylor)

'Rovings' were crossings used by the barge hauliers following the tow path before the Horse Towing Path was established.

At Leabrink shelves of rock are visible below the surface of the water, where a boat was kept at the cottages on this sharp bend, and another unlikely crossing over the river at Hancock's Roving took the barge hauliers across to Bolstone.[22]

At Bolstone the Wye flows through rapids around a rocky bend which was formerly shown as islands at Blackwall Ditch, a name discontinued on present day maps. This was the site of Aburttaretts Mill and Weir of 1505 owned by the Scudamores, later leased to Robert Hancock in 1571 with 'all the houses water courses, weir gates and fyshinges.'[23] It became known as Hancock's Weir and Mill and was beyond repair in 1697.[24]

At the southern edge of Fownhope parish a network of paths lead to Mancell's Ferry, where the boatman's cottage was clearly seen built on a high rocky shelf, giving its alternative name of 'Rocks Ferry.'[25] A sunken part of the bank may have formed a slipway for the boat, although some evidence suggests that the ferry was operated from the Ballingham side, as a boat was kept by Samuel Terry (the parish clerk) in the early 20th century.[26] This former ferry is one of 38 past and present crossings of fords and ferries, the rovings of the tow path, and the foot, road and rail bridges which have been recorded along this 25-mile stretch of the Wye.

Figure 5. The remains of Hancock's weir

Figure 6. Mancell's Ferry with boatman's cottage above

Below the wooded slopes of Capler Camp, rights-of-way indicate the site of an ancient crossing known as Dunsford in the 13th century, Capley Roving in 1799 and Alford's Boat in the 19th century.[27] Several wharves were identified by the LOWV, where in the 1780s and 1790s barley was conveyed to Brockweir and 'limecole' was delivered to be measured and delivered to lime kilns.[28] The leases of the Dean and Chapter's woods and quarries at Capler

date from 1602,[29] and in 1789 and 1790 the stone was of sufficient quality to reconstruct the west tower of Hereford Cathedral which had collapsed in 1786. The accounts show payments for 'raising stone', 'carriage of timber and stone' and 'haulage of stone' from Capler Quarry to the Cathedral Church.[30] Further accounts record stone cut from Capler used for the Vicars Choral in 1803, the tower in 1843 and the Choir in 1847. Amongst other requirements the contractor had to supply carriage along the eight mile route to Hereford, which suggests land transport.[31]

Figure 7. Barge at Capler (James Wathen, 1793)

Around the Ballingham loop of the river two crossing sites were passed including Yearly's Boat of 1780, and the Stag Roving of 1799,[32] which was probably the same crossing used by the Ballingham boatman 'to ferry people across to Carey Mill on the Fawley side in 1250.'[33] Overgrowth and fallen trees cover a series of islands, where the river flows swiftly between them and forms a fascinating feature long associated with Carey Mill. In 1528 it was described as 'Two water mills constructed under one building' in need of repairing a year later.[34] It was later converted or rebuilt as an iron forge which was completed in 1629 for the cost of £632 2s. 9d. and was certainly in production until 1632 and possibly ceased during the Civil War.[35] In 1697 the mill's stone weir was eight feet high, and shown as Carey Old Mill in 1763 after becoming disused.[36]

Below the islands on the Ballingham bank, a right-of-way known as Ford Road leads down to the river where James's Ford was sited in 1780. This became the later Carey boat probably operated by the River Wye Horse Towing Path Company which was established in 1809 and erected the cottage on the Fawley side.[37] This crossing cannot be missed as it was reused by the Hereford, Ross and Gloucester Railway who constructed a six span bridge across the Wye. The railway opened in 1855 and ran until 1964, when the bridge was partly demolished leaving its stark stone piers striding across the river.

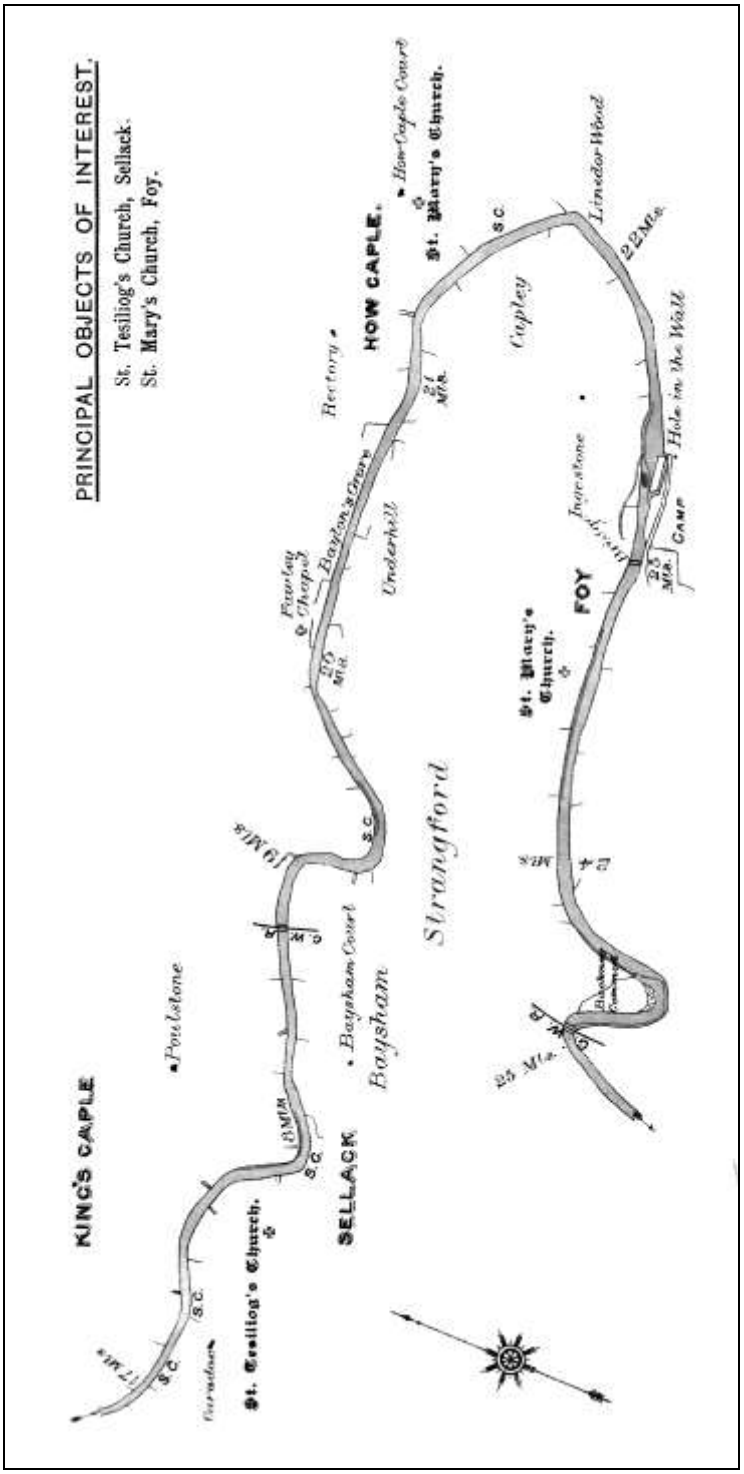

Figure 8. Edwin Stooke's map of 1892, section 3

Figure 9. Carey railway bridge pillars with cottage erected by the River Wye Horse Towing Path Co.

Under the terms of the Horse Towing Path Act, the company was allowed to keep a ferry boat at certain places including 'at or near Hoarwithy Passage and How Caple adjoining or near to the said river Wye, and moor the same to the Posts to be set up.' It has always been understood that the place chosen at Hoarwithy was at the Bibletts Islands, where the horses and men were conveyed across the river from the tow path on the Kings Caple side, but this is confusing as a report of 1816 refers to 'Stables and House at Carey' built by the company, which must refer to the company's cottage at Careyboat on the Fawley side.[38] The Bibletts Islands were dramatically outlined by the 18th and 19th-century cartographers, but have long since been filled in and are only recognisable when the river floods.

At Hoarwithy there were no visible remains of a 19th-century timber yard and a row of malthouses before reaching the bridge, which was originally a timber construction built by the Hoarwithy Bridge Company in 1856. It was replaced by an iron structure in 1876 for a cost of £2090, and by a strengthened concrete and steel bridge over its existing piers in 1990. Fortunately the familiar tall toll house was preserved, although the tolls were discontinued in 1935. The bridge replaced an ancient ford and ferry crossing sited a few yards downstream, and the 'horse and small' boats were operated from Kings Caple bank by the traditional method using chains or cables.[39]

In the past Hoarwithy had seen great activity on the river with barges loading and unloading at four different sites. A few yards below Hoarwithy Bridge the LOWV sighted a previously unknown wharf where goods ranging from slates and ropage from Bristol, junk, paper and rags to and from the paper mill, and barges of coal, lime and flax were conveyed up and down the Wye during the late-18th and early-19th centuries.[40] The lower timber yard fenced by iron railings was probably the site of a wharf recorded as late as 1856.[41] Beyond Rocks Common where commoners have fishing rights is the Bark House, which was rented to the Chepstow Bark Company in 1799. At low water its wharf is visible, which was used by the company for the 'wharfing of any bark.'[42]

The last wharf at Hoarwithy was opposite one at Kings Caple, both named after Red Rail or 'ford of the street', an ancient river crossing on a linear route leading from St. Owens's

Cross in Hentland to Kings Caple and Fawley. Evidence from an excavation in 1969, archaeological finds along the route and names such as 'Caple Street' in 1453 and 'Roman Lane' in 1737 suggest a road of Roman or earlier origin.[43] As the previous excavation was on the Kings Caple side, the LOWV carried out a dig on the approach to the ford on the Hoarwithy side in 2005, but with limited time only a surfaced 18th-century road was revealed. Sub-aqua divers in the river discovered large slabs which may have formed a causeway of the ford, which was discontinued after the opening of the Hoarwithy Bridge.

Sellack to Wilton

There was no sight of a wharf on the western edge of Sellack parish near Shepponhill, where 'The Public had a right of Wharfage for Timber paying a Toll of 1s per Ton' in 1863.[44] There was evidence of a crossing connecting Caradoc in Sellack with Pennoxstone in Kings Caple, but the main link between these two parishes was at Sellack Boat where a ford and ferry were replaced by an elegant suspension bridge in 1895. It was mainly through the efforts of the Revd. Augustin Ley, vicar of Kings Caple and Sellack, that the footbridge was erected, which enabled him a safer and dryer crossing over the Wye to visit his parishioners.[45]

The earliest known wharf on the Wye in the project area was at Kings Caple, a few yards downstream of Sellack Bridge. The bank, now covered with trailing willows, was where Daniel Kerry made a 'tying up place' for barges in 1696 later known as 'Kerry's Lockstock Boat Piece' where cider and corn were shipped downstream for a better price.[46] Other items freighted to and from Kings Caple at a later date, included '2 Ton Fire Coal', '39 Cheese, 2 Bag Pease & 2 Bag Hair from Wilton to Caple' in 1795, '3 Bushels of Oates' in 1810 and sacks of wheat and barley to Bristol in 1812.[47] Almost impossible to identify around the swift flowing bend known as the Goose Neck was a field called the Broken Bank, where Amos Jones of Baysham was permitted 'to go through the Meadow lying by the River Wye at the Broken Bank in the parish of Sellack aforesaid with his teams to carry his Corn & Cyder to and from the said River when he shall have Occasion.'[48]

Between Sellack and Kings Caple another known ferry crossing of 1799 once linked Baysham with Poulstone.[49] Further downstream at Strangford, a strange and secret place only accessible on the river, there was no difficulty in sighting the remains of the Hereford, Ross and Gloucester Railway Bridge of 1855. Due to exceptional floods the bridge collapsed in 1947 but after this disaster its supports were strengthened with concrete, and since its closure in 1964 only its unsightly supports remain standing in the river.[50] A site below Strangford Farm was considered to have been the fording place of 1763 at a possible wharf site which had seen activity in the 1790s.[51]

From Strangford the Wye begins its large meander around Foy, but first sweeps past Much Fawley with its chapel and cluster of farms and barns which form a prominent and fascinating feature from the river. At Much Fawley a sunken track leads down to the river, traditionally known as a ferry and wharf site 'for loading barges with farm produce for transit down the Wye.'[52] In 1687 a lease contains a curious right of passage for 'horses and carriages at all seasonable times between the boat on the river Wye at Much Fawley over and through Strangworth meadow and grounds…for the carrying of lime and cole in their wains and carts from Howle…and for their market horses to and from Monmouth.'[53]

On the How Caple side of the river, a small peninsula of land was investigated, which may have been the site of a mill predating How Caple Mill on the Totnor Brook. Around this bend, the left bank is overgrown with trees and shrubs and the right bank has been covered

with stone and rubble destroying any evidence of wharfs and crossing. The Capel Ford of 1410 leading across to How Caple was probably the later Peartree Roving of 1799 situated below Underhill.[54] This was intended to be used by the Horse Towing Path 'for carrying over the Draft Horses and Drivers Etc.,' as shown on the navigation plan of 1808.[55] Below How Caple Court and church is a large riverside meadow known in 1763 as Lords Meadow and referred to as How Caple Wharf in 1799, where barges loaded and unloaded tiles, coal, timber, wheat, barley, rye grass, cider and limecole for kilns at Sollers Hope in the 1790s. Around the same date Mr. Collins of Ingestone paid for the freight of apples, and large quantities of lime which must have been delivered on the right bank at Foy.[56]

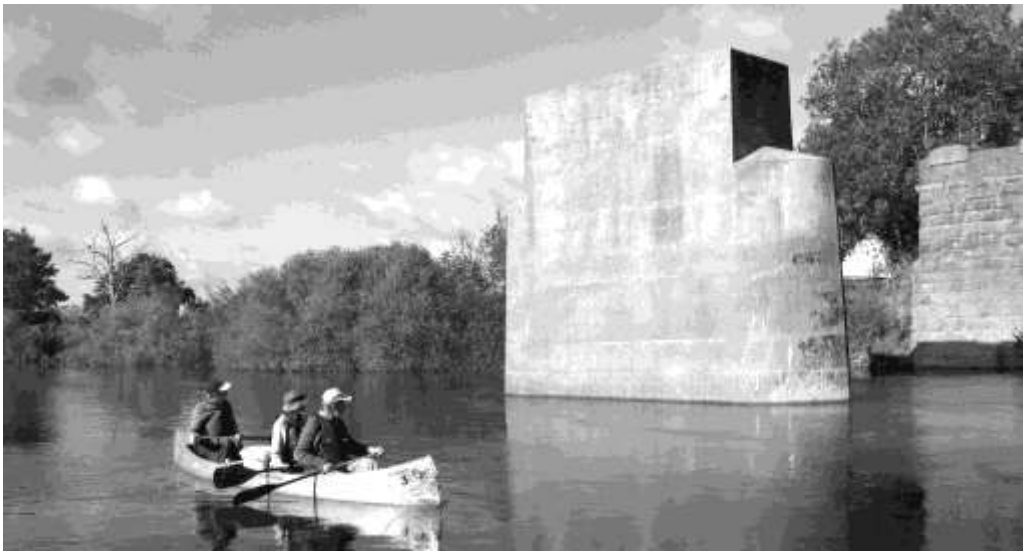

Figure 10. The remains of Strangford railway bridge

Figure 11. Foy Gatehouse

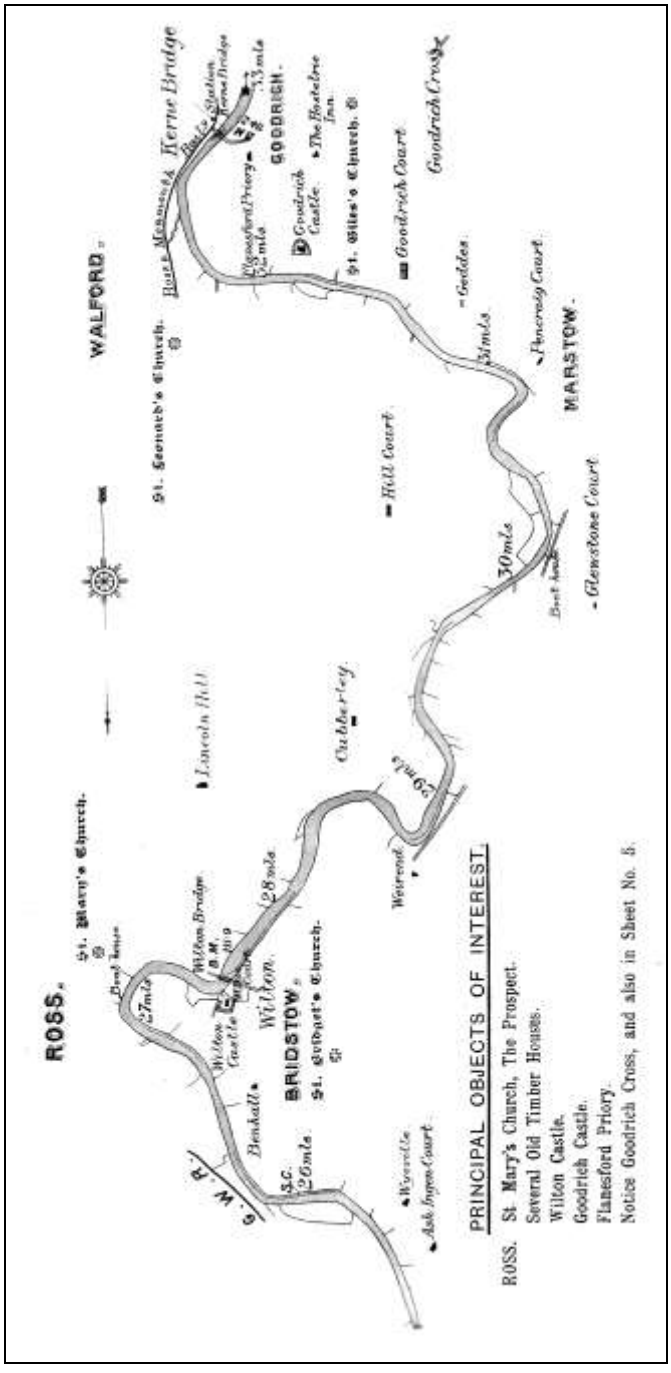

Figure 12. Edwin Stooke's map of 1892, section 4

The quaintly named Hole-in-the-Wall with Court Farm and its group of cottages is situated in Foy East where the derelict Gatehouse was visible from the river. Before being damaged by fire it once served as an inn, stabling for the barge horses and a wharf site. Nearby at Ingestone a long-established ford and ferry crossing connected east and west Foy, which was replaced by a bridle bridge in 1876 for the convenience of the inhabitants. Unfortunately the bridge was swept away by floods in 1919 but rebuilt as a footbridge in 1921 for the cost of £2,000. The upper and lower islands at Foy may have been associated with the 'Two water mills worth 6s 8d' and the fishery and weir worth 40s. recorded in 1369 at Eaton Tregoz in East Foy.[57]

Below the islands on the east side of Foy there was a landing place known as Cams Meadow which was used in 1809 for loading timber conveyed in barges to the shipyards of Bowsher, Hodges & Co. in Chepstow.[58]

Figure 13. Backney bridge piers

The river flows swiftly around Backney Common with its beach of gravel and remaining piers of another railway bridge. The abutments have been incorporated into a pleasant picnic site called Backney Bridge where the river, islands with nesting swans and remnants of the Hereford, Ross and Gloucester Railway may be viewed. In 1809 Bowsher, Hodges & Co. freighted timber and bark to Chepstow, and poles and hurdles to Bristol from Backney with extra charges for dockage and haulage.[59]

Opposite Backney Common tall willows mark a former Withy Bed at Brampton Abbotts, and across this wide sweep of the Wye was a crossing known as Wilford, possibly named after an incident that occurred in the 12th century when the Welsh crossed the river from Archenfield to raid Brampton Abbotts.[60] Noticeable from the river is a simple metal cross bearing the initials H. E. in remembrance of the Revd. Harry St. Helier Evans of Brampton Abbotts who, at the age of 47, met his death whilst saving his son and his daughter's friends from drowning in the Wye.[61]

At the northern end of Bridstow, a cliff of red sandstone suggests former quarries before the river reaches a delightful stretch below Ashe Ingham and Ashe Farm, where a stone wharf was identified. This was probably where Bowsher, Hodges & Co. shipped bark and timber from 'Ash & down to Wilton' in 1795 and 1796. On the bank at Wyelea a small memorial stone is inscribed 'In Fond and Faithful Memory of Katie who was drowned in this River July

14 1902.' She was the daughter of the Smith-Woods of Merrivale Place in Ross.[62] The approach to Ross is under the Bridstow Bridge of 1960 built to connect Ross with the motorway system. It was designed by Scott Wilson Kirkpatrick and spans the Wye across two piers.[63] The bridge marks the start of the famous horse-shoe bend that encircles Ross. At the mouth of the Rudhall Brook was the site of the Mill Brook Roving of 1799 where the tow path crossed the river.[64]

Figure 14. Henry Dowell & Sons' boats for hire at Ross in 1905

Ross church spire, the Royal Hotel and the multi-coloured houses of the market town present a splendid scene from the horse-shoe bend of the Wye. Before boundary changes most of the Ross riverside was within Bridstow parish. It included Dock Meadow and the Dock lying beside premises that later blossomed into the Hope and Anchor Inn, which catered for the bargees, the rope makers, basket weavers, flax dressers and boat builders who were working in sheds and workshops. From the mid-18th century the more cultured Wye Tourists seeking the Picturesque would have hired their pleasure boats from the Dock, but today the only craft on the river are canoes which are launched from a recently-constructed site downstream from the pub.

At the beginning of the 20th century a private ferry and punts were for hire at the foot of Wye Street from the Dowell family who also ran the Hope and Anchor Inn, and it is understood that a ford existed from the Ross bank across to Wilton Castle at a site above the bridge.[65] Wilton castle was built in the 13th century on an earlier motte and bailey site to defend a well-used ford and ferry below the bridge, marked by the 14th-century ferry cross on the Wilton bank. The variable and seasonal levels of the Wye made this an unreliable crossing

for two boats conveying men, horses and cattle across the river. Due to the overloading of boats crossing the 'furious and dangerous river' several accidents occurred resulting in loss of life and limb to man and beast, which prompted the local citizens to petition for a bridge at the end of the 16th century.

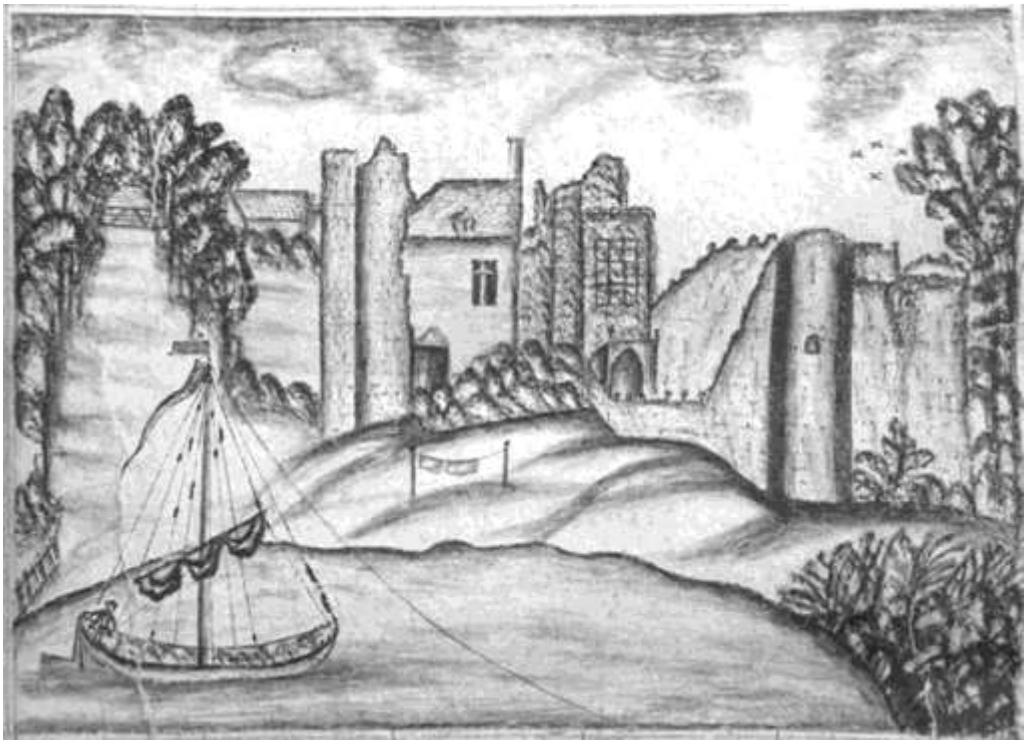

Figure 15. Wilton Castle and Wye barge in 1755[66]

After the passing of the Bridge Act of 1597 the handsome six arched structure built of red sandstone was completed by 1600 as a toll bridge. It was freed of tolls in 1612, and despite being damaged during the Civil War, being frequently repaired, and being widened at the commencement of the Second World War, the bridge has survived. It forms an attractive western approach into Ross, but since a refurbishment scheme of 1993 which included replacing the upstream timber parapet with steel, the bridge stands 'uncomfortably with one half rooted in the past and the other firmly in the present.'[67]

Figure 16. Wilton bridge in 1839 by Waudby. Note the barge with lowered mast

Little remains of the Withy Bed at Wilton but strips of riverside adjoining both sides of the bridge have been designated as a Village green, where there was a 'quay or wharf…for the shipping and landing of goods sent up and down the river.' Some remnants of the wharves are visible possibly dating from the 1730s when Luke Hughes was known to have been the 'first proprietor of any barge on the river at that place, established for trading purposes.'[68] Barges such as the Rival, the Wilton, the Thomas and the Flora and Farmer shipped loads of coal, bark, timber, hops, barley, lime, pantiles, wheat, cider, peas and many other commodities up and downstream from the warehouses at Wilton.[69]

After the passing of the River Wye Horse Towing Path Act in 1809, it was not until 1811 that:

> 'Barges first Hauled by Horses on the River Wye Tuesday the fifteenth day of January 1811, the first through Wilton bridge was Jonathan Cromptons Barge the Henry William Hoskyns Master with coal. Second J Cromptons Fanny Thomas Jones Mastr. With Two Horses each'[70]

At Wilton part of the tow path has been incorporated into the Village Green, and still seen on the coping stones of the bridge are 'deeply cut groove marks left by the once busy traffic, which used to ply up and down the [now] almost boatless river in days before railroads were thought of, when the Wye was the main outlet for the trade of the country and a navigable river provided with weirs. They were cut by the barge ropes.'[71] Opposite the lower wharf at Wilton

and immediately below the bridge was the Ross Wharf where various tradesmen and landowners had rights of the site in 1823.[72]

Figure 17. Barge ledger 1809-1812 (Tim Ward)

In 1324 there were 'two water mills upon the Wye', 'two fulling mills' and 'a fishery with a weir' at Wilton. They were recorded in 1697 as Lord Chandos' Weir and Mills when the stone weir was 'six feet high with a hedge upon part of it.'[73] The mills were rented for less than £10 a year and were situated half a mile below Wilton Bridge, and shortly after this date went out of use. Along this final sweep of the river in the LOWV project area is Weirend, a name that serves as a reminder of these former industries on the Wye.

Conclusions

The best way to understand and appreciate the Wye's past importance as a source of power, a navigable river, and a means of communication was to investigate and photograph its banks, remains of industrial sites, former wharfs and crossings from the river on the only craft now suitable, a canoe. It was then possible to experience the shoals and shallows, the dark depths, the meandering bends and the rushing rapids along the 25-mile course.

It appeared that the naturally-formed islands were in places used in association with the mills, weirs and fisheries, but more investigations need to be undertaken. The wharves were numerous and confirmed by studying the shipping and loading entries in the barge accounts. Although the crossings have been researched and documented over a number of years, many new ones have been discovered, especially those associated with the tow path. The survey, combined with recently-translated early documents, the studying of maps and plans, and the analysis of barge accounts by the LOWV team and its volunteers has led to a better understanding of the River Wye's past history.

LOCATION OF CROSSINGS AND INDUSTRIAL SITES

Oxford crossing	SO 5650 3660	Pennoxton crossing	SO 5575 2771
Even Pits warehouse	SO 5691 3641	Sellack Boat	SO 5645 2800
Holme Lacy Fishing site	-	Sellack ford	SO 5665 2785
Even Pits ferry	SO 5679 3635	Kings Caple wharf	SO 5665 2805
Holme Lacy Bridge	SO 5685 3645	Sellack Broken Bank wharf	SO 5725 2760
Lucksall wharf	SO 5681 3629	Poulstone crossing	SO 5755 2825
Brewery	SO 5720 3541	Strangford Railway bridge	SO 5775 2855
Shipley boat	SO 5665 3565	Strangford ford	SO 5850 2840
Shipley Nethouse/wharf	SO 5620 3540	Strangford wharf	SO 5860 2840
Holme Lacy wharf	SO 5652 3485	Fawley ford	SO 5895 2935
Lechmere bark house	SO 5720 3510	Fawley wharf	SO 5895 2935
Fownhope mill	SO 5745 3475	H Caple mill	SO 6034 2985
Holme Lacy mill & fishery	-	Caple ford	SO 6085 3000
Fownhope Mill ford	SO 5735 3510	Lords Meadow	SO 6150 3020
Fownhope ferry	SO 5745 3419	Foy gatehouse & wharf	SO 6105 2881
Fownhope Coal yard	SO 5750 3419	Ingestone ford	SO 6105 2870
Leabrink boat	SO 5761 3385	Foy bridge	SO 6040 2840
Hancock’s Roving	SO 5655 3281	Foy upper islands	SO 6070 2850
Hancock’s weir	SO 5645 3260	Foy lower islands	SO 6000 2840
Mancell’s ferry	SO 5765 3265	Cams Meadow	SO 5925 2789
Dunsford	SO 5875 3265	Backney Railway Bridge	SO 5835 2720
Capler wharfs	SO 5880 3260	Backney Common	SO 5845 2710
Capler Quarries	SO 5875 3260	B. Abbotts Withy bed	SO 5895 2700
Yearly’s boat	SO 5820 3140	Wilford	SO 5865 2680
Stag Roving	SO 5770 3090	Backney memorial cross	SO 5860 2670
Carey mill	SO 5765 3090	Bridstow quarries	SO 5835 2700
James ford	SO 5700 3075	Ashe wharf	SO 5822 2582
Tow Path Cottage	SO 5709 3065	Wyelea memorial stone	SO 5845 2555
Bibletts	SO 5556 3055	Bridstow bridge	SO 5920 2475
Hoarwithy upper timber yd	SO 5480 2996	Mill brook Roving	SO 5950 2455
Hoarwithy malthouses	SO 5465 2985	Ross Dock	SO 5965 2430
Hoarwithy bridge	SO 5490 2945	Wye Street boat	SO 5942 2410
Hoarwithy ferry	SO 5490 2930	Wilton Castle ford	SO 5910 2445
Hoarwithy wharf	SO 5490 2935	Wilton ferry	SO 5875 2425
Hoarwithy lower timber yd	SO 5475 2890	Wilton bridge	SO 5895 2435
Rocks common	SO 5470 2865	Wilton Withy bed	SO 5920 2432
Bark house	SO 5470 2870	Wilton upper wharf	SO 5898 2425
Red Rail ford	SO 5481 2835	Wilton lower wharf	SO 5885 2425
Red Rail wharfs	SO 5485 2835	Ross wharf	SO 5905 2425
Shepponhill wharf	SO 5555 2750	Weirend	SO 5780 2355

ACKNOWLEDGEMENTS

The River Wye Survey would not have been possible without the assistance of the Landscape Origins of the Wye Valley project and its volunteers who apart from translating documents and researching topics undertook many other tasks. Thanks to John Davies, Jon Hurley, Margot Miller and Rebecca Roseff who joined David Lovelace and the author on the survey of the Wye. The LOWV are grateful to Jan Scudamore, John Williams and Tim Ward for allowing the project to reproduce items from their archives, and for the helpful assistance from the Herefordshire Record Office, Hereford Cathedral Library, Hereford City Library and The National Archives. David Lovelace produced a photographic record of the journey, and the canoes were hired from the Lucksall Caravan and Camping Park. To confirm the sites between Sellack and Wilton, another journey was made in Spring 2007 with the additional help of Angela Williams, Daphne Rutter, Fenny Smith, John Haines and Ruth Lovelace.

ABBREVIATIONS

IPM	*Inquisitions Post Mortem*
LOWV	Landscape Origins of the Wye Valley
HCA	Hereford Cathedral Archive
HCL	Hereford City Library
Her. Jnl.	*Hereford Journal*
TWNFC	*Transactions of the Woolhope Naturalists' Field Club*

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In search of the Unicorn - in Leominster

by JOHN C. EISEL

There has been much confusion about the location of the Unicorn Inn in Leominster, and although its situation was well known to earlier historians, publications in recent years suggest (incorrectly) that it was in South Street.[1] In this paper the history of the Unicorn is explored, and how the confusion came about is explained.

The area around John Abel's Market Hall was the commercial centre of Leominster and no doubt very busy on market days. To cater for this trade, there were a number of inns in Broad Street, mostly clustered around the Market Hall. Two of the earliest, and the most important, at least in earlier times, were the Crown and the Unicorn. In 1863 the Revd. G. F. Townsend wrote of these:

> 'The Unicorn Inn at Leominster, is now a shop in the Broad Street, in the occupation of Mr. Josiah Newman. The other chief Inn, at this time was the Crown, which stood in Broad Street, nearly opposite to the Unicorn, and was approached by six steps, and had a narrow entrance of wainscot.' [2, 3]

Use of the census and other documentary and physical evidence, considered below, is enough to identify the Unicorn as what are now 14 and 14a Broad Street, property described by the Royal Commission on Historical Monuments in the following terms.

> 'Houses and shop, nos. 12 and 14, ...appear to have been built as one house in the 18th century and subsequently altered. At the back of No. 12 is a long range of 17th-century building, with exposed timber-framing in large squares; the E. part is of late 17th or early 18th-century date. E. of this addition is an early 18th-century stable-building with exposed timber-framing. In an addition to No. 14 is a reused 17th-century door with ornamental strap-hinges.'[4]

The documented history of the Unicorn Inn starts in the seventeenth century, so at a later date the main part of the inn, fronting onto Broad Street, must have been rebuilt.

In the middle of the seventeenth century the Unicorn would seem to have been pre-eminent as an inn in Leominster, as when King Charles visited Leominster on 5 September 1645, he had dinner at the Unicorn, before travelling on to Weobley, where he had his supper.[5] In the latter part of the seventeenth century this was no longer an inn, as a deed of 20 December 1694 states that it was a tenement formerly called the Unicorn in a street called the Broad Street.[6] But in not too many years it returned to being a public house and was mentioned in an oblique manner in a reference to the 1722 parliamentary election.

> 'The poll, which was taken in the area of the Town-hall, being closed, the Bailiff moved to adjourn to the Unicorn Inn, to cast up the books, and make the return. Sir Archer drew his sword and swore he would run him through, if he refused to make the return immediately upon the spot. A tumult ensued, much blood was spilled, and the returning

> officer would have doubtless expiated his partiality by his life, had he not fortunately found means to escape along the tops of the adjacent houses.'[7]

Up to 1770 there are only a few glimpses of publicans at the Unicorn. A deed of 24 March 1745 states that it was then in the possession of Thomas Higgins. Subsequently it was run by Mr. Thomas Downie, who owned part of the freehold. Downie gave up the Unicorn in 1769, and *Berrow's Worcester Journal* of 20 July 1769 announced that Nathaniel Millard, late of Bristol, had taken over from him. Meanwhile, in June 1769 Thomas Downie and Joseph Coates, both described as innholders, sold the Unicorn to John Bayley.[8] The lease of 7 June 1769 describes the Unicorn in Broad Street as being

> 'all of which premises are now or were late in the tenure or occupation of Thos. Downie and have been for many years past been used as an Inn and part thereof being a Bowling Green.'

However, it seems that Nathaniel Millard did not last long as tenant of the Unicorn, for an advertisement in *Berrow's Worcester Journal* of 7 December 1769 stated that the Unicorn, Leominster, was to be let, together with what was described as a 'neat Bowling Green.' There is no clue as to who took over at that time, but more is known of the tenant who took over in 1773. The *Hereford Journal* of 13 May 1773 advertised music to be played at the opening of an organ in the Unicorn Music Room, Leominster, tickets to which cost 2s. 6d. The installation of the organ may have been part of the fitting up of the Unicorn when Thomas Martin took over as tenant, which was announced in the *Hereford Journal* of 27 July 1773.[9]

> THOMAS MARTIN, from the *Royal Oak*
> Having taken and entered upon the UNICORN INN,
> in LEOMINSTER
> (which is very neatly fitted up for the reception of Company)
> TAKES this opportunity of returning his
> grateful acknowledgments to his friends and cus-
> tomers that frequented the Royal Oak and hopes for a
> continuance of their favours at the Unicorn; where such
> Gentlemen, Ladies, and others, that will please to favour
> him with their commands may depend on the best accom-
> modations, and most respectful behaviour.
> *** Neat Post-chaises, able horses, and careful drivers.
> ‡ § ‡ The Royal Oak is no more an Inn, being let to a
> private family.

It should be noted that the Royal Oak referred to here was adjacent to the Crown Inn, and not the present Royal Oak.[10]

It is clear that the Unicorn was still very prominent in the town, and sales by auction of timber and property regularly took place here. It was also a venue where the tolls of the Leominster Turnpike Trust were sometimes let by auction. As a prominent inn, there were occasional high profile visitors, and when the Hon. John Byng visited Leominster in 1784 he stayed at the Unicorn, which he said was 'civil and very cheap.'[11]

Figure 1. The Unicorn in Leominster today. (J. C. Eisel)

One of the assets of the pub was the bowling green, at that time the only one in Leominster, and the opening of which in May each year was regularly advertised by Thomas Martin. Not only bowling, but other events took place on the green. On 9 December 1784 it was reported:

> 'We hear from Leominster, that on Tuesday next, if the weather be fine, a large balloon, handsomely ornamented, to which a gallery will be attached containing some living animals, will be launched from the Bowling-green in that town.'

The result was not reported until a fortnight later:

> 'On Monday last, an air-balloon was launched from the Bowling-green, at Leominster. Its circumference was 34 feet and a half, and its height 18 feet and a half. It was computed to contain 65 hogsheads of air. On its first ascension its direction was towards Tenbury; but its course soon after changed towards Hereford. It has not been heard of since.'

This measure of capacity of the air balloon would mean more to Herefordians used to gauging liquid measure in this way! There was no mention of the 'living animals' and no report of the finding of the balloon appeared.

Another event was a much more brutal affair, reported on 28 September 1791:

> 'A pitched battle was fought on the Bowling-green, Leominster, on Monday last, between John Bedford, a noted bruiser, and Richard Godfrey, of Stoke Prior (a man of about fifty years of age), whom Bedford had provoked, by ill usage, to accept his challenge. The contest lasted an hour and a quarter! during which time Bedford shifted and fell without a blow. Godfrey fought with great courage and resolution, and never fell without being knocked down: he broke his right arm by a blow on Bedford's elbow, and fought five rounds afterwards, knocking down his adversary each round with his left hand; but did not make known his accident till he was declared the victor, amid the shouts of the spectators.'

It has been pointed out that Thomas Martin was only a tenant of the Unicorn, and on 4 January 1787 it was announced that the Unicorn was to be sold, and that it was let on a lease with about three years unexpired, at an annual rent of £35. Two years later, in January 1789 it was again advertised for sale by auction, a similar advertisement, but this time with about a year and a half of the lease unexpired. It was advertised to be sold by auction yet again in February 1791, the advertisement stating that an extensive business had been carried on at the Unicorn for many years. The advertisement was careful to state:

> 'The present tenant has notice to quit the Unicorn at Midsummer next; and for further particulars apply to William Bedford, the proprietor, in Leominster.
> Leominster, Feb. 19, 1791.'

William Bedford, a hop merchant, had taken over from John Bayley as proprietor. However, no sale took place, and in December 1791 it was announced that Thomas Martin had renewed his term at the Unicorn.

Thomas Martin's wife died on 19 December 1792,[12] and this may have caused him to neglect his business, as he became bankrupt in the following year. On 16 October 1793 it was announced that his household goods would be sold by auction at his late dwelling-house, also several thousand hop poles. At the same time the remaining part of the lease of a farm called Buthouse-Green, in the parish of Leominster, was to be sold by auction at the Unicorn, so it is evident that he was farming as well as keeping the Unicorn and that Buthouse-Green was his place of residence.

Meanwhile, on 5 June 1793 it was announced that Edward Ford had left the King's Arms and entered the Unicorn, where there was a billiard table and bowling green, promising 'His stabling will be extended, and rendered more commodious, early in the spring.'[13] In view of this announcement, it does not come as a surprise that on 20 August 1794 there was an advertisement announcing twice-weekly coaches from the Unicorn Inn, Leominster, to London, and a weekly coach from Kington to London.

Under Edward Ford's stewardship, the Unicorn continued to be a popular venue for auctions of property, and meetings of the proprietors of the Leominster Canal Navigation were also held there. It continued in the ownership of William Bedford, and whilst little survives in the way of Land Tax Returns for Leominster, the return for 1797 does survive, and records William Bedford as the owner of the Unicorn, with Edward Ford as tenant, paying 17s. 8d., with another 2s. 8d. for the stables and warehouse.

The end of the Unicorn came very suddenly. On 22 April 1801 Edward Ford advertised his thanks for the custom that he had received while at the Old Unicorn, and announced that he had taken the Crown Inn. No certain later reference to the running of the Unicorn in Broad Street has yet been found. It is unlikely that the building was left empty, but it is also unlikely that it continued as licensed premises. However, it continued in the ownership of William Bedford until 6 June 1806 when he signed articles of agreement with John Southall, merchant. In consideration of 5 guineas then paid, and a further sum of £1195 15s. to be paid to him by John Southall before 25 March next, Wm. Bedford agreed to convey the Unicorn Inn in Broad Street and all appurtenances to John Southall who was to take possession on 25 March 1807.

With the closure of the inn, the bowling green also closed, and in 1808 the Revd. Jonathan Williams lamented:

> 'There was, until of late years, a Bowling-green, where the subscribers spent their social evenings, during the summer months. It is now converted into a garden, as is the public inn, to which it is attached, into a private dwelling. No other has yet been substituted, which is the more to be regretted, as the practice of bowling affords to the sedentary a most salutary exercise, and is a reviving species of recreation to the studious, and to the man of business.'[14]

The death of Thomas Martin, for twenty years landlord of the Unicorn, was reported on 24 March 1813.

> 'On Monday last Mr. Thomas Martin, formerly landlord of the Unicorn Inn, in Leominster, dropped down dead whilst walking along the road near the place.'[15]

At that period the premises were occupied by John Southall, of the well-known Leominster family, who had bought the premises from William Bedford and who was a wine merchant by trade. John Southall died on 25 March 1825 and his will was proved on 6 May 1825, value £3,000.[16] He left his property to his brother-in-law John Pritchard and friend George Newman, in trust, specifying that his children be given first refusal. Under this will the trustees contracted with Samuel Southall for the absolute sale of properties for the sum of £1800.

> 'NOW - in consideration of that sum Grant to Samuel Southall messuage tenement and dwelling house with the shop, newly erected warehouse, buildings, stables, yards and also the green (formerly used as a Bowling Green) adjoining and occupied therewith on the

> East side of the Broad Street in the Borough of Leominster formerly known by the name of the Unicorn Inn in the occupation of John Southall decd. and now of Samuel Southall. To the use of Samuel Southall.'[17]

Directories show that the premises were subsequently occupied by Edward Pritchard Southall, also a wine and spirit merchant, although when Townsend wrote in 1863 they had been taken over by Josiah Newman, a grocer and tea dealer. Newman, like the Southall family, was a member of the Society of Friends in Leominster.

To complete the story of the Unicorn in Broad Street, the fate of the bowling green has to be considered. This was to the rear (east) of the Unicorn, and it is clearly identifiable on Galliers' map of 1825.[18] Indeed, it is still identifiable on subsequent large-scale OS maps and is still in existence with most of its walls intact. In the 1950s a house was built in the north-west corner of the green, called, appropriately, The Garden House, occupying what is one of the most peaceful spots in Leominster.

THE MIGRATION OF THE UNICORN

The blame about the confusion of names and hence location, quoted above, must be laid squarely at the door of Edward Ford. As stated above, he transferred his business from the Unicorn to the Crown in April 1801. At that time the Crown had fallen on hard times. From 1775 until he became bankrupt in the 1790s it was held by William Morris and he was still in possession in October 1795 when the Crown was advertised as being to let. This proved hard to do, and it was not until 23 March 1796 that it was announced that William Williams, ostler at the Crown Inn, had taken over. However, he did not prosper, and on 19 September 1798 the Crown was again advertised as being to let, with or without seven acres of meadow land near to the borough. Clearly little was happening at the Crown, as until Edward Ford took over early in 1801, the only mentions of the Crown in the *Hereford Journal* during William Williams's tenure being for three different sales by auction, and nothing else.

With the coming of Edward Ford all that changed, and the Crown again became a popular venue for sales by auction. Moreover, an advertisement in July 1801 for a general meeting of the proprietors of the Leominster Canal stated that it was to be held at the Crown and Unicorn. From this it is clear that Edward Ford had also taken the name and prestige of the Unicorn with him, and over the next three years about a third of the advertisements for sales by auction that took place here refer to it as the Crown and Unicorn. On 31 October 1804 Thomas Bedford advertised that he had taken over the Crown Inn, and it is significant that after that the name Crown and Unicorn was not used again.[19]

While no announcement was made in the *Hereford Journal*, other evidence shows that when Thomas Bedford took over the Crown, Edward Ford moved to the present Royal Oak, which was then newly established. The first reference to this inn is in a poll list of 1802 which records that while Edward Ford sen. was at the Crown, Edward Ford jun. was at the Oak.[20] In 1803 and 1804 there was little happening at the Royal Oak, but with the arrival of Edward Ford sen. the number of sales by auction there increased dramatically. Moreover, an advertisement of 5 June 1805 gives details of a farm to be sold by auction 'At the house of Edward Ford, the Oak and Unicorn Inn, Leominster…' From then on the official name seems to have been the Royal Oak and Unicorn, although it was sometimes referred to as the Royal Oak, the Oak, the Oak and Unicorn (even the Unicorn and Oak!), or, on a couple of occasions in 1807 and 1808, the Unicorn.

Figure 2. The building on the site of the former Crown houses the library on the first floor, satisfying a thirst after knowledge. (J. C. Eisel)

Figure 3. The Royal Oak, Leominster. (R. Shoesmith)

On 13 January 1808 Edward Ford announced that he was about to decline business at the Oak and Unicorn in favour of William Howells jun. of Hereford. This time, however, the public house continued to be called the Royal Oak and Unicorn, probably because Edward Ford did not continue in the licensed trade. Early in 1843 John Jackson took over from Thomas Corfield, the then owner, and an advertisement by Jackson in the *Hereford Times* of 14 January 1843 for a Farmers' and Tradesmen's Dinner to be held at his house refers to it as the Royal Oak and Unicorn. No later reference has so far been found and the name must have reverted to the Royal Oak at about this time.[21]

It seems that Edward Ford sen. entered into farming after he left the Royal Oak and Unicorn, as the only person of that name recorded in the 1812 poll list was stated to be a farmer.[22] His name also appeared in a poll list of 1818, where he was described as 'Gentleman'[23] but another poll List of 1820 states that Edward Ford sen. was then a yeoman.[24] His death was reported in the *Hereford Journal* on 26 October 1825.

> 'On Monday se'nnight [17 October] died, at Leominster, Mr. E. Ford, formerly of the Oak and Unicorn Inn, in that town. He was an affectionate husband, kind parent, and a strictly honest man. His loss is deeply regretted by all who knew him.'

Leominster burial register records that he was buried on 22 October 1825, aged 76. However, his will was not proved until 4 July 1828, and then he left property valued at less than £20.[25] This leads to a suspicion that he was not successful in his farming enterprise and may have become bankrupt. However, nothing has so far been traced either in the *Hereford Journal* or in the *London Gazette*.

As to what happened to Edward Ford jun. when his father took over the Royal Oak, there is no information. It may be that he ran it in partnership with his father until 1808 when William Howells jun. took over. His name does not occur in the 1812 poll list,[26] but the 1818 poll list lists Edward Ford jun. as a victualler, place unspecified.[27] No doubt this was at the Harp Inn, Poplands, where he was recorded as being in a poll list of 1820.[28] This inn, and Edward Ford jun., occur in the recollections of 'an old inhabitant of Leominster' which appeared in the *Leominster News* of 14 October 1898, where he refers to

> '… the Harp, where Mr. J. Davis now resides, at the Poplands. The latter was an important house, and was kept by a Mr. Ford, one of the Sheriff's trumpeters.'

Edward Ford was still there when he died on 2 September 1835, and the inn was carried on by his widow Harriet.[29]

ACKNOWLEDGEMENTS

Most of the research for this article has been carried out in the Reference Library in Hereford, and I extend my grateful thanks to the staff there for their unfailing support under the difficult circumstances in which they work; to the staff in the Record Office where most of the other primary material used is located; to Jean Dobson for information on probate records and making helpful suggestions and to Mr. Dino Beaumont for allowing access to the Garden House in Leominster.

NOTES AND REFERENCES

[1] Ann K. Malpas, *The Lion Hotel and Ballroom*, (1997), p.14. R. Shoesmith and R. Barrett, *The Pubs of Kington, Leominster, and North-West Herefordshire*, (2000), 204-5, p.232.
[2] *The Town and Borough of Leominster*, (1863), p.105.
[3] The Crown was on the corner of the site that was developed as a town hall and market hall in the 1850s. Ann & Tony Malpas and Sheila & Arthur Davis, *The Story of the Buttercross*, (1993), p.9.
[4] *An Inventory of the Historical Monuments in Herefordshire*. Vol. III-North-West, (1934), p.119.
[5] *Iter Carolinum*, quoted in Revd. G.F. Townsend, *The Town and Borough of Leominster*, (1863), p.105. However, the Revd. Jonathan Williams, in *The Leominster Guide*, (1808), pp.100-1, referring to the visit of Charles I after he had raised the siege of Hereford, states:
'Here this unfortunate monarch refreshed his wearied soldiers, and recruited his own spirits, exhausted by a long and fatiguing march, reposing the first night under the roof of that trusty and loyal subject, Thomas Harris, Gent. in his newly built house in Broad-street, well known in a subsequent period by the name of the Unicorn inn;...'
There is no evidence that Charles I ever stayed overnight at Leominster, and in this, as other statements about the peregrinations of Charles I, Williams is inaccurate.
[6] Unless otherwise stated, abstracts of deeds relating to the Unicorn are taken from a note book of the late Norman Reeves in Herefordshire Record Office, – henceforth HRO - BN 30/15.
[7] Quoted by Norman Reeves, *The Town in the Marches*, (1971), p.144, where it was stated that the source was 'Jonathan Williams'. This is presumably the Revd. Jonathan Williams, *The Leominster Guide*, (1808), but I have been unable to trace the quotation.
[8] At this period Joseph Coates was the licensee of the Three Horse Shoes, Corn Square. See, for instance, *Hereford Journal* – henceforth *HJ* - 6 January 1773. He died in 1777. *HJ* 16 October 1777.
[9] All advertisements quoted are taken from the *Hereford Journal*, unless otherwise stated.
[10] Info. ex Ann Malpas. See also HRO, AA42/46&47, which refer to the site of the former Royal Oak.
[11] The Hon. John Byng, *Diaries*, Vol. 1, (1934), p.129.
[12] *HJ* 26 December 1792.
[13] Edward Ford's move from the King's Arms to the Unicorn is slightly surprising, as at this period the King's Arms, in Corn Street, was the leading inn and had a large assembly room where the Leominster Assembly was held in the winter months. There was no such room at the Unicorn, only the music room. Access to the stables behind the Unicorn was by means of a driving way from Church Street, still in existence.
[14] Revd. Jonathan Williams, *The Leominster Guide*, (1808), pp.209-10.
[15] This report implies that Thomas Martin died on 15 March 1813, but the burial register states that he was buried on 4 March at the age of 76. HRO, Transcript of Leominster Burial register 1813-39. Perhaps the burial register was written up later, and a mistake was made in the date.
[16] HRO, Probate Records. Microfilm 102.
[17] HRO, B79/7&8.
[18] Now in Leominster museum, it is stated on the map to have been surveyed in 1825. While no accompanying schedule survives, its purpose was clearly to identify various pieces of land in the vicinity of the town, as these are the only parts that are numbered. Recently it has been suggested that this map is the one that was commissioned by the borough on 26 September 1832, to be surveyed at a cost of £150. See Malpas, *The Lion Hotel and Ballroom*, (1997), p.30, and Joe & Caroline Hillaby, *Leominster Minster, Priory and Borough c.660-1539*, (2006), p.8. However, this cannot be so, as the 1832 map was intended as a valuation of all the rateable property within the borough and town wards, and for this each property needs to be identified and listed in a schedule: none of the properties in the 1825 map is numbered or identified in any way.
[19] Thomas Bedford had an interesting career in the licensed trade in Leominster and elsewhere. For a number of years he was a waiter at the Unicorn Inn, Leominster, and then at the Talbot Inn in Shrewsbury. In July 1795 he took over the King's Arms in Leominster, in succession to Edward Ford, and then in 1804 moved to the Crown Inn. In 1809 he bought the King's Arms (*HJ* 25 January 1809), and was there until 1836, when it was sold (*HJ* 16 March 1836). The death of Thomas Bedford was reported in the *Hereford Journal* of 23 March 1840. 'On the 9th instant died, at Leominster, in his 72d year, Mr. Thomas Bedford, for many years the respectable landlord of the King's Arms Inn. He had also been parish Clerk for a period of thirty years, the duties of which he discharged much to the satisfaction of the parishioners.'
[20] No record of any earlier public house on the site has so far been found. Supporting evidence for this date of establishment is found when the Royal Oak was advertised as being to let in the *Hereford Journal* of 27 October 1852,

when it was stated that it had been established for upwards of half a century – bringing the date neatly back to just before 1802.

[21] Thomas Corfield was given as being at the Royal Oak and Unicorn in *Pigott's Directory* of 1844, but, like many directories, this was out-of-date when it was published. Similarly, this directory gives John Jackson as being at the Waterloo Hotel. This had been opened by James Morris in 1834 (*HJ* 7 May 1834) and after he had financial troubles in 1838 (*HJ* 24 October 1838) it was taken over by John Jackson (*HJ* 23 January 1839). In 1843 Jackson moved to the Royal Oak and the sale of his furniture at the Waterloo Hotel was advertised in the *Hereford Times* of 25 March 1843. There are no later references to the Waterloo being used as licensed premises, and it must be assumed that it was closed at this time. The building was subsequently used by Edward Bannister, a wool merchant, who died in February 1851 (*HJ* 26 February 1851). His business was carried on by his widow Sarah, and *Lascelles' Directory* of 1851 records Sarah Bannister, woolstapler, woollen manufacturer and dyer, at Waterloo House, Upper Marsh. Clearly this directory was up-to-date, unlike the directory of 1844.

[22] Hereford Reference Library, – henceforth HRL - *Herefordshire Tracts*, Vol. 15.

[23] HRL, *Herefordshire Tracts* Vol. 8.

[24] *Loc. cit*. in Note 22.

[25] HRO, Probate Records, Microfilm 103.

[26] *Loc. cit*. in Note 22.

[27] *Loc. cit*. in Note 23.

[28] *Loc. cit*. in Note 22.

[29] Edward Ford was buried on 4 September 1835, but his will was not proved until 25 March 1836. The total was less than £200. HRO, Probate Records, Microfilm 107.

Villa Chachebren or New Court, Marstow: a Monmouth Priory estate

By ROSALIND LOWE

More than nine hundred years ago, 'Villa Chachebren' was granted to Monmouth Priory by the lord of Monmouth, William fitzBaderon, his wife Hadwise and their daughters Iveta and Advenia. This article seeks to prove from field-name evidence that 'Chachebren' can be identified as New Court, now in the parish of Marstow. This identification confirms that Old Mill in Goodrich was the site of the mill of 'Hulla' or 'Castellum Goderich' identified in the Domesday survey.

The farmhouse called 'New Court' now lies within the civil and ecclesiastical parish of Marstow, but when it was offered for sale in 1884 the house and much of the farmland surrounding it was extra-parochial.[1] Accompanying the sale particulars is the first detailed map known to be drawn of the estate, and the field-names given were used by Geoff Gwatkin to complete the tithe map of Marstow as published by the Club.

The position of New Court and the surrounding villages is shown in Figure 1. The extra-parochial part of the estate is surrounded by a loop of the river Garron, and protected from encroachment on that side. Across the neck of this tongue of land runs an ancient road from Goodrich, which crosses the Garron by the humped 'pack-horse bridge', originally narrow but now widened to take farm traffic.[2] After passing the entrance to New Court the road continues westwards, becoming a deeply-sunken track which drops down to the Garron again.[3] It crosses the river by a modern footbridge overlying traces of an old stone bridge, and continues past the stone wall of the graveyard of Marstow old church.[4] The church was abandoned in the mid-19th century because of persistent flooding.[5]

The New Court estate was for hundreds of years in the hands of the Gwillym family of Old Court, Whitchurch. The Gwillyms were substantial landowners in the surrounding parishes, though by 1840 the estates had devolved upon Elizabeth Posthuma Simcoe, née Gwillym. Her father died before she was born and her mother the day after, but she survived to lead an adventurous life with her husband, the first Lieutenant Governor of Upper Canada, later settling with him in Devon.[6]

The wealth of the Gwillyms of Old Court derived in no small measure from the marriage *c*.1598 of Thomas Gwillym to Barbara, one of the two daughters and heiresses of Walter Powell.[7] The Powells had connections with many of the gentry families in south Herefordshire and Monmouthshire, including the Herberts and Scudamores. Barbara's inheritance did not pass to her without trouble, resulting in civil disturbance and a farcical conspiracy. It is an entertaining story but will not be explored here.[8]

Walter Powell died soon after 1580 while his daughters Barbara and Bridget were small. He had married a daughter of Sir Thomas Herbert of Wonastow,[9] and was one of the ten sons of Thomas Powell (or ap Howell) whose wife was Elizabeth Probert of Trellech. It is this Thomas ap Howell who has the first recorded connection with *Chachebren*. Thomas was the son of Robert ap Hoell, who died *c*.1534 and who officiated at the courts of the manor of

Goodrich in the first quarter of the 16th century.[10] This was an important post as the manorial jurisdiction extended over most of Whitchurch, Ganarew and parts of Llangarren and Llanrothal, as well as Goodrich itself. Almost certainly, 'Old Court' in Whitchurch, the ancestral home of the Powells, is so called because of Robert's manorial activities.

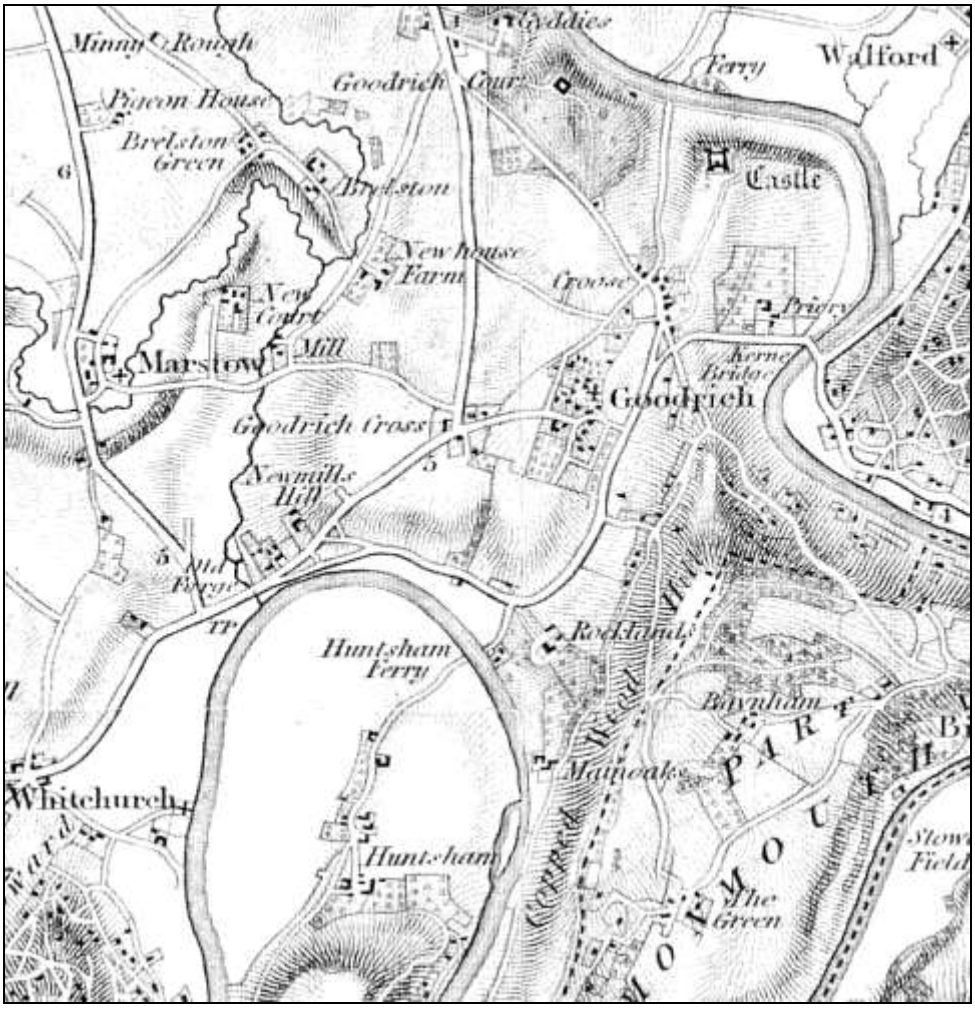

Figure 1. Part of a map of 1832 showing New Court, just to the north of the word 'Marstow.' Old Court in Whitchurch lies just below the 'tch' in Whitchurch

The main farmhouse at New Court has a late-17th-century well-staircase, which probably dates its building. The house may have been given the appellation 'New' to distinguish it from the house in Whitchurch. Certainly 'Old Court' is called 'Whitchurch Cowrte' in a deed of 1643 when Thomas Gwillym's son Rudhall was living there.[11] The first description found of New Court and its estate is in a marriage settlement of 1690.[12] The relevant fields are:

> 'The Plash field, the two Parks, the Dewhouse Close, The Cakebraine next Marstow, the Cakebraine next Old Mill with the barne outhouses and buildings thereupon erected and being, the winter leasow, the long meadow, Brelstone meadow, the homme att the old mill bridge And also all those 5 other parcells of land...called the Frahers meadow and little meadow...'[13]

The significant name is 'Cakebraine', which appears as 'Cae Brain' in the key to the 1884 map of New Court (Fig. 2). This is the link back to the Monmouth Priory estate of *Chachebren*.

The foundation and endowment of Monmouth Priory

The lordship of Monmouth was granted *c.*1075 to Gwethenoc or Withenoc, a pious Breton with strong family connections to the Benedictine abbey of St. Florent at Saumur. At some time between 1075 and 1083 he founded at Monmouth a priory dedicated to St. Mary, and granted it to St. Florent. The priory church was not dedicated until 1101 or 1102, the monks in the meantime using the church of St. Cadoc near the castle. The dedication ceremony was attended by Withenoc, the Abbots of Saumur and Gloucester and many other notables. Also present was Withenoc's nephew William, son of his brother Baderon. The dedication charter is signed with three large crosses made by William fitzBaderon's wife Hahenisa (or Hadwise) and her daughters Advenia and Iventa.[14]

Withenoc seems to have retired from secular life and his holdings soon passed to fitzBaderon: it is he who appears as a considerable landowner in the Domesday survey.[15] A number of grants to the priory are recorded in the cartulary of St. Florent, and the entries have been printed in the original form (by Marchegay) and in translation (by Round).[16] The relevant part of the entry concerning *Chachebren* runs as printed:

> '*Dedit preterea supradictus Willelmus, filius Baderonis, terram Chachebren, que est justa* [iuxta] *molendium Castelli Godrici, Deo sanctoque Florentio beatissimeque virgini Mariæ de Monemuda et monachis ejus....Hujus igitur terre donationem concesserunt domina Haduis, uxor domini Willelmi, et Iveta et Adventa filiæ eorum.*'[17]

The version by Round is:

> '[Notification that] William son of Baderon gave to St. Florent, to St. Mary, Monmouth [*Monemuda*] and to the monks the land of "Chachebren," which is near the mill of Goodrich castle [*castello Godric*]; and that this gift was made...in the presence of the abbot of St. Florent who had come to Monmouth. Hadwise, wife of William, with Iveta and Advenia their daughters confirmed the gift...'[18]

There is some uncertainty about the date of this charter. In a footnote Round quotes the charter as saying it was '*tercia die ante solemnitatem beatissimi patris nostri qui colitur in quadragesima*' or March 18, in 1101. Marchegay says '*vers* 1090.' Neither give their evidence for these dates. The entry against '*Hulla*' in the 'Herefordshire Domesday' identifies it definitively as 'Castellum Goderich' *i.e.* Goodrich.[19] The *manor* of Goodrich was known for a long time as 'Castle Godriche' or 'Goderichescastle' or variations thereof.[20]

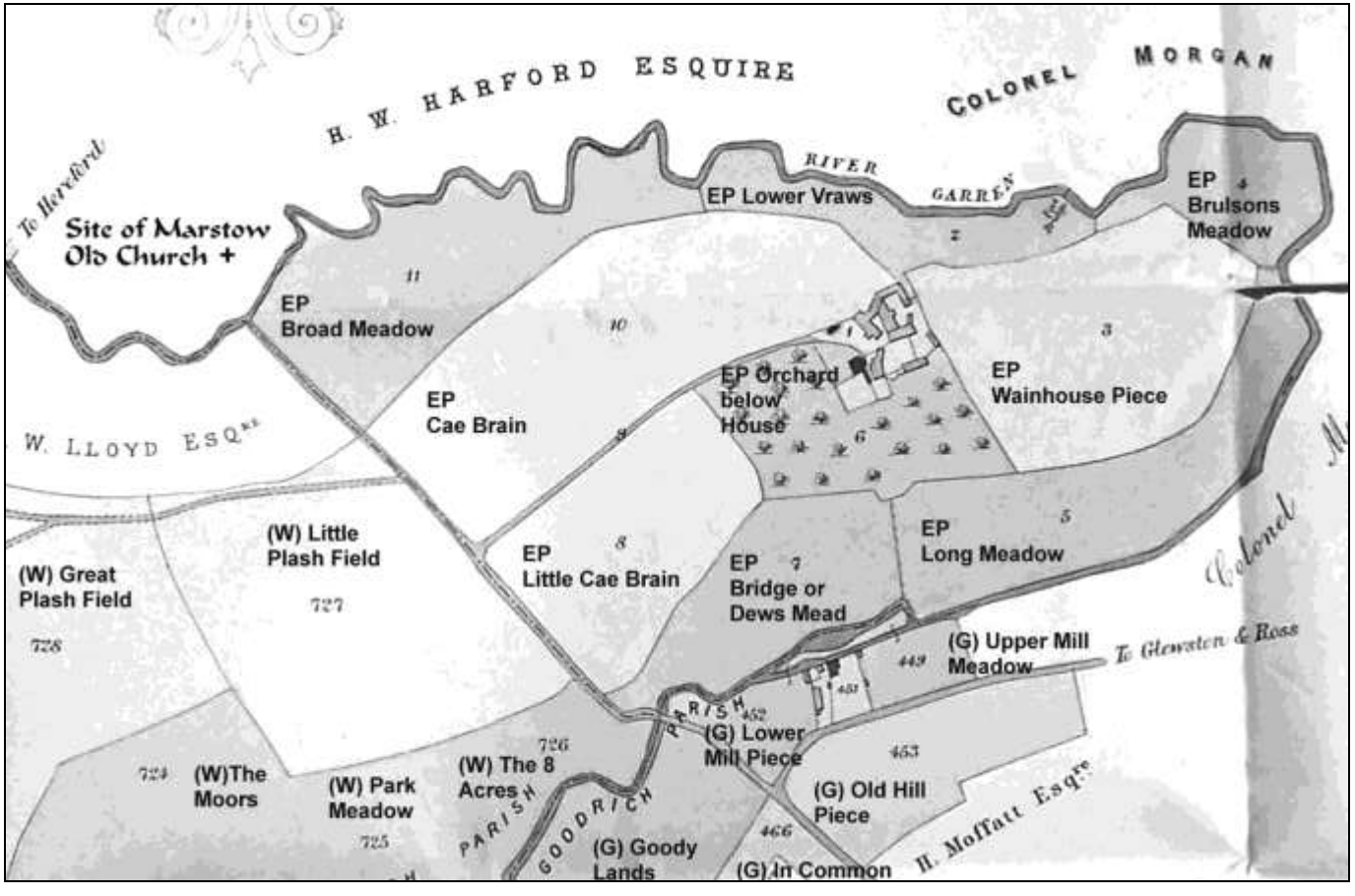

Figure 2. New Court, map from 1884 Sale Particulars, with added field-names and locations in bold type[21]

Interestingly, in The National Archives there is a slightly different version of the same grant, which adds some information to the St. Florent cartulary entry.[22] This reads:

> '*Notum sit omnibus hominibus tam futuris quam presentibus quod Willelmus Baderonis filius et domina Hahenisa uxor eius et filie eius scilicet Iveta et Advenia concesserunt dono deo et sancte Marie Virgini et sancto Florencio et monachis eiusdem patroni terram unius quadruce de terra illa quod Rex Willelmus Hahenise in maritagio dederat et ecclesiam de castello Godericii ac totam decimacionem suam scilicet propriarum quadrucarum et mellis et molendini et* [2 words illegible]. *Insuper Willelmus et uxor eius Hahenisa et filie eius Iveta et Advenia supradictis monachis terram de villa de Cacchebren in elemosinam et perpetue concesserunt. Hec igitur dona sue concessionis super altare posuerunt manibus suis Willelmus et sponsa eius Hahensa cum filiabus eorum Iveta et Advenia* [3 words illegible]...'

> 'Be it know to all men both to come and now that William son of Baderon and the lady Hahenise [or Hahevise] his wife and his daughters, that is Iveta and Advenia, granted to the lord God and St. Mary the Virgin and St. Florent and to the monks of the same patronage, the land of one plough [i.e. one ploughland] of that land which King William gave to Hahenise in marriage, and the church of Goderic's castle and all their tithe, that is to say of their own ploughs and of honey and of the mill and of [lost] In addition William and his wife Hahenise and his daughters Iveta and Advenia gave to the aforesaid monks the vill of Cacchebren in alms and for ever. William and his spouse Hahenise and their daughters Iveta and Advenia placed this grant and gift on the altar with their own hands'

It seems clear that Hadwise was important enough to donate land given to her by William I, as well as that of *Villa Chachebren*. The other significant piece of information in Marchegay's version is that the land is described as '*terram Chachebren, que est justa* [iuxta] *molendium Castelli Godrici*' i.e. next to the mill of [the manor] of Goodrich.

'Old Mill', Goodrich

The manor of Goodrich had a fishery in the Domesday survey, but no mention is made there of a mill.[23] The Garron is a more suitable river for siting a corn mill than the Wye, and the mill shown in Figure 1 on the corner of the road leading to New Court was already known as 'Old Mill' by 1506.[24]

William le Mareschal, who was granted the manor of Goodrich in 1204, granted to the monks of St. Peter's Abbey, Gloucester, 'in pure alms the mill and suit of mill of his whole vill of Godric's Castle...' in the time of Henry Folet.[25] The mill appears several times in the *Inquisitions post mortem* of the lords of Goodrich, being worth 13s. 4d. in 1307,[26] but by 1372 it was worth only 5s. because 'it is decayed.'[27] The work of 'Robert Taylor de olde mylle' in mentioned in the Goodrich manor court roll of 1506, though he may have been a tenant.[28]

The mill and lands eventually came into the hands of the Powell family, and the disputed inheritance of it was one of the major causes of the later disturbances. It is not known when the mill was acquired by the family, but according to one deponent at that time (*c*.1603) the family had owned the property for two hundred years since the time of Robert ap Hoell.[29] It remained in the hands of their descendants until sold after 1884.

It seems certain therefore that the 'Little Cae Brian' shown on the 1884 map is part or all of the 'Cakebraine next Old Mill' in New Court in the 1690 deed mentioned earlier. The 'Cakebraine next Marstow' is 'Cae Brain.'

'Cakebraine' and Monmouth Priory

There are scant records of Cakebraine before the Dissolution, but unusually there is a record of who leased the land in 1200. Abraham (de) Kakebrein entered into a dispute with the prior of Monmouth, whom he accused of preferring the claims of Worno [*sic*] the son of James to the lease of the land.[30] This tells us incidentally that from this early date 'Cakebrain' was the pronunciation of the name.[31]

The transfer of the estate to the Powell or Gwillym families has not been traced so far. There are few Monmouth Priory records before 1536. Some court rolls of the prior's court exist for the 14th century, 1439–1456 and 1509/10, but Cakebraine does not appear to be mentioned by name.[32] The possessions and rentals of Monmouth Priory were detailed for some years in succession after it was dissolved,[33] but there is no obvious mention of the rentals of the land itself. However, there is a record of the grant of:

> '...for 17s. of the ferm of all the tithes of grain and hay of all meadow with their appurtenances in Cakebrayne and also a portion of the tithes of Generowe thus demised to Thomas Appoell of Whitchurch and Elizabeth his wife by indenture under the conventual seal of Monmouth aforesaid dated 3 January in the 26th year of Henry VIII, to have and to hold the aforesaid tithes with appurtenances to the aforesaid Thomas, Elizabeth, their heirs and assigns, from the day of the making of the aforesaid indenture for the term of 99 years immediately following. Paying thence each year to the aforesaid prior and convent and their successors 17s. at the feasts of the annunciation of Our Lady and of St. Michael the Archangel, equally [i.e. in two equal payments], as in the same indenture is more fully contained, in this year the first and a half of their term.'[34]

This was granted in January 1533/4, but in 1536 these tithes were granted to the bishop of Hereford who farmed them out again. It seems feasible that in 1533 Thomas Appoell already owned Cakebraine itself, and as often happened, bought the farm of the tithes to guarantee a stable outgoing. Certainly in 1636 Rudhall Gwillym, Thomas's great-grandson, leased the same tithes from the bishop of Hereford, probably at the end of another 99-year lease.[35]

It is possible that Cakebraine was acquired when Richard of Evesham was prior of Monmouth. He was instituted in 1524, but was deposed by the bishop of Hereford on March 16, 1634/5, on the grounds of improper management of the priory's assets, including alienation of land.[36]

There is a mention of Cakebraine in Dugdale's *Monasticon Anglicanum.* In the *Taxatio Ecclestiastica* of Pope Nicholas IV in 1291, among the temporalities of Monmouth Priory, was a rent of 10s. at 'Martinstowe.'[37] This is possibly Cakebraine as no other priory estates were known here. Dugdale also notes from the Augmentation records, dated 28 Henry VIII or 1536/7, that among the temporalities of the priory was a rental of the tithes of 'Cakebrayne' for 17s. though Ganarew was not mentioned. This is in fact a summary of the detailed rentals of the priory noted above.

Conclusion

There does not seem to be any doubt that the '*Chachebren*' granted to Monmouth Priory was part or all of the extra-parochial land at New Court, Marstow. It has remained as a estate under a single ownership since it was granted more than 900 years ago, albeit with some land added to the original grant.

The land which came into the hands of William fitzBaderon and his wife may already have had ecclesiastical connections. It lies very close to Marstow old church which has been suggested as an early Welsh church site, and could have formed part of its land. A grant of land *c.*874 to '*Penncreic in Ercig super Gui*' is recorded (and considered genuine) in the Llandaff charters. *Penncreic* or Pencraig lies within two km. of Cakebraine.[38]

Study of the complicated boundaries in the area around New Court between the separated parts of the manors of Goodrich and Wilton-on-Wye (very similar to those between the parishes of Goodrich and Marstow) may shed some light on pre-Conquest Archenfield, and possibly on Cakebraine.

ACKNOWLEDGEMENTS

I would like to thank Janet Cooper for her patient help in transcription and translation of the early Monmouth Priory documents, and Sue Hubbard for similar help concerning disputes between the priory and the lords of Goodrich. Thanks also to Herefordshire Archive Service for permission to print the map of New Court in 1884.

REFERENCES

[1] Sale particulars, Herefordshire Record Office (henceforward HRO), M5/26/15. Herefordshire Sites & Monuments Record (HSM) 34505, SO 5583 1950.
[2] HSM 31810, SO 5591 1915.
[3] In the deeply sunken section another track branches to the south, possibly joining the vestigial road shown heading north across the same field. Within living memory, there used to be a bridge (over the old course of the Garron which was originally the parish boundary) situated in this meadow which was isolated when the Garron was diverted in the 16th century. See *Herefordshire Archaeological News* 2005 (HAN 76) pp.37-8.
[4] HSM 6399, SO 5537 1915.
[5] A low-lying site near water is typical of many of the local early churches, such as Whitchurch and Dixton.
[6] Because of this, the Devon Record Office at Exeter holds the Simcoe collection of deeds, many of which concern the Gwillym holdings. Records from this collection will be referenced as 'Simcoe.' Elizabeth Posthuma Simcoe's adventures are described by Ann Gwillim Parker in *The extraordinary lives of Elizabeth Posthuma Gwillim & John Graves Simcoe* which was published privately in 2003 and sold at the church in Whitchurch. The website www.archives.gov.on.ca gives a potted history of the Simcoes, and samples of Elizabeth's water-colours which are unique records of the early settlement of Ontario.
[7] The Powell family name illustrates well the transformation of Welsh patronymics to the English style. It had become 'Powell' by the end of the 16th century, but at the beginning was 'ap Hoell', with many variants between.
[8] The story of the Powell inheritance and the consequent events will be covered in another paper, which will also correct a number of errors in published genealogies, and substantiate relationships given here.
[9] He may have married two daughters of Sir Thomas Herbert. This was usually forbidden by canon law, but could be allowed if the first marriage was childless, in which case the marriage could have been presumed to have been unconsummated. Barbara and her sister were born after 15 years of Walter's first supposed marriage to Blanche Herbert *c.*1565, as evidenced by a deed in the Simcoe collection. The girls were definitely daughters of Walter and a sister of Edmund Herbert, who gave evidence during the inheritance dispute. Bridget died without issue, and so any entailed property would have returned to the Gwillyms at that time. However, she had already sold land on the east of the river Garron, opposite New Court before 1617, *vide* NLW Cwrtmawr 1489.
[10] HRO, G38/1/3 Goodrich Court Rolls 1523-4. Robert ap Ho(w)ell was also a commissioner for the collection of the 1512 subsidy tax payments and a collector for 1514, both for Wormelow. M. A. Faraday, *Herefordshire Taxes in the Reign of Henry VIII*, p.35. The assessments for the places within Goodrich manor for these dates are missing from The National Archives. Robert was also a commissioner for the 1536 valuation of the diocese of Llandaff, along with several close relatives.
[11] Simcoe, 1038 M/T/7/61.
[12] HRO, E71/1.
[13] 'Frahers' may also be a significant field-name.

[14] For more details of Monmouth Priory, see Keith Kissack, *The Lordship, Parish and Borough of Monmouth* (1996) and *Monmouth Priory* (2002). There may be some interesting conclusions to be drawn from the combination of the Domesday information and the endowment charters. It is possible that Hadwise was the daughter of Godric Mapson (suggested by Bruce Copleston Crow) which would explain why she and her daughters had their consent to various endowments recorded explicitly.
[15] *Domesday Book Vol. 17 Herefordshire* (Phillimore, 1983). See [1].48, 15 and notes on these.
[16] A number of Monmouth Priory charters were preserved in the abbey of St. Florent, and have been published in Latin by Paul Marchegay, *Chartes Anciennes du Prieurié de Monmouth en Angleterre* (1879), and in an English translation by J.H. Round, *Calendar of Documents preserved in France, illustrative of the history of Great Britain and Ireland* (1899). The charters as printed in these two books do not always agree - both must be read. Kissack reproduces the foundation charter in *Monmouth Priory*, Plate 2.
[17] Marchegay, p.19.
[18] Round, p.408.
[19] V. H. Galbraith and the late James Tait (editors), *Herefordshire Domesday, circa 1160-1170: reproduced by collotype from facsimile photographs of Balliol College manuscript 350* (1950), p.20.
[20] Certainly until 1396, from various *Inquisitions* and the foundation charter of Flanesford Priory.
[21] Reproduced by kind permission of Herefordshire Archive Service. See note 1.
[22] The National Archives (henceforward TNA), E 210/4437. I am extremely grateful to Dr. Janet Cooper for her transcription and translation of this deed. She comments that this appears to be in a 13th-century hand.
[23] The fishery is almost certainly 'Old Weare'just upstream from Mainoaks, already 'old' in 1454. HRO, O68/II/31.
[24] HSM 5721, SO 5599 1938. Goodrich manor court rolls, HRO, G38 I 1 f.3.
[25] W. Dugdale, *Monasticon Anglicanum*, Vol. 1, p.546; John Hobson Matthews, *Collections towards..History of the County of Hereford, Hundred of Wormelow*, p.78. See also TWNFC (1917), p.266.
[26] Matthews, p.101.
[27] Matthews, p.105.
[28] HRO, G38/I/1 f.3.
[29] TNA, STAC/8/18/5 f.16. 'Richard Powell the younger then beinge an infant under the age of sixteen years who clayme the premisses by lawefull descent from his ancestors which continued in the name and blood of the Powells for the space of two hundred years past and more as lawfull owners of the said premisses by ancient entails made to the heirs males of the body of Thomas Powell and his Father the ancestors of the defendant Richard Powell the younger...'
[30] *Curia Regis Rolls*, 1 John, p.156; *Rotuli Curiæ Regis*, Vol. 2, p.264. Thanks to Bruce Coplestone Crow for giving me full details of both these references. Robert ap Hoell died *c*.1534.
[31] In *Herefordshire Place-Names*, Bruce Coplestone Crow, (BAR, 1989), p.92, it is suggested by Richard Morgan that 'Cachabren' is derived from 'Crake-burna' or 'Heron stream'. John Freeman, in a personal communication, thinks it is more likely to be Welsh, though still unexplained.
[32] TNA, SC 2/192/5, SC 2/192/8 and SC 2/506/20 (a fragment). Some membranes are in poor condition.
[33] TNA, SC 6/HENVIII/7319 to 7336. The first 5 years only have been examined.
[34] TNA, E303/11/28.
[35] Simcoe, 1038 M/T/7/4. Mis-catalogued as 'Oakbraine.'
[36] *Reg. Bothe*, pp.287-8.
[37] Dugdale, *Monasticon Anglicanum*, Vol. 1, p.599.
[38] Wendy Davies, *The Llandaff Charters* (1979), p.122. The earlier name for Pencraig was 'Pencreek' and variants, which means 'the head or end of a rise or ridge.' This also describes the situation of New House which lies at the end of a ridge 'above the Wye' on the Garron.

Reports of Sectional Recorders

Archaeology, 2007

By R. SHOESMITH

As in previous years, I have included a section for each archaeological group that responded to my request for information. This year only a few organisations responded, despite several reminders, but the reports I have received cover work throughout the County and include several fascinating and important sites.

This year I have made some changes to the reports in an effort to make them more interesting and readable. The rather boring lists of sites where no archaeological information was found have been deleted, but they are recorded on the Sites and Monuments Record (SMR). I also asked the contributors for any illustrations they had that would provide a visual addition to the various excavation sites and the finds.

Probably the most publicised site during 2007 was the 'Rotherwas Ribbon' and other features of interest found by the Archaeological Service of Worcestershire County Council during the construction of the Rotherwas Access Road. They have also uncovered much of interest from the Neolithic to the Roman period and beyond from the Wellington gravel quarries excavations. Herefordshire Archaeology have continued their woodland surveys and followed their market profile of Ross-on-Wye with similar reports on Kington and Leominster. The Edgar Street Grid gets a short mention – I expect that we will hear much more about this development in the not-too-distant future Also included is a report on the fourth season looking at the historic development of the Olchon Valley.

Archenfield Archaeology report on the excavations at the Crystal Rooms site in Bridge Street, Hereford where a large development is now almost complete, and describe some new discoveries at Clifford Castle. Archaeological Investigations Ltd. have provided a series of reports on development sites in Hereford and the results of the evaluation of a 140-hectare site at Court-y-Park, Pixley.

In each section I have indexed each report by city, town or parish and site name with a six-figure grid reference where appropriate. Many of the references are to internal unit publications, some of which are available in the City Library; others may be consulted in the Sites and Monuments Record maintained by the Herefordshire County Archaeological Service, some details being available on the internet. Where County Sites and Monuments Record numbers are given they are prefixed by HSM; Scheduled Ancient Monument numbers are prefixed SAM.

Once again I would like to offer my most grateful thanks on behalf of the members of the Woolhope Club to the staff of all the organizations who have willingly provided the information that has made this report a valuable source of work in the county during 2007.

GROUP AND UNIT REPORTS

HEREFORD CATHEDRAL

The 1993 New Library Building excavation

The project, being undertaken by Worcestershire Archaeology Service, is taking longer than anticipated, partly due to the pressure of work and shortage of staff in the Service. However several reports give some indication of the importance of the site and especially the burials. Of particular interest are recent papers on: 'Congenital disease in the medieval population from Hereford Cathedral,' 'White Plague and Black Death in the Medieval cemetery of Hereford cathedral,' and 'The palaeodemography of the Black Death: The Hereford Cathedral Close cemetery.' Full references can be found on the internet.

These short papers give some indication of the importance of the remains from the plague pits—one of only two such excavations in the United Kingdom (the other being in London). It would seem that most of the medieval population was infected with tuberculosis—a disease associated with poor standards of hygiene, overcrowded living conditions and inadequate nutrition. Many congenital defects were found in the 1,200 individuals encountered during the excavation.

Anthea Boylston of Bradford University, who was responsible for the recent analysis, has presented a paper on the human bone from Hereford to the International Medieval Congress in Leeds.

No final date for the completed report has been suggested, but it would seem that the longer it takes, the more interesting and complete it will be.

The Close Project

As part of the overall scheme I prepared a report on the older gravestones in the Lady Arbour in case any may be affected by the scheme. Many are so eroded that they cannot be deciphered, but some are in reasonable condition. Of more recent interest are the interments of Richard Dawes, Dean of Hereford who died 6 March 1867 and Bishop Jacob Atlay who died in 1894.

Following a discussion with John Yates of English Heritage, I prepared a report on the outer Booth Porch with particular reference to the function of the two side openings and the question of whether and when they had been railed. I concluded that it was most likely that the porch had been built with walk-through openings on all three sides and that the eastern opening was probably associated with a chantry or oratory associated with the surviving isolated doorway.

At the request of the Cathedrals Fabric Commission and as part of the ongoing work I prepared a Project Design for exploratory excavations in the Close based on the Stratascan survey. Dan Barrett, a professional archaeologist who has recently moved into Hereford, carried out the work. His archival report, which is now completed, has provided explanations for many of the Stratascan traces that were marked as 'source not known.' These excavations together with the Stratascan survey should ensure that, when the Close is being renovated, new services follow the lines of older ones wherever possible, thus minimising the damage to buried archaeological remains.

Drainage works in St John's Close

Many of you saw the screening that was in place for some weeks on the south side of the Lady Chapel. The drain, which led from the toilets in Chapter House Yard, had become blocked and

a camera survey had shown it to be in very bad condition. Although the drain was quite deep, especially at the eastern end where there is a manhole, replacement was not considered to be a great archaeological problem as the ground had been disturbed when the original drain was inserted. However, it was agreed that an archaeologist should be on site during all excavation work and Daniel Barrett was again conscripted.

Excavation of the trench proved to be more difficult than expected, partly due to the weather, but especially due to the very soft material that had filled the original trench. This would have been hand-dug and was wider than the 2007 machine excavated trench. The net result was that the soft sides started to fall in and shuttering had to be inserted whilst the new pipe was laid. In addition other services were encountered during the excavation and at one time the Vicars' Choral College was without electricity. Several buckets-full of human bone were collected from the trench fill, but in this case all bones were random, there being no articulated skeletons. These provide almost no information to the archaeologist and were re-interred in the trench as it was backfilled. Interestingly, as the soft material of the earlier trench fell into the machine-cut trench, traces of burials could be seen in the exposed sides.

Cathedral Barn

Work to the Cathedral Barn, a grade II* Listed Building on the English Heritage 'Buildings at Risk Register' is an integral part of the Close project. The building had been surveyed in detail by the then City of Hereford Archaeology Unit in the late 1980s. In order to progress the scheme, further survey work was undertaken in December 2007 when a 'revised archaeological assessment' was prepared. A fuller report on the new survey work, which included a detailed 'plank by plank' drawing of the first floor, has been prepared. A scheme for its restoration has been submitted as part of the planning application for the Close.

South Wall of the Nave

The first year of this 3 to 4 year project dealt with the easternmost part of the nave. Eroded stone has been replaced in the first two bays. Opportunities were taken to photograph the work before and after the restoration (Fig. 1). The work will continue in 2008.

ARCHAEOLOGICAL EXCAVATIONS LTD.

EARDISLEY, St. Mary Magdalene Church (SO 312 491)
A watching brief took place in the churchyard during ground works associated with the construction of a northern extension to part of the north aisle. The foundation plinth for the north aisle was exposed, as were fragmentary and disturbed burials in the churchyard. These were probably post-medieval or more recent in date and were reburied on site (Craddock-Bennett, L., HAS 740).

EWYAS HAROLD, Ewyas Harold Castle (SO 385 287)
A Community Project was organised involving earthwork survey, radar and resistivity surveys with documentary research into the site of what is commonly believed to be one of only three pre-Conquest castles in the country. The survey revealed stone structures within the inner bailey and an extremely large masonry structure butting the motte—most probably the curtain wall. (Boucher, A., 2007, *Ewyas Harold Castle*).

Figure 1. Gargoyles in the south face of the nave of Hereford Cathedral, the two eastern bays from east to west. The last picture is of a replacement for gargoyle 3, top right

HEREFORD, Cathedral School Sports Hall, East Street (SO 511 390)
A commission was received from Hereford Cathedral School through their architects, Godwin Austen Johnson, to carry out a desk-based assessment of the site of a proposed Sports Hall at 77 East Street.

This indicated that an archaeological evaluation by means of three trenches had taken place in 1990 and had revealed features and deposits of 11th-century and later date, including evidence of metal-working taking place in the area. These features were sealed below deep deposits of later garden soil.

Map regression and other research showed that a building has existed on the site since at least 1721. A plan of 1794 shows a stable on the site and it can be assumed that most of the current building post-dates 1794. In the 19th century a glass-house was built against the south wall of the present building, apparently necessitating structural alterations to this wall.

Internal inspection of 77 East Street revealed a more complicated story. The presence of a stone cellar below part of the existing building suggested a previous building of different shape on the site, and a stone rear wall to the ground floor and remains of a timber-framed partition indicate that the fabric of the standing building contains remnants of an earlier building or buildings. There was also reuse of wooden panelling (possibly of 17th-century date) in some of the internal doors. (Oakey, N. & Boucher, A., HAS 743).

HEREFORD, Cattle Market, Edgar Street (SO 508 403)
A commission was received from Herefordshire Council through Edgar Street Grid Redevelopments to carry out a second archaeological evaluation of the Cattle Market. Two stake holes survived in a good state of preservation in an area just to the south-east of the north entrance to the site. The features have not yet been conclusively dated, but could be contemporary with a prehistoric feature previously located towards the north edge of the site which, based on a study of the pottery, dates from the Late Neolithic or Early Bronze Age and is potentially Beaker period *c.*2,500BC (Rouse, D., HAS 753).

HEREFORD, The Essex Arms Playing Field (SO 512 405)
Fifteen trenches were excavated within about 50 m. of the remaining buildings of Blackfriars Priory, a Scheduled Ancient Monument. In only one of these trenches were archaeological deposits present; this material dated from the later 17th or 18th centuries and consisted of a large quantity of animal bone (Crooks, K. & Rouse, D., HAS 755).

HEREFORD, Land to the rear of Prospect Place, St. Martin's Avenue (SO 509 394)
Four trenches with a total area of *c.*43 square metres were excavated. The evaluation of the northern part of the site identified small-scale industrial and/or domestic activity dating from the medieval period. The results demonstrated a high degree of archaeological preservation and activity of a medieval date across the site. This is concentrated towards the Bishop's Meadow frontage although large features were also discovered towards the south and west of the site (Mayes, S., HAS 760).

HEREFORD, Gaol Street car park (SO 513 399)
A watching brief took place prior to the construction of new public conveniences at the northern side of the car park in Gaol Street. A number of surfaces were present containing pottery of medieval date. At the eastern end of the trench a burnt deposit possibly associated with pottery of late 12th or early 13th-century date suggested that back plot industrial activity might have been present (Crooks, K., HAS 749).

HEREFORD, Plot between 21 & 22 Union Street (SO 512 400)
The project was undertaken in response to plans to develop the site into residential and commercial premises. Three trenches were excavated to assess the survival of archaeology. Trench 1 provided evidence for 13th-century occupation of the site that may relate to the growth of Hereford around the Norman market place. Seventeenth-century occupation is evidenced by the presence of a stone-lined well and possible building foundations, which is supported by Speed's map of 1610. It would appear that the site comprised two burgage plots, the more southerly of which was cleared between 1757 and 1886 to provide an access route to St. Peter's School. The more northerly plot, with a building fronting on to Union Street, was present on the 1886 Ordnance Survey map but had been replaced by public toilets on the site by the time of the 1937 map (Craddock-Bennett, L., HAS 746; Doyle, D., HAS 766).

HEREFORD, St. Martin's Bowling Green (SO 507 392)
An archaeological evaluation took place on the site of a former bowling green adjacent to Belmont roundabout prior to the construction of an Asda supermarket. The findings from the evaluation included evidence of medieval domestic and industrial activity from the late 12th to the 15th centuries. Related evidence adjacent to the bowling green area indicated metal working and pottery production nearby. Finds from the site included a silver coin minted between 1180 and 1189AD as well as a range of pottery, indicating predominantly late 13th and 14th-century activity. Five pieces of human skull were also found in one of the features (Rouse, D., HAS 737).

PIXLEY, Court-y-Park (SO 647 397)
A commission was received from Court-y-Park Golf and Leisure to evaluate archaeologically the 140-hectare site of a proposed golf course and leisure facility. The results came from 29 evaluation trenches. The evaluation produced evidence for 15th to 16th century occupation in the region of the farmhouse, although the area had been heavily disturbed by subsequent activity and no archaeology was found *in situ.*

The most significant archaeology was discovered on open farmland to the north of the proposed club house and leisure facility (NGR SO 649 401). One trench to the north of the site revealed a shallow feature (2.3 by 2.0 by 0.15 m.) containing a charcoal-rich deposit and an apparently random arrangement of large boulders. This feature produced a typically late 3rd to 4th-century pottery assemblage, dated by diagnostic Severn Valley ware and BB1 forms. The presence of a sherd of Oxfordshire coated mortarium is consistent with this date, as is a single sherd of Herefordshire imitation BB1 found within the deposit. An environmental sample of the deposit contained hearth slag with slight traces of spheroidal smithing slag. Oak, hazel and hawthorn twigs were also present.

The discovery of this feature prompted the excavation of a further four trenches in the locality. Within one of these trenches a linear feature extending across the full width of the

trench (1.9 m.) was revealed. Cut into the natural red clay subsoil on a north-west/south-east alignment, the feature measured 1.3 m. in width and 0.52 m. in depth. The total length could not be determined due to the feature running into both the north-west and south-east trench sections. A high concentration of Roman pottery was found within the feature dating from the latter half of the 2nd or early 3rd centuries, along with some longer-lived types. Analysis of environmental samples points to the presence of metal-working, the deposit containing large quantities of iron-working slags, hammer scale and spheroidal smithing slag. Partly-worked iron bars with hearth slag coatings lend further weight to the suggestion that this feature is connected with metal-working.

The pottery assemblage from Court-y-Park fits broadly within the pattern of rural supply noted elsewhere in Herefordshire—for example, in the Frome Valley, the Arrow Valley, and at Bradbury Lines. Most of the pottery comes from local or regional sources, the only significant 'traded' pottery being Dorset black-burnished ware. Both chronological groups represent a range of utilitarian vessels that might be used in food preparation and storage; mainly coarse ware jars and BB1 bowls and dishes. There was no evidence for more formalised dining that might be attested by flagons, beakers, cups, or even copies of Samian bowls in Severn Valley ware (Craddock-Bennett, L., HAS 701).

ROSS-ON-WYE, 7-11 Brookend Street (SO 600 243)

Trial trenching and building appraisal took place. Excavations throughout were limited by the considerable amount of ground water present. In the north-eastern part of the site a layer comprising iron slag and charcoal contained 13th-century pottery. No features were encountered and it is possible that the layer had been imported to raise the surface above flood levels. Similar, though later (19th-century) attempts to raise the ground level were observed in trenches on the southern part of the site. Building appraisal was also limited, as a result of problems gaining access to the buildings (Crooks, K., HAS 752).

ARCHENFIELD ARCHAEOLOGY

CLIFFORD CASTLE (SO 244 457)

Excavations of foundation trenches in advance of extensions to the house situated within the bailey of the castle revealed the foundations of a previously unrecorded stone wall. The wall was about 0.5 m. wide and the length discovered about 3.5 m. It ran parallel to the projected line of the bailey curtain. Although this wall may have been part of a free-standing structure, it is more likely that it was part of a building set against the inside of the bailey. Another stone structure of unknown purpose was found to the north of this. Provision was made to preserve both *in situ*. The pottery sequence dated from not later than the 13th century (Arnold, G.).

Figure 2. Clifford Castle, stone wall

EARDISLEY, Oakwood (SO 311 494)
A medieval ditch, orientated south-east/north-west, may have been a boundary to the original burgage plot (Arnold, G.).

HEREFORD, The Crystal Rooms, Bridge Street (SO 508 397)
After an evaluation in 2004 confirmed the presence of archaeological features at the old Crystal Rooms night club site, a fuller excavation was carried out in early 2007. The site lies on the east side of the street—the northern approach to Hereford's medieval Wye Bridge—and consisted of a large 1930s warehouse with frontage, a shop, and a disused Wesleyan Methodist chapel.

Figure 3. Crystal Rooms, Hereford: site excavation

Removal of the 20th-century floors revealed walls and surfaces of buildings which had been demolished in 1936 (See article by John van Laun in the *Transactions* for 2006). Although the earlier, underlying deposits were not to be disturbed, the upper layers would have been damaged by the construction work and here, privies, chimney-stacks, wells, stables and warehouses dating from the 17th century and later were recorded.

The buildings on the Bridge Street frontages of the site had cellars that had removed most of the earlier archaeology. Below the floors and wall foundations to the rear of these cellars, the excavation revealed post-medieval and medieval pits cut into the natural gravels. Pottery retrieved from the backfill of the earliest pits has been dated to the 12th to 13th centuries.

Figure 4. Structure built in the King's Ditch, Hereford

Further to the east, towards the rear of the site, a trench was cut into a major feature known as the King's Ditch. The name, used by most local archaeologists and as used here, refers to a linear, low-lying, marshy depression running north to south through the centre of Hereford. This feature, believed to have originated at the end of the last glacial phase, was first identified in 1958. Within this feature was a large stone-built structure, cut into 13th/14th-century layers. The pottery dated this feature to the 14th or 15th centuries. The excavators had supposed that the King's Ditch would still have been a marshy feature at this date—this structure was totally unexpected and its interpretation is not obvious (Lewis, D., and Pikes, P. J.).

HEREFORD, Marks and Spencers, High Town (SO 509 400)

Excavation beneath the floor of the basement of the store was carried out in advance of its conversion into a food hall. The store is built on the site of the northern part of the defences of the original Mercian town. After Hereford was burnt by the Welsh under Gruffydd ap Llywellyn in 1055, Harold Godwinson, who was then made Earl of Hereford, reportedly widened and strengthened these defences. The old Greenlands department store, which stood on this site, was demolished in the 1960s and the new Marks and Spencer store was built in its place. As was common practice at the time, the development took place without any archaeological investigation.

Part of the pre-Norman town ditch was found within the excavated area. At a time when the ditch was long out of use as a defensive feature but still had water in it, wattle-work had been built in it. Similar wattle was found in the Anglo-Saxon ditch when the old City Arms

Hotel was rebuilt as Barclay's Bank in the 1970s. Other features included later medieval rubbish pits.

Not surprisingly, the dating evidence suggested that there was Anglo-Saxon activity on this site. One very unusual sherd of Stafford Ware (sometimes known as Chester Ware, Fabric 48), was found. This dated from the mid 9th to the early 11th centuries. The form was most likely that of a lamp, although it is possible that it could have been a small crucible, in which case it was rather thin and had not seen a lot of use (Lewis, D.).

LOWER BULLINGHAM, Manor Farm (SO 521 381)

A brief documentary and contour survey of the Scheduled Ancient Monument mapped the earthworks in the scheduled area and compared them with the cartographic record. The exercise was quite informative in that it demonstrated that many of the earthworks (by length the greater part) were sited on former field boundaries; these boundaries having mainly been removed since 1850. However, the overwhelming probability is that many of the earthworks on the site are medieval in origin and that they represent remains of part of the settlement known as Boninhope in the 11th century (Pikes, P.J.)

HISTORIC ENVIRONMENT AND ARCHAEOLOGY SERVICE, WORCESTERSHIRE COUNTY COUNCIL

MORETON-ON -LUGG, Wellington Quarry (SO 502 475) [HSM 43223]

Archaeological salvage recording was undertaken during aggregate extraction on behalf of Tarmac Limited. This formed the first elements of an Archaeological Mitigation Strategy for the former military base to the south-west of Wellington Quarry [HSM 5522].

Archaeological features of various periods were identified, although they decreased in concentration towards the north-west corner of the site. Prehistoric activity was well represented and took the form of isolated pits and pit clusters, many of these containing worked flint and prehistoric pottery. Two pits contained discrete flint tool assemblages that did not appear to have been used and were possibly made, or selected, specifically for ritual deposition within the pits. A mace/pick head fragment found in one of these pits may have been similarly selected for deposition. One prehistoric pit also contained quantities of Neolithic Peterborough Ware pottery that represents the largest and one of the best provenanced assemblages of this pottery style found at Wellington Quarry to date. It is possible that one complete pot was represented, although it had so badly decayed that only limited numbers of sherds were recoverable.

Five lengths (approximately 40 m.) of a metalled road or track of Roman date were discovered. These appeared to be in shallow depressions within the surrounding topography, which seems to have protected them from subsequent plough damage. The road or track ran in a north-west to south-east direction, although in one area it appeared to fork, with one spur changing direction towards the north-east and possibly towards a known Roman settlement area. In places wheel ruts had created depressions into the metalled surface. Pottery has established a probable Roman date for construction, but fifteen medieval horseshoes discovered on the cobbled surface illustrates that it remained in use for some considerable time. When abandoned, the hard cobbled surface was reused as a surface on which to build. On two road sections there was evidence for buildings.

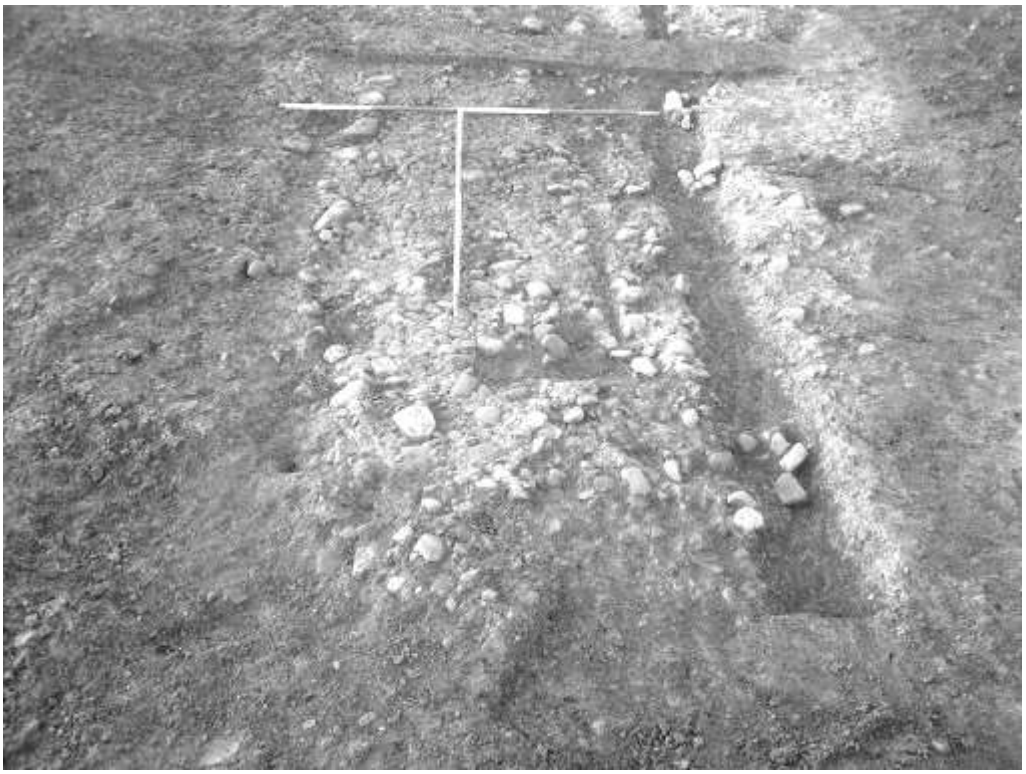

Figure 5. Section of Roman road surface with wheel ruts, Wellington Quarry

Four ditches were also discovered running in a north-east to south-west direction. All contained Roman pottery and were probably field boundary ditches running perpendicular to the road/track. Two large Roman pits of over 2 m. in diameter and up to 1 m. deep were presumably quarry pits. One of these also contained a redeposited prehistoric barbed flint arrowhead.

Many features are at this stage undated, although they are likely to be either prehistoric or Roman in date. A 2 m. wide ditch running north-south in a straight line is also still undated. The straight direction of this over a long distance suggests it may be late in date, perhaps even constructed during the Roman military occupation. However, since this ditch also marks the western limits of earlier activity, it perhaps has earlier origins. One group of undated features of particular interest is a possible timber house/hut. It was formed from nineteen heavily truncated postholes in a semi-circular pattern with a hearth at its southern extremity. This was located not far from a prehistoric pit group and may therefore be of a similar date (Mann, A., WHEAS 1512).

MORETON-ON-LUGG, Wellington Quarry (SO 502 475) [HSM 44438]

Archaeological excavation was undertaken on behalf of Tarmac Ltd. A Neolithic pit contained prehistoric pottery in the plain bowl tradition of the Early Neolithic. No other surrounding features were identified and it appeared in isolation in the north-west corner of the excavation.

A large Bronze Age pit, measuring 5 m. in diameter and 1.2 m. deep, had a shallow slope on the northern side, consolidated with a stone surface of heat shattered quartz pebbles. It is thought that the pit acted as a water-hole, and the metalled surface provided a firm footing to access the base of the pit if water levels were low. The excavation did not produce the number of finds expected from the evaluation, and no evidence for its use as a funerary monument existed. Worked wood identified in the evaluation did not form an identifiable structure, though it is thought that this may have been the remains of a revetment supporting the unstable sand and gravel deposits forming the near-vertical southern side of the feature.

Figure 6. Bronze Age pit, Wellington Quarry

Further postholes and stake holes were identified forming a semicircular pattern around the eastern edge of the pit, possibly providing a screen to shield or delineate a focal point. To the north-east of the water-hole twelve small shallow pits filled with heat-shattered quartz pebbles, charcoal, but no domestic remains, were excavated. These appeared to run along the northern edge of the water-hole and probably extended beyond the excavated limits. The character and fills of these features parallels those commonly associated with burnt mounds, a site type which is widespread in Britain throughout the Bronze Age.

Based on initial pottery identifications it is thought that a single Iron Age ditch ran in an east-west direction. This also cut the uppermost deposits of the Bronze Age water-hole.

Six Roman field boundary ditches formed two distinct groups of three. Firstly a group running in an east-west direction formed a corridor/droveway, and the second appeared to form the corner of a field, with an elaborate entrance that may have functioned to control stock. Two shallow features running in a north-south direction are thought to be the truncated remains of

ridge and furrow and are the only recognized medieval remains. One wide ditch that had been successively recut approximately four times may also be of medieval date. However, the lack of pottery in these features makes dating difficult. The wide ditch is very similar to others recorded across Wellington Quarry which are believed to be boundary/drainage ditches. The fact that these are filled by the red alluvium that is understood to have been deposited after the Roman period places their use in a broad time-frame, from the onset of the Roman through to the post-medieval period.

At present, numerous postholes that formed no recognisable pattern are undated. These were widely distributed across the site and presumably are associated with the prehistoric activity. A small number of pits and a beam slot with an associated beam containing three upright posts is also undated at present. The purpose and date of the latter feature is still unknown, although it was sealed by red alluvial layers known to have been deposited in the post-Roman periods (Mann, A., WHEAS 1513).

ROTHERWAS, Rotherwas Access Road (SO 353 238 to SO 351 237) [HSM various]

An archaeological project was undertaken relating to a proposed road scheme linking the A49 to the Holme Lacy Road on the south-east of Hereford, known as the 'Rotherwas Access Road.' The project included the excavation of a large area undertaken over several phases; the excavation of a palaeochannel; a watching brief and recording of two buildings, and was undertaken on behalf of Herefordshire Council. All fieldwork was undertaken within a construction corridor running the full 3.3 km. length of the route, with a width of approximately 50 m.

Figure 7. Aerial view of the excavation of the 'Rotherwas Ribbon'

In 2002 an initial phase of non-intrusive archaeological evaluation, including fieldwalking, metal detecting, geophysics, and augering, was carried out and identified several areas of potential archaeological interest. A second phase of intrusive archaeological evaluation targeting the areas suggested as being of potential interest by the first phase of works followed at a later date. The only significant archaeological feature was in a trench close to where a flint concentration and geophysical anomaly were found. The feature was either an irregular ditch or tree throw and contained fifteen fragments of prehistoric pottery and a single flint flake. The pottery is thought to date from sometime between the Late Neolithic and Late Bronze Age; a lack of diagnostic sherds meant that a more precise date was not possible.

In the light of the results of the evaluation and prior to construction of the road, a mitigation strategy was implemented. This comprised excavation of two areas, one to focus on prehistoric activity and the other on a palaeochannel and several structures relating to the Rotherwas Royal Ordnance Factory. A large area just to the west of Watery Lane contained a number of isolated Neolithic to Late Bronze Age pits and postholes. One of these consisted of a series of inter-cutting pits covering this entire time span, also a single pit contained numerous flint tools and debitage, and large quantities of Grooved Ware pottery. To the centre of the prehistoric activity was a Bronze Age round house, represented by eight postholes, with a south-facing porch, along with other associated features.

Figure 8. Section through the ‘Rotherwas Ribbon’

At the eastern end of the excavated area, a Roman ditch was located cutting an earlier feature of indeterminate character, but containing a substantial quantity of Roman pottery and a fine brooch, probably of Polden Hill type. At this time, no other Roman features had been observed

during the excavations. This ditch also clearly cut through an earlier, though at that time undated, large feature. This was later to become known as the 'Rotherwas Ribbon.'

On the basis of this ditch and its artefacts a Roman settlement was suspected and the area was extended (100 m. by 50 m.), revealing that the Roman ditch cut through a series of deposits within a wide, sinuous hollow. In turn these deposits sealed a continuous surface, constructed of burnt stones. This stone surface comprised a layer of deliberately 'fire cracked' cobbles including a significant element of evenly dispersed quartzite pebbles. The Ribbon is not laid upon an entirely flat surface, but one that appears to have been deliberately sculpted to undulate and alter direction, forming a series of opposing arcs.

Limited intrusive examination of the surface revealed some areas where the upper stone surface overlay a lower one, with a silt horizon between the two. This may suggest that the Ribbon was rebuilt at least once, or at least its profile was altered. This later surface was either not extensive, or has only partially survived.

Features spatially associated with the Ribbon include pits filled with fire-cracked stones and a partially exposed isolated sub-circular area also made up of shattered stone fragments. Close to one of the largest pits on the eastern edge, a spread of burnt stone and fragmentary charcoal debris extends into and across the stone surface. It is difficult to ascertain whether this was an original design feature, or accumulated during the use of the Ribbon or during its abandonment. However, it appears that this stratigraphically may either predate the main burnt stone layer, or at least is contemporary with the construction phase. At the southern end, the Ribbon also cuts an earlier undated ditch which ran down from the higher slopes. This earlier ditch contained no artefacts, environmental or other datable material.

No cultural material was directly recovered from the limited interventions through the stone surface (limited by the aim to preserve the feature *in situ*). However, sherds of possible Bronze Age pottery and flint, including three fine examples of Early Bronze Age 'thumbnail' scrapers along with fragments of bone, lay directly on the stone surface. The uppermost surface of the Ribbon could therefore be broadly (but not positively) dated to the Neolithic or Early Bronze Age. The presence of significant proven Neolithic activity in the area immediately to the west, and the likelihood that the earlier ditch was also of Neolithic date, could be taken to further support the case that the Ribbon did have a Neolithic origin.

In addition to the main excavation area, a smaller area (80 m. by 20 m.) was exposed across a palaeochannel, some 500 m. to the west of the main excavation. Though its existence is just about visible in the present landscape, running down from the ridge to the south, the channel was revealed to be roughly 22 m. wide and 2.2 m. deep and contained a well-preserved sequence of organic deposits. These were sampled and produced initial radiocarbon dates of Bronze Age, (cal BC 1680-1500) to medieval, (cal AD 1020-1200) for the bottom and top of the deposits, thus providing a broad environmental context for the round house, pits and for the Ribbon itself.

In March 2007, a watching brief confirmed that buried archaeological remains were largely absent from elsewhere along the road corridor but there were two concentrations, one close to the A49 junction, the other on the eastern slope of the hill running down to the Red Brook from Hoarwithy Road. Beyond this, only a few Roman to post-medieval features and artefacts were identified.

In the light of the range, quality and local and regional rarity of the Neolithic to Late Bronze Age deposits and associated artefactual and ecofactual assemblages, these must be considered of more than regional significance, a significance enhanced by the association of

the later elements of the deposits with a well-preserved palaeoenvironmental sequence from the channel.

Further, and more significantly, the potentially unique form and function of the Late Neolithic/Early Bronze Age Ribbon, allied to its location within a long-utilised landscape, makes it a monument of national or international importance (Sworn, S., and Woodiwiss, S., WHEAS).

HEREFORDSHIRE ARCHAEOLOGY

Staff of the county archaeological service for Herefordshire continued and completed a number of projects in 2007. These projects were in receipt of grant-aid from a number of partner organisations, including English Heritage, the Forestry Commission, DEFRA, Herefordshire Nature Trust and The Woodland Trust. Among the principal projects undertaken during 2007 was the second phase of the Herefordshire Commons Survey Project, the survey of New Weir iron works at Symonds Yat and the production of a series of Urban Archaeological Appraisals for Herefordshire's market towns.

Other field projects undertaken in 2007 included the small scale recording of two areas within Castle Green, Hereford and the continuation of a community survey project in the Olchon Valley. The Lugg Valley Archaeology, Landscape Change and Archaeology project (part of the Herefordshire Rivers LEADER+ project), with exploratory investigations of Neolithic and later prehistoric sites, was completed. Further projects included the completion of stage 1 of the Lower Lugg Valley Aggregates Levy assessment study and the Herefordshire Aerial Survey project. Projects associated with the new urban archaeology programme including the Hereford Urban Archaeological Database study continued throughout 2007.

BRAMPTON BRYAN, Brampton Bryan castle (SO 370 725), [HSM 44824; HSM 191]
Reinstatement works were monitored by Herefordshire Archaeology staff. The works covered by the archaeological monitoring relate to the infilling of a cutting which bisects the castle ruins, in accordance with the terms agreed within the Scheduled Monument Consent. The cutting was created in the first half of the 20th century in order to provide easier access from the house to the tennis court. As part of major refurbishment works on the house it was agreed that the cutting should be filled in. This would be of benefit to the monument as it would re-unite the northern and southern portions and therefore display the monument in a more complete and understandable way.

The cutting was faced with roughly-squared stone to a height of approximately 0.8 m. on each side; this helped minimise erosion of the sides of the cutting and acted as a support for the battered embankment that formed its upper portion. Prior to the in-filling, the stone facing was removed for re-use elsewhere on the property. The archaeological monitoring was required in order to record any features or deposits made visible during the removal of the facing and to record any fragments of marked and worked stone from the facing.

The stone facing was removed from both sides of the cutting at the same time. Behind the stone facing was a 0.6 m. thick dump of re-deposited material containing ash and late 18th- or early 19th-century ceramic material. This was left *in situ* as much as possible to avoid the disturbance of foundations relating to the standing structure. No features or deposits of archaeological significance were recorded (Hoverd, T., HAR 239).

BREDENBURY, Manor Farm (SO 615 563), [HSM 48622]
A series of small, hand-dug test pits was excavated by members of the Bromyard and District Local Historical Society within the garden of Manor Farm, Bredenbury. The works were carried out in order to confirm the location of the original house on the site, which dated from the first decade of the 18th century.

The lines of three walls were identified; these comprised roughly coursed stonework with evidence of lime-mortar bonding and survived to an average height of 0.2m and were 0.25m wide. A base for a chimney was recorded on the southern wall. It would appear that the building was roughly 4.5 m. square and its location confirms the accuracy of the earliest map of the area. The thickness of the walls would suggest that it was constructed largely from timber and may have been single storey (Bromyard and District Local Historical Society, forthcoming).

DORSTONE, Woodbury Hill Wood (SO 336 422), [HSM 44690]
The survey of Woodbury Hill Wood was undertaken at the request of Natural England in order to ascertain the type, condition and distribution of features of archaeological significance within the wood. A rapid walk-over survey was carried out in the wood concerned. A hand-held GPS was used to record the location of features encountered.

The earliest features recorded were the earthwork remains of two round barrows, one of which appears to have had an antiquarian trench cut through it. Both barrows occupy the top of the ridge on the western edge of the plateau.

A number of quarries were identified. Most, if not all, were associated with the construction and maintenance of the two phases of stone-built deer park wall recorded.

A number of features relating to woodland management were recorded, principally charcoal-burning platforms and saw pits. These were predominantly located on the western side of the hill.

A series of tracks and hollow-ways was recorded running diagonally over the saddle of the ridge. Many of these inter-connected, suggesting that this area was a major route-way for access onto the ridge top from the west. Interestingly, none of these features were recorded running over the crest and down the eastern side of the ridge (Hoverd, T., HAR 236).

EARDISLAND, cropmark (SO 422 585), [HSM 48623]
The excavation of a cropmark was undertaken by Eardisland Oral History Group under the supervision of Herefordshire Archaeology staff. The excavation was located in an arable field to the south-east of St. Mary's church over a linear cropmark. The cropmark comprised two parallel dark stripes running across the field on a roughly north-south axis. Before running out of the southern edge of the field both stripes turn abruptly to the south-west.

Members of the Group and other members of the local community expressed an interest in investigating this feature in order to ascertain its date and use. A 10 m. by 3 m. trench was excavated across the feature and revealed a pair of V-cut ditches separated by a 3.5 m. wide metalled surface. It appears that this represented a track or roadway with a drainage ditch on either side.

A second, smaller trench was excavated in order to confirm the change in the angle of the feature, close to the southern edge of the field. Unfortunately no dating evidence was forthcoming from either of the ditch fills and this feature does not appear on any known map (Eardisland Oral History Society, forthcoming).

EWYAS HAROLD, Ewyas Harold Common Survey (SO: 385 295), [HSM 45186]
As part of a 'Community Commons' partnership project with Herefordshire Nature Trust, a walk-over survey of the common was undertaken.

The earliest evidence identified during the survey of the common was the common boundary and possible relict field system within the southern part, possibly relating to medieval activity.

During the post-medieval period and perhaps the late medieval period the common was employed not only for agricultural purposes but also for industrial activity centred around the production of charcoal. Over 30 saw pits and a number of charcoal-burning platforms were identified as well as one limekiln. Each of these sites are associated with a network of hollow-ways and track-ways that would have linked the industrial activity with the settlements of Ewyas Harold to the south and Abbey Dore to the east (Atkinson, C.D., HAR 234).

GANAREW, Little Doward Camp (SO 539 160) [HSM 901; SAM 26]
In partnership with the Woodland Trust and the Wye Valley Area of Outstanding Natural Beauty (AONB), Herefordshire Archaeology carried out an archaeological walk-over survey to record the archaeological features on the Iron Age hillfort of Little Doward Camp and its immediate environs. The purpose of the survey was to inform the constraints on the Woodland Trust's proposed removal of the commercial conifer trees from the monument. This was being done as part of the Overlooking the Wye Project, a Heritage Lottery Funded project being co-ordinated by the Wye Valley AONB.

The survey recorded some 150 individual features and it was clear from the results that the whole area contains a wealth of archaeological remains spanning many periods. It is for the Iron Age hillfort that the site is a Scheduled Ancient Monument, but the survey identified a number of features to the west of the scheduled area that probably represent outworks to the main enclosure. Also recorded was a Bronze Age barrow, located on the west of the main hillfort enclosure, which had evidence that it had been subject to antiquarian investigation. Pillow mounds indicating medieval rabbit warrening were also present, and shallow pits and charcoal production sites indicated intensive use for the local iron industry in the post-medieval period.

In the 19th century the hillfort became part of the designed landscape of Wyastone Leys, owned by South Wales industrialist Richard Blakemore. A deer park wall was erected that enclosed the hillfort, and numerous paths and carriage rides were laid out. There is documentary evidence of the levelling of the ramparts to form promenades and this can be seen in the surviving form of the rampart in the south-west corner of the main hillfort enclosure. Blakemore had a number of structures built including a hermitage and a tunnel. He also utilised the local geology to embellish the landscape, placing water-worn limestone and conglomerate boulders throughout the area.

In addition, although no clear archaeological features were visible on the ground, the area referred to as the 'annex' at the east end of the hillfort has significant potential to be an earlier (pre-Iron Age) defensible enclosure. The 'annex' area is defined on three sides by vertical cliffs making it readily convertible into a promontory site by the creation of a rampart at the eastern end. This potential is given extra weight by the discovery of a Neolithic axe nearby (Rimmington, N., HAR 229).

HEREFORD, Castle Green (SO 512 395) [HSM 48624]
Herefordshire Archaeology staff investigated and recorded an illegally-dug hole. The works comprised the recording by photograph and scaled drawing of a square hole that had been dug into the southern rampart of Castle Green. The hole was dug by a group of teenagers who were apparently in the process of making a den. The hole was well dug, being 1.6 m. square and having a maximum depth of 2.1m. Within the sections revealed, material was recorded which related to the demolition of the castle and the subsequent early 18th-century landscaping. Towards the base of the south-facing section, a grave cut containing skeletal remains was recorded. It is presumed that this relates to the presence of St. Guthlac's monastic settlement in the late Saxon and early medieval periods (Hoverd, T., HAR 241).

HEREFORD, Castle Green steps (SO: 513 395) [HSM 45155]
Works were undertaken to re-build and improve a flight of steps that lead from the path that runs along the top of the rampart at Castle Green down to Mill Street. Under the terms of the Scheduled Monument Consent and the Hereford Area of Archaeological Importance an archaeological watching brief was carried out by staff of Herefordshire Archaeology. The aim of the watching brief was to provide coverage of the construction works and record any archaeologically significant deposits that might be encountered.

The extraction of the steps and the establishment of the foundations for the new structure had only a minor impact upon the underlying archaeology due to the shallowness of the excavations. It was only within the very base of the foundation cut for the retaining wall that archaeology relating to the defensive rampart was exposed at a depth of *c.*0.4 m. The material employed in the construction of the rampart was of gravel and sand extracted from the ditch that surrounded the rampart.

The small finds consisted of animal bones, most likely sheep and dog. No other artefacts were retrieved to provide an interim date for the archaeology uncovered, though it is unlikely that the material pre-dates the 17th century (Atkinson, C.D., HAR 214).

HEREFORD, Edgar Street Grid (ESG)
In August 2007 Herefordshire Archaeology was commissioned by ESG Herefordshire Ltd. to undertake an archaeological characterisation of the ESG regeneration area on the north side of Hereford. A rapid walk-over survey led to a date of buildings map and a townscape characterisation that breaks down the present landscape of the area into twenty-three distinct zones (medieval suburban plots, surviving meadow, the cattle market, the football ground, and so on). It explains how these developed from the much simpler medieval geography consisting of two suburbs (Widemarsh Street and Bye Street/Commercial Road), projecting north into the farmland and meadows of Monkmoor and Widemarsh Portfields. These townscape character areas closely reflect the nature of the archaeological deposits beneath, with huge contrasts apparent between, for example, Widemarsh Street (a medieval industrial suburb with archaeology lying up to 2.8 m. deep) and meadows or former meadows either side (Baker, N. *The Edgar Street Grid, Hereford: an archaeological characterisation*).

KINGTON, Kington: an archaeological profile
Kington, the second of the Herefordshire Archaeology market-town profiles (following Ross-on-Wye) was completed to draft stage in 2007. As before, the intention was to update the work of the Central Marches Historic Towns Survey in the mid-1990s, adding new information

derived from PPG 16 archaeological investigations, with an additional emphasis on the historic topography and townscape.

Kington first appears in the documentary record as a rural manor in Domesday Book. By the mid-13th century two boroughs had been created there, though the actual foundation of them is not recorded. The first, generally known as 'Old Kington', lay around the church and the castle, but little is known of its size or form. The second, 'New Kington', the present town centre, was established below Old Kington in the valley bottom. It is a miniature masterpiece of medieval town planning, laid out around a simple T-plan of streets, with parallel rear access lanes throughout. The plan is extremely well-preserved, with very few of the plot amalgamations characteristic of even slightly larger towns. However, despite its regular plan, a document from the end of the 13th century suggests that Kington was then largely inhabited by farmers, with only a handful of townspeople following urban occupations and holding burgages. Very few excavations have as yet taken place within the historic core, so it will be up to future archaeologists to determine just how 'urban' medieval Kington really was (Baker, N., *Kington: an archaeological profile*).

KINGTON RURAL, Hergest Ridge Common Survey (SO: 271 385), [HSM 44451]

As part of a 'Community Commons' partnership project with Herefordshire Nature Trust, a walk-over survey of the common was undertaken.

The earliest evidence identified during the survey consists of the seven cairns located upon the south-facing slope within the south-west of the common. They are likely to be medieval in date with the potential of being earlier. They survive as relatively low mounds of stone, largely overgrown with grass, bracken and gorse. Due to the gradient of slope on which the cairns are located, a number have suffered from subsidence and lost their original form.

Within the south-west of the common, evidence for a possible medieval field system was apparent in the form of a number of linear earthen banks that interlink to form at least two sub-rectangular fields. This field system has been interrupted by later/modern steam-ploughing that has scarred the south-facing slope of the common with north-south aligned furrows.

The remains of a post-medieval race track upon the summit of the common remains prominent along with its associated platforms. Linking the race track with settlements outside of the common to the south and west are a series of well established hollow-ways. It is likely however that the majority of track-ways owe their origins to the medieval period, but their continued use into the post-medieval and modern periods has erased that original surface.

Associated with the 20th-century steam-ploughing activity within the west and south-west of the common are a number of modern clearance cairns close to the summit of Hergest Ridge and concentrated around the triangulation point. The cairns vary in size and shape, but almost all consist of large stones mechanically placed to free-up land for ploughing. The furrows produced as a result of the steam plough activity run up to and encircle almost all of the clearance cairns.

Some final additions to the archaeology within the common occur during the 20th century with the activities of the military. The remains of a number of shell-scrapes are visible along the southern and eastern entrances to the common (Atkinson, C.D., HAR 232).

LEOMINSTER: an archaeological profile

Leominster could be said to have reached a milestone in that more than fifty archaeological investigations have now taken place there, mostly associated with new developments around, rather than in, the historic core. Nevertheless, sufficient information is now on record to be able to comment on the medieval growth of the town which, as Joe Hillaby has suggested, appears to have been very rapid within the 12th century. Already by *c.*1200 occupation had spread from the core of Broad Street and its triangular market place into new side streets to the west, and north up Bridge Street into the flood plain of the Kenwater and Lugg. Mysteries remain: was Corn Square, the medieval Cornmarket, really a primary feature of the 1120s or even earlier, or was it an additional facility added in the 13th century, like the corn markets in Shrewsbury and Worcester? Anglo-Saxon Leominster appears to have been the minster and nothing more, but the form of the church and its precinct remain, for the moment, unknown or unconfirmed. As for the town defences; while their existence and demise has now been established beyond doubt, their origin and complete course remain obscure.

Leominster is the subject of the third of the Herefordshire Archaeology market-town profiles. Unlike the previous profiles, this one concentrates on reviewing the below-ground evidence and relating it back to the development of the town plan (Baker, N., *Leominster: an archaeological profile*).

LLANVEYNOE, Olchon Valley Survey (SO 278 392), [HSM 44560]

2007 saw the completion of the fourth of a five or six season community project looking at the historical development of the upper Olchon Valley. During the first season of work, early in 2004, a series of upland enclosures and their associated settlement were surveyed. Whilst almost certainly containing post-medieval elements, at least two phases of enclosure appear to be of considerably earlier date. The second season's work concentrated on the survey of an extensive ruined farmstead and its associated holding at 'Abbey Fields.' The field-name evidence, together with the location of the holding and the unusually large size of the group of buildings, suggests that it may have been one of the priory farms owned by Llanthony Priory. The 2006 season saw the beginning of a detailed survey of land holdings. All boundaries, earthworks and ruined buildings were recorded by hand-held GPS and were described in detail. It rapidly became apparent that the scale and method of construction of field boundaries changed through time and although of considerable complexity a basic phasing could be put together. Evidence for small-scale medieval and post-medieval intensive arable cultivation was recorded in the form of ridge and furrow. Features relating to small-scale industrial processes were also recorded, such as saw pits, quarrying and the production of lime. A series of leats and dams were also recorded which appear to direct water out of natural water courses to a possible mill site.

The 2007 season saw the continuation of the detailed survey over much of the eastern side of the valley. Again, a complex series of field boundaries was recorded and some important relationships between different boundary types were established. A number of ruined buildings were recorded, illustrating that not only was the population considerably larger during the late-medieval and post-medieval periods but also, during these periods, land use was more diverse and intensive. Evidence of warrening was recorded in two locations (Hoverd, T., forthcoming).

LOWER HARPTON, Herrock Hill Common Survey (SO: 280 596), [HSM 44970]
As part of a 'Community Commons' partnership project with Herefordshire Nature Trust, a walk-over survey of the common was undertaken.

The earliest feature identified during the survey pre-dates the formation of the common and relates to the 8th-century construction of Offa's Dyke during the Anglo-Saxon occupation of the region. Activity upon the common appears to have been concerned primarily with the grazing of livestock. During the post-medieval period there was an attempt to enclose an area of land within the east of the common. This is visible from the remains of a relict boundary that is aligned north-south through the common and probably connected to the site of Holy Well Farm that lies to the south-east.

The processing of wood from the neighbouring Herrock Wood was also practiced in order to produce charcoal for industrial purposes Although the archaeology is likely to relate to the post-medieval period, a medieval origin cannot be ignored. The survey also identified a number of quarries scattered along the west and south-facing slopes of the common. Each of the industrial sites identified (quarries and charcoal-burning platforms) are associated with a network of hollow-ways and terraced track-ways (Atkinson, C.D., HAR 233).

RICHARD'S CASTLE, Climbing Jack Common Survey (SO: 477 718), [HSM 43703]
As part of a 'Community Commons' partnership project with Herefordshire Nature Trust, a walk-over survey of Climbing Jack Common was undertaken.

The common boundary and a possible pillow mound are some of the earliest features identified and most likely relate to medieval activity. During the post-medieval period small areas of the common were taken into the surrounding field system. This is most evident within the south-east portion where a relict common boundary survives within the interior of the common.

Evidence for quarrying and the extraction of clay survives within one area of the common, this is supported by a terraced track-way that runs from the site, south out of the common. A second track survives within the north of the common linking the area of Hyde Wood to the east and Sunny Dingle Wood to the west (Atkinson, C.D., HAR 237).

WHITBOURNE, Badley Wood Common Survey (SO: 697 574), [HSM 44909]
As part of a 'Community Commons' partnership project with Herefordshire Nature Trust, a walk-over survey of the common was undertaken.

The primary activity upon the common appears to have been concerned with the processing of coppiced wood into charcoal: the evidence survives as a complex network of hollow-ways linking saw pits and charcoal-burning platforms. It is assumed that the surviving industrial features and communication networks within the common are the product of post-medieval activity though the possibility of the archaeology being earlier and relating to medieval activity cannot be ruled out (Atkinson, C.D., HAR 235).

BIRMINGHAM UNIVERSITY

HEREFORD, Bradbury Lines (SO 510 382)

A team led by Laurence Jones and Mary Duncan carried out excavations on land within this former military base, which lies about 2 km. south of Hereford, in advance of re-development for housing. The land available for excavation at that time was a disused sports field. The camp buildings were orginally wooden huts. The SAS and 264 Signal Squadron moved there in 1960, and a major reconstruction took place in the 1970s.

Bronze Age

There was some evidence for activity in the Middle or Late Neolithic periods, but the most important and earliest feature of the site excavated is thought to be a pond barrow, constructed during the Early Bronze Age. It was cut into the natural sand and gravel and was 18.4 m. in diameter and 1.7 m. deep with steep sides and a nearly flat base. The evidence suggested that it was used for ritual activities until the later stages of the Middle Bronze Age, if not beyond.

An area of charred oak timbers which lay near the middle of the pond barrow, underlying a deposit rich in charcoal, may be the remains of a funerary structure. Sherds of Middle Bronze Age pottery, small pieces of fired clay and fragments of cattle teeth were found in assocation with the fill, and small fragments of burnt animal bone were recovered from the top of the charred wood. Radiocarbon dates of 1270–1000 cal BC from the wood and 1310–1050 cal BC from the animal bone were obtained, suggesting both charred wood and animal bone are of Middle Bronze Age date. Sealing part of the cut was a shallow layer of a brown sandy silt with gravel containing Neolithic, Early and Middle Bronze Age pottery. There were rim fragments of an Early Bronze Age collared urn *c*.2000–1500 BC., very rarely found in the county.

Evidence of earlier activity may be suggested by the radiocarbon date of 3030–2890 cal BC obtained from a small fragment of charcoal, presumably residual, from the primary fill of the barrow. There was no evidence of human remains.

Charcoal in larger deposits found in two contexts in the barrow was analysed, and these were found to be somewhat different. In one, a wide range of species was represented: oak (*Quercus* sp.), alder (*Alnus glutinosa*), hazel (*Corylus avellana*), ash (*Fraxinus excelsior*) and the hawthorn/*Sorbus* group (Pomoideae). In the other, the deposit consisted entirely of large pieces of oak (*Quercus* sp.), dating from 1310–1050 cal BC. This is interesting as the use of large pieces of single species has been associated elsewhere with initial funerary deposits.

Mid to Late Iron Age (450BC-50AD)

Seven pits and a ditch provided Iron Age evidence—six pits contained Mid to Late Iron Age pottery. One pit contained charred cereal grain from which a radiocarbon date of 550–390 cal BC was obtained, and one also contained flint, slag and fired clay, so iron working was being carried out close by.

From the burnt cereal evidence spelt wheat may have been the main crop cultivated during this period, together with barley and possibly emmer wheat. The sample is dominated by charred cereal grain: the majority of cereal grain identified is wheat and of those identified to species level, most clearly were spelt (*Triticum spelta* L.). However, reasonable amounts of emmer-like (*Triticum* cf. *dicoccum* Schübl.) grain and hulled barley (*Hordeum* sp.) grain were also identified.

Roman (150 AD-350AD)

A complex of Roman enclosures, field boundaries and droveways was found, probably part of a farm. Evidence of occupation started in the 2nd century AD, and may have continued though later pottery is absent.

Evidence of iron working during the Roman period pointed to the presence of a smithy close to the site. There were the remains of a well-made and quite substantial tuyère, which had a very oxidized orange back that suggests it was not used for iron smithing as these tend to be a more pinky-mauve colour. The piece has the remains of a large oval air hole.

A large quantity of charcoal remained from the use of an oven located close to the enclosure ditches. The wood used was mainly from the hawthorn/*Sorbus* group (Pomoideae), although field maple (*Acer campestre*), blackthorn (*Prunus spinosa*) and gorse (*Ulex* sp.) or broom (*Cytisus scoparius*) were also present. The scrubby nature of the wood suggests that land clearance had already taken place.

ACKNOWLEDGEMENTS

This report has been summarised by Roz Lowe from *The excavation of a Bronze Age Pond Barrow, Iron Age and Romano-British settlement at Bradbury Lines, Bullingham Lane, Bullingham, Hereford, 2003,* by Laurence Jones and Mary Duncan, published by the University of Birmingham. A copy is available at the Herefordshire SMR office. It may be available online from the University of Birmingham website.

Field-Names, 2007

By BRIAN SMITH

John Freeman, editor of the Herefordshire Survey of the English Place-Name Society, has reported on its progress.

Work continues on the collection and editing of material for Volume I (Radlow and Greytree Hundreds), which will include field-names. He is also working on a Dictionary of Herefordshire Place-Names in the English Place-Name Society Popular Series, which will cover most of the names on the Ordnance Survey 1:50 000 First Series maps published in the 1970s/1980s, as well as some interesting lost names of historical or philological interest. It is hoped that this will be ready for publication in about two years' time.

Natural History, 2007

By BERYL HARDING

As part of the continuing county-wide survey of churchyards, visits were made to:-

15th May: *St. John the Baptist and St. Alkmund, Aymestrey*. The latter is a very unusual dedication. The church is in a sheltered position within the village amid hills of Aymestrey limestone. The day began in rain but gradually cleared up. The grass is managed by frequent mowing but nevertheless the turf is herb-rich in the old churchyard, especially on the banks abutting the inside of the peripheral walls.

The boundaries consist of mortared stone walls with banks inside but to the south these are overgrown with nettles. To the west is the lychgate, two large English yews and a holly and along the north side an extra lane has been made leading to the new extended churchyard. Most of the gravestones in the older part are still *in situ* especially the table-top monuments and so too is the lower stage of the standing cross. These are also predominately of stone with a rich lichen cover.

Very few invertebrates were seen as it was so chilly but eighteen species of bird were heard or seen. Evidence of mammals noted were fox droppings and abundant molehills. In all, ten species of trees and shrubs, seven of grasses, three of ferns (including wall rue and spleenwort on the walls) and fifty-eight species of herbaceous plants were recorded.

St. John the Evangelist, Shobdon. The present church was built in *c.*1736 replacing the medieval church, part of which was re-erected on a nearby hill as a folly called the Shobdon Arches, unfortunately much weathered.

The church site is away from the present village, within a parkland setting with regularly -mown turf giving a lawn effect. This extends to the road as there is no boundary wall to the north. To the west is a high mortared retaining wall, and to the south a high brick wall enclosing Shobdon Court and its stable block beyond. To the east is a yew hedge and some large Irish yews which are beginning to break up. Very few graves remain with just seven clustered in one corner at the east end.

No longer raining, it was still cool and damp so no invertebrates were to be seen but fifteen species of birds were noted, including the spotted flycatcher. Four species of grass, twenty-two herbaceous plants, five species of ornamental shrubs and five of trees were recorded including two very large cedars.

St. Michael, Kingsland. This is mainly of late 13th- to early 14th-century date, and is situated in the village with mostly pasture nearby. To the south and adjacent to the churchyard is the Millenium Green established by the village with funding, and separated by a hedge. The grass in the churchyard is mown closely, some fly-mown, so the turf is not very herb-rich. To the east there is an extension to the new churchyard with a hedge boundary, and to the north, the only mortared stone wall, with a very large large-leaved lime. Some gravestones are of the chest type and still *in situ* with a good lichen cover.

Now sunny, still only a few invertebrates were noted but twelve species of birds were seen and heard and signs of rabbits were visible. Eight species of grass, one of fern, forty-one

of herbaceous plants and eighteen species of trees and shrubs were recorded including a large turkey oak (*Quercus cerris)*, a large copper beech, the large leaved lime (*Tilia platyphyllos*) and a very large beech tree. [Conservation records in the church porch show that their records number twenty-five species of birds, one hundred species of herbaceous plants, as against our fewer number in the summer visit, several unnamed species of mosses, lichens and ferns, and eighteen of trees and shrubs with the large beech reckoned to be 260 years old.]

26th June: *St. Andrew, Bredwardine.* This is early Norman, possibly pre-Norman, in origin, situated amid fields adjacent to the castle site near to the river Wye with the 14th-century Old Court nearby. In the churchyard the grass receives sympathetic cutting and is consequently herb-rich. There are drystone walls on all four sides and the gravestones are still *in situ* with lichen cover. Altogether seventy-eight species of herbaceous plants, two of ferns, nine of grasses, and fifteen of trees and shrubs were recorded including horse chestnut, sycamore, box and wild service trees. A click beetle was heard and seen and eleven species of birds.

St. Mary, Monnington-on-Wye is situated in a remote sheltered lowland area by Monnington Court. There is little management of the grass but it is all herb-rich. The boundaries consist of drystone walls with a stream to the east and south. Altogether fifty-three species of herbaceous plants, fourteen of grasses including one species of rush, three of ferns, and seven of trees and shrubs were recorded including English yew and sycamore. Eleven species of birds were noted.

St. Lawrence, Preston-on-Wye is of Norman origin. Its chancel was extended in the 14th century. The church was restored in 1625 and again in 1883. It is situated away from the village by farmland and a large house at a higher level than the fields. The grass is close-mown with the cuttings left and the turf is medium-rich throughout. To the west, south and north there are retaining walls with a further fence and hedge to the north. To the east is a barn (with a lovely roof). The graves are predominantly sandstone with some newer granite. Thirty-nine species of herbaceous plants were recorded plus one of fern, six of grass and two of trees. A Painted Lady butterfly was in evidence also signs of bats. Seven species of birds were noted.

7th August: A *millstream and pond survey was undertaken at Risbury Mill*.
The old mill wheel is still in place but it seemed difficult to locate the precise direction of flow above and along the flank of the hillside. Below the wheel there was no obvious outflow feeding the mill stream (which may be because of later changes to the leat).

The present mill stream or leat is *c.*1.5m. wide and *c.*50 cm. deep, flowing along a stony base and giving clear water running amid garden bank-side vegetation and some small trees before reaching the pond. This is open to lawns and rather less than 500 sq. m. in size and contains two islands, both useful for nesting water birds. At the far end of the pond there is a vigorous outflow into a smaller, stony-bottomed stream which then joins the river Humber.

Unfortunately, the ponds, lawns and house basement had been flooded during July consequently the bank-side vegetation was still muddied and partly flattened so there was no clear definition of the water edge, therefore trying to find firm ground from which to make sweeps in the water was a tricky business and finally abandoned. Tiny frogs were hopping about in the vegetation prior to venturing into adult life, thus providing another hazard as we worried about where to place our feet!

Some shallow sweeps were made in the pond but any disturbance made the water murky so that little invertebrate life could be detected. In the clearer streams, however, both surface and base sweeps could be carried out and many tiny dragonfly or damselfly nymph were found, also freshwater shrimps, copepods and many tiny ramshorn and pond snails. There were large numbers of very small newt tadpoles 1 cm. in length. Pond skaters were seen at the surface of the pond and azure damselflies. The owners had seen an eel a few days before but we had no such luck. The pH of the water was 7.5-8.0.

Mole activity was noted (no doubt due to desperate attempts to get away from flooded tunnels) and sixteen species of bird were seen or heard including goldcrest, nuthatch, pied wagtails, long-tailed tits, pheasant, great spotted woodpecker with one solitary moorhen on the pond.

Visits have continued to survey *Whitman's Hill Quarry and Woodland.* A report of the surveys was given in the 2006 Transactions and a detailed report has now been placed in the Woolhope Library. After the scraping last year of the lower cliff surfaces and quarry floor to expose the geological features there has been little plant regeneration despite the rather wet summer. Bird nest box recording has taken place in the woodland and dormouse boxes erected. The quarry has had better fencing for the safety of visiting school parties and has been well visited from late spring to early winter. Such visits will continue for several more years. It is now called the '*Whitman's Hill Geodiversity Discovery Venture*.'

Ornithology, 2007

By BERYL HARDING

Winter 2006/2007 was one of the warmest in modern times with less overnight frosts. Combined with a glut of hedgerow berries and forest seeds most birds fared well with far fewer coming to bird tables and feeders, especially when compared with 2005/2006 which had been the coolest in a decade with less food available. Fewer wintering thrushes and finches came from Europe this winter, which was having equally favourable conditions.

The first half of January was dull and cloudy with 7.5 mm. rainfall, becoming cooler and drier at the end. Statistically, it was an outstandingly mild month continuing the warm mild winter of 2006. Many birds were singing at dawn soon after Christmas and through January e.g. robins, blackbirds, song thrushes with house sparrows chattering as a prelude to early nesting and magpies were nesting by the end of January. With a milder winter in Europe there were fewer migrants up to December. Flocks of 250-300 fieldfare were recorded and up to 100 redwing at Moreton-on-Lugg, both less than usual. Large flocks of mixed corvids were recorded to the north of the county on 3 January with 600+ of jackdaws, rooks and carrion crows. The starling flocks were continuing to diminish in size with a maximum of 900+ in the Letton Lake area from January to March.

This good over-wintering survival led to some early and unseasonable breeding attempts, especially the tawny owl, wood pigeon, collared dove and blackbird, also moorhen, song thrush and robin. These were cut short by a brief blast of arctic air at the end of January with some snow in early February. A return to spring-like conditions in February with a maximum temperature of 12ºC gave further breeding attempts. March started cool with gales and heavy rain that badly affected tree-top nesting bird species such as herons and crows but ended mild and sunny. This saw the arrival of a few early migrants such as swallow, house martin and chiffchaff. April continued the summery weather with no sustained rainfall, 3ºC warmer than usual and the warmest on record. As it became warmer many long-tailed tits, greenfinch, robin, wren and mistle thrush successfully raised families, also some short-haul migrants like blackcap and chiffchaff. The first recorded cuckoo call was heard in the county on 10 April—one day earlier than last year! Little is known about their over-wintering: over the past years numbers have been declining in England and Wales but increasing in Scotland, so the decline cannot be due to difficulties in their sub-Saharan habitats. Their decline cannot be related to a drop in numbers of their British host species either, as the dunnock and reed warbler numbers are increasing although the meadow pipit is decreasing.

The screaming calls of arriving swifts in late April or early May mean that summer is on its way. This year they were back by 15 April, more than three weeks earlier than usual. However, they are in trouble as in the past twelve years the U.K. has lost about one-third of its swift population because newer buildings no longer offer suitable nesting opportunities. Putting up artificial nestboxes below the eaves facing north or west some 5 metres above the ground could help to reverse this decline.

May started with strong southerly winds which helped the return of certain summer visitors, but by the end of the first week rain belts from the Atlantic swept in and temperatures fluctuated during the month, which ended with heavy and destructive storms from the south-east. It was the wettest May for 100 years, making it one of the wettest periods on record. It

was the start of rain that continued through much of June and July. Some 20 mm. of rain fell during July with 10+ mm. on the 20th July, causing widespread flooding and obviously drowning the chicks of any ground-nesting birds still breeding.

The results for the nest box recording carried out by the Nature Trust on thirty-three sites throughout the county are given below. Some sites are on their reserves and others elsewhere .

Recording requires regular visits from the end of March through to late June and the Trust is grateful to those who do this work. The results for last the last ten years are as follows:- (No recording in 2001 due to foot and mouth disease)

	2007	**2006**	**2005**	**2004**	**2003**	**2002**	**2001**	**2000**	**1999**
Sites recorded	33	30	27	29	23	16	-	24	28
Boxes available	943	983	825	766	824	567	-	842	833
Boxes used	639	578	510	467	431	282	-	423	475
Percentage used	**67.8**	**58.7**	**61.8**	**60.9**	**52.3**	**49.7**	**-**	**50.2**	**57.0**

This has been the highest nestbox take-up to date, a result of the promising warm early spring.

Species Results for 2007

Species	**Sites**	**Nests**	**Eggs**	**Hatched**	**Fledged**	**% Success**
Pied Flycatcher	12	107	636	482	263	41.35
Blue Tit	33	301	2116	1871	1346	63.6
Great Tit	32	212	1334	1107	817	61.2
Marsh Tit	1	1	4	2	2	50
Nuthatch	11	18	95	91	74	77.9
Redstart	3	3	21	18	18	85.7
Coal Tit	1	1	7	7	7	100
Wren	2	2	7	0	0	Failed

Comparative annual success rate in fledging for the various species

	2007	**2006**	**2005**
Pied Flycatcher	41.3% on 12 sites	96.7% on 16 sites	62.3% on 14 sites
Blue Tit	63.6% on 33 sites	90.5% on 30 sites	57.8% on 27 sites
Great Tit	61.2% on 32 sites	85.5% on 30 sites	66.0% on 27 sites
Marsh Tit	50.0% on 1 site	100.0% on 4 sites	98.2% on 2 sites
Coal Tit	100.0% on 1 site	-	92.8% on 3 sites
Nuthatch	77.9% on 11 sites	87.0% on 9 sites	80.8% on 6 sites

Redstart	85.7% on 3 sites	100.0% on 2 sites	100.0% on 2 sites
Wren	Failed on 1 site	50.0% on 1 site	84.2% on 4 sites
Tree Creeper	100.0% on 1 site	100.0% on 1 site	-

Pied Flycatcher only Results

2000	24 sites	140 nests	669 eggs	494 fledged	73.8% success
2002	13 sites	96 nests	685 eggs	263 fledged	38.4% success
2003	14 sites	209 nests	708 eggs	376 fledged	53.1% success
2004	14 sites	89 nests	620 eggs	443 fledged	71.4% success
2005	14 sites	85 nests	574 eggs	423 fledged	62.3% success
2006	16 sites	88 nests	520 eggs	503 fledged	96.7% success
2007	12 sites	107 nests	636 eggs	263 fledged	41.4% success

The results proved disappointing this year. With the promise of such an early warm April the birds took up nest box sites rapidly and laid clutches which fully hatched. However, in many cases the fledglings later died due to the cold, wet conditions and/or lack of food. Parents were faced with the usual choice of whether to keep the chicks warm or whether to seek food which had become scarce, being also affected by the cold and wet. Often the parent returned with damp plumage which also cooled the young. The importance of putting out food during the early summer cannot be stressed enough as it allows the parent to take supplementary food for themselves while seeking appropriate insect food for the young. The number of sites taken up by pied flycatchers has halved since 2000, but the number of nests and eggs laid are moderately constant. Nuthatches usually do well as they start nesting earlier than the tits—if the brood fails they will not re-use the box but start again elsewhere. Although they do not use the nest boxes it was observed that many warbler nests were flattened by the deluges of rain giving little time for them to re-lay this year.

August was cool and dry for the first two weeks and again at the end of the month with the average maximum temperature only reaching 20-22ºC for a few days. The low rainfall continued until 24 September which was cool, particularly towards the end of the month. October also continued cool and dry.

For the past twenty to thirty years many of our summer visitors have been arriving progressively sooner; on average almost two weeks earlier than in the 1950s, but some have also changed their migration routes. The central European blackcaps for example used to over-winter in Iberia but since the 1970s, in response to milder winters, many from Germany have been spending their winters in southern England and here. Those we see in our gardens may be part of a sub-population, perhaps founded by a few better adapted accidental winter survivors from previous years that are adjusting to non-migratory behaviour? Experiments with such blackcaps suggest that the melatonin levels in their brains (which appear to trigger migratory behaviour) differ from those that do migrate; they also have slightly smaller wings so are less well adapted to long journeys. Hence, non-migratory blackcaps could be showing evolution in action. They are shy little birds difficult to see in spring and summer but become more conspicuous during the leafless winter months. The males tend to build several flimsy nests in spring until attached to a mate when a more substantial one is constructed from woven grasses

barely concealed in low, shrubby bramble patches.

The rich, lush grass growth from the damp warm winter plus the glut of berries and seeds gave an abundance of small mammal prey so many diurnal raptors laid large clutches but again the later wet conditions led to food shortages with death or sibling cannibalism. A barn owl needs 7 vole-sized mammals a day (*c.*140gm.). Fortunately our most common mammal, the field vole, is a prolific breeder. Moles can make up almost one-third of an owl's diet, especially in the case of the tawny owl. Despite being adapted to an underground life moles do travel above ground at certain times of the year, especially during summer droughts when their earthworm prey is inactive. Emerging after dark to search for beetles and other prey in the night-time dew the noise made in rustling leaves and tearing at grass roots is enough to alert nearby owls. Young moles also have to leave the maternal tunnel system in late spring making easy prey for owls. The wet weather of this summer also had an adverse effect on ground-living mammals.

The lesser-spotted woodpecker can be heard drumming on a still day with the sound carrying up to a mile at eleven times a second. The bird is not searching for food or excavating a nest hole, but is signalling its territorial claim, using carefully selected trees with sonorous properties which amplify the sound. When really excavating a hole or seeking beetle larvae the beats are slower and sound harder. These can be heard at any time of the year, whereas the territorial drumming is heard only from late January into early spring. In the case of the great spotted woodpecker, numbers have greatly increased over the last forty years. Some experts believe this is due the results of Dutch elm disease leaving plenty of nest sites in dead elms, others believe it is due to the mild winters. Whichever, they are now increasingly coming to gardens to feed on peanuts and fat balls which provide easier pickings and parent birds are bringing their young soon after fledging to acquire the habit. However, our pleasure in seeing these handsome birds may be offset when we find that they can dominate feeders and, like magpies, take garden birds' eggs, They also hammer into nest boxes to reach the chicks—a problem that occurs with the Nest Box Survey unless metal guards are placed at the entrance.

Jackdaws, the smallest member of the crow family, mate for life and remain in a pair all year. In winter they are highly sociable gathering in large noisy flocks in the countryside, often with rooks. The jackdaw communities are highly organised with a hierarchy of dominance among the males who have been observed passing food to fellow birds—a form of behaviour more often associated with primates. They are opportunistic feeders on a variety of foods and bolder than other corvids readily eating from bird tables.

The E.U. is abolishing rules that require farmers in the E.U. to keep 10% of their land fallow for the next two years. This decision is driven by both the high price of cereals and the desire to give more land to the production of bio-fuels. Set-aside land has brought huge environmental benefits as it encouraged farmers to let meadows and wildlife flourish. With habitat loss elsewhere, set-aside provided a haven for many species. In the U.K. skylarks, tree sparrows and yellowhammers all use set-aside in the winter, and in France the little bustard lives almost entirely on set-aside. Environmental groups are urging the E.U. to reconsider as the impact on wildlife has not been fully considered in the rush to produce bio-fuels.

The British Trust for Ornithology (B.T.O.) is working to produce a B.T.O. National Atlas the aim of which is to produce dot distribution maps showing in which 10-km squares each species winters or breeds. Such maps will show broad patterns across Britain and Ireland of

relative abundance during winter and the breeding season. It also aims to measure the changes in distribution and abundance patterns since earlier Atlases were made. The Hereford Ornithological Club (H.O.C.) is also working to produce an atlas for Herefordshire using the same 10-km square tetrads and dot maps. Recording will span 2008-2011.

Unusual sightings observed within the county by H.O.C. recorders were a single little egret during last November and December at Wellington Gravel Pits and on the Wye, others have been sighted in twos and threes during the summer; they are almost counted as British now to the south-east of the country. A nightingale was reported at Sollers Hope in April and a long-staying bird at Mathon from 24 May. A storm-blown Manx shearwater was taken into care at Leominster on 20 September, and at Wellington Gravel Pits singles of a yellow-legged gull, a common tern and an arctic tern were seen during August and September, also a little stint at the end of September. At the end of April to early May an adult lesser yellowlegs was seen at Brockhall Gravel Pits which was the first record for Herefordshire.

November was cool and damp with some frosts and snow on the 18/19th of the month preceded by gales. The year ended with December dull and cloudy with dry cold winds in the middle of the month and an overall rainfall of 10mm. 2007 has been a year for acorn production as well as beech mast and bumper crops of berries. It will be interesting to see if this leads to an invasion of jays or waxwings by the end of the year.

Weather Statistics, 2007

Month	*Max. temp. shade ºC*	*Min. temp. shade ºC*	*Nights frost air/ground*	*Rainfall mm.*	*Max. rainfall in 1 day mm.*	*Days with rainfall*
January	12.5	-2.0	4 1	46.6	12.5 (9th)	17
February	11.5	-6.0	6 5	82.4	19.0 (10th)	18
March	16.0	-1.0	1	69.0	22.0 (2nd)	13
April	25.0	1.5		10.3	4.8 (24th)	4
May	26.5	5.0		129.3	41.0 (13th)	19
June	28.0	8.5		122.1	13.0 (19th)	17
July	26.5	8.0		213.5	103.0 (20th)	18
August	28.0	8.0		36.6	14.0 (15th)	9
September	25.5	5.0		49.6	30.0 (23rd)	13
October	18.0	-2.5		52.9	27.0 (16th)	12
November	16.0	3.5	3	57.4	23.0 (18th)	20
December	14.0	4.0	8 7	70.5	15.0 (24th)	14
Total				940.2		184

Highest day temperature:	28.0ºC	9th July, 6th & 25th August
Lowest night temperature:	-6.0ºC	6th February

Wettest day:	20th July
Wettest month:	July
Driest month:	April

Recorded by E. H. Ward at Woodpeckers, Much Marcle.

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