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HEREFORD,	Little Birch	Goodrich
HR1 1SQ	HEREFORD,	ROSS-on-WYE
	HR2 8BD	HR9 6JF

Articles intended for inclusion in future issues of the Woolhope Club *Transactions* should be submitted to the editor: Mrs R. A. Lowe, Charlton, Goodrich, Ross-on-Wye, Herefordshire, HR9 6JF. Please request a copy of *Notes for Contributors to the Transactions* or see the website: woolhopeclub.org.uk.

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Obituary: Jim Tonkin, 1921 - 2010

Jim at the Club's dinner in 2000

Jim was born at Newlyn in October 1921. He and Muriel attended Penzance Grammar Schools; Muriel at the Girls' School at the top of the field; Jim at the Boys' School below.

Called up in June 1941, Jim joined the Royal Corps of Signals and served in Burma, Assam and the Naga country where Wingate and his Chindits 'Special Force' carried out dangerous exploits behind enemy lines. After delayed demobilization Jim, like many ex-service men, took an emergency teacher-training programme, at Redlands College, Bristol. This he followed up by studying for a University of London Honours course, by correspondence. He was awarded a top 2nd class degree.

Jim and Muriel were married on 12 August 1949. Jim's first teaching job, that year, was at Camborne Boys' Secondary School, where he taught for 4½ years. He then moved, with his headmaster, to Tretherras Secondary School at Newquay, as deputy head. His interest in the archaeology and buildings of Cornwall was an absorbing study that sprang partly from his father's traditional work as a stone mason.

In 1963 Jim was appointed head of Wigmore's new secondary school, a post he held until retirement in 1981. He is remembered affectionately by his pupils. An active member of teaching development groups, he started one for history teachers which produced a handbook for exploring Hereford's past.

Jim and Muriel joined the Club in 1963 and its Central Committee two years later. Jim edited its *Transactions* for 40 years from 1966, when he introduced a new, larger, format and contributed an article on *The Early Street Names of Hereford.* Sectional Recorder of the county's buildings from 1969 to 2007, he served as President in 1967, 1973 and 1984, and as Honorary Secretary from 1985 to 2008. A book of essays in honour of Jim and Muriel's work for the Club was published in 2011.

In his early days in Herefordshire domestic architecture was little valued, but the foundation of the national Vernacular Architecture Group changed all that. As Secretary from 1972 and President 1977-9, Jim ensured Herefordshire's remarkable buildings received their due. Despite his busy life as headmaster, serving the northwest of the county, and his lecturing programme, Jim contributed papers to a range of journals, including *The Great House, Truro* (1961), *Recording Vernacular Architecture in Cornwall* (1965) and *Social Standing and Base Crucks in Herefordshire* (1970). With Radford and Hope, he provided an analysis of 'The Great Hall of the Bishop's Palace at Hereford' for *Medieval Archaeology* in 1973. Jim and Muriel's *Book of Hereford* (1975) was followed by Jim's *Herefordshire* in 1977.

He found time willingly to talk about the county's history and buildings to audiences all over the country. Soon after arriving in Herefordshire, Jim was visited by Stan Stanford and Frank Noble, who told him: 'we want you' – to lecture to local evening classes for the University of Birmingham Extra-Mural Studies Dept and the WEA. This gave Jim a platform from which to promote the study of local vernacular buildings. Thus a chapter on 'Bromyard Houses' was included in the Bromyard Local History Society's first publication, *Bromyard. A Local History*. In Hereford, with his students, he recorded No. 3 High Street and its medieval cellars, then reinstated in Littlewoods store after great national interest. Research in the area led to long friendships in the north-east of the county. Many Club members and WEA students were taken into the attics of town and country houses to view the structure while Jim dated the beams. Jim's natural charm always persuaded house owners to reveal their inner sanctums.

Jim served diligently for many years as the Club's representative on the City of Hereford Archaeology Committee (CHAC). This was set up to initiate and carry through a programme of archaeological investigations in Hereford. It included representatives from the City and County Councils, the Civic Trust, the Department of the Environment and West Midland archaeologists. When, in 1996, CHAC became the Hereford City and County Archaeological Trust Ltd., Jim became a trustee. He made an invaluable contribution to archaeology in Herefordshire, as, for example, when the City became an Area of Archaeological Importance and during the Mappa Mundi excavations project at Hereford Cathedral.

Even after retirement, Jim kept a close eye on building developments. When the internal north wall of Wigmore church was stripped, he wrote to the chancellor of the diocese that he felt 'strongly that this section of herring-bone walling should remain exposed for public view, because of its near unique quality'. Indeed, this is the work of Ralph I de Mortimer, who founded it in 1100 as a collegiate church dedicated to St James, with three prebends. Hence the width of the original nave. The Diocesan Advisory Committee has now reversed its decision to plaster over the herring-bone masonry.

Throughout their time in Herefordshire, Jim and Muriel retained their interest and affection for Cornwall, their home county. This is shown by the name they chose for the home they built on its remarkable plot just beyond the parish church: *Chy an Whyloryon*, 'The House of the Seekers'. Before they left Cornwall, both Jim and Muriel were elected bards of Gorsedh Kernow, Jim as 'Bard of the Buildings' and Muriel as 'Bard of the Fragments' (records).

In the days before his death on 22 April 2010, Muriel learned that Jim was to have been awarded an MBE in the Queen's Birthday Honours list for 'his outstanding voluntary service to heritage in Herefordshire over many years', a fitting recognition for all that he had done for the county over the last 47 years and his voluntary work for the Woolhope Club.

Joe Hillaby, Jean O'Donnell and others

Proceedings, 2010

SPRING MEETINGS

FIRST MEETING: 16 January 2010: Mrs R. A. Lowe, president, in the chair.

Mr Neil Surety from Border Archaeology gave a talk on the excavations carried out during 2009 at The Prospect, Ross-on-Wye. The Prospect is a flat area on the edge of St. Mary's churchyard which commands a fine view over the Wye and Wilton castle and bridge. It was laid out by John Kyrle in the 17th century, but part of the original retaining wall had collapsed to reveal underlying structures which it was thought might be Roman. There was the possibility of burials due to the close proximity of the churchyard.

The slippage was removed to the original ground level a metre or more below the current ground level to reveal features such as postholes which appeared to date from more than one period during the Roman occupation.

One unexplained structure was a circular building with foundations more than a metre wide and a bowl-shaped floor, adjoined by a wall a metre wide. As most of the stonework had been robbed or destroyed by the creation of the Prospect, its function and its date remains a mystery.

The excavation area was widened and test pits were dug, one of which revealed a horse's skeleton. This rested on the layer immediately below the soil deposited to make a level base for the circular building, and thus it may have been ritual deposit. Other horse bones, including skulls, were found around the site with possible traces of harness fittings. There were a number of finds from the earlier Roman period, including a brooch, pins and coins. Post-excavation evaluation will, hopefully, answer some of the dating questions.

SECOND MEETING: 6 February 2010: Mrs R. A. Lowe, president, in the chair.

Mr Robin Jackson, from the Worcestershire County Council Historic Environment & Archaeology Service gave an illustrated talk on 'Neolithic and Bronze Age Rotherwas: the 'Ribbon' and other enigmatic activity'.

Six or seven Neolithic and Bronze Age sites have recently been excavated on the Rotherwas industrial estate, of which the most widely publicised was the 'Ribbon'. This feature, constructed with piles of burnt stones, was first identified in the profile of a Roman ditch. The pebbles, many chosen because of their white hue, came from local sources and were mixed with other burnt material, including fragments of Neolithic and Bronze Age pots. A piece of charcoal provided a radio-carbon date of 2140-1930 BC. There were also lots of pits and associated post holes, indicating round houses, one of which contained a piece of Beaker pottery. Another pit contained grooved ware (*c*. 2200-2800 BC), suggesting the site was in use for over 1000 years. Mr Jackson was wary about speculating on the purpose of the 'Ribbon' but stressed that it was certainly a community endeavour, constructed in a well-populated landscape. He suggested that it was a 'ceremonial pathway' leading from the hills down to the river Wye and pointed out that the burnt stones, very much in evidence today, probably only arrived in the later stages of use. The stones were heated then doused with water to create steam.

The talk concluded with a review of the other sites excavated in the Rotherwas area. This included the Future's development where there were areas of burnt stones, pits and post holes, similar to the 'Ribbon', albeit there was no obvious connection. Here the area of occupation

was defined by a boundary ditch and a great deal of charcoal. The site dated from the mid-Neolithic period (3400-2900 BC). Mr Jackson explained that the presence of burnt stone could have been related to a number of activities including (i) heating water to avoid damage to fragile pots; (ii) industrial activities, including fulling and dying and (iii) social usage e.g. a 'sweat lodge' as used by the North American Indians. An adjoining site produced a sarsen stone, which probably came from South Wales and appears to have been part of a processional monument, perhaps developed in succession to the 'Ribbon'.

Mr Jackson hoped that some money – perhaps £85,000 – could be found to pursue the course of the 'Ribbon', which geo-physics suggests went much further up the hill and, probably, down to the river Wye. The excavated stretch of the 'Ribbon' was now under the relief road. During questions the speaker was encouraged to describe something of the rituals associated with the 'Ribbon', graphically describing a torch-light procession, snaking through the veteran trees, following the marker posts down to the river-side.

THIRD MEETING: 6 March 2010: Mrs R. A. Lowe, president, in the chair.
Mr Jeremy Barker from Dorset spoke to the Club, giving an illustrated talk on 'Sir James Thornhill, Thomas Foley, MP and the decoration of Stoke Court, 1704-06'.

Paul Foley (1645?-1699), son of the Stourbridge ironmaster, Thomas Foley, bought the Stoke Edith estate from the widow of Henry Lingen in 1670. After a successful political career, culminating in his appointment as Speaker of the House of Commons, he began to rebuild Stoke Court on a grand scale but left the project unfinished when he died in 1699. His son Thomas embarked upon the decoration of the house in 1704, employing a young 'history painter' from Dorset, James Thornhill, who had recently assisted the Italian painter Antonio Verrio (d. 1707) with the mural paintings at Hampton Court, Middlesex. The talented and well-connected Thornhill came to Stoke Edith determined to establish himself as the leading English decorative painter of his age. Two references in the Foley archive in Herefordshire Record Office confirm that Thornhill painted the grand scenes in the Painted Hall at Stoke, but Mr Barker also showed from his extensive research in other repositories that there were 'many other noble decorations', as Colen Campbell stated in *Vitruvius Britannicus* (1715), carried out by the artist in the house. The iconography and allusions contained within the various scenes in the Hall were described in detail using the notes made by Lady Emily Foley (d.1900) in her Red Notebook. The painted stairway which depicted Ovid's story of Niobe and her children was then discussed, with many valuable insights from Thornhill's own sketchbook, now in the British Museum.

Perhaps the most significant surprise of the afternoon was Mr Barker's discovery of 17 canvas paintings by Thornhill, which decorated the walls of Stoke Edith before the tragic fire of 1927. In nearly all cases the speaker was able to produce images of these and we learnt that several of the canvases survived the fire and were sold by auction at Agnew's as recently as 1964. He concluded with the observation, that apart from Greenwich and St Paul's, Stoke Edith was Thornhill's most significant commission. Moreover, Foley introduced the artist to his friends and political allies, which brought the artist commissions at Hanbury Hall, Wimpole, Blenheim and Chatsworth. The lecture made it very clear that the fire at Stoke Edith on that cold February night in 1927, robbed Herefordshire of its greatest work of art. (Mr Barker's talk was a summary of his definitive paper on Thornhill and the decoration of Stoke Court, which has been published by the Club as one of the *Essays in honour of Jim & Muriel Tonkin*. It is lavishly illustrated in colour and black and white.)

SPRING ANNUAL MEETING: 27 March 2010. Mrs R. A. Lowe, president, in the chair.
The president, Mrs Lowe, thanked the officers and committee, the librarians, the field secretary, the lanternists and other Club members who generously give their time in support of the Club. In particular, the Club committee had reviewed the Club's activities and profile in the county, and had instituted certain changes which had been communicated to members in the Spring newsletter. These were part of an ongoing process designed to attract a steady supply of new members, and also to fulfil our charitable aims.

She gave her address 'An illustrated history of New Weir, Whitchurch' which is printed in these *Transactions*.

She installed Mrs R. E. Skelton B.A., M.R.T.P.I. as president for 2010-11, who thanked members for the honour of being elected the Club's president.

The membership secretary reported that the Club had 652 members as at the end of 2009.

FIRST MEETING: 14 April 2010: MALVERN area: Building stones and churches.

Thirty-five members and guests attended this full-day meeting led by Dr Paul Olver. The first stop was the Dingle Quarry in West Malvern, worked during middle and late Victorian times for both granite and diorite which was then used extensively in Great Malvern itself and in surrounding areas. Both these rocks could be seen at the Victorian church of St James in West Malvern where the angular blocks were closely fitted together in a continuous 'jigsaw', a very characteristic building style in this area. The darker diorites contrasted with the pink pegmatitic granites while those rocks containing veins of pale green epidote were especially likely to be selected. Lunch was taken at the nearby Wyche Inn.

Our first call in the afternoon was the church of St John the Baptist at Mathon. Herringbone masonry in the nave betrayed its early Norman origins probably before 1100AD. The rubble-built walls displayed a rich variety of Malvernian granites and diorites, occasional Silurian limestones and very weathered calcareous siltstones, and a diverse collection of Ice Age erratic boulders. Old Red Sandstone (Devonian) formed the quoins and lintels while Bromsgrove Sandstone (Triassic) was used extensively in the tower (14th Century). An unusual intraformational conglomerate containing mud clasts, probably derived from the local Devonian strata, had been used for the late medieval south porch.

St Edburga's at Leigh was our next stop, again dating from *c.*1100. The oldest walls showed some use of the local Malvernian granites together with some Upper Silurian buff-coloured sandstones and siltstones. The front of the church was of local Old Red Sandstone with some Triassic Bromsgrove Sandstone both showing recent repairs of Grinshill Sandstone from North Shropshire. The differing rates of weathering of these three types of red sandstone could be clearly demonstrated. An excellent tea taken at Storridge Village Hall completed our tour.

SECOND MEETING: 27 May 2010: DEERFOLD FOREST: History and landscape impact
David Lovelace and the president Rosamund Skelton led 39 members and guests on an investigation of the fine landscape of the former forest of Deerfold. Throughout the medieval period communities from surrounding manors had common rights for grazing, fuel and other resources in this untamed area of wood pasture. When Edward Mortimer became King Edward IV in 1461, Deerfold, as part of the Mortimer's honour of Wigmore became a royal forest whose administration has provided historians with considerable documentation. In the early 17th century Deerfold, along with the nearby forest of Mocktree and chase of Bringewood,

supplied great quantities of wood for the iron works at Downton gorge which quickly denuded much of its tree cover. At the same time small local industries had sprung up including a pottery and many small carpentry businesses. Tensions between the competing interests of commoners, iron masters, land improvers and the Crown lead to the partial enclosure of Deerfold in the mid 17th century but nearly 600 acres of the original forest survived until its final conversion to enclosed farmland in the early 19th century.

We investigated some of the enclosures between the Haven farm and Dickendale including the remains of a small settlement active in the 19th century but now only earthworks and a hollow way. Here we had our packed lunch and watched a pair of red kites wheeling directly over us. Native lime trees were found to be frequent in the hedges and we admired a particularly large lime by a stream. As an ancient woodland indicator these limes are living survivors of the original Deerfold's forest.

We briefly visited nearby Barnet wood—an example of a woodland common which was enclosed in 1772. On our return we passed a 'mistletoe oak' which was described and illustrated in the Woolhope *Transactions* of 1869 but the mistletoe had apparently disappeared in the 1970s. We returned to the Royal George in Lingen for an excellent cream tea. Penny Oliver, an expert on the county's enclosure history, handed out some leaflets with maps giving a resume of current research findings on Deerfold's history and enclosure, the latter based upon Muriel Tonkin's meticulous reconstructions of the Wigmore enclosure awards. More original documents have been recently uncovered and research into the many enigmas of Deerfold forest continues.

THIRD MEETING: 16 June 2010: WEOBLEY: Inside out

Duncan James led this meeting around Weobley in blazing sunshine. It broke with tradition in that it was only a half-day excursion and did not involve a coach. Nevertheless there was a more than full house with 40 club members in attendance. The focus of the visit was on the 15th-century buildings with an explanation of the form of the eight half-Wealden houses, some hidden behind later façades, the only examples found so far in Herefordshire. This investigation led to the entire group, with permission, piling in to the butcher's shop to view the ceiling evidence for one of a semi-detached pair of half-Wealdens. Access was also gained to the interior of one of the row of four late medieval shops in the former market place where it was possible to see much of the framing. It was explained that the centre pair of shops had 3-inch thick floorboards that had been tree-ring dated to 1461-83 and were coeval with the building. Weobley has an abundance of late medieval hall houses (surviving evidence for 28 at the last count) so these were viewed at some length. It was noted that on many of the buildings the jetty plates were moulded with a similar profile and that this was a part of the building that normally was undecorated but in Weobley occurs as a key feature. Behind the Red Lion the cruck-framed building was seen and it was explained that this was the surviving two bays of a hall house that had lost the service and parlour bays. At The Gables, also medieval, with a rebuilt open hall, a cream tea was had by all beneath a fine coffered ceiling. A good day with an attentive audience.

FOURTH MEETING: 15 July 2010: MALMESBURY

The President's choice of field meeting was a full day excursion to Malmesbury in Wiltshire when she was accompanied by 38 members. On a day of variable weather, after a few showers at first, it became sunny by the afternoon. After coffee and biscuits at the Highfield Garden

Centre we wound along the side of the Stroud valley to All Saints Church at Selsley. Members saw all the windows produced by William Morris and his partners including a beautiful Rose window.

Many ate lunch on the way to Malmesbury allowing more time to enjoy the sights on arrival. Alighting in the Market Square we walked to the fine medieval Market Cross with its vaulted roof and seats. Passing through the Tolsey Gate, the stately 12th-century Norman abbey (replacing a 7th-century one) was seen. The outer porch has intricately carved arches while the inner part has superbly sculpted almost life-size figures of Christ and the Apostles lining both sides. The nave with the tomb of King Athelstan was inaccessible due to a school performance, although some members were able to see part of it during an interval.

After looking at the remains of the impressive west front, members followed their own interests, looking at the town, the Abbey House Gardens with their roses in flower, or the guided walk in the leaflet. The President, Mrs R. Skelton, led a shortened walk around the town to see notable features such as the view from the medieval town walls set on earlier Iron Age ramparts, the Anglo-Saxon Church of St Helen with its 'long and short quoins' now part of a private house, the spring where the monk Daniel immersed himself in cold water 'to subdue his rebellious flesh', and finally to the 12th century archway of the hospital of St John the Baptist.

Returning to the bus we went to Tetbury for tea and muffins at the Priory Inn and afterwards to the 13th-century Beverstone Castle. In 1331 the recently-married heiress was abducted to try and stop her having an heir and a few years later her husband sold the castle to the Berkeleys who improved the fortifications. Here we looked at the gardens and the tall 14th-century Berkeley Tower. The Jacobean House was built by Sir Michael Hicks secretary to Lord Burleigh, about 1610. The President gave a brief history of the castle and then everyone went to the church with its Anglo-Saxon 'Resurrection Sculpture' halfway up the outside of the tower. After a false start, a speedy return was made via the motorways to Ledbury and Hereford.

FIFTH MEETING: 10 August 2010: DILWYN

The President and the Hon. Secretary led a group of twenty-four members on a circular walk between Dilwyn and Weobley. After a brief visit to the church—referred to as a 'collidge' served by seven vicars by Blount—the castle mound was climbed, its topography examined and its position as the 'caput' of the honour of Dilwyn discussed. Across the fields to the south a second 'moat' was also visited. Surprisingly, this had a substantial mound and appears to have been the settlement of *Faeliglaeh* discussed by the shire court held on Aylestone Hill in *c*.1020 (Coplestone-Crow, *Place-names* (2009), p.80). The President was sure she could detect vestiges of a lost village. The stonework on the mound, seen on an earlier visit by the Club, was less evident but an ancient, yet vigorous Wych elm (*Ulmus glabra*), was much admired. 'Homme Shrubs' was the next objective. Perched on high ground, this coppice marked the site of The Homme – a major country house, dating from the early 16th century, belonging to the Carpenter family. It subsequently became part of the Garnstone estate and was demolished in 1873, leaving in its wake a number of ghost stories and the outline of its substantial pleasure grounds. One or two trees remained that formed part of a grand avenue that extended to Weobley. Along this bridle-road the group set off for lunch.

The afternoon was warm but cloudy when the group commenced its return journey, crossing the valley of the Newbridge Brook, where once there were open fields shared between the communities of Dilwyn and Weobley, but now planted with modern low-growing apple trees in serried ranks. The crucial bridge, crossing the brook, was eventually found and the group climbed up towards The Haven with eyes cast towards the ground, hoping to see clues of a lost Roman site. Marked on the tithe map here are several fields employing the names 'Chesterns' and 'Blacklands' (Richardson, *TWNFC* (1996), pp.456-60). The fields were hard and dry and nothing of archaeological interest was found. Beyond The Haven (and a field with a bull in it!) the landscape changed, and a narrow lane was followed past Tump Ash Farm, which seemed aptly named, through the medieval 'Helvyn's Wood' to its namesake, the modern Henwood. Here was a delightful Georgian villa, built by a lawyer, Lacon Lambe, who was town clerk of Hereford between 1765-1804 (information kindly supplied by member Henry Connor). The house was built *c*.1780 and probably designed by the Hereford architect, Thomas Symonds. After crossing the fine park with ravishing views to the south, a copious tea was provided in Dilwyn Parish Hall by the local W.I.

AUTUMN MEETINGS

FIRST MEETING: 2 October 2010: Mrs R. E. Skelton, president in the chair.

Mrs Ruth E. Richardson, a member of the Club, gave an illustrated talk on 'Blanche Parry, Queen Elizabeth I's confidante'.

Mrs Richardson dedicated her talk to Jim and Muriel Tonkin who helped foster her interest in the history of Herefordshire. She remembered the enjoyable trips organised by Jim for local schoolteachers, which introduced her to many of the historical sites of the county. It was with Jim and Muriel's support that the Herefordshire Field Name Survey came to fruition and, similarly, their encouragement to carry out research eventually led her to Blanche Parry.

Mrs Richardson outlined something of the illustrious history of Blanche Parry's family and especially its relationship with the Herberts of Raglan. She suggested that Blanche went to school at Aconbury Priory under the supervision of Dame Isabella Gardiner, perhaps its most notable prioress. Blanche entered the royal court in the entourage of her aunt, Blanche Herbert, Lady Troy, who was guardian to Henry VIII's youngest children, Elizabeth and Edward. Blanche served in the household from Elizabeth's birth and when Lady Troy retired to Mitchel Troy near Monmouth, *c*.1546, she expected Blanche to succeed her in Princess Elizabeth's household. However, Kate Ashley was appointed, and Blanche became second gentlewoman. She was, therefore, one of the three gentlewomen who accompanied Elizabeth to the Tower in 1554. When Kate Ashley died in 1565 Blanche became principal gentlewoman, a position she retained until her death in 1590 (modern dating). Blanche's cousin and friend was Sir William Cecil, later created Lord Burghley, Queen Elizabeth's Lord Treasurer and it is probable that Blanche's position helped to facilitate his access to the queen. Blanche was certainly in a very privileged position, looking after the Queen's wardrobe and her jewels, and frequently acting as an intermediary between the Queen and the important courtiers, noblemen and politicians of the time. Mrs Richardson analysed the famous picture of the *Dutch Emissaries*, dating from the 1560s, which, she suggested, shows Blanche at the centre of the picture acting as the Queen's chaperone, in her 'recognised and accepted position at the centre of the royal court'.

Blanche acquired considerable land in Herefordshire, Wales and Yorkshire. She eventually relinquished being in charge of the queen's jewels due to her failing eyesight but she remained with Elizabeth until she died at the age of 82 in February 1590. She was buried in

St. Margaret's, Westminster where her tomb effigy commemorates her status in life. She had commissioned an earlier tomb in Bacton church, Herefordshire, close to her family home at Newcourt. This predates Blanche's first will of November 1578 and was probably erected by the Hereford mason, John Gildon, who signed the tomb of Dr David Lewis of Abergavenny, a relative of Blanche. The unused Bacton monument has two figures: Blanche and Queen Elizabeth in the guise of St Faith, to whom Bacton church is dedicated. As this is now securely dated it is proved to be the earliest depiction of Queen Elizabeth as an icon, as Gloriana. It is thus a nationally important monument which, in perhaps a rather perverse way, deifies the Protestant queen as an early Christian martyr.

SECOND MEETING: 23 October 2010: Mrs R. E. Skelton, president in the chair.
This was the forty-eighth F.C. Morgan Lecture given by Dr Timothy Shakesheff on 'Rural Conflict, Crime and Protest: Herefordshire 1800-1860'.

Dr Shakesheff explained that his mission as a social historian was to 'explore the lives of people hidden from history.' With this object in mind he had exploited the court proceedings of Herefordshire in the early 19th century and discovered that the poetic view of the county as some sort of Arcadia was very far from the truth. As a result of enclosure, low wages and changes in the poor law, violent crime was common in Herefordshire. Indeed, with agricultural wages lower than anywhere else in England, the county topped the league table with the most criminous community in the country. Small scale larceny and vandalism were very common, with 62% of such crimes being committed by the lower classes against farmers and landowner. Places like Whitchurch and the Doward were notorious for the criminality of their inhabitants. In some years in the early 19th century there were robberies every night, with the result that respectable people avoided the area and land went out of cultivation. In the 1820s sheep stealing in the county was endemic and those who committed these acts threatened retribution against farmers who instigated prosecutions. Generally, however, theft was for personal consumption, albeit, until the 1830s, sheep stealing was regarded as a capital offence. The stealing of fruit and vegetables was also common, again for subsistence, as was poaching. In some areas, e.g. Credenhill and Breinton, gamekeepers organised gangs to round up thieves, which resulted in much violence. Middle-class fears in this period focussed upon incendiaries. These were not common in Herefordshire but there was an outbreak of fire attacks around Madley, carried out by the so-called 'Fire King'.

In the market towns the picture was rather different. Here, between 1830-60, drunkenness and common assault were the commonest offences heard by the petty sessions. This supports the broader historical view of the transformation of England, between 1780-1860, from barbarism to sensibility. By the middle of the century serious offences were declining, wages were higher and employment more regular. Better surveillance was paid for by polite society, which also pressurised magistrates to be pro-active, especially against criminality caused by drink. In mid-century the magistrates launched a war against the outlets for drink, imposing restricted drinking hours and shaming drunken women via the press. From the 1840s a small police force was available to reclaim the streets. Its work was applauded by the middle classes via the newspapers or, as in the case of Kington, where it was next to useless, shamed. In the countryside the police arrived much later as poor farmers resented the increased rates and the propensity to be ordered about by their own class. By the end of the century Dr Shakesheff felt that there had been very little cultural change in Herefordshire but lower class behaviour had perhaps, improved with secure employment and higher wages. On

the other hand some contemporaries (and some modern historians) argued the reverse i.e. good times provided disposable income to pay for bad behaviour – *plus ça change, plus c'est la même chose*.

THIRD MEETING: 13 November 2010: Mrs R. E. Skelton, president, in the chair.

Dr Janet Cooper's many years work on VCH volumes led to an interest in church dedications and a realisation that some had changed over the years. She wondered whether medieval dedications, if they could be identified, might help to date a church and consequently the settlement in which it stood. Alan Everitt has been able to demonstrate a chronology of dedications in Kent. In Essex, however, Dr Cooper discovered about 400 medieval dedications which did not show such a clear-cut chronology. Her work on church dedications might have come to an early end had she not met Dr Graham Jones, then of Leicester University, who runs an ambitious project to study not only church dedications but also the dedications of side altars and statues in medieval churches.

Dr Cooper started the main part of her talk with a brief history of church dedications. The tradition in late Roman society was to erect churches on the burial places of saints and martyrs. From the late 4th century all churches, whether built over a tomb or not, were dedicated to a saint; the more popular the saint the more churches might be dedicated to him or her. Church councils in England provided that all churches should be so dedicated, but by about 1200 there seems to have been doubt about how effective the instructions had been, and in 1237 any undedicated churches were ordered to be dedicated at once. With the growth of population and wealth in the later Middle Ages, churches acquired side chapels, subsidiary altars, statues and 'lights', each with its own dedication. However, the Reformation down-graded saints and by the 17th century many church dedications in England had been forgotten. In the 18th and 19th centuries antiquarians searched for medieval church dedications, while both evangelicals and supporter of the Oxford movement provided new dedications for some churches whose dedications had been lost. Dr Cooper stressed that serious research into medieval records was essential to discover the earliest dedications for a church. Wills, bishop's registers listing presentations to benefices, post-Reformation grants of former chantry land were probably some of the most useful sources available. Some antiquarians had assumed that local fairs were held on the feast of the church's patron saint, but Dr Cooper found in Essex that 50% of fair dates did not coincide with the dedication of the parish church. Another suggestion, made by the antiquary Silas Taylor, followed by the poet William Wordsworth, was that churches were often orientated towards the position of sunrise on their patronal festival. Recent work has suggested there may be something in this.

The most popular and earliest dedications in England were to the Virgin Mary and to St. Peter. In Herefordshire there are about fifty churches dedicated to Mary and about thirty to St Peter. For obvious reasons the Virgin Mary, the mother of Christ, was a popular focus for devotion. St. Peter was associated with Rome and its civilization, which was particularly important for early Anglo-Saxons. Kings were keen to appease St Peter, who held the keys of heaven, and thus, churches built upon royal estates were dedicated to him. Dr Cooper provided many insights into the church dedications of Herefordshire, using her extensive knowledge of patterns of dedications elsewhere in England. For example, there were twelve churches in the county dedicated to St James the Great, and nearly twice as many in Worcestershire, yet in Essex there were only four. She suggested that the number of dedications reflects the

popularity of pilgrimage to the saint's shrine at Compostela in Spain. She also touched on the problem of the survival of local saints e.g. Celtic ones in Herefordshire, which may have prevalent in earlier times, but as John Blair has suggested, may have been replaced during the era of reform in the 12th century. This may account for the lack of Ethelbert dedications in Herefordshire, which, apart from the cathedral, is only found at Marden, whereas there are 12 dedications in his homeland of East Anglia. Another local saint, Mildburg, abbess of Much Wenlock, was similarly ignored, even though Leominster had her relics and the cathedral celebrated her life in other ways.

Finally, Dr Cooper discussed the problem of investigating lesser cults, celebrated in chantries or by the provision of lights. Private wills often identified these cults or, if they survive, early churchwardens' accounts. At the Reformation, Protestants were very keen to eradicate the memory of these cults. Locally, perhaps the most interesting was that of St Radegund, a Merovingian princess who was remembered at Ledbury and had a following in the West Midlands. At Ledbury she was joined by the unofficial saint, Katherine Audley, who settled as an anchorite in Ledbury in the late 13th century.

WINTER ANNUAL MEETING: 27 November 2010: Mrs R. E. Skelton, president in the chair. Dr Paul Olver, FGS, a member of the Club, gave an illustrated talk on 'Building Stones – their uses in the Marches, both past and present'.

Dr Olver pointed out that before *c.*1750 most of the stone used in building had its origin in the locality but, with the development of canals and railways, the whole of the country could supply building stone. The lack of any detailed geological knowledge until the early 1800s also led to less suitable stones being used that were already known while much more suitable stone was available nearer to the site. He cited the church at Shelsley Beauchamp as an example where the original medieval building was totally constructed from Triassic Bromsgrove Sandstone, derived at some distance from the site, but already well-known in the West Midlands. When the nave fell into disrepair in Victorian times, it was rebuilt in locally derived Old Red Sandstone, a better building stone, which was being actively quarried in the area by that time. At Hereford Cathedral, the local Old Red Sandstone is itself being replaced with more weather-resistant Triassic sandstone from Grinshill, north of Shrewsbury, and with Carboniferous Millstone Grit from Matlock in Derbyshire.

Traditionally, stone was used in four forms – ashlar, squared rubble, random rubble and ashlar with rubble. Masons sometimes favoured a particular colour, so that their work can still be identified on a day-to-day basis. He provided some examples of contrasting stonework. At Church Stretton, for instance, glacial erratics made of igneous rock from North Wales are combined with both local Uriconian volcanic rocks and Ordovician and late Precambrian sedimentary rocks. An important rule had to be followed when laying stone, namely, that it had to be used in a wall as it came out of the quarry. Some masons broke this rule e.g. in the vertical strips used by Anglo-Saxon masons at places like Earls Barton in Northamptonshire and the herringbone work of a similar age at Diddlebury, Shropshire. Similarly, Victorian grave stones often weather badly when placed vertically in the ground. Some stones were highly favoured regionally, for example, the brown-banded Upper Ordovician Soudley Sandstone found near Church Stretton, was much used by Victorian restorers, whilst calcareous tufa was often used earlier in Romanesque work e.g. at Moccas and in the ruins of the old church at Edvin Loach, near Bromyard.

Dr Olver stated that 70% of stones used in traditional building were different types of sandstones whilst the remainder was largely made up of limestones. The dark grey Carboniferous limestone, the oolitic Bath Stone of the middle Jurassic and the excellent Portland Stone were all popular choices. Oolitic limestone was easy to extract and some horizons were excellent for sculpture and delicate tracery but many also spalled badly if used on exterior walls. Chalk, on the other hand, had high porosity but low strength and, as a result, was generally used for cement rather than for building. With the absence of good stone, many buildings in the South-east used flint derived from the local Chalk. Perhaps the most durable stone was a white granite often used for plinths and bollards and supplied largely from Cornwall in the past. Alternatively, granites with salmon-pink feldspars were once used from both Shap in Cumbria and many Scottish localities but today most of our 'red' granites are imported from Finland (Baltic Brown & Balmoral Granite) or from Dakota in the USA (Imperial Mahogany). Kerbstones and road setts of dolerite rock originally came from Clee Hill in Shropshire but today, as with granites, new pedestrianised areas often use imported stone. The local Silurian limestone can be used but only certain horizons make consistently good building stone. Sadly, very little local Old Red Sandstone was quarried today except in small delphs where thinly-bedded horizons were used for roof tiles such as at Abbey Dore. This has meant that a whole range of red and brown sandstone replacement stone has been brought in to repair buildings such as Hereford Cathedral and the medieval churches of All Saints and St. Peters.

Apology to past Presidents omitted from report in 2009 *Transactions*

The 2009 *Transactions* carried a report and photographs of past Presidents of the Club attending the reception in honour of Jim and Muriel Tonkin at the Bishop's Palace on 22 July, 2009. Unfortunately two past Presidents were not in any of the photographs taken to mark the event and they were omitted, for which we apologise. They were Mrs Ruth E. Richardson (1991) and Mr Eric Ward (1989).

Note: The 2010 Accounts following were approved at the 2011 Spring Annual Meeting.

WOOLHOPE NATURALIST'S FIELD CLUB

RECEIPTS AND PAYMENTS ACCOUNT
for the year ended 31st December

2009				2010	
		RECEIPTS			
27		Interest on investments	Subs Reserve	21	
3			GW Smith Reserve	3	
6128			Charity Bond	1711	
259			National Savings	173	
10			Worcs C.C	3	
33			War Stock	33	
	6460				1944
8080		General Subscriptions		7477	
894		Sale of Publications (inc Hereford Taxes £162)		462	
109		ARS Insurance Refund		112	
979		Lottery Bid Balance			
769		Grants, Donations & Legacies		250	
4669		Gift Aid Tax Reclaim (Net)		973	
					11218
		Sundries			
306		Archaeological Research	Net Surplus	461	
554		Geology Section	Net Surplus	389	
		Field Meetings	Net Surplus	80	
	16360				910
	22820				12128
		PAYMENTS			
928		Insurance		956	
6110		Stationery, Printing & Binding		5341	
339		Meeting Expenses		152	
888		Postage & Telephone		1162	
171		Subscriptions & Donations		231	
63		Repairs & Renewals		71	
350		Honoraria		200	
2000		Grants		3300	
469		Miscellaneous		319	
					11732
		Archaeological Research	Net Deficit		
81		Natural History Section	Net Deficit	135	
56		Field Meetings	Net Deficit		
979		Lottery Bid	Net Deficit		
					135
	12434				11867
Surplus	10386		Surplus		261

BALANCE SHEET AS AT 31st DECEMBER

2009			2010	
		ASSETS		
	1040	Herefordshire County Loan		1040
	57726	National Savings Investments		57899
	118000	Charity Bond		118000
		Bank accounts:		
356		General	1314	
14829		Subscriptions	3064	
2550		GW Smith Account	1125	
31747		Subscriptions Reserve	43267	
5000		GW Smith Reserve	5000	
229		Natural History Section	94	
1988		Archaeological Research Section	2450	
1085		Field Meetings	1169	
1521		Geology Section	1890	
	59305			59393
	236071	Sub Total		236332
	236071			236332

Note that the following assets of fluctuation or indeterminate value are not included in this balance sheet:
£933 3.5% War Loan current value approximately £723
The contents of the library and stock of publications
Photographic and computer equipment etc.

		CAPITAL		
		General Funds		
224706		Balance brought forward	236071	
11365	236071	Add surplus in year	261	
		Deduct deficit in year		236332
	236071			236332

Biographical Details of Contributors

Details for Rosalind Lowe appeared in the 2007 *Transactions* and for John C. Eisel appeared in the 2005 *Transactions* .

Philip Anderson
Philip Anderson has lived in Herefordshire for 20 years and has been a member of the Woolhope Club for nearly as long. He is also a past Secretary and Newsletter Editor of the Ross-on-Wye and District Civic Society. He has published papers on 'The Beautification of Hoarwithy Church' and 'Stained Glass in the Ross Area' for the Civic Society and contributed to the Landscape Origins of the Wye Valley project a survey of buildings in the area listed by the Royal Commission on Historic Monuments.

Edward Blackwell
Edward Blackwell worked for 32 years at the central research laboratory of a major engineering manufacturing group. He has been a member of the British Mycological Society since 1965 and was the Society's Fungus Recorder for Herefordshire 1992-2008. In 2003 he received the Society's Benefactor's Medal for services to mycology.

Richard Bryant
Professor Richard (Dick) Bryant is a retired academic physical geographer, who has had a long-standing interest in geomorphology and quaternary geology. After working for some years in south-west Ireland, he gained his doctorate at the University of Reading, and later, on the basis of teaching, articles, and books, was awarded a professorship at London Metropolitan University. In 1994 he moved to Worcester to become Vice-Principal at what is now the University of Worcester. Following retirement from this post in 2003, he rekindled his academic interests through the Earth Heritage Trust, and has developed research interests in the effects of quaternary climatic change on the landscapes of Herefordshire and Worcestershire. He sits on the Advisory Board of the Malvern Hills AONB and on the executive committee of the Malvern Spa Association. Dick lives with his wife Jean in Colwall ('over the hill', as ex-colleagues like to describe it), and now spends a fair bit of time herding grandchildren.

Henry Connor
Henry Connor worked for 25 years as a consultant physician in Hereford. Since retiring he has held an honorary research fellowship in the Centre for the History of Medicine in the University of Birmingham, publishing mainly on the history of medicine in the nineteenth century and, in particular, on the history of anaesthesia.

John Ross
John Ross MC, MD, FRCP was a physician in Hereford for 24 years. He has written medical, natural history and historical articles.

Presidential Address 2010
New Weir, Whitchurch or Symonds Yat: from ironworks to tourist destination

By ROSALIND LOWE

The name 'New Weir' is barely familiar to Herefordians now, but in the 18th century it would have raised strong emotions in many listeners. By contrast, 'Symonds Yat' is well-known throughout the country, the view from Yat Rock over the Wye towards Goodrich appearing on objects from bookcovers to beer mats. The river at New Weir has been attracting tourists and artists for 250 years, early visitors being thrilled rather than daunted by the industry around them. The only problem in relating its history is to decide what to omit from the mountain of documents, maps and, more unusually, paintings and postcards.

INTRODUCTION

New Weir's different lives as ironworks, as a primary object on the Wye Tour and as a popular tourist destination each merit a separate paper, so this account is necessarily constrained. I was able to illustrate my presidential address with just some of the many depictions of the site by early Wye tourists, whether in paint or words. Owing to the litiginous nature of the local landowners and ironmasters there is a similar mine of documentary evidence, much of it a rich source for family historians. It is not possible to list all the professional artists of the late 18th and early 19th centuries who portrayed New Weir; they were followed by innumerable amateurs, but many of the images are available via the internet. In a separate section at the end I have given details of the most important documentary sources.

NEW WEIR or SYMONDS YAT

The settlement of New Weir originally lay on both sides of the river Wye not far from Herefordshire's border with Monmouthshire (Fig. 1).[1] After passing Lydbrook, the river runs in a massive loop (the Huntsham loop) northwards around fertile flatlands which have been cultivated at least since Roman times.[2] At the narrower southern end of the loop the land rises firstly to Huntsham Hill, and then again across the county and country boundary to the parish of English Bicknor in Gloucestershire. The road there passes through a deep cut in the cliff which forms part of the defences of an Iron Age fort, with man-made ramparts on the Gloucestershire side. Yat Rock lies to one side of this passage in the cliff and, on the road here, lay the original 'Symonds Yat'. *Symundeszate* was one of the places mentioned in a survey of the bounds of the bailiwick of Bicknor in 1282.[3] It is not overly fanciful to propose that the 'Yat' or gate was one of a number such in Offa's Dyke, which here runs from near Bishopswood along the cliffs towards the Iron Age fort. The boundary between the parish of English Bicknor to the south and a part of the parish of Goodrich to the north seems to respect this old frontier at Symonds Yat, the precise demarcation line becoming a crucial point in litigation about New Weir around 1700.

Figure 1. A location map for Goodrich manor's ironworks. 'Old Forge' upstream from Whitchurch and 'New Wear' i.e. New Weir downstream lie close to the river, but Whitchurch furnace is unmarked, and lies in Whitchurch village to the south-west of the 'W' in 'Whitchurch'. The text for 'Symmonds Gate' lies to the east of the neck of the peninsula. The map was published in 1832

The migration of 'Symonds Yat' to the riverside seems to date from the opening of the railway, when the station at New Weir was called 'New Weir for Symonds Yat.' Until the renewed interest in the ironworks, the only mention of New Weir was the name of a car park in the eastern part of the hamlet. The site of the ironworks is an overgrown area of land just downstream on the western bank, across which users of the official footpath have to scramble. There is now an interpretation board and the remains of recent excavation.

Figure 2. An aerial photograph looking upstream towards modern Symonds Yat. The line of the weir is clearly visible at the bottom of the photograph, leading towards the corner of a changeable island in the middle of the river. The New Weir iron works lay to the left or west of the channel which separates this island from the west bank of the river. (Woolhope Club collection. Photo:© C. Musson)[4]

EARLY HISTORY

New Weir lies within the manor of Goodrich, which includes the parishes of Goodrich, Whitchurch, Ganarew and sundry other settlements in south Herefordshire. The weirs and fisheries in this stretch of the Wye have been described in some detail in a previous issue of the *Transactions*.[5]

The earliest weir in the manor was probably the fishery mentioned in the Domesday survey for Goodrich (*Hulla*) and was located at 'Old Weare' some way upstream from New Weir.[6] This was relatively easy to construct: a channel was dug through a riverside field and a simple weir in the river diverted some of the flow into the channel. Fish could then be caught easily in basket traps or 'upmouths' which pointed upstream. New Weir was a much bolder

enterprise, as it is placed where the river leaves the flat land of the Huntsham loop and enters a gorge between high rocky banks, i.e. at the exit of a flood-plain. The Wye is a dangerous river in winter and the weir was often plagued by floods or ice. However, it was in existence at least by 1454 and maybe considerably earlier.[7]

From later descriptions of the weir it seems likely that it was made by the simple expedient of dropping rocks into the river. On this stretch of river the fishermen mainly used coracles which were hardly ideal, so perhaps it was built progressively from the shore. A simple timber weir would have been swept away. By the time the weir had been strengthened to supply water to the first ironworks, it was 'in height about twenty foot, in breadth about twenty yards, and in length about one hundred yards.'[8]

Eighteenth-century plans of the ironworks make it clear that at that time a channel ran from the weir, which was angled towards the western bank, along that bank until it joined the river downstream. A simple version of this, with fish traps set in the channel or the sides, may have formed the earliest fish weir. Fish was an important part of the medieval diet given the large number of fast days and a productive fish weir was profitable, although hedged about by regulations concerning the taking of salmon in particular.

THE BEGINNING OF INDUSTRY

It was both amusing and irritating to listen to a television presenter enthuse about the timeless and unspoilt beauty of the verdant scene while negotiating the Wye rapids at New Weir. The rapids themselves, so beloved of canoeists, are but the remains of the weir itself, and the long, calm stretch of water upstream a reflection of the considerable depth of water behind the weir.

As recently as the 1950s the woodland round about was cropped and lime quarries and kilns were visible on the hillsides. Between 1570 and 1760 the scene was one of industry and river trade; when tourists and artists started arriving in the 1760s they were titillated by the contrast between the rugged scenery and the sight and sound of manufacture.

THE FIRST IRONWORKS

Looming over New Weir on the west is the bulk of the Great Doward. Iron ore has been extracted from the Doward since the advent of iron-making, and the local fields are scattered with iron slag and the remains of primitive iron furnaces.[9] The lord of the manor of Goodrich was in the fortunate position of owning both the Doward itself and much other steep land which could be used to grow timber for charcoal production.[10]

No early records have been found which mention iron-making in the manor, but the situation changed in the later 16th century. The use of water power to drive iron-working machinery spread from the continent and was enthusiastically taken up by the great landowners. Among them was the lord of the manor of Goodrich, George Talbot, Earl of Shrewsbury (1528 – 1590).

Shrewsbury is better known on the national stage for two reasons: he was the fourth husband of Bess of Hardwick whom he married in 1568, and he was the gaoler of Mary, Queen of Scots from 1569 until her execution in 1584 which he witnessed from a front-row seat. Although he was reputed to be the richest man in England, he was always keen to increase his fortune and he started ironworks in his manors at Sheffield and Shifnal (amongst others) as well as at Goodrich. He owned the manor of Longhope which had furnaces[11] and by 1603 he had a furnace at Bill Mills behind Penyard Chase.[12]

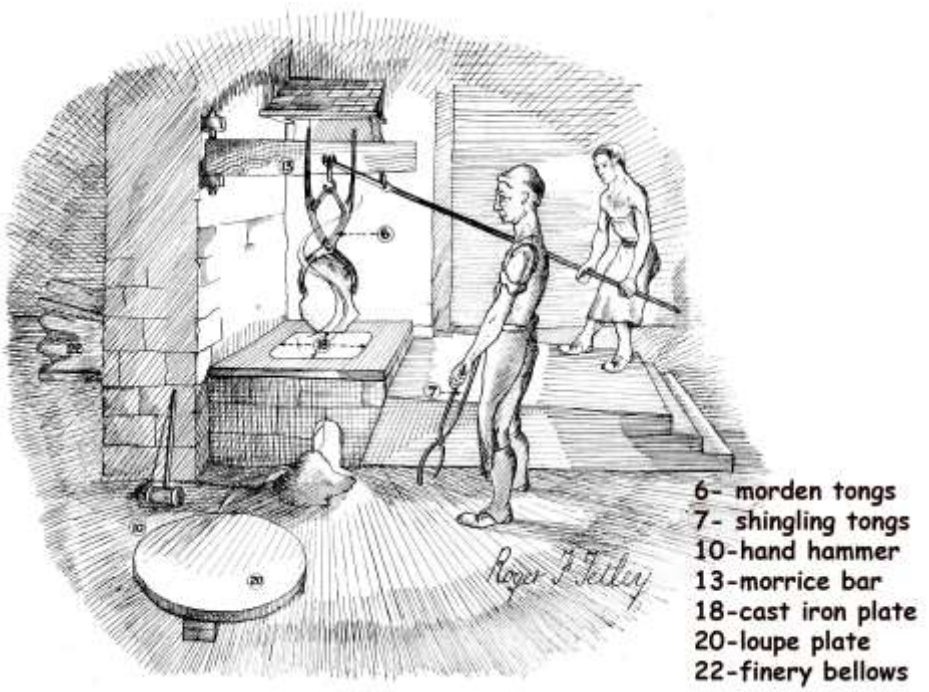


Figure 3. The finery. Note the bellows powered by water. The names of the numbered items are copied from a inventory of the items at New Mill or Old Forge in 1633[13]

Iron extraction and processing at this time was divided into two main phases. In the first phase a furnace fuelled by charcoal was used to heat iron ore and fluxes such as limestone to produce blooms—large lumps of impure iron—or pig iron, where the liquid iron was run off into moulds which looked like a sow with attached piglets. In the second phase the bloom or pig iron was re-heated in the forge in the 'finery' and hit with hammers to drive out impurities. Both phases produced waste slag.

Water wheels were used to drive large bellows to increase the heat of the finery fire and to power large hammers to refine the iron and also to shape it. The iron would have to be re-heated a number of times and re-hammered before it was pure enough and could be taken to the 'chafery' and heated again, before being made into bars for sale. A good idea of the process can be gained from illustrations which accompanied an article in the 1943 *Transactions* (Figs. 3, 4 and 5).[14] Later, water wheels were used to drive rolling mills to produce sheets of iron and slitting mills which cut the sheets into strips of iron easily made into nails.

The most difficult commodity to transport was charcoal which had already been prepared in woodlands. Although light, a large amount by volume was needed and it crumbled easily into small fragments or dust (brayse or braise). There is the possibility that wood cut into standard lengths or 'cords' was purchased and turned into charcoal locally. As well as the woodland in the manor of Goodrich, Shrewsbury owned Penyard Chase but even from the early days fuel had to be bought in.

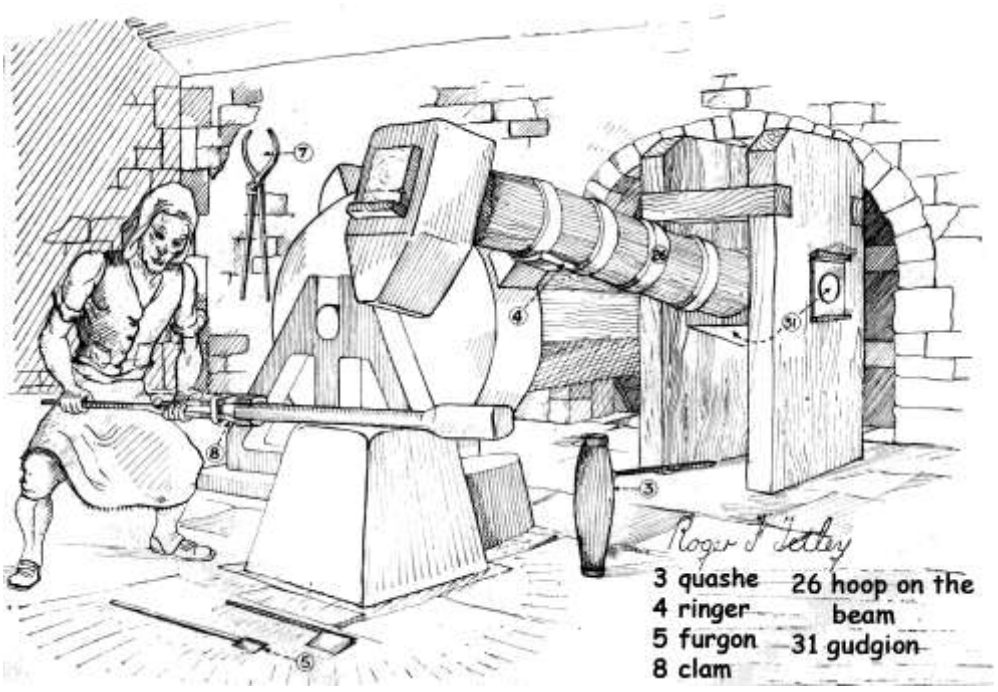


Figure 4. The finery beam showing shaping of an iron bar[15]

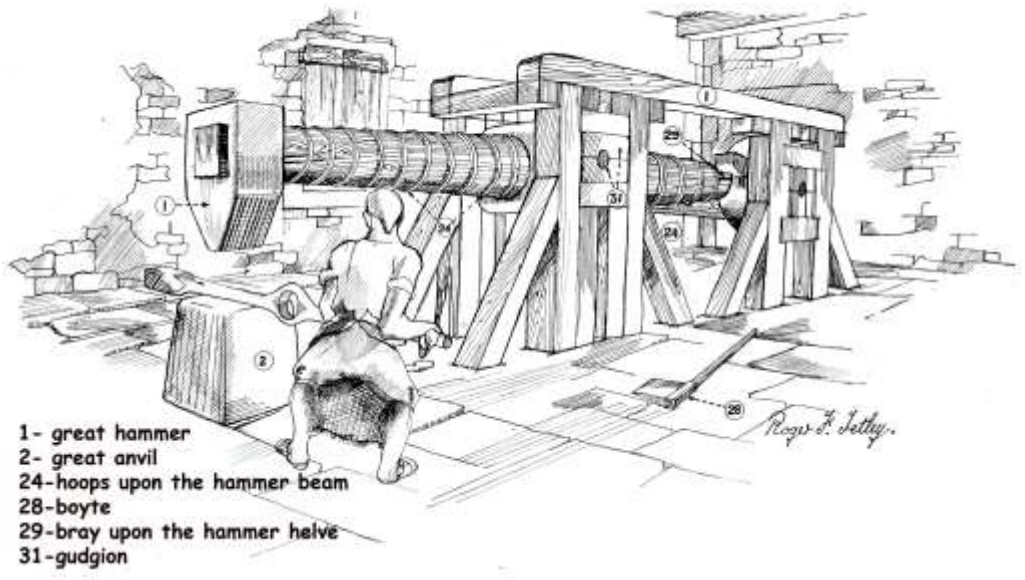


Figure 5. The great water-powered hammer and the great anvil

WHITCHURCH FURNACE, NEW WEIR and OLD FORGE

Given the iron ore on the Doward, Shrewsbury was able to establish a furnace in the heart of Whitchurch to supply New Weir forge and later the forge lying at Old Forge on the Garron. The Whitchurch furnace is often confused with Old Forge, but a manorial survey of Goodrich made in 1718 which includes pages of maps makes its position clear.

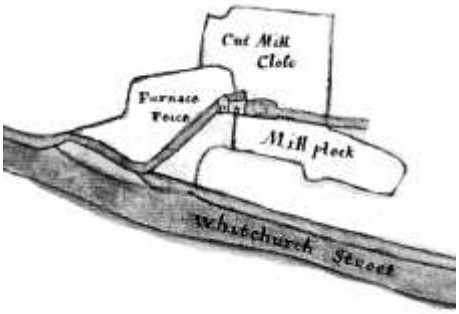


Figure 6. Detail from the Goodrich manorial map of 1718, showing the stream running alongside the main Whitchurch street. 'Furnace piece' is clearly marked.[16] The site is now partly overlain by a slip road to the A40

The centre of Whitchurch was covered with deposits of iron-rich cinders presumed to date back to the Roman period. These were used to augment the iron ore fed into the furnace. Wooden troughs were built to carry the stream which ran down the main street above the 'Sinder Pitt' which had been dug out to some seven feet below ground level. When the troughs burst and flooded a house in 1672, the owner Rudhall Gwillym sued the current lessee of the furnace, Thomas Nurse.[17] The workmen claimed that they had replaced older troughs some three years before, when George Scudamore had held the lease of the furnace, and that the furnace had been built on the foundations of an 'ancient furnace'.

Foundation of New Weir ironworks

Unfortunately for the Earl of Shrewsbury, his weir and ironworks aroused hostility locally and on 18 August 1589 New Weir was attacked by a mob of rioters. As a result of the damage caused, Shrewsbury mounted cases against named offenders.[18] In these he deposed that he did:

> 'about xxtie years past to his great Costs and charges erect and build in his said manor upon or near the said River of Wye and upon or near adjoining to one of his ancient weares one Furnace or Iron worke a weare and certain great edifices houses and buildings to the same furnace or Iron work convenient and appurtaining and therewith used and occupied for the making of Iron in that country by a water milne [mill]...Upon and about the founding erecting and building whereof your said subject did bestow the sum of two thousand pounds or thereabouts.'[19]

The cases took place in 1590 so it seems that the ironworks was built about 1570. By November 1590 the Earl had died, when he was succeeded by his son Gilbert (1552-1616). Gilbert may have been too young to be actively involved in founding the ironworks, but by January 1575 he was writing to his father from Goodrich castle saying that 'a man called Wygfall' would meet the Earl at Sheffield as 'I can now best spare him as the Furnesse is not yet blowynge.'[20] Godfrey Wigfall died in 1605, and in his will his debtors included William Hall of Highmeadow in English Bicknor for 40s 'surveying the place for building the furnace', for overseeing the making of the bellows and for the first 'pygge of iron' 33s. 4d., for 'blowing at the furnace eleven weeks over and above the workmens' wages £5 4s., for the second blast of the furnace £5 whereof received 20s.' Also mentioned was Francis Blunt £10 10s. ...for a 'tonne of iron.' The furnace in question was probably that at Lydbrook.

The Earl was convinced that the riot was caused not by protesters against the damage the weir was doing to fish and river trade, but by the small ironworkers in the Forest of Dean who were being out of business by the Earl's superior product. This may well be true, but not the whole story. There appears to have been a power struggle between two factions within Herefordshire and possibly at court, the members of which did not want to come out into the open. From 1531 'Commissioners of Sewers' (who were responsible for the state of navigable rivers in the kingdom) were given statutory powers to enquire into the state of the rivers in their locality and to ensure that they were kept in good condition. Naturally, the local commissioners were drawn from the most respectable landowners in the county. The Earl, who had no doubt raised the level of the weir, was treading on their toes but he was a powerful man who was not easy to challenge openly.

Quite a lot is known about what was going on behind the scenes because Thomas Atkins, the Earl's eyes and ears at the Council of the Marches in Ludlow, wrote a long letter to the Earl from there on 27 August 1589.[21] According to this:

> 'The xiiijth of this moneth [14 Aug 1589] certaine of the Commissioners, by privat appointment amonge themsellves, assembled at the Citie of Hereford; where withoute purpose to heare any man, eyther for his right, or what otherwise mought bee said in reason, they determyned the nexte daye to meete upon the river side of Wye neare Gotheridge [Goodrich manor] and there to have a Jurye retorned for enquiry of mus[..] one that water. which beeinge done accordingely certaine witnesses weare produced, whoe did depose that about Lty or lx [50 or 60] yeeres paste, there was then in that river of Wye Fare greater store of Salmons than nowe is: And that of late there have byn at the weares and mill dames great abundance of the Sparme of Salmons distroyed. Heareupon the Jurors havinge [a] daye geeven them to bringe in a perfecte presentment, upon the mundaye ensuynge: the Commissioners then presente did appointe surveyors to see the pullinge down of all the weares upon the whole river...but before on the saterdaye and beefore any presentments made: by the ringing of bells 200 and more persons weare assembled: whoe fallinge to the spoyle of your Lordships weare did that daye pull downe sume part thereof. And the mundaye after in the morninge with Crome and Trompett there assembled to the number of 34~ [end character obscured] persons or thereabouts, whoe made spoyle at theire pleasures, castinge into the water and caringe awaye at theire wylls good quantyties of Iron, which had byn used for strengthenynge of that your Lps weare, cuttinge downe and enforsinge upon your lps soyle and other passage for the water (in some pte) than was before.'

Queen Elizabeth had been dragged into the quarrel earlier and had sent a letter to the Commissioners, who claimed that as they could not get six of them together they could not stay the action.[22] Atkins had returned to Hereford, and thence to Ross, but he was too late, as upon the next day the multitude 'assembled at Wiltons weare.' By now the Commissioners were alarmed that if they condoned the action 'then they would have suche and soe great persons to answer as their whole habilities can not defende.' They were consoled by the thought that 'Mrs Blanche ap Parry will obtaine her Majesties pardon, and discharge for them.'

John Bamforth's notebook

The practical consequences of the riots at New Weir were chronicled in a notebook kept by John Bamforth or Bamford, the Earl's 'clerk to Whitchurch furnace.'[23] This notebook has been

lost, but fortunately a later lessee of New Weir, George White,[24] heard about it and managed to obtain it in about 1688 from one of Bamforth's descendants. He and later his son, another George White, copied extracts and made observations on them. These copies and later New Weir material passed through the family and have been deposited at the National Library of Wales.[25]

The entries copied from the notebook run from late 1589 to October 1594. Many are concerned with the expenses of proceeding with the cases against the rioters which carried on into 1590. The immediate problem was to get a replacement for the ironworks up and running as soon as possible. According to White, the notebook mentioned the erecting of the 'the Forge upon Garron (which they called the New Mylne) was begun to be built at Michaelmas 1589.' The forge came into operation 12 June 1590. This is Old Forge, which lies to the top of the map in Figure 1. It remained in use as a forge, though not necessarily continuously, some way through the 17th century, as details of a lease exist for 1633[26] and repairs in 1646 before it became a corn mill.[27]

The notebook illustrates that corded wood and/or charcoal had to be obtained from some way away. Sources mentioned include Penyard, Harwood [*sic*], Lanrothal, [Welsh] Newton, Suffnant and Hill Wood. Timber for the heavy hammer beam came from within the manor, Coppet Hill or the Doward. There was a note that 'most of the Cast Iron, worked at Garron Forge, was from Hope's furnace [Longhope?] and all that cast in large Sows.'

Other costs included: 9 January 1590/1 'Ale and Garlic to Drench Oxen', March 1590/1 'Four bull hides bought for the Bellows at 13s. 4d. each hide for the forge,' May 29 1590 six oxen bought at £21 10s. 0d., 26 June 1591 'hides curried for chafery bellows.'On 20 May 1592 eight oxen were bought at Bromyard Fair which cost £27 8s. 0d., and in August 2 horses were bought at about 35s. each.

According to George White II, the original works at New Weir and at Old Forge were constructed of timber. His father had told him that when he had reconstructed the New Weir ironworks at the end of the 17th century 'there was not the least sign of any stonework, or other old ruins. But many large beams & pieces of timber found in ridding the foundations...' It's not clear from the notebook when the ironworks at New Weir came into production again, but there are entries showing that building material, tools and iron were being carried about between the two. There is a dated list of the materials used at the Whitchurch furnace from October 1589 until 20 April 1593, showing when the furnace was in operation and the amounts of 'Doward mine'—presumably ore—and cinders received. One intriguing entry for 28 October 1592: '28 persons employed to cutt up the ship stream at the Old Weare; and Takeing [?] down a piece of it; &cet vide.' This is unlikely to be at the original 'Old Weare' but that at New Weir which has been thrown down by the rioters. Was it a slipway of some kind?

The Seventeenth Century

For the first decades of this century the records are sparse, but it is known that the weir was 'carried away by a great flood' shortly prior to 26 April 1609, when it was reported from Goodrich by George Moore to the Earl of Shrewsbury that it was still not repaired.[28] In August the same year he regretted that he could not send more money as no iron was being made as the works needed repair.[29]

During this time the ironworks and the fishery associated with the weir were leased out by the lords of Goodrich manor, which was now in the hands of the dukes (later earls) of Kent, Gilbert Talbot having died without a male heir. No plan of the ironworks from this time exists;

the 1608 map of the Forest of Dean covered the area but that portion has disintegrated,[30] and only the associated text survives from a survey and map of Goodrich manor made in 1663.[31]

In March 1684 Anthony, Earl of Kent, leased New Weir and the fishery to Thomas Fletcher for 99 years or three lives, in consideration of £240 expended on the premises, with a proviso not to assign without licence.[32] From George White II's remarks in the Bamford notebook it seems clear that the ironworks (and possibly the weir) had fallen into disrepair and had to be rebuilt. In 1685 Fletcher, 'a plain countryman of substance', was persuaded by George White I, an ironmaster, to go into partnership with him. White seems to have been an unscrupulous man who managed to edge out Fletcher and sign a new lease for 99 years or 3 lives, running from July 1687.[33]

The fortunes of New Weir now enter a very troubled period. Not only was Fletcher at odds with White, but the constant pressure from ship and fishery owners began to bear fruit. Although there had been an Act of Parliament in 1662 for making the Wye and Lugg navigable, the commissioners appointed—all surnamed Sandys—seem to have taken the money, about £1300, but achieved nothing.[34] The 1695 Act made no such mistake and appointed Herefordshire landowners and worthies as commissioners. The Earl of Kent managed to negotiate a special arrangement for New Weir. The weir was allowed to remain, but he had to provide a lock for shipping with a house for a lock-keeper and he had to lower ten yards of the weir to allow fish to pass. He was not allowed to put nets or wheels or any other device for catching fish in or on the weir. The Act negated former leases and White signed a new lease with the Duke of Kent in 1700.

The Act was not universally popular in Herefordshire, for a county charge was proposed to cover the costs. At least 127 inhabitants of the parishes of Eccleswall, Weston under Penyard, Linton and Walford signed a petition to Parliament protesting that as they took their corn to Gloucester to sell they did not use the river (to send it to Bristol as proposed) and should not have to pay.[35]

There is evidence that a lock of some sort was in place before the Act. Among the copious notes on odd sheets of paper in the Goodrich manorial archive there is one that mentions various records no longer to be found. It says 'Note. Paid by the Earl of Kent for building a lock at N. Weare Anno 1674 £111..16..2. vide the acc. of Goodrich Manor.'[36]

Shortly after the Act was passed, in 1697, a survey of the weirs on the Wye was taken.[37] It's worth quoting in full because it is evident that the work on the weir prescribed by the Act had not then taken place. The lock described may therefore be the older one. The survey says:

> 'Next above is New Wear. This is the Earl of Kent's. This is built all of loose stone thrown into the river and stakes and [illegible] be... it & a Hedge upon the top, the Highest part of this Wear be about 9 foot & 1/2 , and the lowest about 6 foot, the length of the Wear is 140 yards, this wear is also a great obstruction to the salmon and other fish haveing divers sluices or fish streames in it, as Mo[nmouth] Wear hath, & much after its manner with Wheels one in each sluice or Fish Stream. I saw when I was there (They having lately let the Fish out of the Wheels & severall Salmon upon the Wear, which...suppose they had thrown away being much bruised, and not to be eaten.) Upon the East end of this wear there is a locker [lock] of 13 foot wide, & is in tolerable good repair, but is not well made, being narrow & raised in the sills 3 feet from the bottom of the river, which makes the passage for vessells more difficult and hazardous.
>
> It is reported that the Fishing at this Wear is worth £100 per annum & it is conjectured that if all the Wears below be taken down and this only left to stand that the

> Fishing there will be worth £1000 per annum for tho Monmouth Wear is thought to be more destructive yet there is a fresh [freshet or rush of water] falls into Wye near Troy House, which many times ponds the River so that it flows the top of Monmouth Wear so as the fish can get over, & likewise in floods that come down Wye, Else it were impossible that the fishing at New-Wear should be worth much, & if the lower wears were all removed and New Wear only left to stand, (Lowered according to the Act) it may be with reason be thought that for one fish they now take they [may] catch 10, nay some say a 100. There is a Forge lately built upon the west end of the Wear which takes a great part of the river that way, and its thought that if they should lower the passage of the water to the Forge, which conceive may easily be done, may occasion so much water to pass that way which may be a mean to defeat the design of the Act for portation. There is below the wear for 100 yards a shallow of near 170 yards wide caused by this wear, and were the wear taken away, we conceive would be as good passage for vessells as in most part of the River. As to whose land the Wear stands upon, It's said that the west part of it is upon lands of the Earl of Kent & the east part of it upon Lands of Mr Halls of High Meadow, But that the Earl of Kent disputes Mr Halls title; above this Wear for a great way the water is very deep 12 or 14 foot at least, and below the Wear 8 or 10 foot deep when the stream that passeth thro' the forge embodyes with it that passeth thro' the Wear, which is not above 150 yards as I believe. As to the profits of the Forge I cannot learn, but as to the quantity of the wood, of the Earl's own spent there is very little there being of his own growth but 786 cord, and ¾ of a cord of 2 foot wood spent there since the first building of the forge and that was had in a wood called Goldsmith's Wood But there are considerable quantities of wood brought by divers persons and expended there, We understand by the relation of divers persons that one White rents the fishing at the New Wear at £5 the year.'

This survey touches upon another dispute concerning New Weir, between the Halls of Highmeadow in English Bicknor and the Kents, which had been simmering for a number of years, possibly since 1646 or 7.[38] The eastern end of the weir was very near to the Goodrich-English Bicknor parish boundary, where the Halls' land lay. The disagreement was not settled until the 1730s, when the two parties agreed to share the piece of land in question, but in the meantime the legal profession had been kept busy taking depositions from innumerable ordinary people.[39] The two sets of parishioners had been drawn into the dispute, as the Rogation Day parades around the parish boundaries seem to have been held more conscientiously. On one occasion the parties from the two parishes found themselves near to each other where the boundary was not in question, only to veer away along different paths. The terrain is particularly difficult, being rocky and steep. The witnesses at the enquiries cannot be said to be unbiased, each owing their livelihood to one or other of the parties.

The disputes did not only concern the ownership of land but also the rights to the fishery at the weir. In a case with George White I, Benedict Hall claimed that his father had been paid a yearly amount of fish because Anthony Grubb, the forge master at the time, had a lock built which encroached on the Halls' land.[40] This is corroborated by a survey of January 1688/8, when the jury said that Anthony Grubb had built up the weir and built the lock.[41]

Miscellaneous documents assembled or written during the Hall-Kent dispute, although probably biased, provide insights into what was going on at New Weir around the turn of the century. For example, it was noted sometime after 1703 that George White I made many encroachments at New Weir on the 'soil of the River' and the 'wast', probably the Doward, to the value of £7 or 800, part being a wood of 7 or 8 acres of 20 years' growth, plus cottages and

fisheries, those these he had turned over to the Duke. He had 'two new mills & a large yard & several workhouses, built on land taken out of the River [which] he still retains.'[42] It was also claimed that 'By covenants in his Lease he was to build a Slitting Mill & a Grize Mill & expend £500 upon them, But he has not yet built the Grist Mill tho the time is limited to 7 years & the lease [was] granted in 1700.'[43] There is an accurate date for the building of the slitting mill[44] at New Weir: a document dated 4 December 1708 says that:

> '...Mr Fletcher said that about 2 years before George White erected the slitting mill at New Weir...He likewise sayeth that before the erecting of the present works the river Wye ran in an intire channel without [outside] the common called Great Doward and did not divide itself or made any island at or near he said works but saith that there was a small parcel of land called Sinderhill not separated by Wye from the Doward and believes that some part of the storehouse is now erected on the said Sinder hill, but further sayth that there was a dry ditch or lower ground leading away from the old works - much about the same place where the present ditch is which leads the water from the present forge, which ditch when the present work was erected was cleansed and made deeper.'[45]

The Eighteenth Century

In the 1718 manorial survey a map of the area near New Weir survives, showing some interesting features (Fig. 7). Alas, the page containing the Great and Little Dowards and New Weir itself has disappeared from the book. The survey maps show all the small encroachments and houses on the manorial commons and it is very likely that the page with New Weir was removed from the book when it and the Dowards were sold in 1823/4. Note the 'Rock near Symons [*sic*] Yat', Long Stone Rock which was mentioned in 1282[46] and the 'Mynors Path.' Thomas Whately says in 1770 about New Weir 'In the midst of all this gloom is an iron forge, covered with a black cloud of smoak, and surrounded with half-burned ore, with coal, and with cinders; the fuel for it is brought down a path, worn into steps, narrow and steep, and winding among precipices;...'[47]

In 1728 the dispute between the Marquis of Kent[48] and the Hall family led to rival maps being drawn of the parish boundary.[49] The maps are, of course, slightly different when it comes to a crucial 'meerstone with three holes in the top' at letter 'I' on the map (Fig. 8), which the Goodrich people denied was a meerstone as it would put the land into the hands of the Halls. There is much incidental information in the documents. Depositions taken during the case include a remark from Owen Thomas: 'That he went the procession of Bicknor 50 years since and 10 times since that or thereabouts And that in the said procession they went...by the meerstone with 3 holes (which he hath known 50 years) In which they pitched boughs & flowers[?] & so down to Wye...'[50] On another letter from George White to the Duke's agent in 1728 there is a scribbled note: 'Clements to send up 100 roots of Wood strawberys' [*sic*].[51]

Fortunately the dispute came to an end and an agreement was drafted in August 1730 between Henry Duke of Kent and George White on one part and Thomas Lord Gage, husband of Benedicta daughter of Benedict Hall on the other part where, in effect, the fishery and the land in dispute was to be shared equally.[52] The lock keeper was allowed to go a certain distance from his house onto Gage's land. To some extent Kent's desire to settle the dispute may have been because he was thinking about the future of Goodrich manor. During the 1730s he had valuations made of the leases and commons in the manor and after his death in 1740 it was sold to Thomas Griffin, Admiral of the White, who lived at Hadnock near Monmouth.[53]

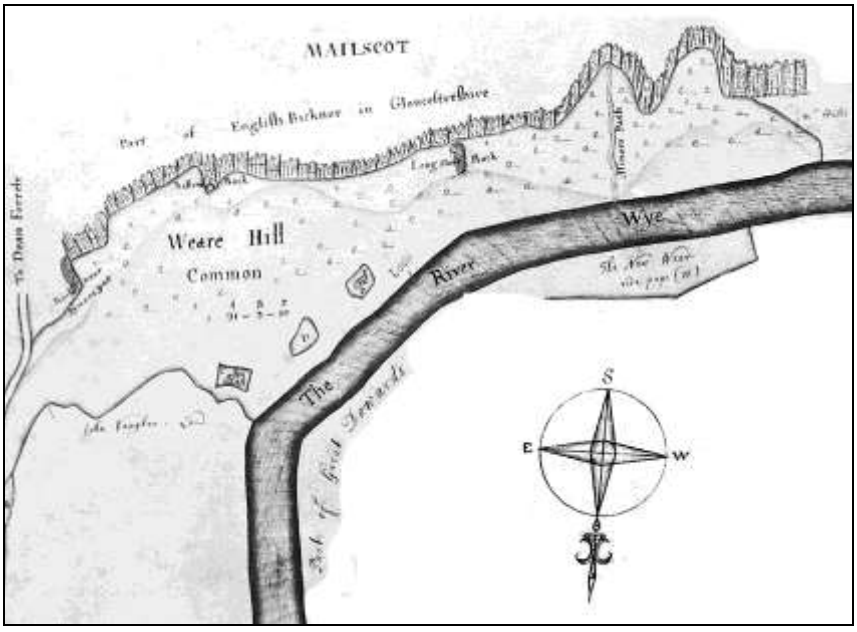


Figure 7. The eastern bank of the Wye at New Weir from the 1718 manorial survey map

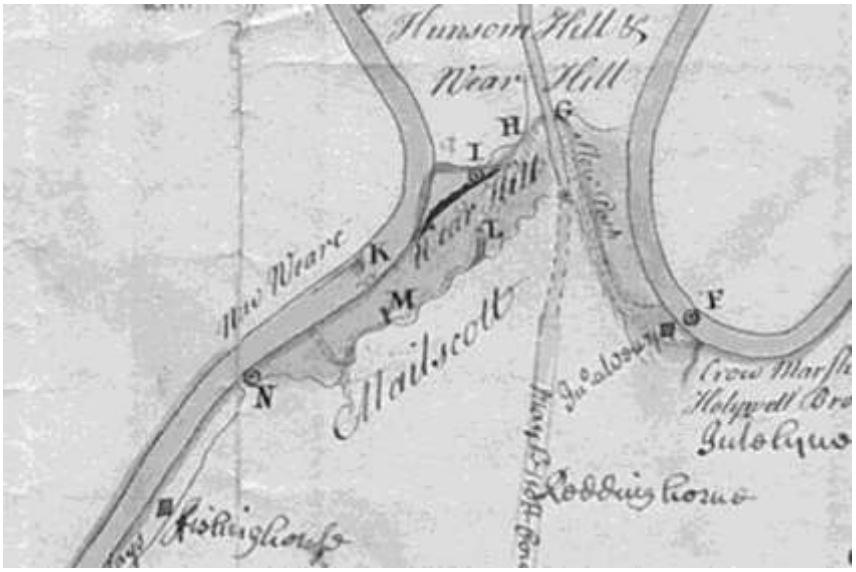


Figure 8. A detail from the map of the disputed boundary between Goodrich and English Bicknor parishes from 1728.[54] The key shows that Symonds Yat was at the small *-shaped symbol on the road running north to south across the map

The White family had extended their ironworks interest to Tintern, when in March 1706/7, the Duke of Beaufort leased for 21 years to George White, junior, of New Weir, iron master, on behalf of George White, the furnace for the melting and running of iron ore and cinders, also the lower forge for the melting and hammering of iron in the parishes of Tintern and 'Chappelhill' in Monmouthshire.[55]

George White II died 17 May 1765, aged 83, and New Weir passed to his daughter Elizabeth who had married John Osborne from Wotton under Edge. The Osbornes lived at Goodrich House, and John kept a diary from 1745 to 1770.[56] He mentions damage caused by floods and ice at New Weir, and the fact that in March 1769 a salmon weighing 56lb. 4ft. 6ins. long was caught there 'the largest ever taken in [the] Wye.'

New Weir in 1753

On 25 May 1724 George White had renewed his family's lease of the New Weir, various parcels of meadow land at the Biblins, coppice land, limestone quarries, fishing houses and the right to build lime kilns, only excepting timber, cinders, cinder earth, iron ore and mine. The lease was to run for 99 years determinable on 3 lives. John Osborne mentions that before he died his father-in-law had 'entirely lost his intellect for near two years before' his death in 1767. It may have been because of increasing age that in 1753 George White sub-let the New Weir ironworks and the fishery to John Partridge, one of a family of iron masters.[57]

A detailed inventory of the works and every piece of equipment and scrap was made taken in May 1753.[58] The inventory runs to many pages, but a selection of the entries give an insight into the values of stock and its source.

Fuel:	Coals [charcoal]...(no Brayses)[59]	46 Lds @ 3s. £83 11s. 0d.
	Lidbrook Coal for the Slitting Mill thirteen tuns	£6 15s.
	Wood in stock in Scudamores hill now coaling	@5s. 3d. per ld £78.
Iron:	Bar Iron in stock for Slitting Eleven Tun : 12C 3	£192 10s. 9d.
	By Tintern Pigs 35..15..0	£241 6s. 3d.
	By Carmarthen Pigs 9 Tons	£56 5s. 0d.
Tools etc.	By 05 New Hamrs never used 1T,12C,2	£36
Plates & other iron	By plates of castings in Vaughan's Finery at £6 per ton	£1 4s. 0d.
	By plates in the chafery wt 1T 11Q 1Q	£9 7s.6d.
		£1 7s. 6d

The negotiations for the sale took some time and it seems that business carried on at the ironworks in the meantime. John Partridge had another inventory made in August 1753 and noted the weights of many items. He kept a book of all the weights, entitled 'Plates & Castings in the Slitting Mill &cet August 1753' and noted items, for example, 'Caste Iron: The Plates at the Furnace Floor'.

		Tons	C	Qr	lb
at 5 C	(One piller plate.....$2^{C}.\3^{Qr}$..0) but	00	5	2	00
	(One ditto in use computed the same..$2^{C}..\3^{Qr}$..0)				
	One finery bottom	00	2	0	8
	One old Tew Iron Plate	00	1	2	4

One large plate	00	3	0	21
A piece of the Furnace Mould [weights crossed out]	00	1	1	23
Four cast brasses under the end of the shafts	00	3	1	0
An old plate	00	1	2	20
A New Tue Iron plate	00	1	1	26
A plate to the Furnace Mouth	00	4	2	11
Two Cuttr Boxes	00	1	3	0
A Finery & a Chafery Gudgion	00	0	3	9
3 Furnace Barrs	00	2	0	1
	01	07	1	16
Wrote [wrought] Iron				
An old mill gudgion	00	00	3	24
Two lasher barrs	00	1	1	17
seven small squares at the Mill hatch	00	00	3	13
Ten at the fore bay po 04:1:22	00	3	2	9
		06	3	07

The agreement as to the worth of the stock was concluded on 7 September 1753 when Partridge agreed to pay White £1175 9s. 4d.[60] The agreement notes 'things not mentioned in the Inventory' such as '...a Barge and other Boates; Netts or fishing Tackle,...'.

In 1758 Daniel Williams drew a detailed plan of New Weir and the surrounding land and cottages which survives, minus a corner, in Monmouth Museum (Plate 1).[61] In order to show the detail, the key to the letters has been omitted from the plate, but is given below:

A Mr Partridge's Orchard
B Ditto Garden
C Ditto House
D Forge
E Slitting Mill
F Forge Pond
G The Pool where Mr Tamplin's fishermen...
H One hundred yards(?)...
I The Wear
K Loch
L Thomas Vaughan's House
M Ditto Incroachment
N George Lewis's House
O Richard Vaughan's Incroachment
P Thomas Lewelin's House
Q Fortune Peregrine's House
R Thomas Walter's House
S John Lewis's House
T Edward Bayton's house
U Thomas Dew's House
W William Bayton's House
X The Lock House
Y That part of Weare Hill belonging to New....so settled between the late Duke of Kent and Lord Gage.

There are a number of interesting features in the plan. The plot of land 'Y' was the subject of the bitter battles between the Duke of Kent and the Halls, and it quite clearly shows a capstan standing near the lock. It was used to haul boats up into the lock, but equally it may have been used to pull boats along the top of the weir from the forge pool towards the lock. Bow-hauliers can be seen, as they can in many paintings, pulling a trow towards the lock. The lock-keeper's

house, X, is rather more palatial than seen in later paintings. The outer part of the forge pool has a number of sluices leading back into the river, handy for the forbidden fish traps, though the 'Pool' at G may have been a way of concentrating fishing in that area. It seems quite possible that White *did* build his slitting mill on land claimed back from the river; note the wheel on the side. The culvert which flowed from the forge pool under the forge at D, driving two wheels at least, still exists, though waterless and somewhat clogged up (Figure 9).

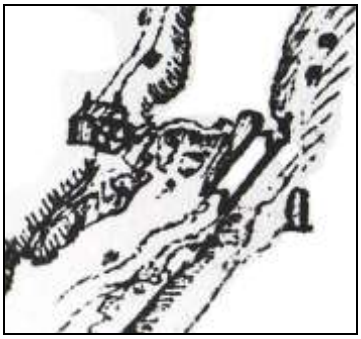
Figure 9. The exit of the culvert which carried water from the forge pool under the forge. It is possible that there was a wheel-pit here for the wheel at the downstream end of the culvert. (Photo: R. Lowe)

The profile of the lock was such that although it could fill to bring trows upstream, when trows were going downstream they were borne out of the lock on the water rushing out. Heath says in *The Excursion down the Wye from Ross to Monmouth* first published in 1796, that:

> 'The Barges, in passing through the Lock, afford some amusement to the minds of those who are not in the habit of witnessing such scenes. On opening the gates, after the vessel is lowered to the level of the river, the current sets into the lock, in opposition to the stream. In order therefore to bring her into the tide, some force is necessary. No sooner is the signal made for assistance, than young and old, boys and girls, fly to the rope, and, with a zeal the most hearty, soon deliver the vessel from her otherwise stationary situation, to the active current of the river. The Boatmen reward their exertions by giving a few of them a half-penny a-piece.'

Decline and Fall

The ironworks had been in operation for nearly 200 years when Williams's plan was drawn, but it was fast approaching the end of its life. In other parts of the country such as South Wales iron-making would soon supersede the relatively primitive processes at New Weir. In the meantime, the weir was still an obstruction and a number of plans were brought forward by surveyors to overcome it.



In 1763 Isaac Taylor surveyed the Wye and produced a map with detailed proposals for easing the passage of shipping at places where weirs, the remains of weirs or fords caused obstructions, New Weir being chief among them.[62] His map has a miniature sketch of the weir, lock and ironworks, though he simplified the buildings and showed only one wheel. It does appear that a channel has been made in the river-bed for ships to pass along on their way to and from the lock.

Figure 10 (left). New Weir from Isaac Taylor's 1763 map

Although Taylor made several proposals, none came to pass and the next suggestion came from Robert Whitworth in 1779.[63] He was in favour of building a channel with sides about 10 feet high from the current lock to a new lock some 1300 feet downstream. This would have been a massive undertaking and unsurprisingly it came to nought. He did leave a plan which incidentally shows the state of the weir and ironworks at that time (Fig. 11).[64] The key to the letters have not been reproduced, but (a) is the 'barge channel', (i) is the capstan shown on Williams's plan, and above this it says 'Flood Mark in 1771 level with the top of the Capstan.' On the eastern side of the weir it is possible to make out the 'salmon wear which is about a foot and a half below the dam.'

THE END OF THE IRONWORKS

Whitworth's proposal came at a time when the ironworks was in its final half-century. There is a draft of a grant of a licence from Admiral Griffin for Elizabeth Osborne to sub-let the ironworks in 1780; she died in 1797 and the final life in White's 1724 lease fell in.[65] In February 1795 it was badly damaged in the massive flood on the Wye. Its demise as an ironworks can be followed in the newspapers.[66]

There is some documentary evidence that it was still working in 1801; a Mr M— kept a diary of his trip down the Wye.[67] At New Weir he saw 'an immense Iron-forge and slitting Mill, disgorging its black sulphureous smoke and encompassed by Coal and cinders.' When he returned to his boat after the lock he saw '12 horses loaded with charcoal come down an almost perpendicular path cut through the woods and ford the river to the Mills;...'

The dilapidated state of the forge buildings can be seen in a sketch by Joseph Powell which dates from soon after 1801 (Fig. 12).[68]

By 1823 the manor of Goodrich had descended via Admiral Griffin's brother George to his daughters Catherine, Elizabeth and Mary Ann. They decided to sell the Dowards, New Weir and meadows along the river to His Majesty's Commissioners of Woods and Forests, forerunner of the Forestry Commission.[69] Presumably because New Weir belonged to the government in 1847, the tithe map for Whitchurch shows virtually nothing of the buildings.[70] There is a map showing the houses around the works, though little detail of the buildings in the works, in the National Archives.[71] The occupiers of the houses are shown in a table. It is undated but the suspicion must be that it was drawn up at the time of the sale in 1823/4. Although the slitting mill and other buildings are still there, the forge pool has disappeared.

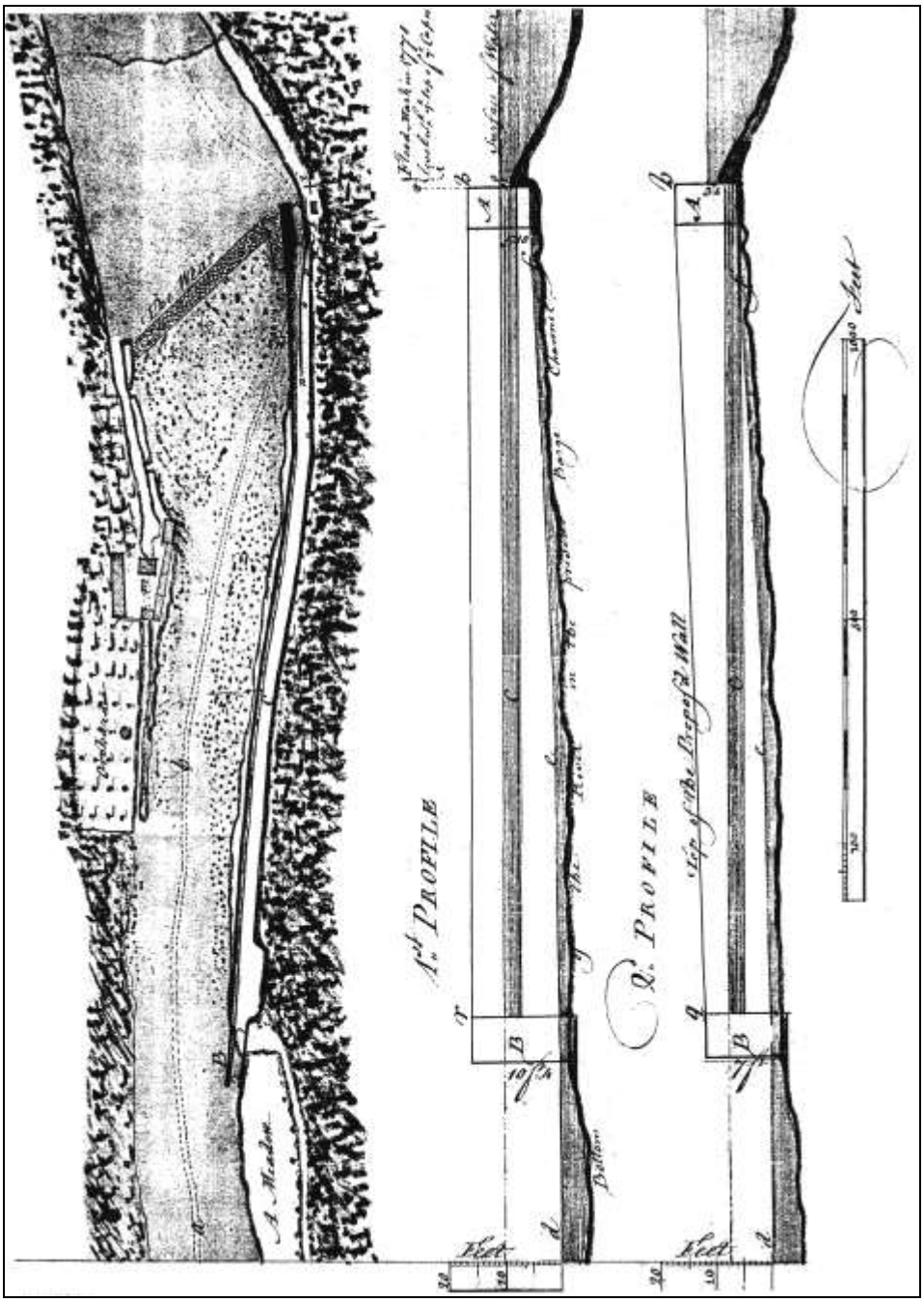


Figure 11. Robert Whitworth's proposed new lock at New Weir, 1779

Figure 12. Joseph Powell's sketch of New Weir in decline. Note the Long Stone in the left background and the strange 'stump' to the left of the buildings. (Photo from the Monmouth Museum archive ©)

THE SECOND GRAND SCENE ON THE WYE

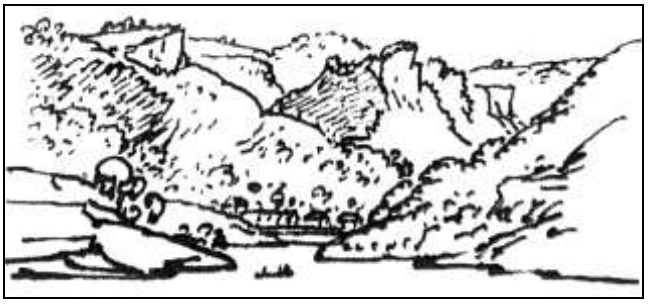
Accounts of the Wye Tour

Fortunately, the history of New Weir is not dependent only on records of the ironworks. As it was nearing its end, New Weir became what Gilpin called 'the second grand scene' of the Wye Tour. The Tour has been written about extensively; the literature starts with the early books concerned with the Picturesque qualities of the scenery, among them Thomas Whately's *Observations on Modern Gardening, illustrated by descriptions* (1770) and Gilpin's *Observations on the River Wye...made in the summer of the year 1770* (though it was not published until 1783). They were followed by more factual guides which still sought to convey the wonder of the experience and the 'Picturesque' quality of the scenery, poetry and private diaries. Modern writing concentrates on historical and poetical analysis but the stream of useful publications shows no sign of slackening.[72]

The Tour from Ross

Not all tourists took advantage of the boats which could take them from Ross to Monmouth in one day, and Chepstow in two.[73] The walk or ride to Goodrich ferry across the fields was shorter, and horses as well as people could cross. The 'first object' on the tour was Goodrich castle, just above the ferry, which Gilpin does 'not scruple to call *correctly picturesque.*'[74] It seems from surviving pictures that many artists did not go by boat as their sketches were made from viewpoints near to ferry crossings.

The Wye reputedly travels seven miles around the heights of Coppet Hill between Goodrich and Huntsham, passing Courtfield and Lydbrook, whereas it is only one mile by land. Many artists must have avoided this part of the trip, as there are few pictures of it.



An exception, Joseph Farington, made quick sketches of many places on his itinerary, including Lydbrook, Rosemary Topping (downstream from Lydbrook) and New Weir in 1803.

Figure 13 (left). Farington's sketch made upstream from New Weir[75]

As the river trip around the Huntsham peninsula was rather dull, most passengers alighted while the boat was still under the lee of Coldwell Rocks on the western bank, where several paths lead up to the heights of Symonds Yat.[76] The boatmen would carry on down the river to New Weir. Coldwell Rocks are better known today as the peregrine falcons' nest site.

There was a small ferry located a short distance upstream from the main Huntsham Ferry which is marked on Figure 1, where the ground starts to rise on the western bank.[77] The ferryman's hut lay in a small settlement (Hentland) on this bank, and a few yards away was (and is) an excellent viewpoint looking south up towards Symonds Yat rock. Many artists have painted or sketched this view, including Michael 'Angelo' Rooker, Joshua Cristall, William Day and J. W. M. Turner,[78] whose Wye sketchbook is so faded that the subjects can only be determined by computer enhancement.

Rooker portrayed the local scenes most diligently and accurately. He painted the view from the lower levels of Coppet Hill, looking towards the Huntsham peninsula and the hill leading up towards Symonds Yat.[79] It shows the huge limestone boulders which have fallen from the top. There is a rare painting of the Huntsham ferry, by David Cox in Birmingham City Art Gallery, entitled 'Waiting for the Ferry.'[80] Some artists did struggle up the hill to Symonds Yat itself, among them Rooker, Thomas Underwood and Joshua Cristall.

What might have been inexplicable is the limited number of places where the artists chose to set up their easels. It's not surprising, though, if they were following the rules of composition laid down in the Picturesque manuals.

The New Weir experience

It is difficult today to get into the same frame of mind as the 18th-century traveller; their gorges are deeper, their woods boskier and their views more sublime. Perhaps only a modern canoeist can, in some sense, feel the awe inspired by the towering cliffs around them. Thomas Whately's account gives a good idea of their feelings about the scene at New Weir:

> 'A scene at the New Weir on the Wye, which in itself is truly great and awful, so far from being disturbed, becomes more interesting and important, by the business to which it is destined. It is a chasm between two high ranges of hill, which rise almost perpendicularly from the water; the rocks on the sides are mostly heavy masses; and their colour is

> generally brown; but here and there a pale craggy shape starts up to a vast heighth above the rest, unconnected, broken, and bare: large trees frequently force out their way amongst them; and many of them stand far back in the covert, where their natural dusky hue is deepened by the shadow which overhangs them. The river too, as it retires, loses itself in woods which close immediately above, then rise thick and high, and darken the water. In the midst of all this gloom is an iron forge, covered with a black cloud of smoak, and surrounded with half burned ore, with coal, and with cinders; the fuel for it is brought down a path, worn into steps, narrow and steep, and winding among precipices; and near it is an open space of barren moor, about which are scattered the huts of the workmen. It stands close to the cascade of the Weir, where the agitation of the current is encreased by large fragments of rocks, which have been swept down by floods from the banks, or shivered by tempests from the brow; and the sullen sound, at stated intervals, from the strokes of the great hammers in the forge, deadens the roar of the water-fall. Just below it, while the rapidity of the stream still continues, a ferry is carried across it; and lower down the fishermen use little round boats, called truckles, the remains perhaps of the ancient British navigation, which the least motion will overset, and the slightest touch may destroy. All the employments of the people seem to require either exertion or caution; and the ideas of force or of danger which attend them, give to the scene an animation unknown to a solitary, though perfectly compatible with the wildest romantic situations.'[81]

In 1811 *The Banks of the Wye* by Robert Bloomfield was published. He had toured the area with friends in 1807, and climbed up to Symonds Yat. This extract gives a sample of his style:

> 'Whence comes thy name? What Symon he,
> Who gain'd a monument in thee?
> Perhaps a rude woodhunter, born
> Peril, and toil, and death, to scorn;
> Or warrior, with his powerful lance,
> Who scal'd the cliff to gain a glance;
> Or shepherd lad, or humble swain,
> Who sought for pasture here in vain;
> Or venerable bard, who strove
> To tune his harp to themes of love;
> Or with a poet's ardent flame,
> Sung to the winds his country's fame?
>
> Westward GREAT DOWARD, stretching wide,
> Upheaves his iron-bowel'd side;
> And by his everlasting mound,
> Prescribes th' imprison'd river's bound,
> And strikes the eye with mountain force:
> But stranger mark thy rugged course
> From crag to crag, unwilling, slow,
> To NEW WIER [*sic*] forge that smokes below.
> Here rush'd the keel like lightning by;
> The helmsman watch'd with anxious eye;
> And oars alternate touch'd the brim,
> To keep the flying boat in trim.'

Bloomfield touches here upon the excitement of shooting the weir; the Duke of Rutland, who published his account in 1805, mentions 'removing all the bottles &c to a place of safety.'[82] He says that they were kept some time in the middle of the lock as 'the water ran in at one end as fast as it went out at the other' and that the gates were 'in very bad repair.' Eventually they were able to leave and 'shot the fall.'

The artists' views

In some ways the most useful (to the historian) portrayals of New Weir were by artists who weren't trying to impress their viewers with their talent or inspire them to make the Wye Tour by the grandeur of the scenery.

One of the earliest paintings, which makes the Wye gorge look like the Dolomites, was painted by Paul Sandby in 1770, or supposedly so, but there is doubt on both fronts.[83] One problem which artists faced when attempting to portray the weir itself from their favourite position upstream, just outside the Saracen's Head, is that the water immediately above it looks rather like a modern 'infinity' swimming pool i.e. the cascade could not be seen. This is well illustrated in Samuel Ireland's *Picturesque Views on the River Wye* (Fig. 14).

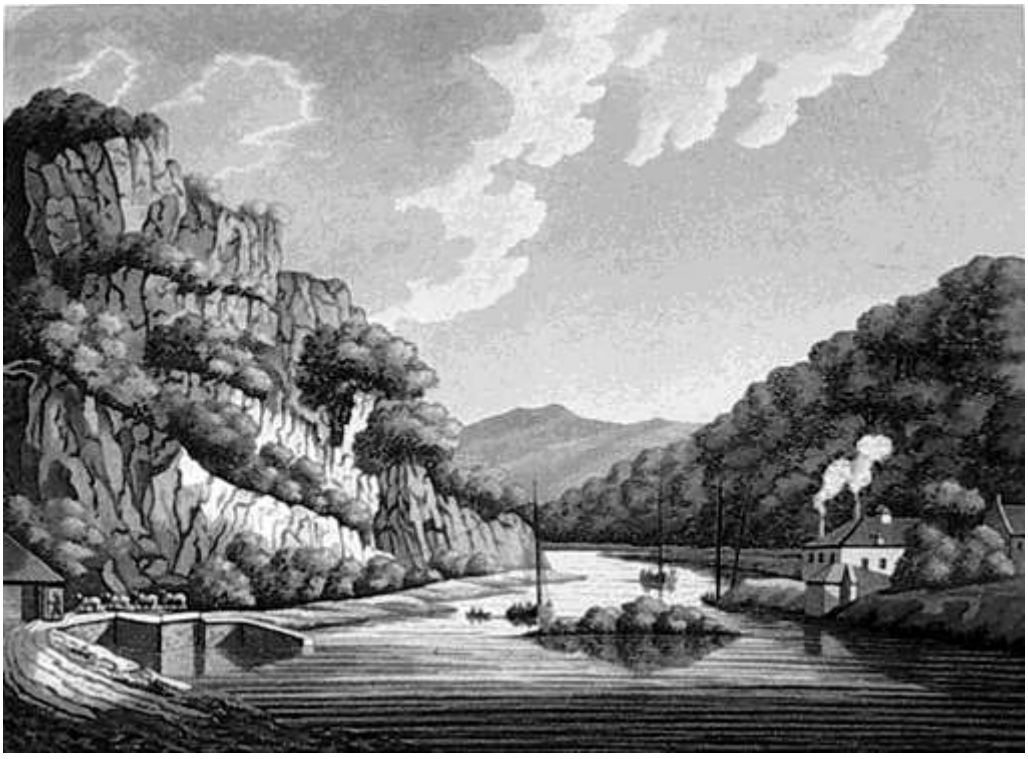


Figure 14. Samuel Ireland's aquatint of New Weir, 1797. The weir is cunningly marked by the 'hedge' growing on the top. It's just possible to see the line from the mast of the trow, being pulled in this instance by ponies instead of the more usual bow-hauliers.[84] The entrance to the lock can be seen on the left on the east bank; on the west bank the ironworks can be seen with the hearths in action.

As we might expect, Rooker's painting of 1788 takes an uncommon viewpoint, solving the problem of showing the cascade (Plate 2). He is standing on the west bank, on the side of the channel leading to the forge pool., where a trow is lying. Note the possible tree stump to the left of the trow, on the river bank. It appears in a number of paintings. The bow-hauliers are pulling a trow up to the lock on the east bank and there are pack ponies ahead of them. Turner sketched New Weir in 1795, but again this was not recognised, as it is described as 'A Reach of the Wye between Steep Rocky Cliffs with a Watermill.'[85] The Herefordshire painter James Wathen accompanied some tourists down the Wye, for example, the Revd Richard Warner in 1797. His style can at best be described as naive, but he shows some interesting details, and he has the useful habit sometimes of giving the day, time and date of his pictures—or it would be, if the date and day always tied up. His picture of the New Weir ironworks (Fig. 15), which is dated (impossibly) Sunday, 7 or 9 Jan or June 1800, corroborates Mr M—'s diary account and shows no sign of the massive flood damage of 1795.[86] He also sketched New Weir from above the weir in 1797, but does not show the ironworks.[87]

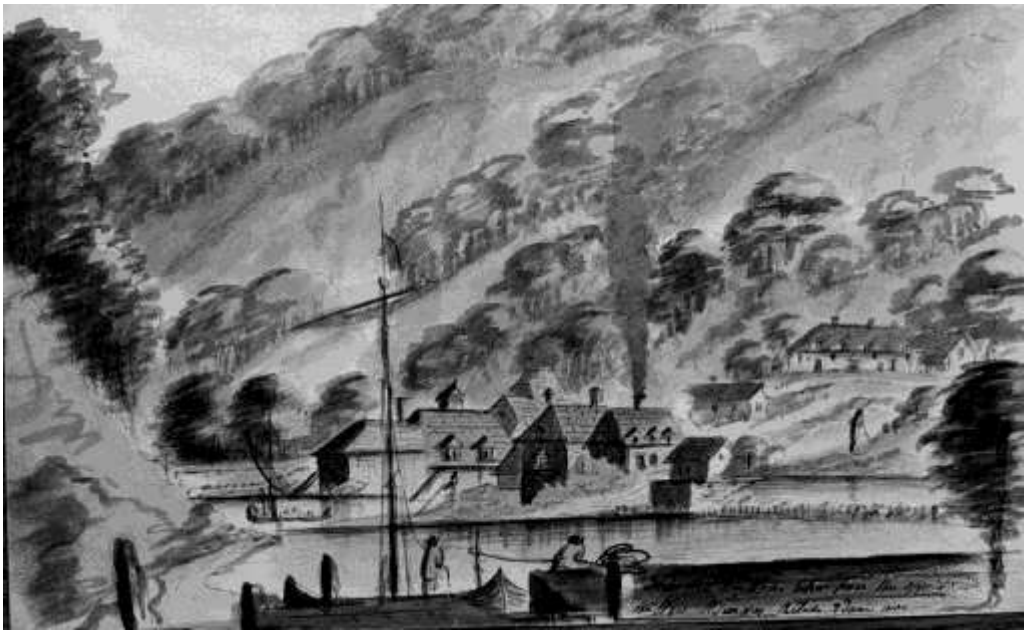


Figure 15. Wathen's picture seems to show that the ironworks were undamaged in 1800.

Most artists concentrated on the weir, the ironworks itself, and there are some charming sketches (Fig. 16). So far the examples chosen have not featured the 'Long Stone' but it can be seen clearly in figure 16, and in the view of cottages on the west bank published by Rudolph Ackermann (Fig. 17). Joshua Cristall painted cottagers at New Weir. There are a number of romantic views from the seat outside the Saracen's Head, those by Edward Dayes (1800) and Copley Fielding (1821)[88] being particularly fine.

Few artists thought of stopping on their way downstream and portraying the view back towards the weir. Fielding's view (Fig. 18) published in 1821 is overly romantic and exaggerated, but Cox's published in 1837 (Fig. 19) is rather more realistic.

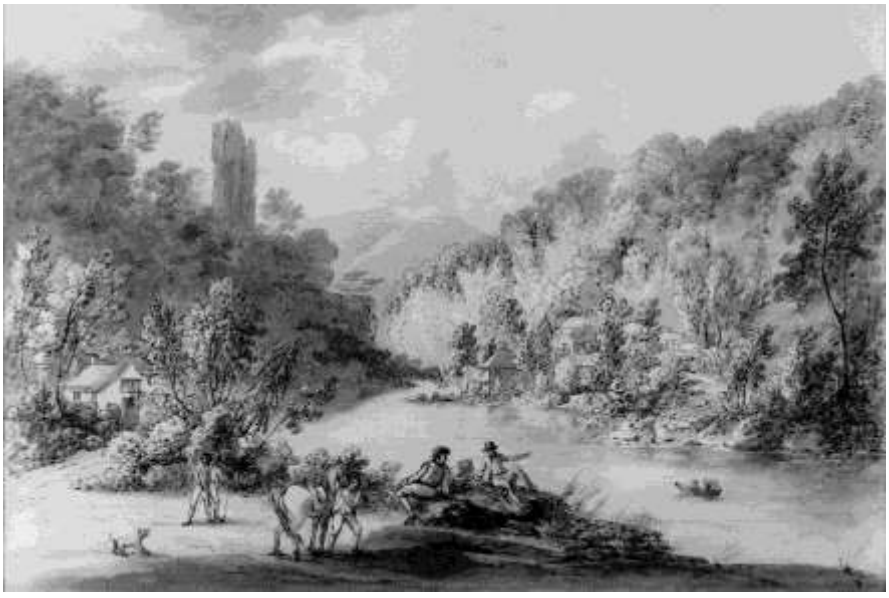


Figure 16. A ‘Picturesque’ sketch of New Weir, with the Long Stone standing proud[89]

Figure 17. Ackermann’s etching of cottages at New Weir (1799)

Figure 18. Copley Fielding's exaggerated view upstream at New Weir[90]

Figure 19. New Weir showing tourists below the weir; an engraving from a watercolour by David Cox the elder in Roscoe's *Wanderings and Excursions in South Wales* (1837)[91]

The ironworks deserted

Pictures of a deserted ironworks by a professional artist would not be of interest to the general public and most other visitors sketched the famous views. Luckily, when Mary Buckle was at New Weir on 28 April 1821 she went into the buildings and recorded them (Fig. 20).

Figure 20. Mary Buckle's pen and wash sketch of New Weir ironworks, looking towards the Wye [92]

The weir itself was broken down to a lower level in 1826.[93] There is an undated painting by Thomas Tudor in Monmouth Museum which shows the lock in operation and, in the lower right corner sketched in pencil, figures apparently breaking down the weir (Figure 21).

The new tourists

Wealthier visitors drifted away as the nineteenth century progressed though, as witness Mary Buckle, the middle classes still came.[94] The published views seem to concentrate less on the scene from the Saracen's Head and more on that seen from the track descending from Symonds Yat Rock. Finally, the opening of the Ross to Monmouth railway on 4 August 1873 allowed people of quite modest means to enjoy the scenery. One proposal for the line of the track meant that the New Weir site would have been obliterated, but as this would have involved a long diagonal bridge over the river wiser counsels prevailed and it was built on the eastern bank, which it followed most of the way to Monmouth (Fig 22).[95]

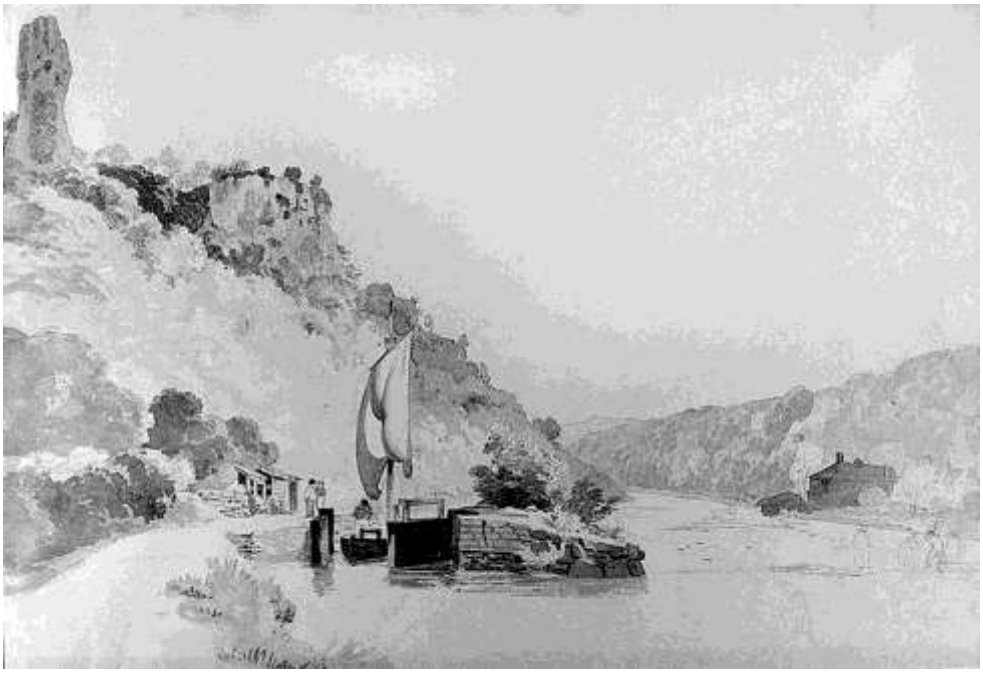


Figure 21. Thomas Tudor's view with figures apparently breaking down the weir. (From the Monmouth Museum collections ©)

Figure 22. Symonds Yat railway station, *circa* 1935, showing the island in the Wye next to the ironworks site, which changes over time

Figure 23. A postcard sent in 1908 showing passengers waiting to cross to Symonds Yat West by the chain ferry, which still operates. The bench on the left could be the successor to that used by many artists. The Long Stone leans over the river, as it still does today, though obscured by conifers on the ridge

SYMONDS YAT TODAY

On summer weekends Symonds Yat is as busy as ever: the old station is 'New Weir' car park, the river is full of pleasure boats and New Weir itself resounds to the screams of canoeists as they navigate the remains of the weir, recently augmented with some huge boulders.

The ferry doesn't always run in the winter months, so if you wish to visit the site of New Weir chose a quiet weekday in late spring, take the ferry across and follow the footpath keeping close to the river. The wild garlic thrives in Mr Partridge's orchard.

MAIN SOURCES

Bedfordshire & Luton Archives	L24 has records of the Kent family
Gloucestershire Record Office	New Weir disputes are in D1677 and D2079; Doward purchase in D9096
Hereford Library	Pilley scrapbooks
Herefordshire Record Office	Goodrich manorial records including the O68 series and AW87; also maps
Lambeth Palace Library	The Talbot manuscripts
National Library of Wales	The John Lloyd collection
Sheffield Archives	Bacon Frank archive
The National Archives, Kew	Civil cases in Chancery and the Star Chamber

Most of these archives have online catalogues.

ACKNOWLEDGEMENTS

I would like to thank Herefordshire Record Office and Hereford Library for permission to use images from their collections and Monmouth Museum for permission to use three important pictures. The National Library of Wales must be commended for its excellent copying service. Owners of private collections of paintings have generously supplied me with images to use. John Eisel has been most helpful in supplying newspaper references. Finally, Julian Mitchell was of the greatest help in tracking down illustrations and references for my original address and for this paper.

REFERENCES

[1] I shall use throughout the modern spelling 'Symonds Yat', though 'Symond's Yat' makes more sense. I shall also use 'New Weir', though Weir was usually spelt 'Weare'.
[2] There is a Romano-British farm on the peninsula, a mesolithic hand-axe has been found there and, of course, there is the Queen Stone.
[3] Hart, *The Regard of the Forest of Dene* (1987), p.36.
[4] Herefordshire Record Office (HRO), Woolhope Club aerial photos, 99-MB-0395.
[5] Lowe, R., 'Upmouths, cruckles and gillyns: some notes on Wye fisheries between Ross and Monmouth' in *Transactions of the Woolhope Naturalists' Field Club* (*TWNFC*), (2008), pp.99-110. The Wye Tourists often remarked on the 'truckles', 'cruckles' or coracles used by the fishermen at New Weir.
[6] The position of 'Old Weare' is indicated by the start of the channel next to the 'm' in Huntsham in Fig. 1.
[7] Lowe, R., *op. cit*.
[8] The National Archives (TNA), STAC 5/S22/11 Shrewsbury v Price, evidence of the Earl of Shrewsbury - but he would have exaggerated its size somewhat.
[9] Just above the New Weir site, there is a slipway down the hillside which leads from an amphitheatre in the cliffs. Mine entrances can be seen all around, some locked to protect hibernating bats in season. It's dangerous country.
[10] Shrewsbury also owned the woodland of Penyard Chase.
[11] Lambeth Palace Library (LPL), Talbot MSS 702, f.169. Unfortunately copies of the documents are difficult to read.
[12] LPL, Talbot MSS 708, f.223. See also Heather Hurley's *The Story of Bill Mills*, pp.10-11.
[13] *TWNFC* (1943), opp. p.103.
[14] H.G. Baker, 'Early iron manufacture and an inventory of Whitchurch Forge, Herefordshire in 1633', *TWNFC* (1943), pp.103-118; Nicholls, *Iron Making in the Olden Times...in the Ancient Mines, Forges, and Furnaces of the Forest of Dean*; (1866) There is also a good account of the process in *The First Iron Works at Wortley* which was published by the South Yorkshire Historical Society in 1976, available online via www.topforge.co.uk/Publications.htm.
[15] *TWNFC* (1943), opp. p.105. and inventory on pp.113-4.
[16] HRO, AW87.
[17] *TWNFC* (1943), pp.109-110 gives a transcription. The original documents are at TNA, E134/24&25 Chas. 2/Hil 15. The depositions were taken in Ross on 15 January 1672/3.

[18] TNA, STAC 5/S22/11, Shrewsbury v Price, Winston & others; TNA, STAC 5/S82/22 Shrewsbury v Argell, Monmouth & others.
[19] In this case, the 'furnace' was not for the primary smelting of the ore but for heating the blooms or pig iron.
[20] From a transcription of the original letter offered for sale on the internet, sold before it could be examined.
[21] LPL, Talbot MSS 3198, ff.493, 494.
[22] Atkins gives some of the Commissioners as Mr Rudhall, the Dean of Hereford, 'the Vaughans' and Mr John Garnon. Atkins says that he had been a Commisioner for the Severn and the Leadon.
[23] Members of the Bamforth family are mentioned in connection with the Earl of Shrewsbury in a number of Talbot letters in Lambeth Palace library.
[24] I shall designate him George White I and his son George White II.
[25] National Library of Wales, John Lloyd Collection (hereafter NLWJL). The original sheets have been separated and muddled up. Both Whites made copies of the same passages in part. The Bamforth copies and notes have been transcribed by the author.
[26] *TWNFC* (1943), pp.110-113.
[27] *Ibid.*, pp.113-116; HRO, O68/II/42; Deed no. 48 in NLWJL is the record of an agreement in 1741 for the early end to the lease of Mrs Ann Powell of Old Forge to George White, for which he paid her £50, but she was able to retain two pairs of millstones which were not then in use.
[28] Sheffield Archives, Bacon Frank MSS, BFM/2/220.
[29] *Ibid.*, BFM/2/222.
[30] TNA, M1/879.
[31] HRO, O68/I/21.
[32] Bedfordshire and Luton Archives, L24/391 and L24/394. The records came into this archive via the Duke of Kent's family.
[33] *Ibid*.
[34] Complaints about the obstruction of the Wye were not new. In 1302, John Buteturte [*sic*] and William de Mortuo Mari were commssioned to survey the weirs, dykes and stakes in the water of Wye between Hereford and Monmouth, as boats and ships could not pass. Cal . Pat. Rolls 1301 p.627. The text of the Acts and a large amount of other information can be found in Stockinger, V.R., *The Rivers Wye and Lugg Navigation a documentary history 1555-1951*.
[35] HRO, B1/1. Some signatures are faded and haven't been counted, but this is a rich source for family historians.
[36] HRO, O68/II/52.
[37] HRO, AP21. This is a photocopy of a British Library document which, although a full reference is not given, from the reference number 11052 appears to be one of the Scudamore manuscripts.
[38] HRO, O68/II/52.
[39] It is by no means certain that all the records for the suits in this case have been found.
[40] TNA, C11/318/31. One of the scraps of paper with odd notes (HRO, O68/II/34 p.1) says that Grubb leased New Weir & the fishery from 1667 to 1683.
[41] HRO, O68/II/45.
[42] Bedford and Luton Archives, L24/391.
[43] There is a mysterious anonymous letter in Hereford Library which appears to be giving a warning about Fletcher and the New Weare fishery, but it is couched in obscure terms. Pilley Scrapbook I, f14v, dated 10 Nov 1706.
[44] A slitting mill was used to cut thin strips of iron from iron plates which had been made from heated iron bars rolled out in a rolling mill. Both operations were water-powered. It was then very easy to make nails etc. from the strips.
[45] Bedfordshire and Luton Archives, L24/398.
[46] Hart, *op. cit.*, p.36.
[47] Whately, Thomas, *Observations on Modern Gardening, illustrated by descriptions* (1770), pp.108-110. This book is available as an online edition.
[48] Henry Grey, 1st Duke of Kent succeeded his father Anthony Earl of Kent in 1702, became Marquis of Kent in 1706 and Duke in 1710. He died in 1740.
[49] Gloucestershire Record Office (GRO), D23/35 (the Halls' map) and HRO, O68/Maps/7 (the Duke of Kent's map).
[50] HRO, O68/II/20. The word 'Flow^{rs}' is squashed into the end of the line.
[51] HRO, O68/II/20. The '1' of the '100' appears to be written over another number, maybe 200.
[52] HRO, O68/II/13.
[53] Most of the Duke's children predeceased him, but his daughter Anne Sophia married Revd John Egerton, who started the fashion of touring the Wye.
[54] GRO, D23/35.

[55] NLWJL, 44. George White I died 25 April 1720 and was buried at Monmouth. In his will he provided for his youngest son Richard to continue in partnership at the Tintern forge, his second son John already having the remainder of the lease on his forge at Monmouth. In 1708, George White I was 67, his son George 26 and his son John 24 (HRO, O68/I/25). George White was supposed to have come from Newnham, and there is a George son of Richard White of 'Sawdley' baptised there in 1641.
[56] GRO, D2930.
[57] NLWJL, 58.
[58] NLWJL, 49, 51-6
[59] 'Brayse' or 'braise' is charcoal that has broken up into smaller pieces.
[60] About £100,000 today.
[61] The colours have been somewhat exaggerated to bring out the paler features.
[62] Copies are to be found at Hereford Library and HRO.
[63] In Hereford Library in Pilley Scrapbook I there is a copy of a printed petition 'To the inhabitants of the Counties of Hereford, Brecon and Radnor' dated 20 June1775 which re-states the provision of the 1695 Navigation Act, and proposes that where there are weirs 'wear-hedges' should be built to narrow the stream and make navigation easier.
[64] HRO, T90/1.
[65] HRO, O68/III/26.
[66] In these *Transactions*,'The Great Flood of 1795' by John C. Eisel. In 1806 a lease of a house and stables in Bristol was made by John Partridge of Monmouth, ironmaster to John Tomlinson of New Weir, co. Hereford, ironmaster (Bristol Record Office, 30273/7/a-b).
[67] NLW, MSS 447-4279, 1340C.
[68] Joseph Powell's sketchbook for his expedition on the Wye is watermarked 1801.
[69] A farm which lies between the Great and Little Doward, The Kill[n]yards or Kiln House, had been subject ot a charge for maintaining the lock at New Weir.
[70] Mr Partridge had also offered to sell to the Commissioners Penyard wood and The Lawns (GRO, D9096).
[71] TNA, F17/126. It has proved difficult to get a copy worth reproduction.
[72] The best recent book on Wye Tourists is Julian Mitchell's *The Wye Tours and its artists* (Logaston, 2010). He wrote it to coincide with an exhibition at Chepstow Museum of paintings of the Wye Tour. Many of these are illustrated in the book, but it also gives a very good history of the tour with extracts from the travellers' writings. A copy is available in the Club's library.
[73] The tourists were at the very least middle-class, or had some literary or artistic occupation.
[74] Unfortunately he also says that 'the views from the castle were mentioned to us as worth examining; but the rain was now set in, and would not permit us to land.'
[75] Farington's diary is in Hereford Library.
[76] The supposed height of Symonds Yat gradually decreases from 2000ft. in the mid eighteenth century to 500ft. by 1839 when T. Jew printed an account of the scenery.
[77] Charles Heath does not mention this ferry in 1808, but it is shown on the 1838 tithe map.
[78] The sketch has been titled 'A Bend of the Wye beneath Wooded Cliffs'. Tate Britain, Turner's South Wales Sketchbook 1795, D00612, Finberg number: XXVI 59.
[79] This painting is in a private collection. The spot that Rooker sketched from has been located to within a metre or so.
[80] Birming ham City Art Gallery, accession reference 1885P2493.
[81] Whately, pp.108-110.
[82] Mitchell, *op.cit*., p.54.
[83] It can be viewed on the internet at http://www.wikigallery.org/wiki/painting_367317/Paul-Sandby/Symonds-Yat-On-The-River-Wye.
[84] A similar trow and bow-hauliers appear in almost every picture, which is rather suspicious.
[85] The sketch has been titled 'A Reach of the Wye between Steep Rocky Cliffs with a Watermill'. Tate Britain, Turner's South Wales Sketchbook 1795, D00613, Finberg number: XXVI 63.
[86] The date is certainly 180- i.e 1800 to 1809. HRO/S90. Wathen often seems to have gone down the Wye on a Sunday.
[87] HRO/S90.
[88] Theodore Henry Fielding, *Picturesque Illustrations of the River Wye* (1821), Plate 13. The illustrations were painted by his brother, (Anthony Van Dyck) Copley Fielding.
[89] Unknown artist. Private collection.
[90] Fielding, *Picturesque Illustrations*, Plate 11.
[91] Cox's riverside banks and hills are rather exaggerated, but no more than others. The original watercolour is in the Fitzwilliam Museum, Cambridge, ref. no. 9892

[92] Private collection. The wash used is light brown.
[93] See Eisel, *op. cit.*in note 66.
[94] Visitors were attracted to the area when Goodrich Court was built and they could admire the collections there for the price of 1s.
[95] HRO, F59. F59/9/3 is the map of the proposed track of the railway in 1867.

Henry Graves Bull (1818–1885)

By HENRY CONNOR, JOHN ROSS and EDWARD BLACKWELL

Henry Graves Bull was recognised by his contemporaries as a most remarkable man. For many years he was the leading physician in Herefordshire and, as a naturalist, antiquarian and historian, he was one of the founding fathers of the Woolhope Club and the driving force during its early years. He was a devout Christian and his strong sense of moral and social responsibility made him one of the city's most important philanthropists.

Although Bull has been the subject of previous biographical papers,[1] *the discovery of new material makes this an appropriate time for a re-evaluation. His pioneering work as a mycologist is the subject of a separate paper in these* Transactions. *The photograph above (Figure 1) is held in the Club's library.*

EARLY YEARS

Henry Graves Bull was born at Pitsford in Northamptonshire in 1818 to Edward Bull, a gentleman-farmer, and his wife Mary. His father, who had a daughter Charlotte from a previous marriage, was already forty-seven at the time of Henry's birth and twenty years older than his mother. Henry had two other brothers, James and Frederick, and a sister Lucy. After his father's death his mother, Charlotte and Lucy came to live with Bull who, by this time, was in Hereford.[2]

According to one of his obituaries Henry was educated at 'Apsley School'.[3] This probably refers to the Classical Academy at Aspley Guise in Bedfordshire—about thirty miles from Pitsford. The school existed from 1715 until 1865 and, in the late 18th and early 19th centuries was said to rival Eton, Harrow and Rugby.[4]

BULL'S MEDICAL CAREER

Medical Training

At the age of sixteen Bull entered the Northampton Infirmary as the resident pupil of Dr Archibald Robertson.[5] Bull would have received an excellent education from Robertson who was among the most eminent provincial practitioners of the day. Having obtained his MD from the University of Edinburgh in 1817, Robertson had settled in Northampton where he built a large and lucrative practice, wrote articles for Forbes's *Cyclopaedia of Practical Medicine* [6] and for various literary publications, and was elected a Fellow of the Royal Society in 1836.[7]At that time physicians were seen as the élite of the medical profession and, by becoming apprenticed to a physician, and an eminent one at that, it was already evident that Bull was regarded by his father and by Robertson as a potential future physician rather than as a surgeon or a surgeon-apothecary. When only nineteen and still a pupil, Bull published his first report in a scientific journal.[8] After four years as Robertson's pupil, Bull entered the Faculty of Medicine at Edinburgh University, probably on the advice of Robertson who had studied there some twenty years earlier. The detailed notes which Bull took during the lectures on midwifery in Edinburgh are now in the possession of the Herefordshire Medical Society. They were given by James Simpson who, a few years later, discovered and promoted the anaesthetic properties of chloroform.

Although pre-eminent in the late eighteenth and early nineteenth centuries, the prestige of the medical faculty in Edinburgh had been damaged by internecine strife in the mid nineteenth century and by this time it was losing ground to medical schools in London and, more particularly, to the experience now available in Paris which had become the preferred location for further training in medicine.[9]

It comes, therefore, as no surprise to find that during 1839–40 the ambitious and energetic young Bull had interrupted his time in Edinburgh to study under some of the great doctors then working in Paris. Because his father was ill, he compressed a two-year course into one, often allowing himself only four hours sleep at night.[10] We can form some idea of Bull's life in Paris from the anonymous diary of another Edinburgh student who had studied in Paris just five years earlier.[11] According to Dr Walker, who came to Hereford as a physician in 1926 and who would have known three of Bull's daughters, Bull lived at 13, Quai St. Michel, on the south bank of the Seine and almost opposite the cathedral of Notre Dame.[12] It was only some 600 metres from the lodgings of the anonymous diarist and would have been chosen by Bull because it was conveniently situated for the hospitals and other medical institutions which he visited on a daily basis.[13]

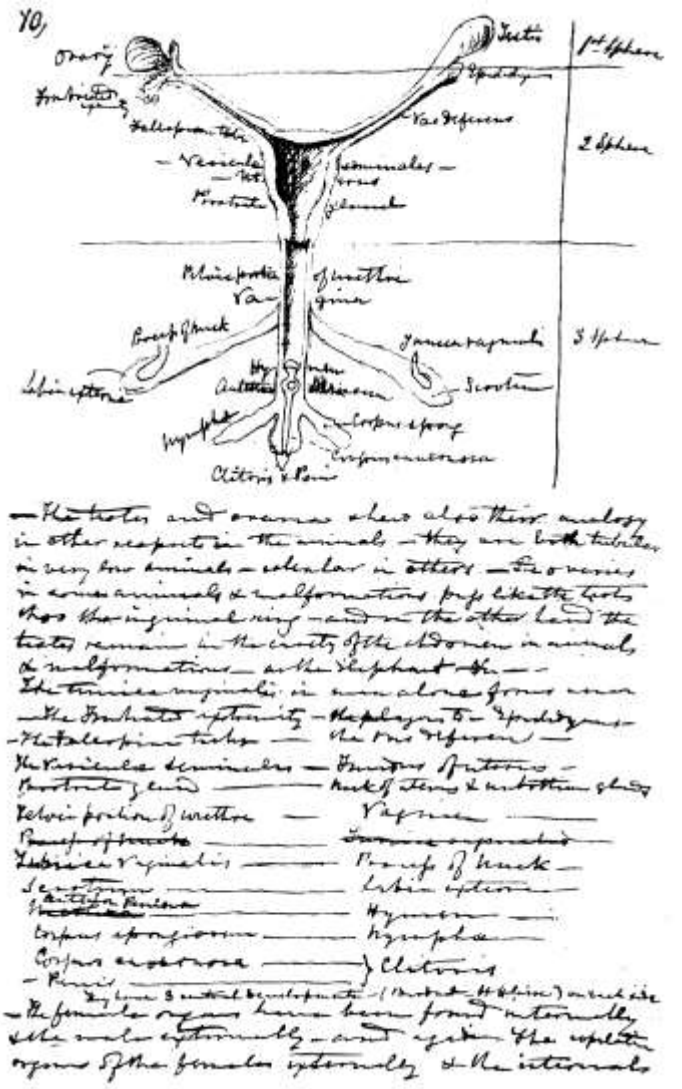


Figure 2. The meticulous notes taken by Bull during a lecture given by James Young Simpson in November 1840

In Edinburgh most of the student's clinical experience would have been restricted to the Edinburgh Royal Infirmary but in Paris he could 'walk the wards' of the seven general hospitals and the five specialist hospitals which were located across the city. As in London, there were also private courses for which additional fees were payable. The diligent student would have led a busy life, even if not trying to cram a two-year course into one, because some of the surgeons began their rounds between 6.30 and 7.00 am and some lecture courses were held in the evenings.[14]

Bull returned to Edinburgh where he graduated doctor of medicine (MD) in 1841. Within a period of 5 months he also obtained the membership diplomas of the Royal College of Surgeons of Edinburgh (MRCS Ed.), the Royal College of Surgeons of England (MRCS) and the Licentiateship of the Society of Apothecaries of London (LSA). His degree and diplomas were subsequently recorded in the minutes of the Herefordshire Medical Association when he registered his qualifications as required by the Medical Act of 1858. He was awarded a gold medal by Edinburgh University for an essay on the diseases of the brain, another gold medal for an essay on the viability of infants and the Charles Bell surgical prize, all in his *annus mirabilis* of 1841.[15] Bull's attention to detail was exemplified in his preparatory work for his essay on infants. He wished to check an oft-quoted and apparently authoritative Italian reference, but was only able to locate a copy of the book just two weeks before the closing date for the essay. As he knew no Italian, he sought some instruction in the language from a friend. In the time available the friend could spare only three hours but this provided sufficient tuition for Bull to discover the relevant passage and to find that it had been misquoted.[16]

Arrival in Hereford

With his outstanding academic record Bull applied for the post of House Surgeon at the Hereford Infirmary in June 1842. He had been recommended to apply by Dr Robertson but the grounds for Robertson's recommendation are not known.[17] One wonders why such an exceptional student should have been advised to apply for this particular post. The Hereford Infirmary was one of the earlier provincial hospitals, having been founded in 1776,[18] but it had no special or national reputation. Indeed the mental asylum, which was linked to the Infirmary and with which two of the Infirmary's physicians were closely associated, had recently been the subject of an enquiry by a Parliamentary Select Committee after complaints had been raised by individuals and by the county magistrates.[19] Although the enquiry had ultimately exonerated the Infirmary and its staff, the incident must have left some taint. Moreover, Hereford was geographically isolated and there were still no plans to link it to the expanding national rail network, an event which did not finally happen until 1853.[20]

Above all, perhaps, the city's infrastructure was in a sorry state. As will be discussed later, the sewerage was hopelessly inadequate and the water supplies were positively dangerous. Poverty was rife, the principal streets were thronged with prostitutes, among whom were several children,[21] and the mortality rate was well above the national average. On the face of it therefore, the city did not seem an attractive proposition for a young doctor of exceptional ability and energy. Nevertheless, Bull followed the advice of his mentor and it was to prove most fortunate for Hereford that he did so.

At that time the appointment of the Infirmary's house surgeon (the most junior medical post) was largely determined by the Infirmary's subscribers, who were known as governors. Lobbying was permitted and, like the other six candidates, Bull would certainly have called on as many as possible of the more influential governors. In the event, and despite his excellent qualifications, he received only one vote.[22] In fact the appointment had, to all intents and purposes, been decided beforehand.[23] The successful candidate, Samuel Waudby, had qualified with the LSA and MRCS diplomas in 1841–2 but, unlike Bull, he did not have the higher qualification of an MD. He does not seem to have had any great ambition because he remained as the resident house surgeon in Hereford until 1856. He then became a ship's surgeon in the service of the Peninsular and Orient Company and died in 1857, aged only 37, of an intermittent fever on board the steamship *Alma*.[24]

Although not selected for the post of house surgeon and in spite of Hereford's many disadvantages, Bull had been impressed by the kindness with which he had been received in Hereford and decided to remain here anyway.[25] In the light of one of his later interests it may be significant that in the same year that he was rejected by the Infirmary's governors, he was taken by the Town Clerk, Richard Johnson, to see the 'explorations' which were then taking place at Kenchester and where the two men made a number of finds. The most significant of these was a Roman oculist's stamp which was discovered by Johnson.[26] Clearly it had not taken him long to meet like-minded friends.

Figure 3. Harley House, Hereford, Bull's home from 1850 or 51 until his death in 1885 (Photo: H. Connor)

When Bull first arrived in Hereford he would probably have stayed in lodgings but, once he had made the decision to remain, he would have needed a residence where he could 'put up his plate' and in which he could see private patients. In 1847, five years after his arrival in Hereford, he was living at 14 High Town and then, by 1850, he was in Capuchin Lane (now Church Street).[27] By the time of the 1851 census he had moved to Harley House in St. John Street where he spent the remainder of his life and where his name and his work as a naturalist are recorded on a plaque on the wall.

Clinical Practice

According to his obituary in the *Hereford Times* Bull 'was not long in establishing a large practice', but his obituary in the *British Medical Journal* states that the practice was only gradually established.[28] Given that there were already two well-established physicians in the city, both with prestigious honorary appointments at the Infirmary, it is more probable that the *BMJ* obituary is correct. However, his first year in the city can hardly have been less successful than that of Dr Robertson in Northampton for the latter 'did not receive the encouragement of a single fee for more than a twelvemonth.'[29]

In the same year that he arrived in Hereford, Bull began his long association with the Dispensary which had been founded as a free dispensary in 1835. Patients were initially seen in the houses of the medical officers and subsequently at premises in Bye Street, now Commercial Street.[30] Bull was initially appointed as an honorary surgeon to the Dispensary. He resigned this post in 1864 and was then appointed honorary physician. He not only gave his services free but was also a contributor to the dispensary's funds.[31]

His obituary recorded that he was always ready to give free advice to those unable to pay for medical assistance and that his 'many acts of kindness to the poor will never all be known.' He also provided free medical advice to a number of charitable institutions.[32] Among these was the Convent of St Vincent de Paul at Bullingham. The sisters no longer have a convent in Hereford but elsewhere they are still committed to helping the poor and needy. At Bull's funeral three of the sisters knelt in prayer as his body was carried into the church. The members of another convent, The Community of the Poor Clares, at that time also in Bullingham but now in Much Birch, sent a wreath.[33] He was also honorary physician to St Martin's Home at Blackmarston, which was 'a reformatory for the fallen women of Herefordshire.'[34] Bull's generosity also extended towards professional colleagues and their relatives. The pages of the *Lancet* show that he subscribed to at least nine testimonial funds between 1864 and 1883. He was one of the earliest subscribers to, and a strong advocate for, the Medical Benevolent College at Epsom.[35]

Bull's obituaries refer to the high esteem in which he was held for his clinical expertise and judgment. His astute clinical acumen and his preparedness are well exemplified in a paper which he published in 1844 on a case of cyanide poisoning. The report begins:

> 'On Monday morning, July 29th, I was sent for, in a great hurry, to see a woman who "had taken something, and was dying." It was five minutes to eight o'clock when the messenger came, and before the hour had struck I arrived with a stomach pump at the bedside of the patient.'

He goes on to give a detailed but remarkably succinct account of the patient's desperate condition and of his unsuccessful attempts to resuscitate her, attempts which he continued for more than an hour. He then describes the detailed chemical tests which he made on the fluid aspirated from her stomach. This was only possible because he had collected 2oz. of the fluid into 'a clean bottle which I happened to have with me.' His purpose in writing the report was to highlight the ready availability of poisons such as almond oil. It is remarkable that Bull submitted his highly detailed paper, which involved some complex chemical analyses, only one week after he had been called to see the patient.[36]

Accidental poisoning was probably quite a prominent feature of Bull's medical practice. Reference will be made later to the problem of lead poisoning in the city, and mention is made by Purchas and Ley of a case of atropine poisoning (from berries of the deadly nightshade) in Bull's practice.[37]

Some of the medicines used by doctors at this time were also extremely toxic. Bull himself prescribed strychnine, ergot and belladonna, all potentially fatal, but he was careful to increase the dosages gradually.[38] His wry comment on the 'Apple Cure' is therefore of interest. This ancient treatment, which was essentially a diet of apples and milk, was once much favoured by unqualified practitioners and Bull noted that 'It was a remedy, it must be admitted, much more safe and effective than many others which have since become fashionable.'[39]

In 1846 he was appointed surgeon to the County Gaol at a salary of £70 p.a. and continued in this post until 1880.[40] In late January 1847, only one month after ether anaesthesia had first been used in England, he had designed his own ether inhaler and had anaesthetised a prisoner in the County Gaol for a tooth extraction.[41]

Bull's non-medical charitable activities are described later, but his medical knowledge and expertise were sometimes of value in these circumstances. When addressing the meeting at which it was proposed, by the Hereford Society for Aiding the Industrious, to build a corn mill for the very considerable sum of £3000 Bull seconded the proposal.[42] He recommended using coarse flour rather than fine flour, 'as containing a greater amount of nutrition and as being more wholesome than the finer flour', a suggestion which was some 100 years ahead of its time. In advising people to bake their own bread:

> 'He did not mean to insinuate that the bakers in this city adulterated their bread, but it certainly underwent some process which made it very different from home-made bread.'[43]

Adulteration was, of course, exactly what Bull did mean to insinuate. Adulteration of flour and of other foods was very common at the time, and several Parliamentary Acts were required before the practice was finally brought under some semblance of control.

It comes as no surprise to find that Bull's expertise was valued by the coroner. Before the era of specialist pathologists and at a time when it was not always convenient to move a corpse over any distance, it was usually the nearest doctor who was asked to make a post-mortem examination. However, it was Bull who was asked by the coroner to carry out the autopsy on the victim of a particularly brutal rape and murder at Ullingswick. Bull gave a most detailed and carefully presented report with which the local doctor could do no more than acquiesce.[44]

The Public Health

Bull took a major interest in the public health of the city or, more correctly, in the lack of public health provision. Article 8 of the Public Health Act of 1848 (11 & 12 Vict. Cap. 63) had made provision for a public inquiry to be held into the state of the sewerage, drainage, water supply, sanitary condition and state of the burial grounds in any town, city, borough or parish if a petition were made by not less than ten per cent of the ratepayers (provided that the ten per cent amounted to at least 30 individuals), or if the average annual death rate over a period of seven years was more than 23 per thousand. Ratepayers were not usually keen to petition for something which might involve them in extra expense but, when the mortality data for 1851

became available, it was found that the average mortality in the city for the seven years 1845–51 was 27 per 1000. On this evidence the General Board of Health instigated a public inquiry by one of its superintending inspectors, T. W. Rammell, in 1853.[45]

Bull proved to be the principal and the most influential witness at the inquiry. He provided a detailed analysis of mortality caused by different illnesses in 1846–52 and gave evidence concerning the inadequate sewerage, water supply, housing and burial arrangements.[46] 'The most glaring evil', according to Bull, was the Castle mill-pond which acted as a stagnant cess-pool. He described the adjoining area of St. Owen's Gate as the most unhealthy part of the city, where the inhabitants lived in poor, overcrowded housing, adjacent to an overcrowded burial ground and an offensive open drain. In the previous five years the area had experienced typhus, smallpox, diarrhoea and scarlet fever.

Several witnesses blamed the lead content of the water from the city's wells for the lead poisoning which was prevalent in the city but Bull was adamant that, in this respect if in no other, the water supplies were blameless. The poisoning, he explained, occurred because lead pipes were used to convey cider up from the cellars:

> 'Cider it is well known acts rapidly upon lead, and people who drink it from the tap early in the morning are frequently and seriously affected. I have not known deaths to result, but permanent paralysis in many instances.'

As usual Bull was correct. In 1767 Sir George Baker had shown that the symptoms of Devonshire Colic in cider drinkers were a consequence of lead poisoning, and he attributed this to the presence of lead in the pipes and other equipment used in the manufacture of the cider. In 1778 James Hardy showed that the major source of lead contamination in Devon cider was actually the use of lead-glazed earthenware, more common in Devon than in other cider drinking counties, explaining the higher prevalence of lead poisoning in cider drinkers there.[47]

Bull's description of the problem occurring as a consequence of contamination in domestic pipes, and in those who drank first from the tap after the cider had stood in the pipes overnight being the most severely affected, appears to be the first in the literature. By this time the disease had probably largely disappeared from Devon. Indeed in 1863 William Aitkin, a professor at the Army Medical School, claimed that lead poisoning was now confined principally to labourers in the lead manufactories and to painters.[48] However, it was still commonplace in Hereford in 1867, as is shown by the evidence of Charles Lingen, a surgeon at the Hereford Infirmary, to a Parliamentary Commission in that year.[49] It was also still recognised in America in 1870 when an advertisement in the *New York Times* promoted the use of tin-lined lead piping for use in plumbing and in beer and cider pumps.[50] The problem has recurred intermittently since then. In 1969 a case occurred in Surrey where the cider had been made using a press which was 120 years old and which had been repaired with lead and, also in Surrey, a case of lead poisoning associated with wine made in lead-glazed earthenware was reported in 1961.[51]

Figure 4. Timothy Curley, from a photograph in the Club's library

Rammell made detailed recommendations which were accepted by the authorities in Hereford who appointed an engineer, Timothy Curley, to begin their implementation. Curley was shocked by what he saw in Hereford, writing that 'I witnessed such scenes of filth and uncleanliness in this city, as I did not believe could exist in a civilised community.' The city's doctors, including Bull, may have been anxious to ensure that the authorities kept their word because they wrote a joint letter to the City Commissioners to emphasise the importance of the work.[52] If Rammell's recommendations were carried out, the doctors believed that the sanitary state of the city would be 'inferior to none in the kingdom.' This statement tells us something about the standards which were considered acceptable in 1854 because, in 1876, all of the city's sewage was still being discharged, untreated, into the Wye.[53] The Medical Officer of Health for the City protested against this practice and it is likely that Bull and other colleagues would have supported him. Some untreated sewage was still being discharged into the Wye until the 1970s.[54]

Medical Politics

From the time of his arrival in the city Bull had been interested in medical politics. Indeed this interest may already have been inculcated while he was still in Northampton by Dr Robertson, who was a prominent member of the Provincial Medical and Surgical Association (PMSA) which was the forerunner of the British Medical Association. When Robertson was President of the PMSA in 1844, its annual meeting was held in Northampton and Bull attended.[55] It was, no doubt, an opportunity to meet old friends but Bull would have been keen to attend the meeting itself because medical reform was actively under discussion and it was known that the Home Secretary, Sir James Graham, intended to introduce a Parliamentary Bill on this subject in the near future. In fact Graham chose to introduce his Bill on August 7, the first day of the Northampton meeting, and too late for those present to read it and discuss it.

When the doctors in Hereford city met to discuss the Bill on September 2 1844, it was Bull who was called upon to give an account of its contents and to analyse its more contentious clauses.[56] Two weeks, later at a meeting which was open to all the doctors in the county, it was decided to form 'The Herefordshire Medical Association for the purpose of watching over and protecting the interests of the Profession, until they cease to be threatened in any such manner as they are in the present Bill.' Bull was appointed Honorary Secretary of the new Association.[57] Two months later, when a special meeting of the Provincial Medical and Surgical Association was convened in Derby to discuss the Bill, Bull was one of five city

doctors who wrote to express their support for the Association's policies. However, they were unable to attend the meeting because the

> 'distance from Hereford to Derby is so great, and the means of accomplishing it so inconvenient, that we could not do so at this busy season of the year, without greater loss of time, and neglect of duty, than our attendance would compensate for.'[58]

In 1845 Bull also became Honorary Local Secretary of the Hereford branch of another lobbying association, the newly formed National Association of General Practitioners,[59] and he was kept very busy in his role as secretary of the Herefordshire Medical Association. After the Association met to discuss the Home Secretary's amended Bill on March 18, a report was promptly published and, a short while later, Bull was writing to enclose a copy of a protest to Sir James over the autocratic behaviour of the Royal College of Surgeons.[60] He also reported the outcome of a further meeting to discuss Sir James's Bill in September 1845.[61] On this occasion the Herefordshire doctors continued to express some anxieties over the Bill but were more conciliatory towards Sir James, recognising the difficulties which he faced in trying to reconcile the various warring factions within the profession. Sir James, however, had had his fill of the profession and dropped his efforts at reform.

Although there were continuing attempts to reform the profession, the momentum had been lost, at least for the time being, and the Herefordshire Medical Association seems to have lapsed. When a successful Bill was finally enacted in 1858, a new Herefordshire Medical Association was formed, initially as a local registration association through which local doctors could register their medical qualifications, as required by the new Act. However, it soon broadened its remit to discuss all medico-political matters. Although no longer the secretary, Bull was a founder member of the new association, a committee member for many years and he wrote nearly all the Annual Reports during the first fifteen years of the Association's history.[62] As at the Woolhope Club, whose *Transactions* he was also editing at this time, he was President only once of the Medical Association but was, for very many years, the guiding spirit behind both organisations.

Bull's continuing work for the Dispensary and his appointment to the Infirmary

Bull's charitable work and free advice for the poor have already been mentioned. However, his charity was not unconditional. In 1865 Bull addressed the annual general meeting of the Herefordshire Medical Association 'On the excess of gratuitous medical services and the desirability of encouraging the self supporting principle.' The members then passed a resolution, which was almost certainly drafted by Bull, to the effect:

> 'That the system of gratuitous medical advice and assistance has outgrown all necessary and reasonable limits; with all its acknowledged benefit...in the excess to which it is now carried, it is largely productive of the serious evil of checking those habits of providence, forethought and independence which it is always so desirable to encourage among the working classes; and that it will, therefore, be of great advantage to introduce the self-supporting principle...in all dispensaries..'

The first of many self-supporting dispensaries, or provident dispensaries as they were often known, had been initiated at Southam in Warwickshire in 1823 by Dr Henry Lilley Smith.[63] After a slow start, the idea gained in popularity as the concept of self-help gained strength,

particularly following the publication of Samuel Smiles's work on that subject in 1859,[64] but in Hereford Bull faced a sixteen-year struggle in his efforts to add a provident branch to the existing charitable dispensary.

By 1881, however, the committee responsible for running the Dispensary had finally accepted the provident principle. The committee's decision then had to be approved at a special general meeting of the governors.[65] Bull had prepared for this meeting very carefully. He had identified four colleagues who were prepared to act as medical officers to the new branch. He had also studied the rules and financial accounts of other such institutions and was convinced of the financial viability of the project. However two speakers at the meeting bitterly opposed the idea. One challenged Bull's estimate of the cost of drugs for the provident branch and claimed that the new branch would threaten the viability of the existing charitable dispensary. He continued his opposition even after Bull had undertaken to meet the cost of any excess expenditure on drugs out of his own pocket. The debate became acrimonious; Bull, who spoke passionately in favour of his proposal, accused one member of the Dispensary's committee, Alderman Carless, of having neglected his duties over a period of thirty years. Ultimately the proposal won overwhelming support with only two votes against and one abstention.

The Dispensary continued to provide free treatment for those on parish relief, but those who wished to join the provident branch and who were not excluded because they could afford to pay doctors' bills were required to pay a small regular subscription. For example, members under the age of fifty paid one penny per week or three pence weekly for a whole family. Unlike those receiving charitable treatment, the provident members were able to choose their own doctor from among the four medical officers and were also entitled to home visits when necessary. The provident branch opened shortly after the Dispensary had moved into a new purpose-built building in Union Street. It was a very fine building but has been sadly neglected in recent years (Fig. 5).[66]

There is no surviving record of Bull having discussed gratuitous medical services prior to 1865 but it seems probable that he did so. Between 1850 and 1867 his next door neighbour at the north-east corner of the Cathedral Close was the Very Reverend Richard Dawes, Dean of Hereford. In 1856 Dawes preached a sermon at the Cathedral in aid of the Dispensary. As surgeon to the Dispensary, Bull would have attended the sermon and would have heard Dawes remark on the abuse of the extensive gratuitous advice which was offered by the medical profession. Dawes also commented on the high mortality rate in the city and regretted that there were still no plans to clean up the Mill-pond by Castle Green which he described as 'among the most pestilential nuisances we have in the place.'[67] Both of these latter issues were among the particular points which Bull had made in his evidence to the Board of Health inquiry three years earlier, and it therefore seems very probable that the two neighbours had discussed the content of Dawes's sermon before it was delivered.

In 1864 Dr Bleeck Lye, the senior physician to the Infirmary, died 44 years after he had been appointed. As his resignation came only very shortly before his death, it seems possible that he had clung on to office long after he should have retired. Dr Bull was elected unanimously to the vacant post. His outstanding testimonials and prizes, which had been ignored when he applied for the humble position of House Surgeon, were now described by the Reverend Archer Clive, the Chairman of the Governors, as 'first rate'.[68]

Figure 5. The purpose-built Dispensary, Union St, largely unaltered outside (Photo: H. Connor)

The appointment was an honorary one with no financial recompense. It did, however, carry some prestige and, for this reason, such appointments were of indirect financial value, particularly to younger doctors when building up a private practice. However, by the time Bull had been appointed, twenty two years after his arrival in Hereford, his reputation was already made. Nevertheless he served the Infirmary devotedly until one week before his death twenty one years later. He spent several hours at the Infirmary on three days one week and then four days the next. Beyond his clinical duties, he 'devoted himself to increasing the efficiency of the institution and the comfort of his patients.'[69]

THE WOOLHOPE CLUB

Bull's antiquarian interests, of which mention has already been made, would have been catered for by his membership of the Hereford Literary, Philosophical and Antiquarian Society. However at this time he had an even greater enthusiasm for natural history and especially for botany. As a student he had begun to compile a herbarium, to which other members of his family subsequently contributed and which is now in the Hereford Museum.[70]

During the closing months of 1851, discussions had been held among those members of the Society with an interest in natural history with a view to the formation of a field club, as had already happened in some other counties. At a meeting on 26 March 1852 Bull noted that the Society's horizons were beginning to expand and, 'after hearing almost unceasingly lectures upon things of antiquity', he suggested that it was now time to introduce summer excursions devoted to botanical research. Publication of this research 'would tell people in ages to come that it [the Society] had existed usefully'. It seems, however, that Bull and others had already determined on forming a new club for this purpose and, although the Hereford Literary, Philosophical and Antiquarian Society did subsequently hold some lectures and expeditions which were devoted to natural history, it gradually faded and then finally disbanded in 1869.[71]

It is not possible to give a precise date when the Woolhope Club was actually founded and who was most involved. The first recorded meeting of the Club was on Tuesday 13 April 1852 when minutes were written and the rules of the Club were listed, but it has always been considered that the Club was formed towards the end of 1851. Certainly the list of Presidents in the Transactions volume for 1881 and 1882 and in subsequent volumes had a heading '1851, Club formed in the Winter months'.[72]

There does not seem to have been any single founding father. Bull, Thomas Taylor Lewis, William Henry Purchas, William Symonds, Mackay John Scobie and Robert Maulkin Lingwood were all involved.[73] At the Club's AGM in 1883 Bull acknowledged that the Club had arisen 'in two or three directions' but gave pride of place to Mackay Scobie. However, this may have been said, at least in part, out of politeness because Scobie's son was present as the Club's principal guest in his capacity as Mayor of Hereford.[74] Blashill, speaking in 1901, recalled that, in the winter of 1851–2, Scobie was considering forming a field club to study geology and Purchas another field club with a wider remit but perhaps with an emphasis on botany. It was Bull who engineered the situation which brought the two men together and the unifying Woolhope Club was formed.[75] Scobie, incidentally, was an outstanding geologist with a national reputation, despite having died when only 34.[76]

However, once the Club had been founded, there is no doubt that Bull was its mainstay until his death nearly thirty five years later. His name is included in all the lists of those attending meetings and excursions in the 1850s and 1860s (there are not lists for every occasion) but he was not present at a number of the 1870s gatherings. Just two years after he had taken on his additional work at the Infirmary, he wrote to his friend Thomas Blashill, an eminent architect and twice president of the Woolhope Club:

> 'I am in a fix – in spite of a strong determination to have nothing to do officially with the Woolhope Club this year – and having point blank refused overtures for the Secretaryship in place of Mr Lingwood – they have made me President for the year…I feel rather provoked at my eminence for I am so much occupied this year'.[77]

The Club's Field Meetings were physically and mentally demanding and, in addition to Bull's many other interests and duties, must have taken their toll on a man who was now nearly fifty. The records show that members would gather at 9am for breakfast at a country inn near to the place chosen for study (they might have had to travel 20 miles to get there) and, after a day of visiting sites of interest, would dine at 4 pm and then listen to 'learned papers' before setting off for home at about 7 pm.

Bull seems to have been more involved again with the Club in the 1880s right up to his death. During the thirty-four years in which he was associated with the Club, he must have devoted very many hours to its management and to writing articles and reports of meetings. A huge amount of paperwork must have accumulated but little has survived. His obituary in the *Transactions* described him as 'the life and soul of the Club' and as 'the energizing spirit of all that it did or achieved'.[78]

One of the Club's greatest achievements, and it was one in which Bull played a leading part, was the Club's great success at the 'Great Apple Congress' in Rouen in October 1884. There had already been contact with pomologists in France who had sent seventy-five varieties of fruit from Normandy to the previous year's Hereford exhibition when it was mentioned that the last part of the *Herefordshire Pomona* was to be published after the exhibition of the Pomological Society of France at Rouen in October 1884.[79] There must have been some discussion at that time, or during the next six months, about Hereford taking part in the French exhibition because at the Club AGM, on April 26 1884, a deputation consisting of Dr Hogg (Vice President of the Royal Horticultural Society), Mr George H Piper FGS (President of the Club 1883–1884) and Dr Bull, was appointed to attend the French exhibition and to exhibit Herefordshire vintage fruits.[80] They spent much time deciding what to show and how to send the exhibits.

A week before the exhibition four large boxes of fruit, containing 238 different varieties of apples and pears with up to seven fruits of each variety and some grapes, and also two boxes containing six varieties of the best cider and two of the best perry were sent. It took six hours on October 1 for Bull and the other two to arrange 1,600 different fruits on a table in the centre of the exhibition. There was a banquet the next day at which Bull spoke in French, which he presumably recalled from his student days in Paris. This was no simple speech of thanks but a historical lecture in which he put forward a case, based on statements in the ancient Book of Llandaff, that the cider growers of Normandy had come there from Wales in the sixth century AD as refugees, having been driven out by Saxon invaders. This created 'quite a sensation and great applause'. There was said to be no other collection among the 6,000 plates displayed to equal the Herefordshire fruit and the following awards were given to the Herefordians on October 9:

– a gold medal for the collection of table fruit (apples and pears) from Stoke Edith, Holme Lacy, Thing-hill and other gardens.
– a large silver medal for Alicante grapes from Eastnor Castle,
– a gold medal to Dr Hogg for his life-work in pomology,
– a silver gilt medal for cider made from mixed fruits,
– a silver medal for cider made from Foxwhelp apples,
– a bronze medal for cider and perry fruits,
– two diplomas of honour to the Woolhope Club for the first six parts of the Herefordshire Pomona.[81]

Figure 6.1. Obverse of the bronze medal presented to the Club at Rouen in 1884 (Photos: I. Porter)

Figure 6.2. Reverse of the same medal for the Club's collection of 'Orchard Fruits'

Figure 6.3. Obverse of the gold medal won by the Club at Rouen in 1884

Figure 6.4. Reverse of the same medal for 'A collection of Apples & Pears'

Four of these medals were subsequently presented to the Club in 1915 by a Mr Hutchinson on behalf of 'Mrs E. E. Bull'. The gift was made in December 1915 and must, therefore, have been made by *Miss* E. E. Bull because Mrs E. Bull had died in January of that year. The medals were then deposited in a bank vault for safe-keeping and their existence was forgotten for nearly one hundred years until they were found in 2010.[82]

Bull was closely involved with the Club's proposal to make a lithographic copy of the Mappa Mundi in the Cathedral. The original suggestion came from Sir William Guise at the Club's Annual Meeting in 1867 but it was Bull and Blashill who ensured that the project was taken further.[83] Bull subsequently sat on the Club's project committee but was privately critical of the process, writing that 'The Club pays nothing towards the Map – only patronizes it!'[84]

Bull was always keen to help the younger members of the Club with suitable projects, and encouraged them with hints and criticisms.[85]

BULL'S WOOLHOPE PAPERS AND PUBLICATIONS

Pomology

Bull's papers and talks to the Club, as published in the *Transactions*, are summarised in the Appendix. It is clear that advancing years had little or no effect on his creativity because, if the records of Field Meetings during his time as editor are excluded, the number of contributions in the years from 1852 to 1869 is similar to that from 1870 until his death in 1885. The Appendix also shows a gradual change in his research interests over the decades. In the earlier years his contributions were largely botanical, then mainly mycological and, finally, predominantly antiquarian and historical. One of his antiquarian publications in the *Transactions* was subsequently re-published, but without most of the illustrations, in a book which contained a paper by another Woolhope Club member, the Reverend Prebendary Francis Tebbs Havergal, vicar of Upton Bishop and a former Vicar Choral at the Cathedral.[86] As an antiquarian he was, like his friend Thomas Blashill, a member of the British Archaeological Association and was a member of the local committee which planned the Association's meeting in Hereford in 1870, but he did not publish in the Association's journal.[87]

Aside from his publications in the *Transactions*, the best known of his works is the *Herefordshire Pomona*. Production of the *Pomona* was first discussed officially on 25 October 1876 at a special meeting of members.[88] Bull said that it had long been the wish of the Club to make a full study of the 'Pomology' of the county which was neither known nor valued elsewhere as it deserved to be, especially as Herefordshire had more acres of orchard than Devon, Kent or Somerset. Three years previously an exhibition of apples and pears had taken place at the time of the Club's autumn meeting and annual exhibitions followed. In 1883 the external judges declared the exhibition to be 'the finest show ever held in the provinces'. They also said that 'the advancement in the art of fruit culture may be attributed with justice to the efforts of the Pomona Committee of the Woolhope Club, foremost among whom stands Dr Bull.'[89]

In 1876 the Reverend Charles Bulmer of Credenhill had asked Dr Robert Hogg, Vice President of the Royal Horticultural Society, head of the Society's gardens and editor of the *Journal of Horticulture*, to come to the 1876 exhibition and he was 'astonished to see at once so many kinds of apple which were new to him.' Hogg suggested that a local Pomona should be compiled and offered his help as editor. Bull said that the *Pomona Herefordiensis*, by Thomas Andrew Knight (1759–1838) and published in 1811, had become very scarce, valuable and difficult to find. He proposed a new publication which he would edit with the help of Hogg, Bulmer and the growers. It was Bull who suggested that a Pomological Committee should be formed and that the publication should be produced in annual parts, similar to Knight's work. Mr Reginald Symonds was appointed secretary and treasurer, and plans were made to raise money by subscription for the work. Bull agreed to help with this and had, in fact, already obtained guarantees of £50.[90]

However, after more than a year of preparatory work, the whole project was nearly abandoned when, in January 1878, Bull received revised estimates for the cost of the plates for the illustrations. The preliminary estimate had been £7 for each plate. Bull had then allowed a contingency of an additional £3 in his financial calculations, but the revised estimates came in at £18 for each plate. Bull wrote to his wife who was staying with her mother in Clifton:

> 'This is so far beyond my ideas that my present idea is to return all the subscriptions with a copy of the Introductory papers and give it up...It is a disappointment but I don't see any other good way out of it.'[91]

Fortunately some solution must have been found and the *Herefordshire Pomona* was produced in seven parts from 1878 to 1885, each part becoming more detailed following larger and larger exhibitions (on 27 October 1880 about two thousand dishes of fruit were exhibited). Copies of the first part cost fifteen shillings and of the last twenty one shillings. At the annual general meeting of the Club on 16 April 1885, Bull discussed with the committee the finances related to these seven parts as there was a deficiency of three hundred and fifty pounds.[92]

Two artists, Bull's oldest daughter Edith Elizabeth and Alice Blanche Ellis (a Gold Medallist of the Bloomsbury School of Art), painted seventy-six plates representing 432 apples and pears 'from nature', working in the Bulls's drawing room. They did this with specimens from the autumn exhibitions. Bull wrote in his introduction to the first volume 'in this their labour of love they have spent all the sunshiny hours of eight autumnal seasons in succession.'[93] In a letter to Bull, Hogg praised the drawings which were 'not only artistic but faithful', and he observed that many painters could produce artistic work but that it was not always faithful to the original. Each of the two artists was later, after Bull's death, given a testimonial of one hundred guineas and a miniature portrait, on ivory, of Dr Bull.[94]

Six hundred of the two fine volumes of the *Herefordshire Pomona*, containing the seven parts with additional information and a comprehensive introduction by Bull (including an early history of apple and pear and of the activities of Knight) were published shortly after Bull's death. At the time of writing this paper (December 2010), two copies of the *Pomona* were for sale on the internet. One was offered at £5,600 and the other at £13,000. An epitome of the *Pomona*, without the coloured illustrations and with an abbreviated text, was produced by Hogg after Bull's death.[95]

Ornithology

Bull was not really a 'bird-watcher' but over the years he did make notes and spoke briefly about his ornithological observations, and he collected much information from others about the birds of Herefordshire. He was always observant and is recorded as having noted a pair of lesser spotted woodpeckers which visited his garden at Harley House each spring and which nested in his Irish Peach apple tree.[96]

He had almost completed a book about birds when he died and his wife prepared his work for publication in 1888. The book was based on Club meetings at which Herefordshire birds were discussed and their occurrences recorded in 'notes'. Bull's own observations were added and he took care to acknowledge that the work was not his alone. The spine of the book carries the title *Notes on the Birds of Herefordshire* and the title page adds 'Contributed by Members of the Woolhope Club. Collected and arranged by the late Henry Graves Bull, MD.' In the text he also acknowledges those observations made by others and he mentions the authority for many of the statements. It is remarkable that nearly every passage about a bird has an accompanying poetic quotation; for example, twenty-eight quotations with the notes on the nightingale and even nine in the introduction to the volume.[97]

After its publication in 1888, three years after Bull's death, Mr D. R. Chapman, a former librarian and curator to the Hereford Free Library and Museum, wrote to the *Athenaeum* pointing out that at least some parts of the *Notes* had been published in the *Hereford Times* where they were stated to be 'by Members of the Club, edited by Mr D. R. Chapman' who 'will be happy to receive any information about them that may be sent to him.' The author of the *Athenaeum* article which commented on Chapman's letter noted that, in the book's preface, there was not a word about the previous publication nor about Chapman who thought that he had a better right to the *Notes* than did Bull, and that Bull's contribution to the book was inserting all but one of the poetic quotations. The anonymous author of the *Athenaeum* article did not think the matter was worth a quarrel and said he was far too glad to get a work on the birds of any county to be hypercritical. But he did doubt the finding of some rare birds which were recorded, and noted that much was copied from other writers and that there were many 'blunders'. He wrote that 'The bulk of the work is more than doubled by the insertion of almost every quotation which can be tortured into something like a special or even a general allusion to a bird' and, somewhat amused, he mentioned the quotation from Macbeth given in reference to the white-fronted goose: '*...thou cream-faced loon! Where got'st thou that goose look?*' [98] He also wrote that he was 'astonished by a perfect burst of accurate information' in paragraphs which he found came, without acknowledgement, from the 4th edition of Yarrell's *History of British Birds*, published in 1885. He concluded that Chapman should 'wash his hands of all responsibility and write, as he may easily do, a better book.'[99] Henry T. Wharton, a well known Oxford ornithologist, wrote a long and somewhat effusive review in the *Woolhope Transactions* in which he defended Bull, 'our loved and lamented master.'[100] He admitted that there were mistaken bird identifications and that he had been amused by the endless poetical 'allusions', but referred to Bull's repeated statements that he was reporting the work of others: '...Upon his title page, which he himself indited, he renounces his individuality, and expresses his indebtedness to all our *confrères*.' He concluded that 'Our friend Bull was as honest and straightforward a naturalist as it has ever been the glory of Great Britain to foster and admire.'

OTHER ACTIVITIES

As already described, Bull undertook much work for charitable institutions in his capacity as a doctor, but he also gave a considerable amount of his time as an ordinary citizen.

Aiding the Industrious

In 1847 Bull was appointed to the committee of the Hereford Society for Aiding the Industrious which had been founded in 1841 by Revd John Venn to help the poor in many different ways. Venn and Bull became close friends, two outstanding Herefordians, who did so much for their adopted city. Bull took an active part in the Society, including serving on the 'Soup Committee' for ten years and working with the subcommittees concerned with a swimming pool and with the construction of a flour mill. He resigned early in 1885, being so busy with other activities. He had also helped with the Herefordshire Friendly Society, established by Venn in 1838, and was chairman of one of its subcommittees.[101]

Cottage Improvement Society

Bull was also active in the Hereford Cottage Improvement Society of which Venn was the honorary president. The object of this society was to buy and to build cottages to sell or let to labourers at affordable prices, and it is evident from Bull's letters to Blashill that he was a

driving force in the society which, within two years of its foundation, had already invested £3000. According to Bull's share certificate, now in the Hereford Record Office, the aim had been to raise £30,000 capital by selling 3000 shares at £10 each. The £10 was returned to Bull's heirs when the Society went into voluntary liquidation in 1944.[102] The Hereford City Charities also benefitted from Bull's services.[103]

Hereford Free Library

Figure 7. The frontage of Hereford Free Library.
Photo: H. Connor

As a bibliophile and a believer in the philosophy of self-improvement, Bull gave much of his time to libraries. For many years he was honorary librarian of the Hereford Permanent Library.[104] This was a subscription library but with his belief in the principle of self-help, Bull was keen to establish a free library for the benefit of all, including those unable to afford a library subscription.

It was Bull who proposed the creation of the Hereford Free Library in 1871.

Figure 8. The Bull carving.
Photo: Derek Foxton

He was vice-chairman and later chairman of its committee, and was the 'guiding hand' which established and sustained it. His involvement is remembered on the third string-course of the building which ends with a carving of a bull, flanked by mushrooms to reflect his mycological interests (Figs. 7, 8).[105]

City Cemeteries

Bull played a major role in the long-running campaign for a city cemetery. Until 1791 virtually all interments within the city were in the graveyard in the Cathedral Close, but in that year the cathedral authorities closed it on the grounds of overcrowding. Each city parish was then obliged to make its own arrangements but, with the exception of St. John's parish, the space available in the other burial grounds was totally inadequate. In 1849 Bull was one of those who formed the Hereford Cemetery Company which intended to buy land at Broomy Hill for a new cemetery for the city. However, this proposal was blocked by Bishop Hampden. At the Board of Health inquiry in 1853, much was said about the lack of burial space within the city and about the disgusting state of the existing, overcrowded grounds. Bull gave detailed figures for the number of burials in each of the parish graveyards and on the extent to which each was overcrowded.[106] The lengthy saga which followed has been described in detail elsewhere.[107] In 1858 some additional space was found for the All Saints cemetery but not for the others. Bull was involved in further protracted correspondence in 1861, still urging the formation of a general cemetery, but the bishop continued to insist on the principle of a parochial cemetery for each parish.[108] The bishop continued his objections until May 1863 when he finally agreed to consecrate the ground for what is now the general cemetery in Westfaling Street, and the parochial grounds were then closed.

Temperance

When Bull introduced the speaker at a 'temperance oration' in the Hereford Corn Exchange in 1861, he enlarged on the sad effects of intemperance saying that it caused so much misery among the lower classes, filled the prisons and asylums and crowded the hospitals. He admitted that he was not a total abstainer and was not therefore worthy to be their chairman but the *Hereford Times* reported that the audience would not let him off.[109]

Prostitution and Disease

Another social evil which concerned Bull was prostitution which, to judge by newspaper reports of proceedings in the magistrates courts, was rife in Hereford at this time. Mention has been made of Bull's involvement as honorary physician to St. Martin's Home, the reformatory for 'fallen' or 'penitent' women, as it was variously described. But Bull was not only the Home's honorary physician; he was also actively involved in its management. At the Home's annual meeting in 1870 Bull presented a detailed analysis of its work and of the results which had been achieved since its inception in 1864. He went on to describe what he believed to be the diminution in prostitution brought about in those towns which were subject to the Contagious Diseases Acts.[110]

These Acts had been introduced during the 1860s with the aim of reducing the very high prevalence of sexually transmitted diseases in soldiers and sailors. This extremely contentious legislation listed certain ports and garrison towns in which women suspected of prostitution could be obliged to undergo a physical examination. Those found to be infected could be detained and subjected to compulsory treatment. This represented a very significant intrusion by the state into personal liberties, and it was one which attracted considerable opposition from libertarians and feminists.[111] However, there were those who wanted to see the legislation extended to other towns in which prostitution was considered to be a problem. When a branch of the Association for Promoting the Extension of the Contagious Diseases Act to the Civil Population was formed in Hereford in 1871, the *BMJ* reported that Bull and six other doctors

had become members.[112] The opponents of the Act were already active in the city and the subject attracted some notice in the local press, even though the attendance at the initial meeting of the 'extensionists' had been very small. The meeting was also reported in *The Shield* which was the organ of the association for the repeal of the Acts, and which took some delight in reporting the small attendance.[113] When the debate resurfaced in the city in 1873 the arguments became quite heated. The abolitionists circulated handbills which their opponents described as 'filthy' and 'disgusting', and both sides accused the other of misrepresenting the facts. The Mayor was criticised, both in Council and in the press, for having allowed the abolitionists to use the Guildhall for what proved to be a very rowdy meeting. The *Hereford Journal* was highly critical of the way in which the meeting had been organised and conducted, but the *Hereford Times* felt unable to comment because it had not sent a reporter, even though it conceded that the subject was 'a most important one'.[114]

Bull's name did not appear in any of the reports in the lay press and he may not have attended any of the public meetings. He would surely have recognised how divisive a subject this was. It is, perhaps, surprising that he should have supported a measure so opposed to the rights of the individual. He must have considered that, in this instance, the end justified the means and that a loss of personal freedom was a price worth paying for, as he interpreted the evidence, a reduction in prostitution. Ultimately the abolition movement was fuelled by the attempts to extend the Acts which proved to be a step too far, and the legislation was repealed in 1886.[115]

Bull's views on prostitution would have been influenced by religious and moral concerns but he would also have had to consider the legal aspects after he was appointed a magistrate for the city in 1873. In March 1885 he was nominated for the County magistracy but did not qualify until the Michaelmas Session in October by which time he was already fatally ill.[116]

Bull was as sharp an observer of human nature as he was of the natural world. He noted the social and cultural changes which stemmed from 'the penny-a-week school; the penny postage; the penny newspapers; and the penny-a-mile railway train.' Not all of the resulting changes were for the better and one senses a nostalgia for the village wake which had been lost to the club feast of the wider district and the pleasure fair of the nearest town, and for the simple village customs which 'are rapidly passing from disuse into oblivion.'[117]

With all his many interests and duties it is astonishing that Bull also found time to act as examiner in chemistry at the Hereford Proprietary School. As one of his obituarists noted, it is the busiest man who still has leisure to take on additional work.[118]

BULL AND HIS FAMILY

In 1854 Bull married Elizabeth Read, the second daughter of Henry Read, a London merchant of Finsbury Square and later of Essex. She was a descendent of Sir Christopher Wren, granddaughter of the banker William Banbury and related to Sir Frederick Banbury, business man and politician who was later ennobled as Lord Banbury of Southam. At the time of the marriage Bull was 36 and she was 23. Over the next fourteen years Elizabeth bore nine children.[119] She survived her husband by almost thirty years, dying in 1915 at Clevedon where she had gone while extensive renovations took place at Harley House. Her obituary described her as 'universally respected and beloved for her character and works.' She was known for her religious and philanthropic work and was a regular worshipper at the Cathedral.

All four of the Bulls' sons were educated at Hereford Cathedral School.[120] The eldest, **Ernest Henry** (1855–1939), joined the office of a London stockbroker at the age of 17 but

subsequently became an actor, apparently against his parents' wishes though he afterwards prospered as a theatrical manager. He was the only one of the children to marry and had two daughters. When he died in 1939 he left bequests to several theatrical charities.[121]

Alexis (1856–1879), went out, apparently very reluctantly, to Assam as a tea planter in 1874.[122] He must have returned to England because in 1879 he sailed from Liverpool for New Zealand on the *Knowsley Hall*. The ship never reached its destination and was presumed to have sunk *en route.* Two other Old Herefordians, Henry and Herbert Stillingfleet, the sons of the rector of Hampton Bishop, were also on board. The rector was one of Dr Bull's colleagues on the council of St. Martin's Home and the two families were friendly, so it was a great tragedy for them all, compounded by months of uncertainty while hoping that the ship or survivors might yet be found.[123]

For the Bulls it came less than six months after the tragic death of their fourth son, **Herbert** who had died in May 1879, aged 16, a week after falling from a tree. The death certificate, given by the Hereford surgeon and Woolhope Club member H. C. Moore, stated that death was due to a brain abscess but a newspaper report, which described promise of recovery followed by an attack 'which carried him off in two hours', is more suggestive of a haemorrhage. Bull must have felt the loss all the more keenly because the boy had intended to follow him into the medical profession.[124] He may have taken some comfort from the fact that Edward Du Buisson, the son of close friends of the Bulls and a particular friend of Herbert and just two days older, did qualify as a doctor and became a surgeon at the Hereford General Infirmary.[125]

The third son, **Henry Power** (1858–1947), was a co-founder of the School magazine, and went on to Brasenose College as a Philpotts exhibitioner and Somerset scholar. After attending Ely Theological College he was ordained and served as curate at St. Sepulchre's, Northampton. He was said to have been a fine preacher and one whose sermons gave great satisfaction to his father. When he became vicar of Stoke by Nayland he was joined by his sister Edith Elizabeth, who presumably undertook the parish duties which would have fallen to the vicar's wife had Henry been married. In 1899 he joined the Society of St. John the Evangelist (The Cowley Fathers), an Anglican foundation based in Oxford. At this point he renounced all his interest in the Bull family's estate. From 1901 to 1911 he worked in Capetown and was then sent to America. In 1916 he was recalled to Oxford as Superior of the Order. In 1931 he retired from this post in order to return to Capetown where he worked in the native mission almost to the time of his death. His advice was often sought by politicians in South Africa and by successive Archbishops of Canterbury.[126]

The eldest daughter, **Edith Elizabeth** (1860–1921), has already been mentioned in connection with her work for the *Pomona* and for her brother, the Revd Henry Bull. After her return to Hereford she was 'never idle'. A devoted High Church Anglican, in her later days she favoured the services at All Saints' Church, to which she gave £300 towards the re-hanging of the bells. She worked on altar frontals for the Cathedral, All Saints and other churches and supported the Universities Mission to Central Africa. She continued her father's interest in St. Martin's Home where she taught laundry work. She was awarded Queen Alexandra's Recognition for her work during the Great War when she was active in the Red Cross, the Women's Police Patrol and the Hereford Board of Guardians.[127]

The second daughter, **Margaret Lucy**, was born in August 1861 but died in December that year.[128] The death certificate, issued by the Hereford surgeon and Woolhope Club member, Charles Lingen, gave the cause of death as 'double pneumonia'.

Evelyn Mary (1865–1944), like her eldest sister, worked for the Red Cross during and for many years after the First World War. Her other main charitable interest was the Herefordshire Ladies Linen League. Dr Bull was a Conservative in his political views,[129] but Evelyn appears to have been the only overtly politically active member of the family, being an ardent supporter of the Unionist cause and a co-founder, and later president, of the Hereford Women's Unionist Club in Castle Street. For many years she was honorary secretary of the Herefordshire Orchestral Society. She played the clarinet in the Society's orchestra and was also an accomplished pianist.[130]

Maude Ellen (1867–1951) was, in many ways, the most exceptional and certainly the most eccentric of all the Bull children. Her energy rivalled and may even have exceeded that of her father; the list of causes which she espoused and nurtured is phenomenal. She was involved with the Hereford Branch of the Sailors and Soldiers Families' Association for 53 years, Honorary Secretary of the Oxford University Extension Lectures in Hereford for more than 45 years and of the Hereford Ladies Committee of the NSPCC for 41 years. She was awarded the MBE for her work with the War Graves Commission during the Great War, at which time she was also involved with the War Pensions Committee and several other similar causes. For many years she was honorary sub-librarian to the Cathedral Library and made it her personal responsibility to ensure the safe transport of volumes in need of repair to and from the Bodleian Library. She travelled widely especially to and around the Middle East, often as the only woman passenger on small cargo vessels. She was said to have known the streets of Jerusalem and Constantinople as well as she knew those of Hereford, and made nine pilgrimages to the Holy Land. She inherited her father's scientific interests and was a regular attender at even the most distant meetings of the British Association. She would never travel by train if she could take a bus and would never use a cheque book if she could possibly avoid it, preferring to carry large sums in crisp £5 notes. Another of her eccentricities was to eat a mince pie in a different house every day from Christmas to Epiphany. It was also said that she always wore wellington boots but this has not been substantiated by any contemporary reference![131]

The youngest daughter, **Leila Marion** (1870–1957) was the first female student of the Royal Academy of Music to take up the oboe professionally, performing at London concerts and at Hereford festivals. She was said to be so much in demand as a performer that she had no time for teaching. She was a member of the Aeolian Ladies Orchestra which played at many women's suffrage meetings so she may have had sympathies with that movement.[132] In her will she endowed an annual oboe prize at the Royal Academy of Music. After her death the family lease on Harley House finally ended, having stood for 107 years.[133]

By the standards of the time the Bull family would have had a comfortable lifestyle. The census records show that there were between three and five indoor servants at any one time. Only one seems to have stayed with the family for more than ten years. This was the housekeeper, Marina Dunkerton, described by Bull in his will as 'my valued servant' and to whom he left £25. The outdoor servants would have included a coachman because Bull left his horses and carriages (note the plural) to his wife. As a widow, Mrs Bull also kept a coachman for both he and her gardener attended her funeral. Indeed there were still three servants at Harley House when Evelyn died in 1944.[134]

It is reasonable to assume that the parents would have applied the same principles to the upbringing of their children which Bull thought appropriate at St. Martin's Home, namely gentleness, kindness and Christian teaching.[135] The children's lives suggest that they had been imbued with their parents' sense of social responsibility and duty and with a strong Christian

belief. Their considerable and varied achievements also indicate both a good education and much parental encouragement.

The details of the daughters' education are not known. It is possible that they were educated at home by governesses or tutors, like their friends the Du Buisson girls who learned Greek, Latin, French, German, Italian, algebra and drawing and who would almost certainly also have studied history, geography, grammar, English literature and needlework.[136] Alternatively they may have attended one of the many schools for young ladies in the city, of which the Hereford Ladies College in Widemarsh Street was the most prominent, and where they would have followed a very similar curriculum.[137] Bull often took his children with him on his medical rounds and the records of the Woolhope Club show that they sometimes accompanied him on Field meetings. Any of them who found an interesting specimen was rewarded with a three-penny bit.[138]

We learn something more about life at Harley House from three family letters which have survived, and from the diary of Lucy Du Buisson. The three family letters were written by one teenage son, who was still at home, to another away at university and they give some idea of their home activities. The writer refers, in a zoological way, to himself and his siblings as 'Elephant', 'Ornithorhynchus', 'Mammoth' and 'Dinotherium'. In a letter of 2 February 1878, he related that a friend of his father, Mr Forty, had brought to the house a Teleform [*sic*] and

> '…it is so jolly first we had one end in the kitchen and the other up in by [*sic*] the nursery. Evelyn, Mr Forty and Lillie up by the nursery and Papa and me in the kitchen it is splendid, there are two magnets were [sic] you speak and there are two copper wires joined together covered with green worsted it can be heard miles off…The Mammoth and the Dinotherium send their love…'

This instrument was presumably a simple telephone, possibly the first in Hereford. One wonders what form of electrical supply was used. Alexander Bell had only recently developed the telephone in Boston between 1872 and 1876.[139]

Lucy Du Buisson was a daughter of the Reverend Edmund Du Buisson, the wealthy incumbent of Breinton just two miles upstream from Hereford. Like the Bulls, the Du Buissons were a large family which consisted of three boys and three girls, the children being of similar ages to the Bull children. There were also three children who had died. Of these three, Mary Charlotte had died aged seven weeks in 1859, two years before the death of the Bull's infant daughter; Charlotte died aged three weeks in 1865 and Cuthbert aged only one day in 1866.[140] Both families, like so many of the time, were therefore no strangers to premature death. Worse was to follow for the Du Buissons. The father died in 1875 and Lucy herself in 1878, aged only twenty three and less than three months after her marriage to the clergyman, botanist and Woolhope Club member Augustin Ley. Bull was the family's doctor, caring for them in time of mortal illness and during coughs and colds, giddy turns, 'weak eyes', measles and scarlet fever.[141] The families were also close socially. Bull, as will be discussed later, was a very frequent visitor to Breinton and was sometimes accompanied by one or more of his children, most commonly during the period covered by the diaries by Herbert, Maude or Leila. From the diaries we learn that the young Henry Bull was always known as Harry, though not presumably to distinguish him from his parent who would have been known in the family as Father. Evelyn was often known as Evie, Maude was always Maudie, and Leila was Lillie. Lucy described Maudie and Lillie as Dr Bull's 'two little maidens' who say 'such funny things.'[142]

In summer the Bulls would come out to Breinton for picnics or for tea and croquet. Edward Du Buisson and Herbert Bull destroyed hornets' nests and went shooting together and, on at least one occasion, Dr Bull took the boys to hunt for 'funguses' [*sic*]. Occasionally they would venture further afield. In August 1876 the Bulls, Du Buissons and other families all met at Llangorse. In winter the social scene moved to the city. On 5 November there would be a Guy Fawkes party with 'beautiful fireworks' at Harley House and, after midnight on one moonlit January night, Mrs Du Buisson, Lucy and two of her siblings walked home to Breinton after a dance at the Bulls's home.

Dr Bull would tell the younger children stories, especially from the Arabian Nights and, according to Lucy, he told them 'so cleverly'. He taught them card tricks, whist and 'Beg of my neighbour'.

At its best it must have been an idyllic life but, even for a financially secure upper middle class family, the twin spectres of illness and death were never far away. Aside from the tragedies in Bull's immediate family, Lucy's diaries reveal two visits by Bull to Bromborough in the Wirral in 1875 and 1876. The first, it would seem, was to console his elder brother, James Goodman Bull, whose son Edward had died in Valparaiso. The second followed a few days after news that another nephew had 'broken a blood vessel' and for whom, like his brother Edward, there was 'hardly any hope.' James Goodman Bull was an oil merchant in Liverpool. He had two other sons both of whom were educated as boarders at Hereford Cathedral School, where one imagines that Dr Bull would have kept a watchful eye over them. One of them, James junior, died in a fatal accident with a revolver. The other, William Charles, became a successful London surgeon.[143]

THE INNER MAN

Bull's public persona is relatively well documented through his publications, through newspaper reports and in his obituaries. Much less is known about the private inner man, about his temperament, his personal relationships and about how he fitted his many activities into his daily life. Such information is usually to be found only in private diaries and in correspondence with friends, so it is fortunate that the diary of a family friend and Bull's own letters to a fellow member of the Woolhope Club have survived.

It is evident from Lucy Du Buisson's diaries that Bull was a great favourite with children of all ages and, as a young woman of nineteen, Lucy wrote that: 'I do like Dr Bull more and more.' She often refers to him as 'the dear doctor' or 'the good doctor' or even occasionally as 'the dear good doctor.' She describes him as being 'so jovial' and, on another occasion, as 'full of fun and quite roguish'.[144]

His obituary in the *Transactions* of the Club remarked, in passing, on his abilities as a doctor, noting that the grateful estimation accorded to him in his professional capacity

> 'owed its origin scarcely more to the skill with which he exercised his profession, or to his assiduous attention to his duties, than to the sympathy of his nature, the charm of his cheerful, kindly, manner, and very markedly to his abundant charity towards the suffering poor.'[145]

Obituaries often exaggerate the better aspects of the subject's character but these words do have the ring of sincerity and truth. They are corroborated by entries in Lucy's diary, which was a private journal albeit one written from the perspective of a close family friend. She

makes repeated references to his kindness and to his ability to cheer the downhearted. Her younger sister Edith, a less talented diarist than Lucy, makes similar observations during Lucy's last illness, and an obituary also remarked on the confidence which he inspired.[146]

When Lucy's father fell ill with what proved to be his final illness, Bull was away from home consoling his brother over the loss of his son. Nevertheless, he still made time, as soon as the news reached him, to write a supportive letter to Mrs Du Buisson; and, on his arrival back in Hereford, he drove directly to Breinton without first going home. As death approached he stayed for more than three hours until it was all over. He and Mrs Bull then visited the next day and were 'so kind.'[147] A year later, on the anniversary of her father's death, Bull called by with Maudie and Lillie. As Lucy wrote:

> 'Though not a word did he mention on the one subject [her father's death] yet I am sure it was for that he came out to see us today'[148]

On Christmas Day that year she wrote that 'we could never half repay him all that he has done for us.' Even for a family friend, Bull's concern was clearly exceptional.

We can also learn something of Bull's character from 157 of his letters, written from 1864 to 1885, to his friend Thomas Blashill and preserved in the Club's Library.[149] Like his published work the letters are clearly expressed. He does not show off in any way although he does, not unnaturally, express pleasure at some of his achievements. This is in contrast to the effusive letters which he received from his friend Edwin Lees, the botanist of Worcester.[150]

One example of the conflict between the pressures of his medical work and his activities with the Woolhope Club has already been mentioned, and there had been similar pressures two years earlier in 1864.[151] In 1870 he wrote: 'A week of intense hurry, worry and fatigue has pretty nearly knocked me up – everybody would die, and all things went crooked.' In 1872 he noted that 'I have only been out with the Club once this year for the days have not suited me, and you must remember that now I have ceased to have anything to do with its management and am not on the executive even, I do not set aside work in the rash way I formerly did!' In 1885 we learn that '...there are so many people ill just now that it is as much as one can do to get home at meal times.'[152] Every modern doctor can empathise with this!

A whimsical sense of humour is shown in some letters. For example, it would seem that Blashill, for reasons unknown, had asked him to visit 'Old Bishop Cantilupe in his present dwelling place', presumably meaning his tomb in the Cathedral. Bull thought it amusing to pretend that he had been asked to visit him in his afterlife by committing suicide and wrote: 'Considering the doubt where he might be and the difficulty of reaching him, I postponed the idea (Prussic acid is uncomfortable and Chloroform not satisfactory) and visited his tomb instead.'[153]

In one letter he has 'just got over that disagreeable phase in a country doctor's life, his Xmas letters to his friends.'[154] This is a reference to the practice whereby doctors would, at the end of the year, send out their accounts for professional services rendered during the previous twelve months. While financially comfortable, Bull would certainly have expanded his library if funds had permitted. A desire to own J. C. Loudon's *Arboretum* 'must bide a bit – can't afford it just now! – Perhaps somebody will leave me a legacy!'[155] Although he could not afford this particular book at this time, the same letter reveals that Bull owned a copy of Gerard's *Herbal*, so he was certainly prone to acquiring expensive books.[156]

Bull's meticulous attention to detail has been mentioned in connection with his Edinburgh lecture notes and, when editing the Woolhope Club *Transactions*, it is probable that he expected similar standards from contributors. Many of his letters to Blashill contain peremptory demands for a reply by return of post, and his obituary in the *Hereford Times* noted that, in his professional duties, 'he was strict in having his instructions fulfilled.'[157]

Bull could be critical of others; for example he wrote in 1882 that the Club was at a very low ebb and '…with some 160 members, real workers may be counted on the fingers (of one hand I am afraid).' Criticisms included the President of the Club and the officials of other organisations and he made reference to the famous geologist as '...Old Grumpy conceited Sir Rodk Murchison.'[158] It is surprising that, in 1866, when he was President, he wrote '…only don't expect the Club to help you, it's all very well to talk of this but it is moonshine, the Club and its members hardly help anybody to anything.'[159] When appearing in public, for example during the Board of Health enquiry and the debate over the Provident Dispensary, Bull could speak with forceful criticism of the living conditions of the poor and of the work of others.[160]

He could be proud of some of his activities but in a modest way. For example, he mentions '…doing a little ornamental gardening and architecture at the Infirmary…and erecting a new lodge (cost £330) — all of my own designing moreover.'[161] This was in fact a fine achievement. In 1865 he had secured the piece of land, next to Castle Green and owned by the city Corporation, on which at one time had stood a mill. Here he designed a lodge for the Infirmary, surrounded by landscaped grounds.[162] He referred modestly to the great achievement in winning a gold medal for the exhibition of apples and pears in France: 'To have taken a gold medal for the Herefordshire apples in the centre of Normandy is a thing not to be forgotten.'[163]

On the Origin of the Species by Charles Darwin had been published in 1859 and started the conflict between creationists and those who accepted the concept of evolution in the natural world. Club members' comments on this topic are recorded in the *Transactions* and have recently been examined by Stone,[164] but there is nothing attributed to Bull. His only known mention of Darwin is in a letter of 27 April 1882 to Blashill in which he congratulates Blashill on having attended Darwin's funeral as President of the Woolhope Club – 'that comes of having a President in London, you see' and writes that it must be mentioned at a Club meeting with 'a resolution of sympathy to the Darwins'.[165]

Bull gave a firm indication of his belief in God as the Creator in his retiring address as President of the Woolhope Club in 1867 when he wrote:

> '...the heart is made conscious of the presence everywhere of one great beneficent Power, the Author of all that beauty, the Promulgator of all those marvellous laws, the Sustainer of the universal fabric.'[166]

Bull was indeed a committed Christian and the last of the parishioners to retain a family seat in St. John's, where he was a regular attender and always ready to assist with parochial affairs.[167] He was also a committee member of the Herefordshire Branch of the Church Missionary Society,[168] which may have influenced his son Harry in his decision to join the Cowley Fathers.

Science versus Romanticism

In a recent Presidential Address to the Woolhope Club[169] David Whitehead has identified Bull as an ardent supporter of the Picturesque movement and he also notes that Bull's writings were

often embellished with quotations from pastoral and romantic poets. Whitehead views Bull and his contemporaries in the Club as 'scientists with sensibility', as men whose researches in the field of natural history were rooted deeply in a *milieu* of late romanticism. In many respects, according to Whitehead, it was the sensibility which drove their science and Bull's own 'putative steps towards modern science' would not have happened were it not for his Romanticism.[170]

We put a rather different interpretation on Bull's writings. That he was a disciple and an admirer of Uvedale Price and Richard Payne Knight there is no doubt; he praises them both in print and many of his writings are imbued with their philosophy.[171] However the writings in which these Picturesque enthusiasms are most apparent are predominantly in his accounts of the Club's Field Meetings and in his reports of some of the county's more remarkable trees, both of them topics which lend themselves most readily to descriptions of landscapes and scenery. By contrast his more scientific papers, for example, his 'Illustrations of the edible funguses of Herefordshire',[172] show little or no tendency to such flights of romantic fancy. Rather, we suggest, the joy and the pleasure of the landscape was, for Bull, a by-product, albeit a happy and beneficial one, of the pursuit of science. Thus he writes:

> 'The excursions themselves furnish us with a delightful recreation. We are taken into scenes always of great interest and often of great beauty. Hill and dale, rock and meadow, not only yield fresh spoils for the vasculum and the hammer, but they refresh our eyes and banish from our thoughts many of those corroding cares of which busy life is full.'[173]

Nevertheless, Bull was quite clear that, ultimately, the charms of the Picturesque 'must be left to the artist' while the scientist got on with the real business of 'exact measurement'.[174]

Whitehead describes Bull as a 'proto-scientist' who is conscious of a basic flaw which allows his emotion to usurp his scientific objectivity.[175] By contrast, we consider Bull to be, by the standards of his time, a fully-fledged scientist. As already described, he had both the knowledge and the laboratory equipment to carry out complex chemical analyses on biological fluids in a case of cyanide poisoning. As is discussed in another paper in these *Transactions*, his mycological studies were also scientific in both outlook and method. This was not a man who was taking 'putative steps towards modern science' but one who was well versed in modern scientific thought and methodology.

Bull's work displays a remarkable breadth of knowledge, learning and memory, but where and how did he obtain so many facts, quotations and references? And, in an age before digitised databases and searches, how did he locate the appropriate item when it was needed? Even if he kept detailed notes and used a card reference system, it still represents a prodigious feat of memory and organisation, as well as a voracious appetite for reading.

He must have had an extensive library of his own and he would certainly have borrowed volumes from his friends, just as he lent his books to others. Thus he told Blashill that his copy of Gerard's *Herbal* was 'quite at your service' and he lent Mrs Du Buisson what Lucy described as 'The Life of T Edwards the Naturalist.'[176] This probably refers to *Life of a Scottish Naturalist: Thomas Edward* by Samuel Smiles. It was first published in 1876 and in 1877, the year in which it was loaned by Bull, it went through four more editions.

Bull would have had access to libraries in the city. The Permanent Library, with the running of which he was closely involved, was almost next door to his house in St. John's

Street. He would also have used the Cathedral Library, the Woolhope Club's own embryonic library and, while he remained a member, that of the Hereford Literary and Philosophical Institute, a library which was later transferred to the Free Library in Broad Street which Bull helped to found.[177] When he could not find what he needed in Hereford, he would ask Blashill to look for it in the library of the British Museum.[178]

At the dinner after a Fungus Foray there was speculation that the next year's meeting might be attended by mycologists from Japan. Someone remarked, in jest, that the language would pose no problem because 'Bull speaks all the languages (dead and living) with equal fluency.' The joke was continued when, during his temporary absence at the dinner, 'no one could remember the French, Latin or Greek for Welsh Rarebit.'[179] We know that Bull was fluent in French, and privately educated gentlemen of his era would all have had some Latin and Greek. If he spoke any other languages then no record has survived.

The Enigma of Breinton

We have said that Bull was a very frequent visitor to Breinton. At Christmas in 1876, Lucy Du Buisson wrote that 'he never misses a week without coming to see us.' The weekly entries in her diary suggest that his visits, which were usually at teatime, were less frequent than this, but she may not have recorded every visit and, on some occasions, would have been away from home when he called. Excluding visits made for medical reasons, she recorded ten teatime visits in 1873, nineteen in 1874, eleven in 1875, twenty one in 1876 and sixteen in 1877. On average, therefore, he visited the Du Buisson home at teatime at least fifteen times a year and it may have been as often as every week.[180] As has been mentioned, he was sometimes accompanied by one or more of his younger children but never by Mrs Bull. There was no discernable change in the frequency of the recorded visits after the death of the Reverend Du Buisson.

It is possible that Bull was calling on the family after visiting the grave of his infant daughter, Margaret Lucy, who had been buried in Breinton churchyard; but, if this were the case, it seems strange that he was never accompanied by Mrs Bull. There is also the question of why the child had been buried at Breinton and not, as might have been expected, in St. John's parish graveyard at Blackmarston. It may have been that the two families, being close friends and each having lost an infant daughter, felt a common bond and comfort in having the two little girls buried within a few yards of each other. An alternative or additional explanation may stem from Bull's efforts to establish a municipal cemetery, at which time the Reverend John Goss, the vicar of St. Johns, accused Bull of misrepresenting his views on the matter.[181] This was in March 1861, only nine months before Margaret Lucy's death, and it is possible that there may have been some persistent ill-feeling. Goss was described in his obituary as a 'vigorous opponent'. The obituarist went to some lengths in claiming that he never harboured a grudge after a disagreement, but the very fact that the claim was made may be significant; and when Goss's medical attendants required a physician's opinion during his last illness they sent for Dr Evans from Gloucester and not for Dr Bull from the far side of the Cathedral Close.[182]

There is yet another link between Bull and Breinton church. In the church are memorial windows to members of a family called Eckersall who are also commemorated by a memorial stone in the churchyard, close to the Bull family plot. The Eckersall family has no known connection with the church[183] but Frederic Stirling Eckersall was one of the witnesses at Bull's wedding[184] and a Frederic S. Eckersall is one of those commemorated at the church. According to his memorial he died in 1865, aged only 31, after 'long and patient suffering.' His father, the

Revd Charles Eckersall, who is also commemorated at Breinton, was appointed as Evening Lecturer at All Saints, Hereford in 1839 and then as rector of All Saints, Worcester in 1845. It is possible, therefore, that the family were in the city when Bull arrived in 1842.[185] Bull was certainly responsible for their memorial windows in Breinton because Lucy records that he not only gave the windows but that he also designed them. He also arranged the removal of three trees which were encroaching on their memorial in the churchyard.[186] Whatever the link between Bull, Frederic and other members of the Eckersall family, it was clearly a strong one and provides an additional reason for Bull's visits to Breinton. But the great frequency of the visits remains unexplained.

FINAL DAYS

So far as is known Bull generally enjoyed good health, though in 1867 he wrote to Blashill from Mickleham where he was 'recruiting my health after a severe attack of pneumonia which has pulled me down dreadfully.'[187] During the last year of his life he attended Woolhope Club meetings in Hereford and most of the Club's outings. He also outlined his ambitious plans for Woolhope Club publications, plans which he never personally achieved – the book on the flora of the county for 1885, on the birds for 1886 and then on the fungi. He read a long paper on Risbury Camp at the end of August and took part in the Fungus Forays in October, at which time he also spoke on 'The solution of a New Zealand botanical mystery.' His last contribution to the Club was on 8 October when he opened a discussion on 'The effect of fungus growth in destroying tree life'.[188]

Some days after the eighteenth fungus foray, he had seen some private patients and had walked as usual from the Infirmary across Castle Green to his home. The following morning he felt ill and was unable to rise from bed. His son Ernest wrote to Blashill on 30 October that he had been ailing for two or three weeks and had become much worse in the last few days.[189] He died on 31 October, the same day that the *Hereford Times* announced his serious illness saying that:

> 'For some little time prior to being laid up Dr Bull seemed to have lost some of that vigour and energy which was so characteristic of him, but there had been no grounds for concern until a week before. Now however medical friends and colleagues entertain no hope of his recovery.'[190]

His obituary in the *Hereford Times* said that he had been free from pain and his mind had been clear to the end and so, during his final days, he was able to work on his manuscripts of *The Birds of Herefordshire.* Five days before his death he made a very precise will[191] and the next day, shortly before the scheduled publication of the *Herefordshire Pomona*, he inscribed one copy:

To my dear good wife
Elizabeth Bull
the first bound copy of her husband's
and her daughter's work
Henry G Bull
Oct 27th 1885 for Nov 7th 1885[192]

November 7 was Mrs Bull's birthday and so this volume, his last birthday present to his 'dearest Bessie', was to be a gift from beyond the grave.[193] A scirrhus of the pylorus (a type of stomach cancer) was given as the cause of death.[194]

Bull was buried in Breinton churchyard where all the members of his family are buried or commemorated. The headstones are all of stone, except for one which is a marble cross and it is this one which records the burial of Bull and his wife. On its reverse, their daughter Maude is commemorated. This marble cross, which is of relatively modern appearance, contrasts with the stone memorials of other members of the family. It was probably erected following Maude's death and presumably took the place of a stone headstone for Bull and his wife.

Today Bull is remembered chiefly for his contributions to the study of natural history and as an antiquarian, but to many of his contemporaries, especially the poorer ones, he would have been remembered, perhaps even revered, for his philanthropy and for his skills and his kindness as a doctor. At that time it was usual in Hereford to mark the funeral of a prominent citizen by partial closure of businesses and by drawing down the blinds of private houses; and so it was when Bull's funeral cortege passed through the city on 6 November 1885.

In the light of Bull's own frequent use of quotations, it seems appropriate to end with one which seems most apposite for Bull himself:

> '*I was eyes to the blind and feet was I to the lame,*
> *I was father to the poor and the cause which I knew not I searched out.*'
> Job 29, verses 15–16.

APPENDIX: Bull's publications in the *Transactions* and his unpublished talks to the Club

This list is almost certainly incomplete. Many of the earlier contributions were published anonymously and so some have very probably been missed. The information for 1868 is complete because one volume for 1868 in the Club library was given by Leila Bull and annotated to show Bull's contributions. The Field Reports written by Bull in 1868 and in other years when he was editor are sometimes difficult to categorise because he often provides a commentary and other information in addition to the factual report. Those described as "attributed" were published anonymously but are considered on grounds of style and content to have been written by Bull.

Report = Report of Field Meeting B = Botanical G = Geological,
H = Historical M = Mycological Z = Zoological

Year	Pages	Author/ Attribution	Main Topic	Title/subject matter
1852	18-19	Bull	B	Field Meeting – botanical report
1857	199-204	Attributed	Report, B	Field meeting report, Shucknall-Hagley Park, etc
1862	295	Bull	B	Request for information for County Flora
1864	312-347	Bull	B	The Mistletoe in Herefordshire
1866	146-9	Bull	Report	President's Annual Address
1866	166-9	Attributed	Report, B	Field Meeting, Kington
1866	185-91	Bull	B	On Wandering Plants, with recent examples
1867	40-45	Attributed	Report, B,G	Field Meeting, Craig-y-Pwll-Ddu
1867	46-48	Bull	B,H	Capel-y-Ffin, its Yew Trees and its Church

Year	Pages	Author/ Attribution	Main Topic	Title/subject matter
1867	66-74	Attributed	Report, B,G	Meeting at Hereford for Woolhope
1867	76-79	Bull	M	Discussion after paper by Mrs H Cooper Key
1867	124-7	Bull	H	The Ryeland Sheep
1867	149-69	Bull	M	Illustrations of the edible funguses of Herefordshire
1868	1-2 12-6	Bull	Report, B,G	Field Meeting, Hereford for Hampton Court Estate
1868	3-6	Bull	G	The Silurian Fossils at Wickton
1868	16-17	Bull	Z	Mole Cricket or *Gryllotalpa vulgaris*
1868	18	Bull	M	St. George's Mushroom (Paper delivered but not subsequently published)
1868	32-4,	Bull	Report	Field Meeting, Crumlin Bridge and Pontypool
	42-5	"	Report, B,G	" " " " " "
1868	65-7,	Bull	Report	Field Meeting, Penwylt and Scwd Hen Rhyd
	77-9		Report, B	" " " " " "
1868	80-95	Bull	B	The Elm Tree in Herefordshire
1868	98-110,	Bull	Report	Field Meeting, Ludlow for Titterstone, etc.
	111-2	Bull	Report	" " " " " "
	151-2	Bull	Report, B	" " " " " "
1868	122	Bull	B	*Cuscuta hassiaca*, The Lucern Dodder
1868	153-7	Bull	Report, G,B	Meeting at Hereford for Woolhope
	162-3	"	Report, Z	" " " " " "
1868	184-92	Bull	M, (B)	A Foray among the funguses
1868	193-5	Bull	M	Report on the exhibition of edible funguses at the Royal Horticultural Society, Oct 6th 1868
1868	196-210	Bull	M	Illustrations of the edible funguses of Herefordshire
1868	243-4	Bull	M	Fairy Rings
1868	255-76	Bull	B	A report on the remarkable trees at Whitfield
1869	15-16	Bull	B	Remarkable plants in Deerfold Forest
1869	28-33	Bull	H	Ewyas Harold, its name, its castle and its priory
1869	51-3,	Attributed	Report	Meeting at Ludlow and Downton Castle
	61-3	"	Report, B	" " " " "
1869	54-59	Bull	H	Some account of Bringewood forge and forest
1869	117-27	Bull	M	Illustrations of the edible funguses of Herefordshire
1869	132-5	Bull	M	In: The Discussion on fairy rings pp.128-36
1869	164-80	Bull	H	The Ancient Forest of Deerfold and the Lollards in Herefordshire
1870	23-Apr	Bull	B	In discussion of Blight's paper on mistletoe
1870	31-4	Attributed	Report	Ross, the Wye, and Symond's Yat meeting
	37-44	"	Report	" " " " "

Year	Pages	Author/ Attribution	Main Topic	Title/subject matter
1870	34-7	Bull	H	Brief Sketch of the History of Goodrich Castle
1870	68-9	Bull	B	The Mistletoe Oak at Llangattock
1870	178-84	Bull	M	Mr Worthington Smith's "Clavis Agaricinorum"
1870	213-28	Bull	M	Illustrations of the edible funguses of Herefordshire
1870	288-321	Bull	B	Incidental notes on remarkable trees in Herefordshire
1871	14-21	Attributed	M	The Foray among the funguses
1872	18-24	Bull	M	The Fungus Foray of the Woolhope Club, October 1872, with a list of funguses found
1873	100-9	Attributed	M	The Fungus Foray and the Feast of the Woolhope Club
1873	114-7	Bull	M	List of Funguses observed at the Fungus Forays and exhibition of the Woolhope Naturalists Field Club, Oct 20th-25th, 1873
1874	41-57	Attributed	M	The Annual Fungus Forays
1877	1	Bull	H	Unpublished talk - 'Mr Knight and his work in the Apple Orchards'
1879	156	Bull	H	Unpublished talk – 'The Life of Lord Scudamore'
1880	216-7	Bull	B	Discussion on mistletoe at Field Meeting
1880	270	Bull	M	Unpublished talk – 'The new sclerotium disease in Irish potatoes'
1881	28-38	Bull	H	William Swinderby and the Lollards in Herefordshire (revised version of 1869 pp. 164-80)
1881	86	Bull	M	Unpublished talk – 'The progress of mycology'
1882	200-9	Bull	H	Brecon and the Brecon Beacons – A Local Historical Legend
1882	213-9	Bull	H	Ivington Camp
1882	236-60	Bull	H	Credenhill Camp - Magna Castra - and the Roman Stations and Towns in Herefordshire
1883	20-28	Bull	H	Wall Hills, Ledbury
1883	44-9	Bull	H	Woldbury, or Caplar Camp
1883	68-72	Bull	Literary	Shakespeare's notice of flowers and plants
1884	152-7	Bull	H	Field Address at Cwmyoy
1884	229-33	Bull	B,H	Speech at banquet of *Société Centrale d'Horticulture de la Seine-Inférieure*
1885	293-6	Bull	H	Aconbury Camp
1885	301-8	Bull	H	Fragments of the history of Aconbury Priory and Church
1885	334-7	Attributed	H	Risbury Camp
1885	370	Bull	B	Unpublished talk – 'On the solution of a New Zealand Botanical Mystery'
1885	372	Bull	M	Unpublished talk – 'The effect of fungus growth in destroying tree life'

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[169] Whitehead, D., 'Some Picturesque influences upon the study of natural history in 19th-century Herefordshire', *TWNFC*, 57 (2009), pp.17–50.
[170] *Ibid.* pp.17–18.
[171] 'Field Meeting, Kington', *TWNFC*, (1866), pp.166–9; Some account of Bringewood forge and forest, *TWNFC*, (1869), pp.54–9.
[172] *TWNFC*, (1867), pp.149–69; (1869), pp.117–27; (1870), pp.213–8.
[173] 'Address of the Retiring President', *loc. cit.* in note 166.
[174] Bull, H.G., 'Incidental notes on remarkable trees in Herefordshire', *TWNFC*, (1870), pp.288–321, especially pp.305–6.
[175] Whitehead, *loc. cit.* in note 169, p.48.
[176] BB Letters, *loc. cit.* in note 77, 8 May 1868; *Diaries*, *loc. cit.* in note 121, 26 Oct 1877.
[177] O'Donnell, J., 'The Hereford Free Library 1871–1912'. *loc. cit.* in note 105.
[178] BB Letters, *loc. cit.* in note 77, 19 Aug 1867.
[179] 'The Fungus Meeting at Hereford', *TWNFC*, (1877), pp.43–50, especially p.44.
[180] *Diaries*, *loc. cit.* in note 121, *passim.*
[181] *Hereford Times*, 23 Mar 1861 p.7 c. 2–3.
[182] 'The Late Revd John Goss, of Hereford', *Hereford Times*, 6 Oct 1877 p.8 c.2.
[183] *St. Michael's Church Breinton, Guide Book* (1996), p.6.
[184] Marriage certificate of H.G. Bull.
[185] *The Ecclesiastical Gazette*, 1839 p.15; *Berrow's Worcester Journal* 20 Mar 1845. No record has been found of Eckersall in Herefordshire directories or in the vestry minutes and churchwardens' accounts of All Saints, Hereford.
[186] *Diaries*, *loc. cit.* in note 121, 7 and 8 Dec 1874; 26 Feb 1877.
[187] BB Letters, *loc. cit.* in note 77, 20 Dec 1867.
[188] Bull, H.G., 'On the solution of a New Zealand Botanical Mystery', *TWNFC*, (1885), p.370; Bull, H.G., 'The effect of fungus growth in destroying tree life', *TWNFC*, (1885), p.372. Both of these are citations without any details of the talks.
[189] BB Letters, *loc. cit*. in note 77, 30 Oct 1885.
[190]'Illness of Dr Bull, of Hereford', *Hereford Times*, 31 Oct 1885 p.8 c. 5.
[191] Probate was initially granted on 29 Dec 1885 when his personal estate was valued at £27,942 gross and £27,605 net. When re-sworn in March 1886 the estate was valued at £29,026 gross.
[192] The citation is in one of the copies held in the Hereford city Library.
[193] Although the inscription is addressed, rather formally, to "Elizabeth Bull", he addressed her informally as "My dearest Bessie" in the personal letter quoted earlier, *Loc cit* in note 91.
[194] *BMJ obituary*, *loc. cit.* in note 28.

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Henry Graves Bull, fungologist and father of the Fungus Foray

By EDWARD BLACKWELL

Henry Graves Bull (1818–85) has long been regarded among British mycologists as the founding father of the Fungus Foray, even from the years immediately following his death.[1] A thread is traced of influences and events against a backdrop of evolving fungal knowledge that bears on Bull's role in British and international mycology.

INTRODUCTION

Today, Mycology, the study of fungal biology, encompasses an extensive range of applications in various avenues of modern life. From time-honoured traditions of brewing and bread making to the modern production of food and pharmaceuticals, plant growth and biological protection, climate research and waste disposal, or genetics and DNA studies, the relentless march of mycology advances in step with the almost weekly discovery of new British fungus species and the tracing of their taxonomic affinities.[2] It is concerned with a diverse assemblage of organisms we know as mushrooms, toadstools, truffles, brackets, lichens, microfungi, mildews, moulds, smuts, and rusts, plus some 'honorary' fungi in the Protozoa and Chromista also studied by mycologists.[3]

From early history, fungi are known to have been used for a variety of purposes such as dyeing, as tinder, as psychotropic agents, in folk medicine, and almost certainly as food although archaeological evidence of mycophagy is unlikely to be found.[4] In Britain, Brown Puffballs (*Bovista nigrescens*) dating from *circa* 3000 BC were identified from excavations at the late neolithic Orkney village of Skara Brae, where use as a haemostatic has been supposed, and similar puffball material was found at Vindolanda on Hadrian's Wall dated to 80–100 AD.[5] A 5300-year-old corpse of a Neolithic 'Ice-man' dubbed 'Ötzi' by the media, which was found in September 1991 at the melting edge of a glacier in the Italian Alps, was carrying tinder in the form of pieces of Birch Bracket (*Piptoporus betulinus*) and Tinder Bracket (*Fomes fomentarius*).[6] An excavation in Japan uncovered 4000-year-old clay artifacts convincingly representing toadstools, possibly used as ceremonial food offerings.[7] The hallucinogenic and frenzy-inducing Fly-Agaric toadstool (*Amanita muscaria*) is believed to be the *Soma* venerated in Hindu hymns of the Sanskrit *Rig Veda* dating from the Bronze Age;[8] and the (variously dated) possibly 2500-year-old pre-Columbian 'mushroom stones' of carved effigies embodying mushroom forms are thought to represent the same hallucinogenic fungi so loathingly proscribed centuries later by the priests of the Spanish Conquest.[9]

In ancient China fungi are recorded in use for a variety of purposes from the Neolithic period (6000–7000 years ago),[10] but elsewhere evidence is scanty. In Europe at least, knowledge grew only slowly and after the early accounts of Classical Greek and Roman authors a dark age seems to have prevailed.[11] That great scholar of British mycology, Dr John Ramsbottom, in an historical preamble to a Presidential Address, as if overstepping a desert of fungus history, strides without further comment from 50 AD (Pliny) across more than a millennium to 1583 (Caesalpinus).[12]

Folklore use of fungi may have been passed down the generations by oral tradition,[13] and although throughout history vernacular allusions to fungi occur in legend, poetry, and drama, apart from ancient Chinese accounts, there is little *scientific* reference to fungi until approaching the time of Shakespeare. Crude representations and notions of fungi begin to appear in literature, hedged about by hoary superstitions and speculations, usually in Latin, about the origins and status of these strange emanations of nature, often associated with the lairs of serpents, of rusty iron, old rags, putrefaction and corruption. Some early naturalists associated fungi with slime, decay and death, or imagined they were connected with the Devil.[14] Accordingly, fungi had been regarded as the antithesis of anything beneficial, least of all as items of food.[15] They had been reviled by no less an authority than *The Grete Herbal* of 1526 'whiche giveth parfyt knowledge and understanding of all manner of herbes and there gracious virtues' :

> 'Fungi ben mussherons…There be two manner of them; one manner is deedly and sleeth them that eateth of them and be called tode stools, and the other doeth not. They that be not deedly have a grosse gleymy moisture that is dysobedyent to nature and digestion and be perilous and dredfull to eate & therefore it is good to eschew them all.' [16]

Documented scientific study of fungi begins to appear in Europe from about the sixteenth century when a number of workers began hesitantly to lay the foundations of fungal knowledge and to differentiate and describe recognisable species.[17] In due course, illustration and description found a firmer footing, and works devoted to fungi started to become more available.[18] Then in the mid-19th century Britain, a concerted field study of fungi—'fungology' as it was then known—began in the rural terrain over which the Woolhope Naturalists' Field Club roamed. It developed from a series of fieldwork events that are well documented in Woolhope Club history.

The first embryonic stirrings of what, in retrospect, are thought to have set the course towards significant future developments in Herefordshire may be found in a record of local interest. It occurs in an account written about 1790 by John Stackhouse, who had inherited the manors of Fownhope and How Caple in 1789. Surveying his properties in the woods at Haugh and Caplar, he recorded fungi there.[19] Happily, his records survive. A second edition of a handbook on wild plants was about to be published and his notes on fungi were conveyed for inclusion to the author, William Withering.[20] His book *A Botanical Arrangement of British Plants* was published in 1792.[21] It became the standard botany textbook for many years to come.[22] Significantly it contained 'the first extensive account of British fungi written in English'[23] in contrast to the traditional Latin[24] and, marking an historic datum for the county, among the species described, are the first known records of Herefordshire fungi.

NINETEENTH-CENTURY ADVANCES IN MYCOLOGY

More than half a century later, a unique event in the history of the Woolhope Club brought 'fungology' to Herefordshire. More specifically, it sprang from the singular enthusiasm and drive of one of its founder members and a former President, the illustrious Dr Henry Graves Bull. It began in 1867 when Bull successfully contrived to introduce to Club members a hitherto unconsidered topic, fungi. It was to be the portent of unimagined future development, and was followed the next year by his pioneering invitation to members to a 'Foray among the Funguses.'[25]

Bull lived in an age when the endeavours of early plant taxonomists such as William Turner, John Parkinson, John Goodyer, John Ray and Carl Linnaeus had advanced the study of botany in many of its branches to a secure place within the sciences, well beyond the whimsical folk-wisdom of herbalist writers and pedlars of simples.

Running parallel was a growing upsurge in global exploration and plant hunting. This led in turn to the stocking of private estates, nurseries, and botanic gardens with exotic plants from far and wide, and botany as a topic would not be unfamiliar among the educated and affluent. The exploits of such as Sir Joseph Banks, Archibald Menzies, Hans Sloane, Charles Darwin and the ill-fated David Douglas were well known. Many of these adventuring plant-hunters trained firstly in medicine, with an implicit commitment to knowing the medicinal uses of plants, so the study of plants was imperative for a trainee doctor at that time.

In Britain the general popularity of botany and the pursuit of plant hunting were well established but the study of fungi did not share the same esteem, against which a peculiarly British prejudice had developed. As evidenced in such as Gerard's *Herball*, this singular aversion to 'bastard plants', 'venomous earthy excrescences'[26] and 'vegetable vermin' was later described as 'amounting to a national superstition'.[27] Although there is scant Biblical reference to fungi,[28,29] study of them was frowned on by the church so 'fungology' lagged behind botany.[30] And although still classed within the province of botany and assuredly within the purview of the keen all-round botanist, the fungi were perhaps a somewhat obscure subsection and rather dismissively grouped with 'lower plants', and consequently less well understood and probably neglected as too arcane.

Nearer to Bull's time, Linnaeus (1707–78) although credited for his introduction of the universally accepted binomial system of biological nomenclature, nevertheless 'merits scant mention in the history of mycology.'[31] Due to a misapprehension prevailing at the time that fungal species were ever metamorphosing, Linnaeus despairing declared 'The Order of Fungi, a scandal to art, is still chaos with botanists not knowing what is a species, what is a variety.' As Dr Ramsbottom dismissively comments: 'As far as Linnaeus is concerned, we may consider that for all practical purposes mycology as a subject had not begun.'[32]

Half a century later it was the work successively of Christiaan Hendrick Persoon (1761–1836), a South African, and of the Swede Elias Magnus Fries (1794–1878) that began to define a taxonomy of fungus species and to form a framework on which later systemists would base their classifications.[33] It would be the Friesian classification that Bull and his fellow Woolhopian mycologists would have known and used, and appropriately, a letter from Fries dated 10th August 1870 is reproduced in the *Transactions*[34] followed on subsequent pages by Fries' portrait and autobiographical notes.[35]

Although these workers laid the foundations of systematic classification, it is easy to overlook the limited knowledge available in the 19th century as many aspects of fungal biology taken for granted today were yet to be discovered. Among many such examples are: (1) the fundamentally different microstructure of the spore-bearing apparatus, which now differentiates the two main Phyla of fungi, the Ascomycota and Basidiomycota, began to be recognised only between 1836 and 1840;[36] (2) the connection between the perfect (sexual) and imperfect (asexual) states of the Powdery Mildews (fungus parasites on vascular plants) were first clearly indicated by the brothers Tulasne in 1861 and more fully elucidated by de Bary in 1863 and 1870;[37] (3) the formation of the lichen thallus by the symbiotic association of a fungus and an alga was not postulated until 1873 when it was described by Frank as a 'consortium'.[38] What fungi really are and a detailed understanding of their life-styles and their

relationships in nature was only slowly unravelled by gradual accretion. Their distant ancestral affinities, more akin to animals than to plants, and where they fit with other organisms in the natural world has emerged only in relatively recent times.[39]

BULL'S EARLY YEARS WITH THE WOOLHOPE CLUB

Bull had been born in 1818, at rural Pitsford, near Northampton, a son of a gentleman farmer, Edward Bull, where it is believed he first started to collect and preserve wild plants.[40] Little otherwise is known of his early childhood but his early interest in botany is evidenced by specimens dated 1835 among the other 900 or so dried plants in his Herbarium, now conserved in Hereford by the City's Heritage Services.[41]

Even from the earliest history of the Woolhope Club it is clear he was much involved and proactive in the realm of botany, with a commitment to its pursuit scientifically. In the Club's first active year of 1852 he was advocating excursions devoted to the closer study of wild flowers and botanical research, and in effect was proposing a *Flora of Herefordshire*.[42] Undoubtedly his abiding interest and knowledge of botany was the deep-rooted foundation from which his interest in fungi later developed.

From indirect evidence it is probable that during his university time in Edinburgh Bull received expert botanical instruction from one of Scotland's leading botanists. This was John Hutton Balfour (1808–1884), who later became Regius Keeper of the Royal Botanic Garden, Edinburgh and the Queen's Botanist. It was this brilliant botanist who in 1836 'was prominent in establishing the Botanical Society of Edinburgh',[43] (hereafter BSE).[44] In the following year when Bull began his medical studies, he joined this fledgling BSE.[45] The first obligation of BSE membership was to produce 250 dried plant specimens.[46] The scale of this duty gives a measure of the keenness and competence of those aspiring to membership, and confirms, if such were needed, Bull's enthusiasm for botany and a *raison d'être* for a herbarium. University medical students of those times were as hitherto still required to know their plants, and in Edinburgh help from expert and enthusiastic botanists was not lacking. Eminent botanists like W. J. Hooker[47] and Balfour were running botanical excursions into the Scottish hinterland.[48] The youthful Balfour was said to be 'very popular with students, his geniality was contagious, and his botanical excursions were most energetically conducted and extended to almost every part of Scotland'.[49] As Bull had promptly joined his Society it is reasonable to assume that he came under Balfour's instruction and influence, and significantly, a number of specimens in Bull's Herbarium are labelled 'Ex. Herb. J. H. Balfour'.

In 1852 the Woolhope Club's very first field excursion on Tuesday 18 May, although clearly concerned as much with geology as with botany, was nevertheless reported in detail in *Transactions* under the heading 'Herefordshire Wild Flowers'. The excursionists had traversed cross-country from Tarrington to Fownhope, concluding with 'an excellent dinner' at the Green Man Inn. Following what seems to have been a flurry of toasts, Mr Henry Purchas and Dr Bull undertook to produce a botanical report of the day's proceedings.[50] In the event, the botanical report appeared on later pages under Bull's name only.[51]

With an eventual *Flora* in mind, a scheme had been arranged in connection with the annual exhibitions of the Hereford Horticultural Society to acquire knowledge of the whereabouts of wild flowers 'many of which are medicinally valuable.' Awards for collections of plants were advertised with the instructions 'all are to have a paper attached to them to state in what wood, field, or parish they were gathered.'[52] It was Bull that offered prizes in the first year (of gold and silver pencil cases) for the best collection of dried Herefordshire plants.[53,54,55]

Although there is firm evidence in his Herbarium and the *Transactions* of Bull's enduring botanical interest and involvement, this occurs in the latter only as occasional glimpses in ensuing volumes. He was mentioned in references to such as the Globe-flower at Monnington,[56] the brief appearance of Moth Mullein on the Abergavenny tram-road,[57] and the occurrence of Canadian waterweed (*Anacharis alsinastrum* = *Elodea canadensis*) in the canal about two miles from Hereford and in the bye-pools of the Lugg Meadows.[58] In 1859 Bull was among those appointed to a committee for the preparation of the *Herefordshire Flora*.[59] He joined in a general discussion about viability of 'buried seeds', and later reported the rapid spread of the Canadian waterweed, which he says had been seen at Northampton much earlier in 1836.[60] He was mentioned as having explored the Forest of Deerfold 'a district utterly unknown to nine-tenths of our members' where he had discovered a Mistletoe Oak in the heart of the district,[61] and to have 'distributed roots of the Asarabaca (*Asarum europium*) from Deerfold Forest for all who wished for them'.[62] Happily, the Asarabaca was said to be surviving there in 1999.[63] He also reported the finding of a new Mistletoe Oak at Hendre, Llangattock Lingoed.[64]

In 1862 he was acting as botanical referee for various botanical districts, and is on record as asking for 'further information for the *Flora of Herefordshire'* for several under-recorded areas. He also sought authority to publish 'a Map of the County divided into Botanical Districts' which appeared later as the frontispiece of *Transactions* 1866.[65] Although he was only one of a coterie of botanists amongst which were W. H. Purchas, Edwin Lees, James Buckman, Revd J. F. Crouch, William Houghton and Thomas Blashill, he appears to have carried out a proactive botanical role in the Club.

The 1864 *Transactions* carries his long and detailed paper (about 34 pages) on the mistletoe in Herefordshire.[66] Alongside his medical duties he pursued his natural history interests with enthusiasm, and in addition to botany, his wide range of knowledge extended to a number of seemingly unrelated branches, as evidenced by his papers on hill forts, Ryeland sheep and fossils. Although as yet there is little hint in the *Transactions*, he was unobtrusively pursuing his interest in fungi.

He was keen to encourage greater attendance at field meetings. In his Presidential Address on 26 February 1866, in referring to an arrangement with the *Hereford Times* to print all accounts of their meetings, he claimed that 'The published report of our field meetings make people wish they had been with us'. And in the same Presidential Year, he demonstrated his continuing botanical commitment by his paper *Wandering Plants*.[67] In this paper—after acknowledging the author's 'free permission to use it'—he quotes extensively from a curiously named book *The Botanical Looker-Out*.[68] Its author was Edwin Lees FLS. FGS. (1800–1887), a long established member of the Woolhope Club, almost from the start. Lees was also Vice-President of the neighbouring Worcestershire Naturalists' Club, and from this point, evidence begins to appear of his significant influence on Bull's developing interest in fungi.

Thomas Blashill, in his Presidential Address to the Club at the close of the Jubilee Year in 1902, recalled details of the Club's foundation in 1851. Among those he named as the founding fathers were both Dr Bull and 'Mr Edwin Lees, of Worcester, a very old Promoter of Natural History Societies.'[69] Years earlier in 1833, Lees had been one of the founders of the neighbouring Worcestershire Natural History Society and the first Curator of its Museum and Library. He helped to compile *Illustrations of the Natural History of Worcestershire*, published in 1834.[70] In due course, Lees had become keen to begin compilation of a *Flora of Worcestershire* and in 1847 together with two friends, Professor James Buckman and William

Mathews, the Worcestershire Naturalists' Club (WNC) was formed with Lees as its first President.[71]

In 1853 Lees was named among those attending the early field meetings of the Woolhope Club, and was taking an active part in Woolhope Club affairs by contributing a paper to *Transactions* 'On the plants which flourish on Silurian limestone.'[72] In the same year the Woolhope Club was joining with neighbouring field clubs on excursions.[73] There is a report in *The Phytologist* 1863 of a visit to the Malverns, where 'an ardent band of botanists including Dr Bull, of Hereford, Mr W.H. Purchas, of Ross, and Woolhopean gentlemen, had placed themselves under the able direction of Mr Edwin Lees, to gain some insight into the Botany of Malvern, attaching more value to the clothing of rock than to the naked ribs of mother earth.'[74]

GROWTH OF INTEREST IN FUNGI

In 1853, in the *Transactions* of Lees' own *Worcestershire Naturalists' Club* (*TWNC 1847–96*) there appear—albeit incidental to the main objective—what may be the first records of fungi made during a field meeting. In October 1858, at the conclusion of the Worcestershire NC season, a final field meeting took the form of a geological excursion surveying the local rocks as they traversed the Lickey Hills near Bromsgrove, (SO 9975) to Kendal End (SO 0074).[75] One may reasonably speculate that Lees was not only present but was leading the excursion and that it was he who also wrote the account. Flowering plants were over so the botanists turned their attention to 'Cryptogamic productions, more especially the beautiful form of fungi, and the Agaric tribe.' There follows an account of the fungi observed amounting to almost 40 species. 'The exploration finished, the party sat down to an acceptable dinner at the Old Rose and Crown.'[76]

That Lees had long been knowledgeable about fungi is evident from *The Phytologist* of December 1841 where he appears to have been the first to recognize the fungal nature of myrcorrhiza on the roots of Yellow Birdsnest *Monotropa hypopitys* describing it as 'a hirsuture that appears to be a byssoid fungus' (the symbiotic function was more fully elucidated in 1882 by F. Kamiemnski).[77] In this observation Lees was in advance of his time, as only as recently as 2002 has research shown that *M. hypopitys* is parasitic on the ectomycorrhiza of *Tricholoma* toadstools, specifically on *T. cingulatum* (Girdled Knight) with willow associations, and *T. terreum* (Grey Knight) with pine associations.[78]

The fact of Bull's early membership of the Botanical Society of Edinburgh is significant. Lees had joined the Edinburgh Botanical Society on 10 Nov 1836 and Bull, after arriving at the University of Edinburgh a year later, had joined on 14 Dec 1837.[79] This suggests an early common link whereby Bull and Lees could each have known of the other's existence and whereabouts,[80] and when Bull came to Hereford in 1841, a new boy to the region, it seems probable that in sharing this common enthusiasm for botany, they became acquainted.

From his rural upbringing it is likely that Bull would have been well acquainted with the commoner types of edible wild mushrooms both in the field and as food. It is inconceivable that he would have spent his student year in France without encountering fungi in some way where traditionally certain esculent fungi were valued not merely as food but prized as choice additions to the diet.[81] Bull's restless curiosity, so clearly apparent from the wide range of topics on which he wrote in the *Transactions*[82] would hardly neglect the less popular sections of botany. The more so, if he had attended field meetings when fungi had been found and named by an expert elucidating the finer points of identification and other characters of interest.

Almost certainly Bull learned the essentials of identifying fungi in the field from Lees. Although others of the Woolhopian botanists were knowledgeable about fungi such as James Buckman and William Houghton, etc., it is likely that—more than anyone else—Lees was the first and principal mentor of Bull's field knowledge of fungi.

Lees and Bull shared a deep and abiding interest in natural history, and particularly so in botany, of which fungi were then considered a part. Lees's presence at Woolhope meetings would have afforded ample opportunity for Bull to be enthused by Lees's fungus interest, and various hints in *Transactions* suggest their very long friendship and that they were comparing notes on fungi before the Woolhope forays.[83] Several times Lees and Bull are mentioned as travelling away from home to visit together such places as Llandrindod[84] and Capel-y-ffin[85] and of finding the Wood Hedgehog fungus (*Hydnum repandum*) in Haywood Forest.[86] In fact Bull thanks Lees 'to whose instruction he is chiefly indebted for such practical knowledge as he may possess on Funguses, and therefore for many a pleasant ramble, and many a savory dish of them at the table.'[87]

The genial tone in which Lees wrote to Bull in October 1866 shows a warmth born of longstanding friendship. Lees was offering his opinion on the contents of 'the box of fungi' Bull had sent him. He gently chides Bull for missing the opportunity to collect an edible species (the Trooping Funnel, *Clitocybe geotropa*) and, interestingly, suggests Bull should go on another 'foray' to look for more. He later discusses the characteristics of the Field Blewit (*Lepista saeva*) and how to distinguish it from the Violet Webcap (*Cortinarius violaceus*). He provides a name for 'a curious little fungus' which today is now recognised as a common Slime Mould (*Mucilago crustacea*), not yet given an 'official' English Name (but now often familiarly referred to as 'Mucky Crust').[88]

The constancy of their friendship is marked by Bull's attendance at Worcester in the autumn of 1869 to represent the Woolhope Club and show his regard for Lees.[89] The occasion was a presentation to Lees of a specially commissioned full-length portrait of himself, and a clock and solid silver tea and coffee service. The Malvern and the Worcester Field Clubs, with the Woolhope and Cotteswold Clubs joining in, had initiated the presentation.[90] In the speechifying that ensues Bull is acknowledged by William Mathews who says he knows him well 'as every lover of natural history did, in consequence of the work he had done at Woolhope, and in connection with his great knowledge of cryptogamic botany. There were very few gentlemen who had done more in that sphere of science than Dr Bull.'[91] From this and other instances it is clear their friendship and common interest included fungi in their botanising before their collaboration that culminated in the launch of the forays in 1868.

Undoubtedly Bull was accustomed to researching his subject and there is evidence he possessed an adequate library and would have acquired reference books on his chosen topic and seems to be well acquainted with those of leading mycologists of that time. Quite apart from Continental works on fungi, English works were already available by such as Badham, Bolton, and Berkeley's volume on Fungi in Smith's *English Flora*.[92] Certainly he would be fully aware of Withering's *Botanical Arrangement of British Plants* (1792) containing John Stackhouse's records from Caplar Hill and Haugh Wood, and interestingly, it is on record that Edwin Lees used this work.[93] When Bull mentions that he 'had paid some attention to funguses', one feels his claim is understated and refers to the start of a more serious interest and a commitment to a project, and having begun a closer study of fungi, it was neither cursory nor superficial. Among other ambitions, it becomes apparent he was confidently setting out to produce a compendium of Herefordshire fungus illustrations. Whether this was purely as a

memory aid of the finer details or with a longer-term intention of publication, must be left to be surmise. His interest seems to have been the larger toadstools and was not confined to those good to eat, and although in a letter his discussion of spore dimensions suggests use of a microscope, he seems to have left to others the study of the microfungi.

But, able scholar though he undoubtedly was, in essaying to name a much wider and more interesting range of toadstool types than just the well-known edibles, he would not have progressed far without tuition in the field. To the novice, mere descriptions devoid of illustrations are often enigmatic and tedious to assimilate, and reliance on books alone is not sufficient. Even high quality coloured illustrations—such as may have been available at the time—will serve the student only when characteristics are very obvious and unambiguous. [94] Even then, so much more is needed for identification than purely 'picture recognition'. One needs to use the sum total of numerous characters such as smell, judicious tasting (with caution), weight, texture, robustness or fragility, degree of dryness, moistness or stickiness, whether smooth or scaly, as well as habitat and substrate, in summary, a perception akin to the ornithologist's 'jizz'. Only by having been shown toadstools *in situ* and being able to handle them can the necessary insight be acquired, certainly not by solitary study. Tutors have been known to say: 'When you can identify a toadstool in the field, you can then point to the handbook picture.' And to risk eating wild mushrooms purely on picture identification is a reckless gamble.

FUNGI IN THE CLUB'S *TRANSACTIONS*

The first obvious reference in the *Transactions* to Bull's fungus interest occurs in 1867, at the time of a somewhat curious fungus-related paper. Perhaps the uninitiated Woolhope audience would not have thought it strange, but to anyone with even a rudimentary knowledge of the larger British fungi, much would appear to have been made of very little. The formality of reading a paper on such a minor matter seems disproportionate because Bull could have privately explained the differences in a few seconds to its author. [95]

The author was a Mrs Key and her paper related her observations from which she had concluded that two fungus species, which were known under different names, '*are really one and the same plant altered by those circumstances of habitat, weather etc.*..'.

We know these fungi today as respectively St. George's Mushroom (*Calocybe gambosa*) and the Field Mushroom (*Agaricus campestris*). She was mistaken—they differ in several ways. St. George's Mushroom is so called because it occurs mainly in April on or near St. George's day, has cream-coloured gills, does not have a ring on the stem, and smells strongly of newly-ground meal, whereas the Field Mushroom usually occurs in late summer, has a ringed stem, chocolate coloured gills, and a typical mushroom smell.

In the *Transactions* account, Mrs Key's paper is briefly reported in a page and a half, and it required only another half page for Bull's explanatory reply. However, although very little elucidation was necessary from Bull it is significant that he prefaced his comments saying 'they were very much obliged to Mrs Key for introducing the subject of Funguses to the notice of the Club.' After which Bull then continues his address for another two and a half pages.

We cannot be certain that there was collusion between Bull and Mrs Key, but it begins to look like a contrived stratagem. Bull clearly had quite another long-ranging agenda: he needed a pretext to talk about fungi as a way of introducing what may have been regarded as a novel and contentious topic. British mycophobia was then no less evident than today, and with ignorance and prejudice to overcome it was necessary to prepare the ground by gilding the

subject with the respectability of scientific endeavour coupled with charitable intent.

The event of Mrs Key's paper may be seen as very significant in that it appears to have been contrived as a 'fungus curtain raiser' to the Club. Having given the short explanation to Mrs Key, Bull then at much greater length used the occasion to expound on the study of fungi and why it was important not only for the Club but also for the public good. Paralleling his life-long devotion to botany and similar outdoor interests, his fungus motivation seems in part to have been charitably and welfare oriented. He expressed a sense of regret that so much potential food was going to waste when its sustenance might be utilized by the needy if only its food value could be realized and the means afforded to differentiate the edible from the rest. 'Since [fungi] are so abundant in the county it is peculiarly the province of the Woolhope Club to encourage the study of Mycology, and thus lessen the prejudice existing against them all, by clearly showing the means of distinguishing which are good and which are bad.'[96]

He goes on to suggest the Club's *Transactions* should publish 'carefully-coloured illustrations' (it will be seen later that a number of these had already been prepared by him) and gains his objective by persuading the members to vote a grant of six pounds to publish three of them. In the next *Transactions* coloured illustrations with descriptions were published of the Parasol Mushroom (*Macrolepiota procera*), the Saffron Milkcap (*Lactarius deliciosus*), and the Fairy Ring Champignon (*Marasmius oreades*).[97]

This should be seen as a conditioning of opinion for a field meeting about fungi. It was a prelude to the historic event that came the following year, the inauguration of the Woolhope Fungus Forays, announced as an extra field meeting 'for a Foray amongst the Funguses.' There is evidence that Bull and Edwin Lees conferred about this beforehand and it may have been at Lees's suggestion.[98] In Lees's Worcestershire Club, fungi had been 'gathered and named wherever found as an incidental part of field meetings and particularly when the last meeting of the year was held in October'[99] so Bull would be familiar with Lees's expertise in naming fungi at field meetings. Moreover, both he and Bull had ulterior motives for promoting a special Fungus Event—Bull hoped to introduce fungi into Club activities, Lees needed an opportunity to read his paper expounding his theory about the formation of 'fairy rings'.[100,101] Thereby were launched the famous Hereford Woolhope Forays which continued for 24 years.

THE FUNGUS FORAYS

Although in proposing a fungus foray, Bull's first intentions were probably hardly more than to indulge his fungus interest while offering the Club a new subject of study, the first Woolhope Foray was hailed as such an outstanding success that the Club resolved to repeat it the following year.

On this first foray (9 October 1868), 'having sufficiently beaten the umbrageous bounds of Holme Lacy, and carried off piles of vegetable beef-steaks (*Fistulina hepatica*), one grand specimen of which would have made a dish enough for a dozen aldermen, the retreat was sounded and the carriages remounted and a move made…over the Wye through Fownhope and to Caplar Hill and Camp.' It is interesting that in the choice of Caplar as a venue for the first foray not only was homage paid to the pioneering fungus recording of John Stackhouse at Caplar in the previous century, it also reflected Bull's interest in hill forts and allowed him later to enlarged on both topics in the *Transactions* report.

After a return to Hereford, and 'time for dinner,' he reports how 'nothing daunted, twenty-one of them sat down to the feast' at which a variety of cooked fungi were served, and while they greatly relished some, his report does not endorse every dish with equal enthusiasm,

'the next presented was the Parasol agaric, of which the less said the better on this occasion.'[102]

The remarkable success of the inaugural foray was unquestionably assured by the fungus expertise of Edwin Lees and Worthington G. Smith, who were present 'to name all the funguses found and answer all the questions put to them.'[103] Lees was already committed to be there but Smith's appearance is noteworthy. A few days beforehand, to represent the Woolhope Club, Bull had attended the Royal Horticultural Society's 1868 Fungus Exhibition at Kensington at which Smith was present. It was through Bull's initiative and efficient organisation of Woolhope contributors that the Club had sent an abundant and diverse range of toadstools that gained first prize—significantly, W. G. Smith was runner-up. Almost certainly, Bull had seized the opportunity to invite Smith to the forthcoming foray.[104] Smith, a relatively young recruit aged 33, was by then an experienced fungologist having been fascinated by fungi from his childhood.[105] From that point onwards Smith's name appears in the *Transactions,* and for years to come he was to play a key role in Woolhopian fungology, and his expertise and commitment were soon to be highly regarded.

Edwin Lees was approaching 70 and although for many years he continued to attend Woolhope forays, other fungus experts came to the fore. Undoubtedly news of the forays spread to a wider circle of aficionados. Smith lived in London, and through his membership from its start in 1863 of the London-based Society of Amateur Botanists had known its President, Mordecai Cubitt Cooke.[106] Cooke was an expert botanist employed at that time by the India Museum and, very probably through contact with Smith, joined the Woolhope Club in 1873. In her biography of Cooke, Dr Mary English remarks: 'By 1874 Cooke was well established as one of Britain's leading mycologists and not only this but his pioneering work for field studies in London would also be widely known; with the result that from then on he would be invited to meetings of more and more field clubs all over the country as their expert on fungi.'[107] He was popular in the Woolhope Club not only for his mycological expertise but also as a witty after-dinner speaker, and in 1876, was made an honorary member. 'Cooke would never forget the Woolhope forays. Many years later he wrote 'old folks are proverbially given to glorifying the past, hence I shall be quite in order in recalling those days when the Hereford district was to me an Eden, a fairy-land teeming with fungi so that the difficulty was that of determining which kinds were best left behind, and the latter half of the day was occupied partly in throwing away sufficient of the spoils of the morning to make room in the basket for the rarer trophies of the afternoon. There was no difficulty in filling big baskets then for they always seemed too small.'[108] As Lees became less active, perhaps imperceptibly, Cooke and Smith took over Lees's role as mentor and fungus expert.

In the second year (on 1 October 1869) they first forayed at Merryhill Common and Haywood forest, wooded sites long since converted to agriculture, finding amongst the harvest what they termed Hedgehog Fungus (*Hericium erinaceus*). 'It was beautiful in its tints of colour, from pale yellow, through orange to scarlet. If it were but more common its edible virtues would cause it to be more esteemed.' This remains a rare species in the wild, which remarkably, has been recorded only once again in Herefordshire in 2001 at Whitfield. Today it ranks highly among commercially cultivated fungi, perhaps better known as the Lion's Mane fungus. It is estemed for its flavour and alleged medicinal properties, but although exhibiting yellow to orange/pinkish tints, the Woolhopian description of 'scarlet' seems an exaggeration. Continuing to Mynde Park and Bryngwyn, among the plethora of toadstools they recorded '*Agaricus incana*' [*Entoloma incana*] which 'is remarkable for its for its strong and persistent smell of mice, and some amusement was created by the persevering way in which some of the

members went on to convince themselves time after time of its disagreeable odour.'[109] Today this fungus is graced with the official English name of Mousepee Pinkgill.

Whether prescient or not, the timing of the launch of the forays predestined their establishment as an annual institution: they took off from a standing start. Unexpectedly, the forays fulfilled a need far more widespread than just that of the Woolhopians and Herefordshire. While for Club members a foray was another pleasant social occasion, for visiting specialists a field meeting specifically devoted to fungi emerged as a unique event.

It offered a scientific excursion of a kind not hitherto available, and accordingly was embraced enthusiastically by leading fungologists of the day as heaven-sent. It provided an exceptional opportunity for specialists to join with like-minded enthusiasts during which undoubtedly they revelled in fungus shoptalk and exchanged opinions. The abundantly productive Herefordshire countryside coupled with the concerted efforts of assorted experts yielded a plethora of fungi far greater and more diverse than any solitary prospector could ever hope to achieve. 'Thus more real practical progress in the knowledge of this difficult branch of botany is made in a single field-day with the Woolhope Club than could possibly be gained by any amount of mere closet study.'[110] Harking back twenty years later, William Phillips remarked 'When Fungus Forays were first established there were hardly a hundred men in the kingdom who could have correctly named a hundred species. The first result [of the Forays] was that many lovers of nature from outside sought permission to join in those delightful rambles, and carried away the knowledge they gained, becoming in their turn, centres of information and instruction in their own neighbourhoods.'[111] Despite the hazard of unpredictable weather, the forays were scientifically and socially so attractive as to become an annual event not to be missed.

It may not have been his longer-term objective, but Bull nevertheless became host to what rapidly developed into a rallying point for fungologists. Having embarked on this course, Bull was proactive in gathering together leading experts. Through his motivation, energy and enthusiasm a movement in British field mycology spread rapidly in the 19th century far beyond the bounds of Herefordshire. Thus in successive volumes of the *Transactions* new names of experienced fungologists from far and wide begin to appear. In 1870, the *Transactions* record the attendance of Charles Currey (Vice President of the Linnean Society), Henry Trimen (British Museum), C. E. Broome (Bath), Charles Plowright (Kings Lynn), William Phillips (Shrewsbury), and in the following year, James Renny and Mr M. C. Cooke (London), W. A. Leighton, (Shrewsbury).[112] In following years, Professor Thistleton-Dyer, Assistant Director of the Royal Botanic Gardens, Kew, and at various Forays eminent guest mycologists from the Continent such as Quelet, Boudier, de Seynes and Cornu.[113]

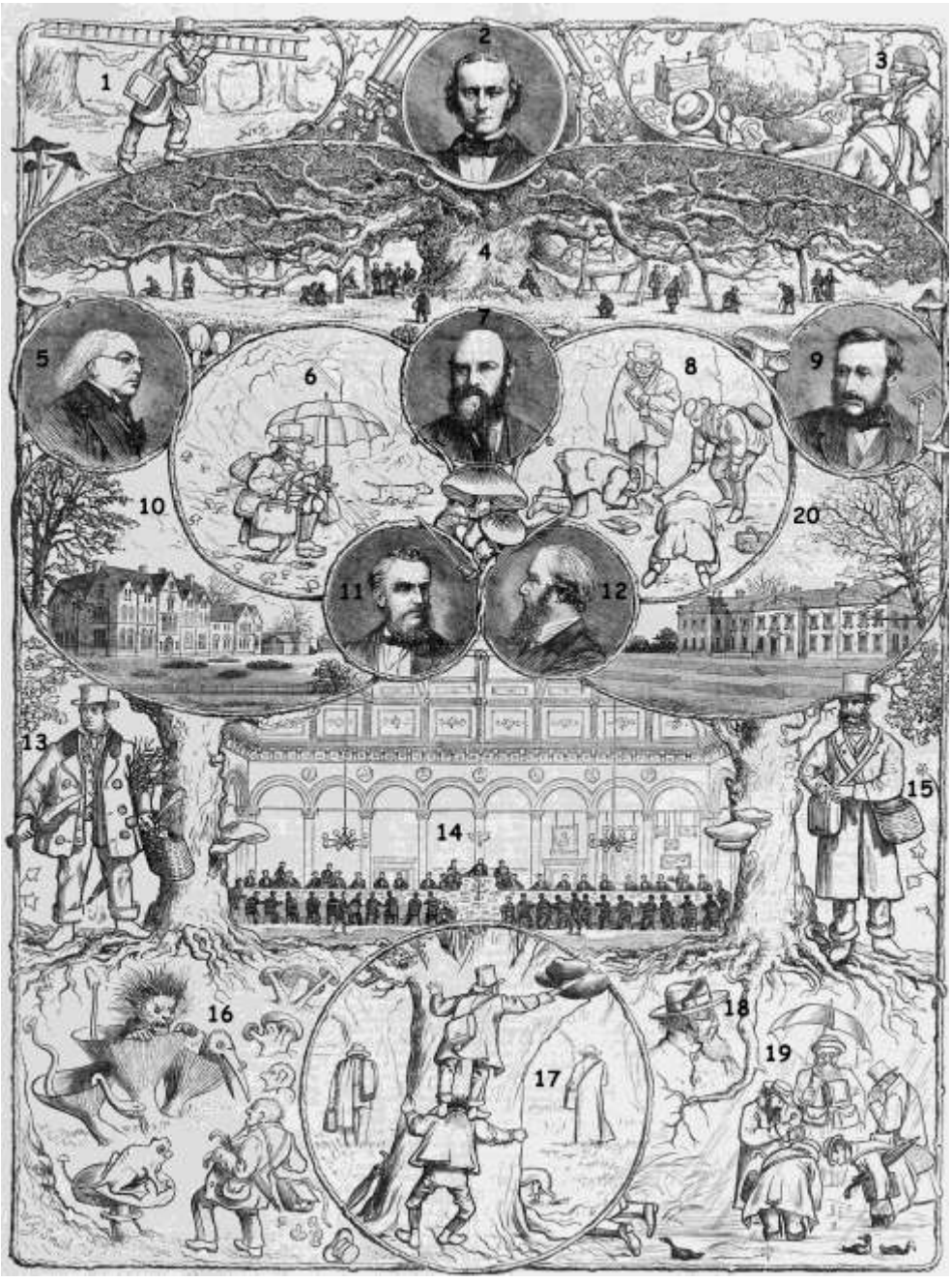

Figure 1. *The Graphic*, 15 November 1873, pp.455-6. (Reproduced by kind permission of the Director and the Board of Trustees, Royal Botanic Gardens, Kew). Original numbers have been increased in size

The artist's explanation of Figure 1

'It is now little more than five years ago, that taking into consideration the number of poisoning cases occurring every autumn from the consumption of poisonous mushrooms, the Royal Horticultural Society of London founded a series of annual fungus exhibitions [6th October 1868.]. These exhibitions take place every October at South Kensington, where innumerable species of fungi are displayed, with their names and characters plainly written; at these meetings all the great fungus authorities are generally present, so that all who desire to gain a practical knowledge of fungi have the completest of opportunities for doing so. The first London exhibition was a very great success, and this success was almost entirely owing to the extraordinary collection of fungi brought from Herefordshire, and lectured upon by Dr Bull. This lecture, with illustrative figures, was not only printed in every direction in this country, but it was published in France, Germany, and America. The same year, 1868, Dr Bull invited various botanists to meet him at Hereford to ransack the woods, and practically test the various fungi gathered. From that year to this, the great fungus meeting at Hereford, under the immediate direction of Dr Bull, has always far exceeded in interest the same exhibition held in London, and the meeting for the present year has perhaps eclipsed all others in the striking advance it has made in the study of the difficult science of fungology. On the 20th of last October, botanists and others from all parts of England began to flock into Hereford, and on the Tuesday the first excursion was made to Mynde Woods and Bryngwyn, the visitors dining at dusk at the latter place with James Rankin Esq, MA, the High Sheriff of the County, and a former President of the Woolhope Club.

On Wednesday the woods of Hudson Lutwyche, Esq. and those of Mr F. R. Wegg-Prosser at Belmont, were ransacked for fungi. Thursday was the great day of the Club when Holme Lacy Park, the seat of Mr Henry Scudamore Stanhope was visited, and the members dined in the Great Assembly Room of the 'Green Dragon' Hotel. Between fifty and sixty guests sat down to dinner when turkeys stuffed with truffles (*Tuber aestivum*) were served with the Pasture Hygrophorus (*H. pratensis*) and the so-called vegetable beefsteak (*Fistulina hepatica*). On Friday Moccas Park and Hill were visited, the excursionists dining at dusk with Sir George H. Cornewall, Bart, of Moccas, the Honorary Secretary of the Club. It is probably hopeless to look forward to the time when the people at large will consume fungi as a common article of diet, though it is a well known fact that in delicacy and richness of flavour, as well as in nutritious qualities, fungi can hardly be surpassed by the best meats. There are no broad rules by which edible and poisonous groups of fungi can be distinguished from each other, as each individual plant has characters of its own which must be learned. Fungi growing under trees and bright in colour are usually dangerous, while those low in tone and gathered from open pastures are generally safe. This was recently stated from the Bench in very excellent and accurate terms of Mr Justice Denman, though at the time the remarks were laughed at in more than one quarter by writers quite ignorant of the subject. Our illustration shows sketch portraits of some of the best known fungologists who assembled at Hereford this year with some of the semi-humorous incidents if the excursions.

Fig 1 is a sketch of an actual incident where a clergyman carried a ladder for securing fungi from the trees. 2 Dr Bull, MD and JP of Hereford. 3 The examination of the gigantic fungus recently found under the Bank of England and the fungus (also found this autumn) upon one of the magnetic instruments of the Royal Observatory, Greenwich. 4 Gathering fungi under the 'Monarch' oak at Holme Lacy; the foliage of this gigantic tree spreads 110 feet. 5. The Revd M.J. Berkeley, MA, Rector of Sibbertoft, gold medallist of the Royal Society, and botanical Director of the Royal Horticultural Society. 6 'In the rear of advanced science'. 7 Sir George Cornewall, Bart. of Moccas. 8 Raking for truffles at Belmont. 9. C. Edmund Broome, Esq., MA, Batheaston, and the great authority on truffles. 10 Bryngwyn. 11. Worthington Smith, FLS, Engraver. 12. The Revd James Davies. MA, of Moor Court, President of the Woolhope Club, the well-known classical scholar and translator of 'Babrias' 'Terense' 'Hesiod and Theognis', 'Alcestis', 'Theocritus', 'Plato's apology', &c. 13 Charles B. Plowright, surgeon of Kings Lynne. 14 The Great Assembly Room of the Green Dragon Hotel. 15 Rev William Houghton, MA of Preston, Salop, writer on 'The Sacred Natural History', Edinburgh Reviewer, &c. 16 Mental effects of fungus poisoning. Fig 17 Gathering the Vegetable Beefsteak. The latter fungus is a parasite of oak trees, and is commonly out of reach unless one has a ladder. The incident here represented has occurred more than once. 18 Edwin Lees, FLS, President of the Malvern Field Club, this veteran botanist nearly eighty years of age, accompanied the club to Moccas with the elasticity and ardour of youth. 19 Gathering the Marsh Mitrula. Some fungi only grow in boggy places and the subject of our cut, (*Mitrula paludosa*), can seldom be gathered without getting one's feet and legs thoroughly wet. 20 Holme Lacy house.'

In 1870, on 6 October, when the Club visited Bartestree, a species new to Britain, the Many-rooted Earthball, was recognised by C. E. Broome, which he knew as the *Scleroderma geaster* of Fries, which even today is the only known record for Herefordshire, now synonymised as *Scleroderma polyrhizum*. They then proceeded to Backbury Hill but due to very dry conditions did not record many more, 'the drought was too prevalent and agarics could be numbered by units instead of scores.'[114] On 10 October 1871 they arrived by rail at Dinmore station to foray at Hampton Park, and among the finds 'soon smelt out that curious, undesirable, beautiful, horrid, graceful, disgusting, interesting, stinking fungus, *Phallus impudicus*, which is very justly named "Stinkhorn".' In 1872 the season was very wet but they recorded interesting finds, such as the Old Man of the Woods (*Strobilomyces strobilaceus*) 'and many fine specimens were gathered by Mr Renny on Downton Slopes, and distributed, to the great joy of mycologists, all over the country.'[115]

The growing interest was such that a four-day 'Fungus Foray and Feast of the Woolhope Club' was arranged in 1873 from 21 to 24 October, attended by a number of 'eminent guests learned in mycology.'[116] This momentous event was vividly caricatured by Worthington G. Smith and reported in the national press (Fig. 1). The accompanying text is reproduced on the page opposite the caricature.

Under the heading 'The Fungus Foray and Feast of the Woolhope Club, 21–4 October 1873', where Bull is described as 'the pioneer and the untiring prime mover', an assembly of invited eminent guests is reported, which Bull calls a red-letter day in the annals of the Woolhope Club.[117] Included in this galaxy of distinction at which Bull expresses his sense of high honour was no less than the great authority on British fungi, the Revd Miles Joseph Berkeley, considered to be the Father of British mycology,[118] whom Bull some years earlier had referred to as 'our great mycologist.'[119] From this year onwards the Hereford Forays were held over several days and were highly popular with leading workers in mycology from Britain and abroad. 'The characteristic feature of the Woolhope forays consists of bringing together, by invitation, all the principal botanists who devote themselves to the study of fungi for a week's holiday, four consecutive days being devoted to excursions in neighbouring woods in search of fungi during the day, and in the evening or early morning the specimens are examined and determined, and papers read on mycological subjects.' 'Thanks to the presiding genius, who has undertaken all the labour and responsibility of arranging the entire series from the first to the last.'[120]

Berkeley's towering reputation as a mycologist made it a considerable *coup* for Bull to have attracted him to the Woolhope Forays. Perhaps Berkeley had already received positive news of the Forays from his collaborator on 'Notices of British Fungi', C. E. Broome (already a member), to be well disposed towards Bull's invitation. We know Bull had already made Berkeley's acquaintance at the RHS Fungus Exhibition of 1868 where Berkeley is mentioned in *Transactions* as commenting on the exhibits.[121] Links between Bull and Berkeley may have been even earlier as they were both Northamptonians, Bull's place of birth and family home at rural Pitsford was only 24 miles from Kings Cliff where Berkeley had been perpetual curate between 1833 and 1868. Suffice to say that thereafter Berkeley continued to attend the Forays for a number of years. His presence in 1876 at Shobdon Court, the seat of Lord Bateman, Lord Lieutenant of Herefordshire is well documented. He and a number of nationally distinguished mycologists together with Woolhopians were among the forayers who had travelled by the 9.20am train to Kingsland station. There they were met by carriages and 'Lord Bateman's omnibus.' On arrival at Shobdon Court they received 'a most cordial reception by Lord and

Lady Bateman.' Among many other fungi gathered, the foray account mentions *Polyporus lucidus* (*Ganoderma lucidum*), the Lacquered Bracket 'which Mr Berkeley had spied growing from the bole of an oak.'

Figure 2. Members of the Woolhope Club on their way to foray for fungi on 29 September 1876. They are at Kingsland station where they will travel by carriage and 'Lord Bateman's bus' to Shobdon Court. Bull is fourth from the right with a basket over his arm. (Reproduced by kind permission of the Director and the Board of Trustees, Royal Botanic Gardens, Kew)

In 1880 Berkeley even joined Bull with other Woolhopians and M. Cornu for what seems to have been a select private foray at Coed Coch, North Wales, the home of Mrs Lloyd Wynne.[122] Heading a list of mycological luminaries, in 1874 Berkeley was elected an Honorary Member, along with Broome, Houghton, Phillips, Plowright and Renny. In the same year the Club decided to acknowledge and recognize 'the great and gratuitous service of Mr Worthington G. Smith as its "Mycological Professor," who as one who was ever ready to assist their studies with his pen, his pencil and his head.' A testimonial presentation took place at the foray meeting of that year of silver tableware, each fork or spoon engraved with a fungus on its handle in place of a crest.[123] Members' subscriptions to this presentation came to £48 13s. 0d., today probably the equivalent of between two and three thousand pounds.

Once begun, it was Bull's initiative and sustained promotion of field-work expressly devoted to the collection and study of fungi which historians of British mycology regard as the catalyst that launched British mycology into early prominence. 'The labour and responsibility of conducting these forays were undertaken by one man; for several years they were unique, but have now been imitated in several places—*e.g.* Paris, Scotland, Leeds, Epping Forest &c—but they have never been equalled.'[124] The Forays gained such scientific distinction that today Bull is remembered by British mycologists as having played a significant role among the founders of mycological science.[125,126] By his ardent espousal of field mycology Bull had initiated a process in Britain and the near Continent that promoted fungology from relative obscurity as a minor branch of botany, to a discipline recognized and formalised in its own right and thereafter increasingly known by the name first used by Berkeley, as the science of Mycology.[127]

Figure 3. Dr Bull, Revd M. J. Berkeley, Lord Bateman (mounted) and Miss Hanbury at Shobdon Arches, 29 September 1876 (1885, according to the annotation on the photograph, but this is incorrect). The name of the man at the rear is obscured. (Reproduced by kind permission of the Director and the Board of Trustees, Royal Botanic Gardens, Kew)

BULL'S FUNGUS WATERCOLOURS

Bull's fungus interest dating from well before the forays has now been more than amply confirmed by the discovery (perhaps more correctly, a re-discovery) in 2009, by Mrs Weightman, at the Royal Botanic Gardens at Kew, of four folios of over 400 water-colours of fungi by Bull. The earliest is dated 1862, predating the start of the famous Woolhope Forays by five years.[128,129]Although among these folios there are a few painted by others, his output of paintings of over 40 species during the autumn of 1863 suggests his interest in fungi was by then a serious study. The sheer number that Bull executed from that point shows and he was already quite familiar with a range of the commoner larger toadstools and seems to have been attracted by their aesthetic and edible qualities as much as by scientific interest. The inspiration to begin painting may have been through Lees's influence, whose four folios of paintings of fungi and other subjects dating from 1824 until the 1870s can be found in the Worcester City Art Gallery and Museum.[130] Among Bull's folios, there is at least one painting signed by Lees, and Mrs Weightman has noted several others with Worcestershire provenances that are not in Bull's style, and are almost certainly by Lees.

Bull continued to paint fungi but his high output of earlier years slowed perhaps due to distractions such as his administrative editorship of *The Pomona* between 1876 and 1884 and the grievous loss in the deaths of two sons in 1879. When he started to paint fungi he could not have foreseen that, due to circumstances he himself brought about, the results would have enduring consequences. The influx of other fungologists to the Club prompted a great boost to the fungus activity, and the need was soon recognised for illustrations of fungi far surpassing a modest suggestion that the Club should publish a pamphlet of edible and poisonous fungi, and perhaps even on a scale more ambitious than an occasional plate in the *Transactions.*[131] Discussions eventually led to Cooke, who had by then moved to the Royal Botanic Gardens, Kew, agreeing to undertake this project, and Bull's support was manifest in allowing the use of his paintings, along with those of Berkeley, Smith and others, in the proposed *Illustrations of British Fungi* (1881–91), which became the title of Cooke's compilation. In Cooke's biography, Dr Mary English remarks: 'In fact it was the excellent series of drawings which had been made by Dr Bull, the doyen of the Woolhope Club, and a man who Cooke came to revere almost as much as he did the Revd M. J. Berkeley, that originally put the idea for the *Illustrations of British Fungi* into Cooke's head, and over the years he [Cooke] had been collecting drawings of the rarer species of Agarics from colleagues in the hope of publishing a complete series, and the move to Kew provided the ideal opportunity.'[132] A mark of Bull's abiding interest and support of Cooke's undertaking was his gift to the Hereford Free Library of each part of the *Illustrations* as they came out, and 'since his death the series has been continued by the generosity of Mrs Bull.'[133]

BULL'S LEGACY

At the 'Annual Fungus Dinner' in 1884, Bull had announced that following the forthcoming publication of *The Herefordshire Flora* planned the next year and *The Birds of Herefordshire* in 1886, 'the last thing was *The Fungi of Herefordshire'*.[134] In that year, the year before he died, he had sought Cooke's co-operation in the preparation of a catalogue of the *Fungi of Herefordshire*, which he was anxious he should make his next important work: 'There is one more work which I now hope to accomplish, and then I fancy I have done, and may take my rest, and that is a catalogue of the Fungi of Herefordshire'; 'I must get together all the notes I can for the Fungi of Herefordshire'; 'As soon as the arrears of the Transactions are brought up, I must set to work in earnest upon that catalogue of the Fungi of Herefordshire.'[135] But Bull died in 1885 and the task was to fall to Cooke, who completed the editing of the catalogue, and it was published in Curtis & Ley's *Flora of Herefordshire* in 1889.[136]

Bull's (perhaps, serendipitous) use of the word 'foray' by which the now famous 'extra field meeting' was announced, has survived the ravages of time, and in the English-speaking world today it is the firmly established tradition to refer to a fungus field meeting by this time-honored term 'foray'.

Henry Graves Bull was honoured in the names of fungi, firstly by Smith in 1873 with *Peziza bullii*, subsequently renamed with the modern synonym of *Discocistella* (*Dasyscyphus*) *bullii*, a minute Ascomycete cup-fungus first recorded as having been found on 'a wooden cistern';[137] secondly by Cooke in 1886 with *Pluteus bullii*.[138] It is particularly pleasing to observe from a recent publication that *Pluteus bullii* may be regarded as a good species (and rare taxon) in its own right rather than thought to be, as for sometime previously, just a larger form of the Deer Shield *Pluteus cervinus*.[139]

After Bull's death in 1885, the Woolhope tradition of what had became the renowned Hereford Forays did not cease abruptly but by some means was carried on for a few years more.[140] Cooke had said in his valedictory tribute to Bull: 'If you would maintain a kindly and a perpetual remembrance of one who was ever a staunch friend and earnest worker for the Woolhope Club, you could not do this more effectually than by keeping up in its integrity the annual reunions which he established, and did so much to maintain, in the interest of a pursuit which to him was almost a passion.'[141]

The Club continued to hold forays that were attended by many out-of-county fungologists of Bull's time and were no doubt supported through Cooke's encouragement and professional interest. Lees had died in October 1887, and Worthington Smith's interest had waned, so there was no local organiser to match Bull's enthusiasm and calibre. Deprived of his drive and motivating genius and further beset by years of fungus famine or forays abandoned due to bad weather, interest began to falter.

In 1891 the single 'foray' day turned into an archaeological excursion, and in 1892 again hit by heavy rain, although yielding 17 species new to the county 'this season the Club combined with the Fungus Foray a search for *Rubi*, under the direction of the Rev. Augustin Ley.'[142] Cooke's report of the 1892 forays written in the *Gardener's Chronicle* is reproduced a few pages later. In it he mentions that an immense change had taken place 'and there is a great dearth of larger fungi, those of the Mushroom kind, everywhere. To whatever causes we may attribute this, the fact still remains, that woods which in the days of our remembrance literally swarmed with toadstools, are now comparatively bare. It was impossible to carry away in our baskets one-half of the good things met with. Now it becomes incumbent to secure everything that is met with, good, bad, or indifferent, in order to make up an exhibition at all.'[143] He goes on to mention that a week before a similar scarcity had beset a foray of the Yorkshire Naturalists' Union (YNU) held in the neighbourhood of Malton. It is clear that by this year the specific field study of fungi was established elsewhere and other societies were holding field meetings, which were being called 'fungus forays'.

Cooke was then approaching seventy and in an attempt to rally Woolhope members, in an address on *Fungi past, Present, and Future* he appealed to them not let the foray meetings lapse. But the response was not there; the 1892 Woolhope foray would be the terminal one of Bull's era. The movement generated by the Woolhope forays however, with its gathering momentum, was to be Bull's mycological legacy, as it underpinned the growth and burgeoning of what soon was to become a national institution.

When Cooke wrote the 1892 foray report he may have feared the demise of the Woolhope forays was unavoidable, and he was almost certainly not alone in this foreboding. Significantly, juxtaposed with that of the YNU he mentions two new names, Mr Carleton Rea and Mr John Rose. In the established tradition of both the Worcester and the Woolhope field clubs, the YNU's last meeting of the season from 1881 had been a fungus foray. When, after Bull's death, the Woolhope forays were tending to fall into decline, the YNU forays were becoming increasingly popular and Woolhopian mycologists began attend the Yorkshire meetings. This eventually resulted in the YNU setting up a Mycological Committee in 1891 to espouse this interest.

Carleton Rea had been a member of the Edwin Lees' Worcestershire club since 1876, having joined as a schoolboy. It is probable that Lees even in his declining years, had mentored Rea's fungus interest, and after Lees died in 1887, Rea seems to have been proactive in enlisting the help of visiting specialists. On this occasion Rea was present at a Woolhope foray

apparently as a visitor, in company with John Rose, an honorary Woolhope member (by virtue of his Presidency of the Worcester Naturalists' Club). On the following Thursday and Friday, 'through the instrumentality of our member Mr C. Rea,' Cooke in company with George Massee 'the highest authorities in Mycology' attended a foray of the Worcestershire Naturalists' Club'.[144] Massee was then working at the Royal Botanic Gardens, Kew, and after Cooke's retirement in 1893, was appointed crytogammic botanist.[145] The foundations laid by Bull in the Woolhope meetings had resulted in a coterie of expert mycologists such as Cooke, Massee, Rea, and others, whose expertise was being sought at such forays.

On the formation of the Mycological Committee of the YNU in 1891, Charles Crossland, a Yorkshire naturalist (who through Massee's introduction had taken up the study of fungi with enthusiasm) became its secretary.[146] The Woolhope Forays ceased as from 1892, and Crossland, recalling that by 1894 the YNU very much aspired to continue in the Woolhope tradition, had written: 'The stability of the foray as an annual event is now firmly established. The justly celebrated Hereford Foray which for many year monopolized the first week in October and was the universally acknowledged meeting place for the exchange of opinions and the courteous criticism between British and foreign mycologists, has unfortunately run its course, and it is the hope and ambition of the Yorkshire Union that the annual Yorkshire gathering may, by avoiding the weak points of its predecessors, which were mainly confined to an excess of hospitality, prove at least equally attractive and instructive to mycologists.'[147]

At the YNU Huddersfield foray in 1895, attended by Cooke, Massee and Rea, in company with other mycologists, the idea was discussed of inaugurating a national mycological society.[148] The following year, at the 1896 Selby foray, the matter was broached again resulting in a successful proposal to form a new society. 'The gathering of mycologists and cryptogamists in general was larger than on any previous occasion and it was gratifying to notice the welcome presence of several Woolhopeans who acknowledged that the Yorkshire gathering is a worthy successor to the once famous meeting of mycologists at Hereford under the auspices of the Woolhope Club.' Everyone of the meeting 'about twenty', joined, including Cooke, Plowright, Rea, Massee and the Yorkshiremen Clark and Crossland. Massee was elected President, Rea who had done more than anyone to press for the society, became secretary and editor, and Crossland treasurer.[149] [150]

Thereby, the movement started by Bull in 1868 in the Herefordshire territory of the Woolhope Club, espoused and sustained in Yorkshire after his death, was brought to an assured maturity by the inauguration of what is today an internationally recogised scientific institution, the British Mycological Society. The Woolhope Club, no doubt fully cognisant of its historic role in the genesis, with admirable promptness, joined the new Society.[151] Today, the Britsh Mycological Society is a leader in its field and of world-wide high repute. It has over 1200 members, and one of its important sections is devoted to Field Mycology and Conservation, embracing an annual programme of forays and workshops, a network of recorders, and a national fungus database holding more than 1.6 million British Isles records dating over four centuries. Most appropriately, the Society's Centenary in 1996 was duly celebrated in Hereford with a week of forays, and the highlight of a Grand Dinner at the Green Dragon Hotel attended by many distinguished guests.[152]

FUNGI ON THE MENU

As the promotion of edible fungi was the declared rationale of Bull at the launch of the Forays, it may be of interest to review what species Woolhopians ate in the heyday of foraying and at

the Green Dragon dinners.

Bull was dining on wild fungi well before the start of the Forays and he mentions how with Edwin Lees he 'enjoyed many a savoury dish of them at the table.'[153] On the historic occasion in 1867 when he successfully contrived to bring fungi to Woolhope Club's attention, his justification was partly on grounds of educating the needy poor to exploit 'food for free' which otherwise was wasted, which was very much in character with his charitable work in which he was prominent among Hereford society.[154]

When Bull first addressed the Club on this unfamiliar subject he referred to wild fungi as 'manna of the poor'. He was echoing the views of—and indeed quoting from—Dr Charles Badham, who in 1847 had written of the occurrence of fungi in England:

> 'No country is perhaps richer in esculent Funguses than our own; we have upwards of thirty species abounding in our woods. No markets might therefore be better supplied than the English, and yet England is the only country in Europe where this important and savoury food is, through ignorance or prejudice, left to perish ungathered. In France, Germany, and Italy, Funguses not only constitute for weeks together the sole diet of thousands, but the residue either fresh, dried, or variously preserved in oil, vinegar, or brine, is sold by the poor, and forms a valuable source of income to many who have no other produce to bring into the market. Well, may we style them, "the manna of the poor". To call attention to an article of commerce elsewhere so lucrative, with us so wholly neglected, is the object of the present work.' [155]

Consistent with this aim the Woolhope Club in the following year participated in the London Exhibition of Edible Funguses arranged by the RHS. Very much due to Bull's efficient organisation, he was able to bring back to the Club—somewhat to his evident embarrassment—the First Prize.[156] The types of fungi sent by the Club and displayed at the exhibition were not limited to the edible, and although Bull was an enthusiastic advocate of edible wild fungi, in the years before the forays, he nevertheless painted a range of species indicating a much wider interest in all types of the larger fungi, not just the edible.[157]

Among his many fungus paintings he captioned an image by a name recognised today as the Grey-spotted Amanita (*Amanita excelsa* var. *spissa*) but which close examination has identified as the lethal Deathcap (*A. phalloides*). Although there was little chance of this mistaken caption on a private drawing leading to dire consequencies because the Grey-spotted Amanita was never mentioned or listed by the Woolhopians as edible nor illustrated in the *Transactions*, the error may be noted in passing. Another painting correctly captioned as the Deathcap also bears (in a pencilled annotation of unknown authorship) the name of a harmless False Deathcap (*A. mappa*). Nothing has been found to suggest the Woolhopians ate *A. mappa* or included it in any lists of edible fungi. Dr Dennis, Head of Mycology at the Royal Botanic Gardens, Kew had commented that the apparent inability of the Woolhope Club to distinguish between esculent and deadly species suggests the Green Dragon dinners were more hazardous than the participants realised.[158] Perhaps a rather sweeping conclusion on this slender evidence, because they knew absolutely what was seriously hazardous, and as William Phillips later jokingly remarked, no one died.[159] However…

It should be born in mind that detailed knowledge of fungus poisoning worldwide has grown only slowly, often gained by unfortunate experience, and that beyond a certain point the Woolhopians were pioneering. Susceptibility to milder types of fungus poison varies with individuals, some people become ill when others having eaten the same fare at the same meal

may experience no discomfort. Among the Woolhope fungi submitted at the RHS Exhibition and grouped in the 2nd class as 'Edible, but not usually eaten' were species that modern mycophagists would not relish and which today are shunned as either dubious or poisonous.

Among exhibits in this 2nd class was the Stinking Dapperling (*Lepiota cristata*), which justifying its name, smells of burnt rubber and tastes unpleasant, and is grouped in the genus in which other species are known to contain cyclopeptide cyto-toxins.[160] Two more were the Iodine Bolete (*B. impolitus*), and the Ivory Funnel (*Clitocybe dealbata*).[161] The first has an odour of phenol or iodoform and today is flagged as inedible and suspected of causing gastro-enteric symptoms, while the second contains the toxin muscarine, producing a syndrome of prolonged profuse sweating, lachrymation and salivation, with a slowed pulse and a fall in blood pressure.[162] In the genus of another, the Potato Earthball (*Scleroderma bovisa*), none are now considered edible, as it is reported that if more than a small amount is consumed it may cause abdominal pain, nausea, and tingling of the extremities progressing to rigidity of the whole body.[163]

Another toadstool, the multicoloured Parrot Waxcap (*Hygrocybe psittacina*), frequently illustrated in modern fungus identification books because of its attractive varied tinting, is listed (misspelled) in the account of the very first foray as 'the little paroquet agaric, with its greenish stems' and there described as edible.[164] But today, picking it, possessing it, even failing to destroy it could incur a maximum penalty of up to seven years imprisonment plus fine as a breach of Section 20 of the Misuse of Drugs Act 2005 due to its psilocybin content.

Somewhat surprising too is the inclusion of the Common Inkcap (*Coprinus atramentarius*) among those classed as edible, as modern opinion regards it as only conditionally so. The proviso is the strict avoidance of alcohol (ethanol) in the hours either before or after consumption. While susceptibility varies with the individual, for those affected, if consumed with even small amounts of alcohol (sufficient for a blood-alcohol level above 5mg%) it may give rise to alarming symptoms. The poisonous principle is similar in action to the drug Disulfiram ('Antabuse') used in remedial treatment of alcoholism. Symptoms include flushing of the face, rapid pulse, perspiration, tingling of the extremities, nausea, vomiting, severe headache and mental confusion, and may last for one or two hours. If alcohol is taken again within the next few days the reaction may recur.

Further, some years after the Exhibition, an ambiguous reference to either the Shaggy or the Common Inkcap occurs in a glowing account of fungus feasting at the dinner of 1874 and the culinary merits of Coprinus Soup: 'It has been reserved for the Woolhope Club to demonstrate the value of [the Common Inkcap] as the principle ingredient in a piquant and tasty soup...it is too good an addition to our list of soups to be lightly forgotten; and perhaps the day will yet come when those philosophers…may count among their benefactors the motley group of "Fungi Fogies".'[165] Perhaps the writer became confused between the Shaggy and the Common Inkcaps, because it is hard to believe that Coprinus Soup with Common Inkcap as an ingredient was never consumed on the same occasion as some form of alcohol.[166] One is left wondering if concerning this and other dubious species mentioned above adverse consequences were attributed to other causes, but the *Transactions* are silent about any consequential dire effects.

Even Worthington Smith, creator of the famous Woolhope cartoons, before he joined the Club had badly poisoned himself and his family with the Livid Pinkgill (*Entoloma sinuatum*). True to the interests of science he responsibly published his experiences of the unpleasant result.[167,168] In fact, up to 1950s the False Morel (*Gyromitra esculenta*), as the specific epithet

implies, was listed as edible in many British fungus books. Subsequently it has been banned from public sale in Spain and parts of Europe due to recurrent poisonings resulting from carelessness or ignorance of the essential cooking method necessary to remove the poison.[169] So far, there are no records, past or present, of the False Morel ever being found in Herefordshire.

In all senses of the word it may be said that recipes are matter of taste, and tastes alter. A 'receipt' (recipe) that does not occur in modern literature and may today evoke amazement is attributed to Edwin Lees. He is quoted as saying the Penny Bun or Cep (*Boletus edulis)*: 'as part of a fungus dinner should come last, with the puddings and sweets.... it should not be disguised with any sauce beyond lemon juice and powdered lump sugar; as a fricassee or sweet omelette it is excellent, and when delicately cooked it has a close resemblance to custard pudding.'[170]

Sometimes their pioneering led to droll harmless mistakes as in the report of a member eating a leathery bracket fungus. The *Transactions* account runs: '[The Shaggy Bracket *Inonotus hispidus*] is very handsome, but withal uncouth-looking, covered with rough dark hair—handsome in its bold ugliness. It is fleshy and abounds in juice and one gentleman present greatly to the amazement of the others, declared he had been eating it in mistake for the 'Vegetable Beefsteak' [Beefsteak Fungus (*Fistulina hepatica*)] and it was not bad though he did not care to try it again.'[171]

Fashions change as do tastes and it is interesting to observe that certain edible fungi that the Woolhopians savoured are not those of first choice today.

Some insight into preferences of more recent times was gained from an informal investigation about 20 years ago. An experienced mycologist, Alan Legg, carried out a poll in 1990 of wild-mushroom aficionados through the pages of *The Mycologist*.[172] This anecdotal survey resulted in a preferred 'Top Twenty' list, and although not of immediately recent date may indicate modern British preferences and, by omission, prejudices. Legg was at pains to point out that due to the small sample the results had little statistical significance and were presented mainly for the interest of readers and those participating.

LEGG'S FINAL TOP TWENTY

1	Penny Bun or Cep	*Boletus edulis*
2	Parasol	*Macrolepiota procera*
3	Field Mushroom	*Agaricus campestris*
4	Chanterelle	*Cantharellus cibarius*
5	Wood Blewit	*Lepista nuda*
6	Shaggy Inkcap/ Lawyer's Wig	*Coprinus comatus*
7	Giant Puffball	*Calvatia gigantea*
8	Horse Mushroom	*Agaricus arvensis*
9	Bay Bolete	*Boletus badius*
10	Field Blewit	*Lepista saeva*
11	The Prince	*Agaricus augustus*
12	Horn of Plenty	*Craterellus cornucopioides*
12	Morel	*Morchella esculenta*
14	Wood Hedgehog	*Hydnum repandum*
15	Shaggy Parasol	*Chlorophyllum (Macrolepiota) rhacodes*
16	Charcoal Burner	*Russula cyanoxantha*
17	(no English name)	*Agaricus macrosporus*

18	Chicken of the Woods	*Laetiporus sulphureus*
19	St George's Mushroom	*Calocybe gambosa*
20	Oyster Mushroom	*Pleurotus ostreatus*

Although the following were sufficiently favoured by the Woolhopians to be selected for illustration in the *Transactions* and some appeared as items on their dinner menus, they are absent from the above 'Top Twenty' edible fungi:

Blusher	*Amanita rubescens*
Meadow Waxcap	*Hygrocybe pratensis*
Snowy Waxcap	*Hygrocybe virginea*
Beefsteak Fungus	*Fistulina hepatica*
The Miller	*Clitopilus prunulus*
Fairy Ring Champignon	*Marasmius oreades*
Saffron Milkcap	*Lactarius deliciosus*

Only six are common to both lists: Giant Puffball (*Calvatia gigantea*); Penny Bun/Cep (*Boletus edulis*); Parasol (*Macrolepiota procera*); Shaggy Inkcap/ Lawyer's Wig (*Coprinus comatus*); Wood Hedgehog (*Hydnum repandum*) and St George's Mushroom (*Calocybe gambosa*).

The Fairy Ring Champignon and Saffron Milkcap were among the very first to be illustrated in *TWNFC* (1867) following Bull's advocacy of edible fungi. Several fungi in Legg's list, which today are commonly eaten, were not specifically referred to or illustrated in the *Transactions*. Notably absent from the Woolhopians' list of esculents is the Chicken of the Woods (*Laetiporus sulphureus*) and absent from either list, the truly edible Truffles.

The first, Chicken of the Woods, a distinctive large yellow bracket fungus commonly occurring on oak trunks, is well known and often eaten in Britain today. But the Woolhopians either seldom found it or, when they did, they didn't eat it. In M. C. Cooke's book *British Edible Fungi* (1891) p.96 he states: 'It is not eaten in Europe, Dr Curtis considers it just tolerably safe but not to be coveted. It is by no means to be recommended to persons with weak stomachs.'[173] Nevertheless, today, it is reported to have been in use as food in various countries, although sometimes may be the possible cause of mild illness either due to differing susceptibilities, or different strains of fungus, those growing on yew being suspect.[174] In the national fungus database there are only four Herefordshire records of it in the years of the Woolhope forays, all dated 18xx, at Brockhampton, Eastnor, Hereford and Breinton. From that time there was a complete absence of records until 1926 (three); 1951 (two); 1970s (two), and in the 1990s, indicative of the inauguration of a Herefordshire Fungus Survey Group, fifty-six.

The second absentee, the edible Summer Truffle (*Tuber aestivum*)—as distinct from various inedible False Truffles—is rarely mentioned. Underground (hypogeous) fungi are difficult to find although professional truffle hunters had been a significant feature of country life, as related by Gilbert White of Selbourne.[175] In 1860 according the Dr Ramsbottom's detailed chapter on truffles, the truffle hunters of Winterslow, Wiltshire, petitioned Parliament for exemption from dog-tax on their truffle dogs; and the last of the professional truffle hunters retired in the 1930s.[176]

Figure 4. The menu for the Grand Dinner at the Green Dragon in Hereford on 4 October 1877

DESCRIPTION BY THE ARTIST OF THE WOOLHOPE MENU.

For such readers as may not be so deeply versed in fungi as the Members of the Woolhope Club, appended is a brief explanation of the allusions to be found in the pictorial border of the *Menu* card. Beginning at the top, the pleasant faces seen in the "edible" fungi, and the dolorous mementos manifest in the "poisonous" ones, explain themselves. The former are suitable for frying, and "Fries" is the greatest living authority on fungi; the latter cause unpleasant symptoms, and pain us—"Panus" is a genus of fungi; the pill-box, pill, and medicine bottle, are represented by the genus of fungi, named "Pil-o-bolus." Mr. Berkeley, in the top centre, is being attacked by a starry puff-ball (a species of vegetable octopus), and his exclamation of affright naturally takes the form of another genus of fungi, named "Odontia." It will be observed that Mr. Berkeley, has let fall his *Outlines of Fun-gology*. The bottle of "Currey" on the left, immortalises Mr. Frederick Currey, the famous fungologist. "Kneiffia," underneath, is a genus of fungi, and "Forkia" is a genus shortly to be established. The cuneiform inscription indicates the character of the fungoid octopus, as well as the Colorado beetle at Hereford. The porcine quadruped on the left, points to Dr. Robert Hogg, who has published a book on fungi, and the inscription, "Non Sow," indicates that he is not to be confounded with Sowerby. The umbrella handle and great knife on the left always appear at the Hereford Meetings; they belong to Mr. C. B. Plowright, the famous surgeon and fungologist of King's Lynn. The wine bottle bears the name of renowned wine merchants who supply so many fungus-eaters with their (as pronounced after dinner) "Sphæria Champign." "Sphæria" is an immense genus of fungi, and "Champign" is Champignon with its tail off. On the right, we have Dr. Bull, the physician, of Hereford, supporting "Cornu" (Latin for Dr. Bull's Horn of Plenty). M. Max Cornu, of Paris, is one of the highest living authorities on fungi, and was a guest at Hereford. The chains and ropes ornamenting the bovine nose, indicate the power and irrepressible energy of Dr. Bull. Leveille is the name of a great fungus author, and refers, at the same time, to the "veal" which, at an early period, clothes the bones of all oxen. "Magnus" refers to Dr. Magnus, of Berlin, the fungologist. The greatness of this author's name has expelled the cork from the bottle to the knife blade above. "Badham," on the dried pig's leg, refers to Dr. Badham, who wrote *Esculent Funguses of England;* whilst the mole hanging head downwards indicates the miserable condition of Mr. Lees' "molar theory," which referred the formation of fairy-rings to the underground gyrations of the mole. "Hygrophorus" (the water-bearer) is the name of a large genus of watery fungi, and the "Myxomycetes" are a large group of fungi now attracting peculiar attention. "Phallus" is a genus of fungi, which does service here in indicating that there is no fallac-y as to the quality of the wine consumed. Some fungi bear special corkscrew-like springs for use in dispersing the spores; the springs are named "elaters," therefore, the corkscrew figured, is, in more senses than one, an "elater." The bottle of cider on the left, and "Agaricus cider-is" are synonymous; and "Du Port," on the right, is the name of an excellent fungoid Canon, from Norfolk, who attends the Hereford Meetings. Arriving now at the bottom, we have "Tode," a writer on mushrooms, together with a figure of "Boletus edulis," beheaded. Hussey, Broome, Cooke, and Curtis, are all renowned fungologists. Hussey and Cooke are in conflict, the latter has just thrown a rolling-pin (Clavaria—a genus of fungi) at the latter, and is now in the act of discharging a basin of batter (Batarrea—another genus of fungi) at her opponent. The cook's name is Psalliota, a sub-genus of fungi; the hussy's name, Polyporus, a large genus of the same class of plants. C.E.B., M.A., on the hussy's weapon, point to the name and degree of Mr. Broome, the fungologist. "Sparassis" is an important genus of fungi, which is here hinting to the combatants how to proceed when their artificial weapons are no longer available. "Crucibulum" is the name of a large genus of fungi, and means a saucepan; the "Batch," inside, is the name of a great fungus author. "Flammula,"—a little flame—is a sub-genus of fungi; and "Fries' Epi-crisis" (the fat in the fire) is the name of the best text-book of fungi in existence. The nature of the Woolhope Ketchup, or "cats-up," was fully described in the *Gardener's Chronicle*, last year. As a matter of fact, the word "Poissons" (fish) was misprinted "Poisons," by the printer; the error was overlooked by the revising editor, and appeared as "Poisons" on all the cards on "the fungus dinner table."

Figure 5. An explanation of the symbolism in the 1877 menu

The only apparent record in the *Transactions* of edible truffles occurs at Holme Lacy during the Foray days of 1877. An unobtrusive reference reports: 'Truffles turned up under laurels', which Worthington Smith in his contemporary cartoon depicted as 'Raking for truffles.' As *Dindon roti aux Truffes* appears among the delectable dishes of the subsequent dinner one may assume at least on that occasion they ate their own harvesting of truffles. The occasion of 4 October 1877 was a grand affair when 'there were seventy-one Woolhopeans at the "Green Dragon" dinner.' An amusing reminder of this survives in the *Transactions* as a facsimile copy of the celebrated dinner menu designed by Worthington Smith, who humorously caricatured many of the mycologist personalities of the forays (Figs. 4, 5). The names of guests and other mycologists, along with such fungi as the Horn of Plenty, the Cep and several less edible fungi, were woven into the punning iconography and in-jokes. Among the ingenious vignettes, Berkeley is given honourable top-centre place 'being attacked by a species of vegetable octopus, the starry puff-ball' while lower to the left: 'the chains and ropes ornamenting the bovine nose, indicate the power and irrepressible energy of Dr Bull.' Adding to the fun, perhaps an error—although it may have been a printer's mischievous act—was the heading of the menu's fish section printed as POISONS. The menu plate was signed 'Drawn and cut by Worthy-ton Gee-up Smith.' [177]

However, from Bull's paintings there is additional evidence that the Summer Truffle was found in Herefordshire in Bull's time on at least two more occasions. Mrs Weightman's research reveals that his painting of the Summer Truffle with the provenance of Holme Lacy, is dated 2 November 1867—significantly this date is before the start of the Forays—and the same painting bears a later footnote referring to another find dated 23 October 1873 also at Holme Lacy.[178] As an indication of rarity—at least, of records of it—no further Herefordshire finds of Summer Truffle are known following those of Holme Lacy until 2008 when a fourth specimen was found in a garden at Withington. This fourth specimen is now preserved among the collections of Hereford City Heritage Services.

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Note: English fungus names conform to those listed in *Recommended English Names for Fungi in the UK*, by E. M. Holden. 2003, published by the BMS. (Downloadable).

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Bul. BMS: Bulletin of the British Mycological Society.
TBMS:. Transactions of the British Mycological Society.
TWNFC: Transactions of the Woolhope Naturalists' Field Club.
TWNC: Transactions of the Worcestershire Naturalists' Club.

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[25] *TWNFC* (1868), pp.184–192.
[26] Paul, David, *op. cit.*, in note 17, pp.93-4.
[27] Cooke, R., *Fungi* (1981), Collins, pp.7-8.
[28] Harding, P., *Mushroom Miscellany* (2008), Collins, p.103.
[29] Biblical references to mushrooms or toadstools are unknown, but pathogenic Rust microfungi may be inferred from blasting or mildew, e.g. II *Chronicles* 6:28; and *Deuteronomy* 28:22. Clothing soiled by mildew may be inferred from Leviticus 13:47–59. Dubiously, dry-rot has been inferred from 'leprosy of the house': *Leviticus* 14:34 *et seq*.
[30] Watling, R., *Fungi* (2003), Natural History Museum, London, p.19.
[31] Ainsworth, C. G. *Introduction to the History of Mycology*. (1976). CU P. p.251.
[32] Ramsbottom, J. 'Presidential Address'. 1941, o*p.cit*. in note 12, p.280.
[33] Hawksworth, D. M. *et al*., *Dictionary of the Fungi*, 8th Edition(1995), CAB International, pp.168 & 340.
[34] *TWNFC* (1870), pp.178–80.
[35] *TWNFC* (1870), pp.280–286.
[36] Ramsbottom, J. 'Presidential Address', o*p.cit.* in note 12, p.344. 'A statement by Berkeley in 1842 puts the matter in its proper perspective. 'The eyes of modern mycologists were for years blinded by Link's celebrated paper or the real structure would have long been recognised. The modern rediscovery is due to Ascherson; at least he is the first who made it known.'
[37] Braun, U., *The Powdery Mildews (Erysiphales) of Europe*. (1995), Gustav Fischer Verlag, Jena, Germany, p.3.
[38] Ainsworth, C. G., *op.cit*. in note 31, p.98.
[39] Boddy, L. & Colmore, M, Eds., *op.cit*. in note 3 p.5 *et seq*.
[40] Connor, Ross, & Blackwell, 'Henry Graves Bull (1818–85)', *TWNFC* (2011).
[41] For example: Herbarium Accession No. 6777/2. *Caltha palustris*. Hardingstone meadows, Northamptonshire. 1835.
[42] *TWNFC* (1852), pp.3–4.
[43] Allen, D. E., 'Balfour, John Hutton (1808–1884)', *Oxford DNB* (2004), Oxford University Press, [http://www.oxforddnb.com/view/article/1192, accessed 26 Feb 2011], hereafter: ODNB web site. Also web page of Botanical Society of Scotland. Watling, R., 'A Sesquicentennial Celebration.' *Bul. BMS* 20-2. Oct 1986. pp.98–100.
[44] In 1991 this became the Botanical Society of Scotland.
[45] Personal communication (3 & 9/2010). Professor Roy Watling, formerly Head of Mycology, Royal Botanic Garden, Edinburgh, President of BSE 1984–86 and Secretary for 16 years..
[46] Personal communication. Professor Roy Watling, (as previously, in note 45).
[47] William Jackson Hooker became the first Director of the Royal Botanic Gardens, Kew, 1841–65. Ainsworth, C. G. (1996). *Op cit*. in note 31. p.94. Bull very probably used J. E. Smith's *English Flora.* After Smith's death in 1828, Hooker produced for Smith's publishers, Messrs Longmans, Part I of Volume V on Cryptogams, printed in Glasgow by Khull. The author of Part II of Volume V published in 1836, devoted entirely to Fungi, was Revd M. J. Berkeley.
[48] Personal communication. Professor Roy Watling, (as previously, in note 45).
[49] Allen, D. E., 'Balfour, John Hutton (1808–1884)', *loc. cit*. in note 43.
[50] *TWNFC* (1852), p.8.
[51] *TWNFC* (1852), p.18.
[52] *TWNFC* (1852), pp.1–3.
[53] The first prize was awarded to the Revd J. F. Crouch, and the second prize to Thomas Blashill, junior. In 1890 the Revd Crouch bequeathed his herbaria to the Woolhope Club, *TWNFC* (1890), pp.144–5.
[54] *TWNFC* (1852), pp.25–27.
[55] Lawley. M. *The Bygone Botanists of Herefordshire.* (1995). p.5.
[56] *TWNFC* (1852), p.41. The entry does not specify which Monnington this was.
[57] *TWNFC* (1852), p.144.
[58] *TWNFC* (1857), pp.194. Variously named American/Canadian waterweed/pondweed, an alien weed introduced to Britain *circa* the 1830s that spread rapidly to inland waters.
[59] *TWNFC* (1860), p.247.
[60] *TWNFC* (1860), p.201.
[61] *TWNFC* (1870), p.(i).
[62] *TWNFC* (1869), p.50.

[63] Lawley, M. *A Botanical Stroll through Herefordshire* (1999), pp.21 & 29.
[64] *TWNFC* (1870), pp.68–9.
[65] *TWNFC* (1862), p.295.
[66] *TWNFC* (1864), pp.312–47.
[67] *TWNFC* (1866), p.185–191.
[68] Jones, M. M. *The Lookers-Out of Worcestershire*. (1980), Worcestershire Naturalists' Club (WNC), p.45.
[69] *TWNFC* (1902), p.292.
[70] Jones, M. M., *op.cit*. in note 68, p.33.
[71] Jones, M. M., *op.cit*. in note 68, p.54.
[72] *TWNFC* (1853), p.57.
[73] *TWNFC* (1853), p.46.
[74] Personal communication, Mrs Jacqueline Hartwright. Secretary, *Worcestershire Naturalists' Club*, 30 November 2009.
[75] *Transactions of the Worcestershire Naturalists' Club* (1847-1896), p.51–3 from personal communication, Mrs Jacqueline Hartwright, as in note 74.
[76] Jones, M. M., *op.cit*. in note 68, p.138.
[77] Jones, M. M., *op.cit*. in note 68, p.103. Ainsworth, C. G., (1976) *op.cit*. in note 31, p.102.
[78] Spooner, B. & Roberts, P., *op.cit.* in note 9 p.83; Bitardondo, M. I & Brunns, T. D. *Molec. Ecol.* 11:557–569. (2003); Leake, J. R. *Mycologist* 19-3, (2005), pp.113–122; Jones, Phillip, *BSBI News 109.* (2008), pp.40–1.
[79] Personal communications (3 & 9/2010) from Professor Roy Watling, as in note 45.
[80] Lawley, M. (1995), *op cit*. in note 55. 1995. p.11.
[81] *TWNFC* (1875), p.62. References to 'Dr Bull's exquisite recipes' may suggest tastes and cuisine techniques he acquired from his Paris sojourn or other Continental travelling.
[82] Connor, Ross, & Blackwell, *TWNFC* (2011). *op.cit*. in note 40 p.16 & Table.
[83] *TWNFC* (1875), p.61.
[84] *TWNFC* (1867), p.26. 'Under the enthusiastic guidance of Mr Lees and Dr Bull, who evidently had been there before,' before, that is, the occasion of the Club's visit to the Llandrindod bog on 28 June 1867.
[85] *TWNFC* (1867), p.45.
[86] *TWNFC* (1868), p.223.
[87] *TWNFC* (1867), p.167.
[88] Letter from Lees to Bull dated 23 October 1866 (Woolhope Club library).
[89] Jones, M. M., *op.cit*. in note 68, p.110.
[90] Jones, M. M., *op.cit*. in note 68, p.108–9.
[91] Personal communication 29/11/ 2009 from Mrs Jacqueline Hartwright , as in note 74.
[92] Badham, C. D. *op.cit*. in note 15; Bolton, J., *An History of the Fungusses growing about Halifax. 1788–1791;*. Berkeley, M. J., *Fungi*, (1836) in *The English Flora of Sir James Edward Smith*, Vol. V Part II.
[93] Jones, M. M., *op.cit* in note 68, p.13.
[94] Price, S., *Illustrations of the Fungi of our fields and woods* (1864–1865) (published in Ludlow); Sowerby, J., *Coloured Figures of English Fungi* (1797–1809). Interestingly, another well-known mycological illustrator lived only 20 miles distant from Bull's childhood home at Pitsford, Northamptonshire. She was the mycologist Mrs T. J. Hussey, who published *Illustrations of British Mycology*, 1847–1855, and whose coloured plates of fungi had been used earlier in Badham's first edition, as cited in note 15.
[95] *TWNFC* (1867), pp.75–79.
[96] *TWNFC* (1867), p.77.
[97] *TWNFC* (1867) respectively, facing pp.155; 161; 164.
[98] Ross, J. H., 'Letters of Dr Henry Graves Bull to Thomas Blashill 1946 to 1885', *TWNFC* (2000), p.86.
[99] Jones, M. M., *op.cit*. in note 68, p.138.
[100] Lees, Edwin, 'On the Formation of Fairy Rings and the fungi that inhabit them', *TWNFC* (1868), p.211–225, and 'The Discussion on Fairy Rings', *TWNFC* (1869), p.128.
[101] Having regard to Lees' keen intelligence and extensive natural history knowledge and experience, his theory that the gyrations of moles were the cause of fairy-rings raises the suspicion that it all may have been tongue-in-cheek, devised as a debating challenge and a convenient vehicle to expound more broadly on associated folk-lore and literary references. By 1875 'Dr Bull observed that Mr Lees had given up his molar theory of the formation of fairy-rings.', *TWNFC* (1875), p.64.
[102] *TWNFC* (1868), pp.184–192.
[103] *TWNFC* (1868), p.184. Ainsworth, C. G. (1996). as in note 47, pp.163–4.

[104] Smith later became the famed creator of the Woolhope Club cartoons and was a prominent personality in both national and Woolhopian mycology.
[105] English, M. P. *Mordecai Cubitt Cooke. Victorian Naturalist, Mycologist, Teacher, Eccentric.* (1987). Bristol. p.99.
[106] English, M. P., *op.cit*. in note 105. p.98.
[107] English, M. P., *op.cit*. in note 105. p.135.
[108] English, M. P., *op.cit*. in note 105. p.268.
[109] *TWNFC* (1869), pp.106–113.
[110] *TWNFC* (1870), p.158.
[111] Phillips, W. 'Some observations on popularizing the knowledge of edible and poisonous fungi.' *TWNFC* (1889), pp.388–9.
[112] *TWNFC* (1871), pp.20–1.
[113] Dr Lucien Quelet, founder and first President of the Société de Mycologique de France. Jean Louis Émile Boudier, Honorary President of the Société de Mycologique de France. Jules de Seynes, Professeur agrégé à la Faculté de Médecin de Paris. Maxime Cornu, Directeur, Jardin des Plantes, Paris.
[114] *TWNFC* (1870), pp.158–166.
[115] *TWNFC* (1872), p.18.
[116] *TWNFC* (1873), pp.100–109.
[117] *TWNFC* (1873), pp.103–104.
[118] Cooke, M. C. 'Controverted Agarics.' *TWNFC* (1890). pp.112–114.
[119] *TWNFC* (1868), p.192.
[120] Cooke, M.C. 'The Fungus Foray, October 1883'. *TWNFC* (1883) p.97.
[121] *TWNFC* (1868), pp.193–5.
[122] *TWNFC* (1880), pp.258–9
[123] *TWNFC* (1874), pp.46–51. '…every fork or spoon, in place of crest, should bear a fungus on its handle—each a different one, and all of them to be copied from the plates published in our '*Transactions*,' or as to represent the funguses new to Britain discovered by our Club; so that the friendly, pleasant days he has passed in Herefordshire shall always be recalled to him as his eye falls on a *deliciosus* spoon, or a *procerus* fork, and a kindly feeling will pervade his domestic every day life (applause).'
[124] *TWNFC* (1886), p.62.
[125] Ainsworth, C. G., (1976), *op.cit*. in note 31, p.285; Ainsworth, C. G., (1996), *op.cit*. as in note 47, pp.32–33. British Mycological Society; Webster, J., 'The British Mycological Society, 1896–1996'. Presidential Address', *Mycological Research* 101(10), pp.1153–78. (1997); Cooke, M. C., 'Address', *loc. cit*. in note 1; Rea, Carleton, *British Basidiomycetae* (1922), p.56, 'Dr H.G. Bull of Hereford, the originator of the Woolhope Club fungus forays.'
[126] English, M. P., *op.cit*. in note 105, p.266.
[127] Ainsworth, C. G., (1976), *op.cit.* in note 31, p.2.
[128] Weightman, Jo., 'Dr Bull's Paintings of Fungi', *Field Mycologist* 10–4. (2009), pp.113–121). A copy of the annotated list of Bull's paintings held at Kew is in the Club's library.
[129] Dennis, R. W. G,. 'Dr Bull's drawings and the Herefordshire Flora', *Kew Bulletin* 30 (3) (1975), pp.541–2.
[130] Personal communication 20/5/2011 from Mrs Jacqueline Hartwright (as in note 74) and Mr Garston Phillips, Worcester Art Gallery.
[131] *TWNFC* (1873), pp.105–6. [A suggestion by Mr Edwin Lees]: 'It is very remarkable that every autumn there are accounts of deaths from eating poisonous funguses taken for mushrooms. This wants looking into in a more popular way. I mean a cheap pamphlet, with wood-cut illustrations, that members of Naturalists' Clubs might distribute among rural folk or the poor in towns, for it is generally the lower classes that get ill or poisoned by eating funguses and not getting relief in time'.
[132] English, M. P., *op.cit.* in note 105, p.215. 'In his preface to *Illustrations of British Fungi* (1881-91), Cooke thanks ten friends and colleagues, including Berkeley, Bull, and Smith, for allowing him to use their drawings, and the great majority of figures bear either his own initials or those of one or other of these contributors'. See also concluding remarks by Rev. Canon Du Port following the reading of Cooke's paper, as in note 188, *TWNFC* (1890), p.113.
[133] *TWNFC* (1890), p.98.
[134] *TWNFC* (1884), p.243–4.
[135] Cooke, M. C., 'Address', *loc. cit*. in note 1.
[136] English, M.P., *op.cit.* in note 105, p.266.
[137] Personal communication from Dr B.M. Spooner, Head of Mycology, Royal Botanic Gardens, Kew. 2010.
[138] Dennis, R. W. G., (1975), *op.cit*. in note 129, p.542.
[139] Kibby, G. *et al.*, 'Some problems in the Genus *Pluteus*', *Field Mycology* 11–3 (2010), p.97.

[140] *TWNFC* (1886) p.62. 'Are these meetings to be allowed to lapse? Can they not be invigorated? For there is no doubt that the absence of the energetic 'presiding genius,' Dr. Bull, has been keenly felt by all the visitors whom we have been in the habit of welcoming at our autumnal gatherings'.
[141] *TWNFC* (1886), p.69.
[142] *TWNFC* (1892), pp.358–9.
[143] *TWNFC* (1892), pp.362–3. Fungal fruiting would have been inhibited by the marked deficiency of rainfall in Herefordshire in the decade 1886–96, see Southall, H. 'On the remarkable deficiency of rainfall etc...' *TWNFC* (1896) pp.181–4.
[144] Jones, M. M., *op.cit*. in note 68, p.139.
[145] Ainsworth, G. C., (1996) *op.cit*. in note 47, p.121.
[146] Ainsworth, G. C,. (1996) *op.cit*. in note 47, p.51.
[147] Crossland, C., *The Naturalist* (1894), p.69.
[148] Ainsworth, G. C., (1976) *op.cit*. in note 31, p.285.
[149] Blackwell, E. M., 'Alfred Clark, his herbarium and the Birth of the British Mycological Society', *News Bulletin*. BMS 25 (Winter 1965–66), pp.13–20.
[150] English, M. P., *op.cit*. in note 105, p.289.
[151] *TWNFC* (1896), p.227.
[152] Blackwell, T. 'Mycological Celebrations in Hereford. The BMS Centenary 1996'. *TWNFC* XLVIII. Pt.III. 1996. pp.597–600.
[153] *TWNFC* (1867), p.167.
[154] O'Donnell, J., *John Venn and the Friends of the Hereford Poor*. (2007). Logaston Press, Hereford. Powell, J., *Hard Times in Herefordshire. The effects of the workhouse and the New Poor Law.* (2008). Logaston Press, Hereford..
[155] Badham, C. D., *op.cit*. in note 15, p.xiii. 'Introductory Notice'.
[156] *TWNFC* (1868), pp.191–5. A full account of the event, and of Bull's unscheduled extempore lecture occasioned by Berkeley quitting the proceedings due to mild illness, is detailed in *The Gardeners' Chronicle and Agricultural Gazette*, 10/10/1868 pp.1061-2 & 1064-6; a shorter account appears in the *Journal of Horticulture and Cottage Gardener*, 8/10/1868 p.283 (RHS library).
[157] Weightman, J. (2009) *op.cit.* in note 128, pp.113–121.
[158] Dennis, R. W. G., (1975), *op.cit*. in note 129, pp.541–2.
[159] Phillips, W. op. cit. as in note 111, p.388:. 'To give practical proof that properly selected species ….. were not only harmless, but wholesome and nutritious, the cook at the Green Dragon was served with the right sort which were prepared and partaken of at the annual dinner, without any serious results following. I do not remember that our ranks were thinned by a single fatality' [!].
[160] In 2008, a best-selling writer, Nicholas Evans, poisoned himself and three of his family. Believing he had collected wild Ceps, they ate Deadly Webcaps *Cortinarius* (*speciosissimus*) *rubellus* which contain polypeptide 'Orellanine' mycotoxins. After critical illness and subsequent three year's dialysis, he received a kidney transplant in 2011 donated by his daughter. One other family member recovered after illness, two still remain on dialysis. *The Daily Telegraph*. 2/8/2011, p.21.
[161] *TWNFC* (1868), pp.185.
[162] *TWNFC* (1868), pp.193-5.
[163] Cooper, M. R. & Johnson, A.W., *Poisonous Plants and Fungi in Britain* (1998), HMSO, p.254.
[164] *TWNFC* (1868), p.187.
[165] *TWNFC* (1874), pp.54–5. James Britten paraphrases this account with almost equal ambiguity in his handbook *Popular British Fungi*, p.36 as in note 170.
[166] *TWNFC* (1875) p.136. An account reproduced from the *Daily News* says : 'Burgundy will be found the most suitable wine to drink with them.'
[167] *Journal of Botany* II (1864), p.215.
[168] Ainsworth, C. G., (1996), *op.cit.* in note 47, p.163.
[169] Cooper, M. R. & Johnson, A. W., (1998), *op.cit*. in note 163, p.239; Zeitlemayr, L., *Wild Mushrooms, an illustrated handbook* (1968), Frederick Muller, p.112.
[170] Britten, J., *Popular British Fungi* (1877), London, p.63.
[171] *TWNFC* (1870), p.165.
[172] Legg, A. W., 'Your Top Twenty Fungi – the final list', *The Mycologist* 4(1) (Jan. 1990), p.23.
[173] Personal communication from Mrs J. Weightman, 10 October 2010.
[174] Boa. E., *Wild Edible Fungi. A global overview of their use and importance to people* Annex 2 (2004), Food & Agriculture Organisation. Sect. 2. Sect. 2. 'Characteristics'.

[175] White, Gilbert., *The Natural History of Selborne*, Seasons 1767–88; Foster, P.G.M., 'The Truffle Records of Gilbert White' *Bul. BMS* 20(1) April 1986, pp.42–47.
[176] Ramsbottom, J., (1953), *op.cit.* in note 5, pp.268–72.
[177] *TWNFC* (1877), pp.43–50.
[178] Personal communication from Mrs J. Weightman 4 March 2009.

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Rock slope failure and glaciation of the Darens, Olchon Valley, Herefordshire

By R. H. BRYANT

Black Daren and adjacent Red Daren are two prominent landscape features flanking the Olchon valley on the eastern edge of the Black Mountains. The area exhibits impressive evidence of rock slope failure (RSF) that is likely to represent an adjustment to previous glacial erosion of the slopes (paraglacial). There are also landforms present which are related to periglacial (cold climate) conditions. The embayment between the two Darens may have harboured a cirque glacier in the Late Devensian, the last glacial period in Britain. This assemblage of mountain features is unique within Herefordshire and Worcestershire, although similar landforms occur within other highland areas of Britain, including the nearby Brecon Beacons. Although the major landslips at the Darens can be considered to be in a largely arrested state, a number of smaller scale slope processes are currently active.

CONTEXT

On the western side of the Olchon valley in Herefordshire lie two prominent cliffed areas known as Black Daren and Red Daren.[1] The valley is one of five with a distinctive north-west/south-east trend characterising the topography of the Black Mountains (Fig. 1). The Darens themselves lie within the small area of the Brecon Beacons National Park situated in England. Perhaps because of their marginal position on the English/Welsh border, both the Darens and the valley as a whole have received scant attention in the geological literature. The most extensive descriptions were written as long ago as 1936 by Clarke.[2] In particular, although there have been extensive studies of the Quaternary features of the National Park, most notably in the Quaternary Research Association's Field Guide to the Brecon Beacons,[3] the geomorphological features within the Darens and the surrounding valley are rarely mentioned. This paper attempts to take some introductory steps towards rectifying that situation, in the hope that further work will be encouraged within the locality.

The Olchon valley has a wide, open aspect and is separated on its western side from the adjacent Honddu valley (also known as the Vale of Ewyas in its lower parts) by a whaleback ridge reaching to *c*.650m. (2000ft.). On its eastern side, the upper reaches of the Olchon valley are separated from the valley of the Monnow by a distinctive sharp ridge known locally as the Cat's Back. Further down river, the interfluve between the two is more subdued, and the two valleys merge at Longtown. The river system itself has an interesting geological history, and this is described elsewhere.[4]

This area of the Black Mountains is underlain entirely by sedimentary rocks which are mainly of Lower Devonian age and which dip from north-east to south-west at a low angle, typically less than five degrees. The lower slopes of the Olchon valley are cut into the relatively soft terrestrial mudstones and siltstones of the St Maughans Formation. The upper slopes are characterized by the well-bedded sandstones of the Senni Formation. Separating these two formations, is the Ffynnon limestone which occurs in the form of a nodular calcrete (chemical limestone), and this forms a distinctive and useful marker horizon throughout much of the valley.

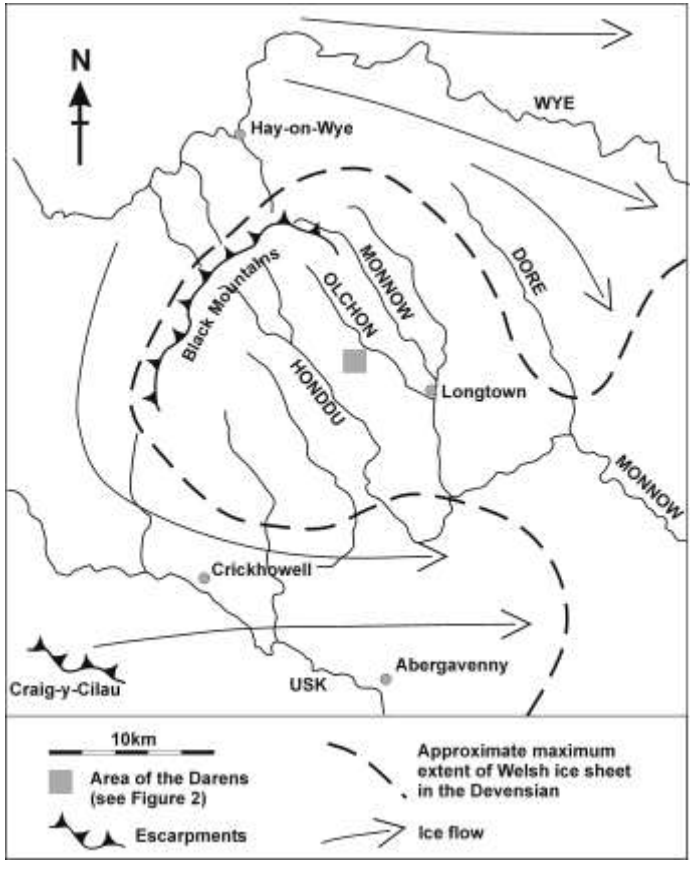


Figure 1. Location of the Darens in relation to the Welsh Late-Devensian ice sheet (*circa 18,000BP)*

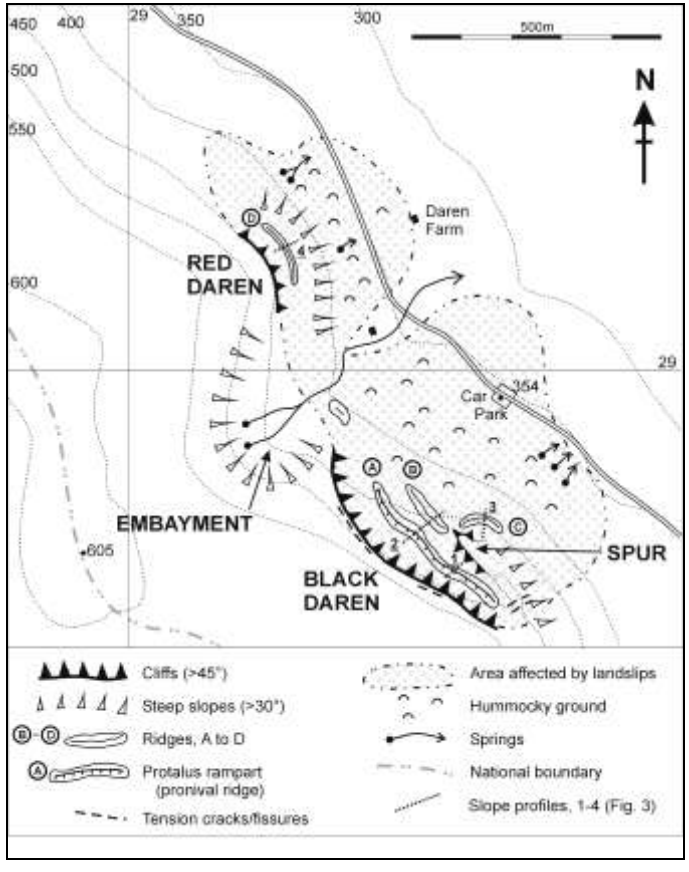


Figure 2. Geomorphological map of the landslips at the Darens

Geochronologically, within the valley there is then a huge gap between these rocks and those of the Quaternary era. 'Undifferentiated' glacial deposits, consisting largely of till, have been recorded in the bottom of the valley,[5] and can been seen in intermittent exposures in the banks of the Olchon brook, for example west of Longtown Castle (e.g. SO 318 288). These deposits lie outside the conventionally accepted limits of the last (Devensian) ice sheet emanating from mid-Wales.[6] During this glaciation, which reached its maximum extent about 18,000 years ago (known as the Last Glacial Maximum or LGM), the Olchon valley and surrounding uplands lay between the Wye valley glacier to the north and the Usk valley glacier to the south (Fig. 1).

The eastward flowing Wye valley glacier pressed against the northern edge of the Black Mountains to a height of *c*.300m., reaching eastwards into the Dore (Golden) valley and towards Hereford. No evidence has been found so far that it ever breached the head of the Olchon valley, and neither have erratics been identified lower down in the valley which would indicate invasion of ice from mid-Wales at this time. However, the possibility that a local valley glacier occupied the Olchon valley during one or more of the glacial episodes of the Late-Quaternary is debated later in this paper.

GEOMORPHOLOGY

The area immediately around Black Daren and Red Daren is designated by the British Geological Survey on the Talgarth map as 'landslip' and covers about 0.4km^2. The disturbed morphology of this terrain contrasts markedly with the generally smooth concave-upwards slopes characteristic of the western side of the Olchon valley. The bulk of the disturbed ground consists of generally unorganised humps (some up to 6m. in elevation) and intervening shallow hollows. The amplitude of these features tends to decrease downslope. In the upper reaches of this tract and especially immediately below the cliffs at Black Daren and Red Daren, the landforms are more organised and sufficiently distinctive to be described as discrete entities. An outline map of the geomorphology of the area is presented in Fig. 2, together with a number of measured slope profiles in Fig. 3.

Black Daren

The mountainside here is dominated by a prominent multi-ledged rock scarp trending approximately north-west to south-east, and is made up of a sequence of well-jointed sandstone ledges separated by weaker siltstone beds within the Senni Formation (Plate 3). The whole feature is about 500m. in length and 150m. high at its maximum, reaching to an elevation of 560m. O.D. A separate hard rock *spur* runs approximately parallel to the main cliff, but is joined to the cliff at its southern end. When viewed from its northern end, this spur forms a dramatic prow overlooking the valley below. As on the main Black Daren scarp, the cliffs of the spur are formed of massively bedded sandstones of the Senni Formation. Many of the surface joints on the spur have been widened by cambering, especially on the western side of the crest.

Between the spur and the Black Daren cliff, there is a narrow debris-filled valley which rises to the south (profile 1 in Fig. 2). Various possibilities for the origin of this valley are considered later in the context of other evidence. A series of stone streams and coalescing talus cones (scree fans) cover the lower slopes of the main cliff, and on a smaller scale also wrap around the northern prow of the spur. The majority of the boulders and other debris in these rockfall-related features are heavily lichen- covered, suggesting a large measure of slope stability, but there is also evidence of recent small-scale boulder falls, debris flows and rill

formation, especially on the western side of the spur. This activity was particularly marked after the severe winter of 2009/10, and again in January 2011.

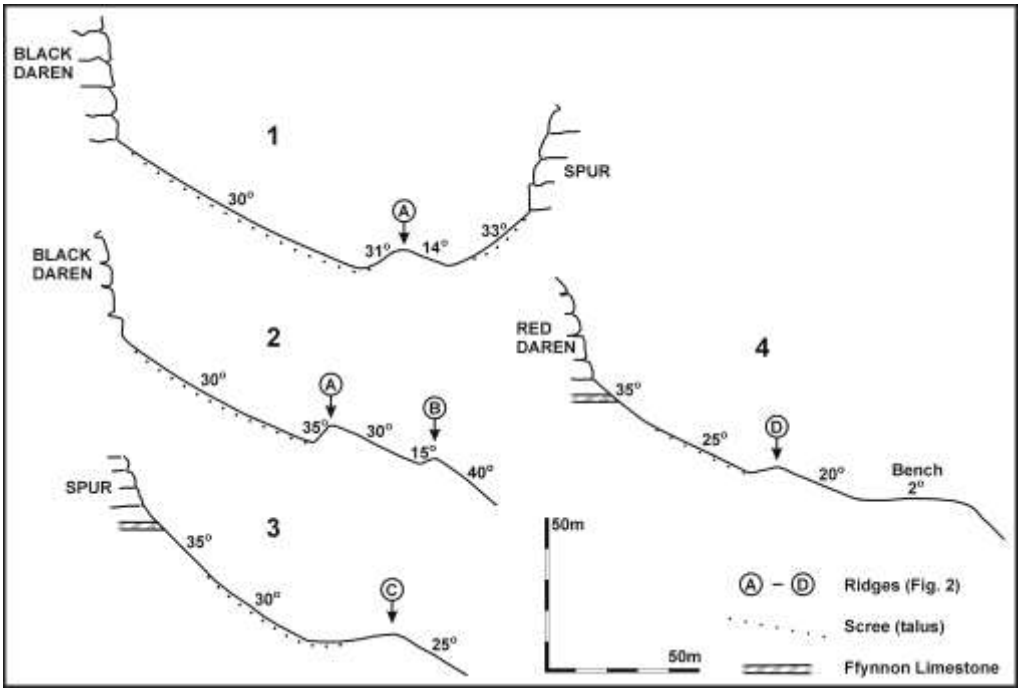


Figure 3. Representative slope cross-profiles of the depositional ridges. Note that the horizontal and vertical scales are the same

A prominent scarpfoot debris ridge (A, Fig. 2) runs the full length of the small valley. At its maximum, this ridge is 7-8m. high; it includes some very large rock slabs and angular boulders (> 2m.), and has slopes of >35° on both sides (see measured profile in Fig. 3). A second, much smaller ridge (B) emanating from the foot of the spur lies below and parallel to ridge A. In contrast, ridge B has a proximal (upslope) angle of 13° and a longer, steeper (30°) distal side. At the foot of the scree slopes on the eastern side of the spur is a third boulder ridge (C, in Fig. 2), which is about 300m. in length. It is much broader and less well defined than the other two ridges, but nevertheless encloses an elongated basin which holds water from time to time. Below these three ridges, and occupying all the ground as least as far down as the mountain road, is the main area of disturbed and hummocky ground. The area below the road is distinctly less broken than that above it, and terminates in an arcuate tongue marked by a line of trees.

Red Daren

The cliffs at Red Daren (Plate 4) are less extensive than at Black Daren, but they have a clear and consistent vertical stratification along their length, reflecting the regional geology. The Ffynnon limestone is almost continuously exposed at an altitude of 455-465m. along the 400m. length of the cliff. Above this horizon, the main scarp-formers mimic the same competent sandstone beds seen at Black Daren, and downslope, the solid rock is largely covered by the

products of slope weathering. The screes, although primarily comprised of sandstone debris, are notable in also containing a significant element of nodular calcrete, derived from the Ffynnon limestone outcrop. There is also scattered evidence of freshly fallen boulders at the foot of the scree. Geomorphologically, these slopes are among the most active in the study area.

Running parallel to the foot of the cliffs is a discontinuous boulder ridge (D) about 2m. high possessing a gently sloping inward face, and a steeper vegetated outer slope (profile 4 in Fig. 2). Some of the fresh boulders falling intermittently from the cliff face have enough momentum to roll as far as the top of this small ridge, and appear to be contributing to increasing its height. These various deposits rest on a broad quasi-horizontal bench which forms an apron around Red Daren. Although this bench could be a structural feature, it only occurs adjacent to the cliffs, and seems more likely to be product of large-scale landslipping.

The Daren embayment

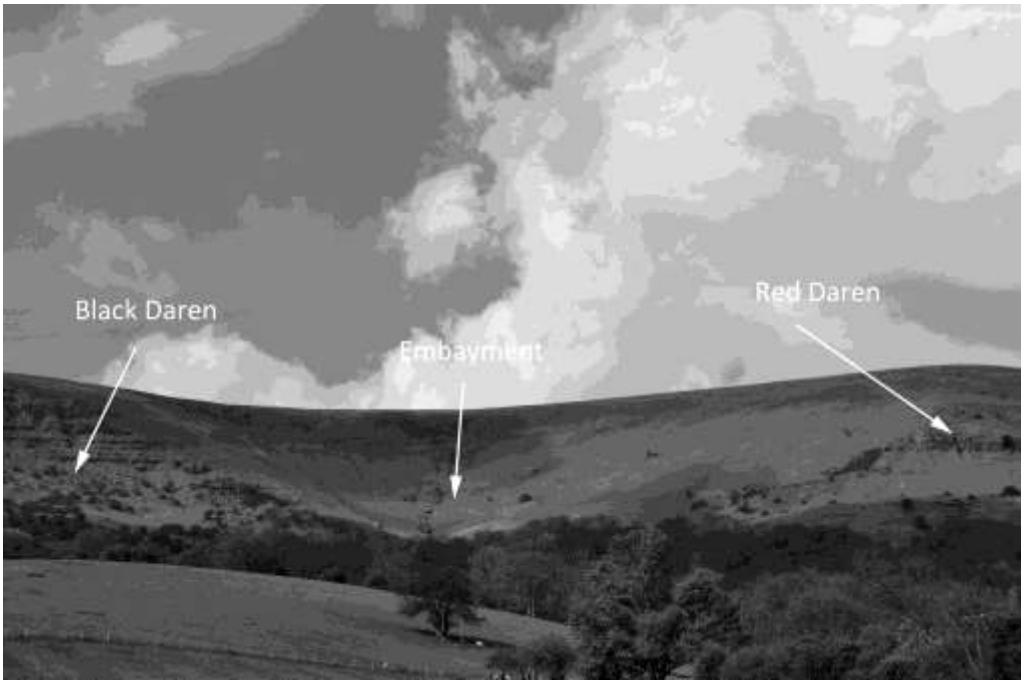


Figure 4. The embayment, flanked by the two Darens. The rock ledges within the embayment are now largely covered with slope debris and vegetation. Photo taken from the east

The two Darens are separated by a large embayment which has the form of a shallow bowl (Fig. 4). Any rock ledges within this feature are largely obscured by slope debris and vegetation. Gulleys within the embayment are incised to a depth of up to 3m. into the drift mantle. At the base of this embayment on its southern side, on the edge of the area visibly affected by mass movement, are two hillocks, one of which is an elongated mound 12-15m. in height and 100m. long. These hillocks are generally smooth sided with few projecting boulders. Below the embayment and flanking the main stream, the ground is markedly less

hummocky, and does not appear to have been directly affected by the landslips on either side related to the Darens.

Rock Slope Failure

On the basis of the observations outlined above, the essential features of the Darens would appear to be most obviously a function of the underlying solid geology and mass movement, principally rock slope failure (RSF). The landslipped area seems to be now in an arrested state, in which the potential for further major change under current conditions has been largely exhausted. Elsewhere in the Black Mountains (e.g. at Cwmyoy in the Honddu valley), some minor adjustments to landslipped areas with a similar lithological arrangement do occur from time to time. Notwithstanding, the major landslips at the Darens as we see them today are relict and are likely to have taken place under different climatic and hydrological conditions from the present.

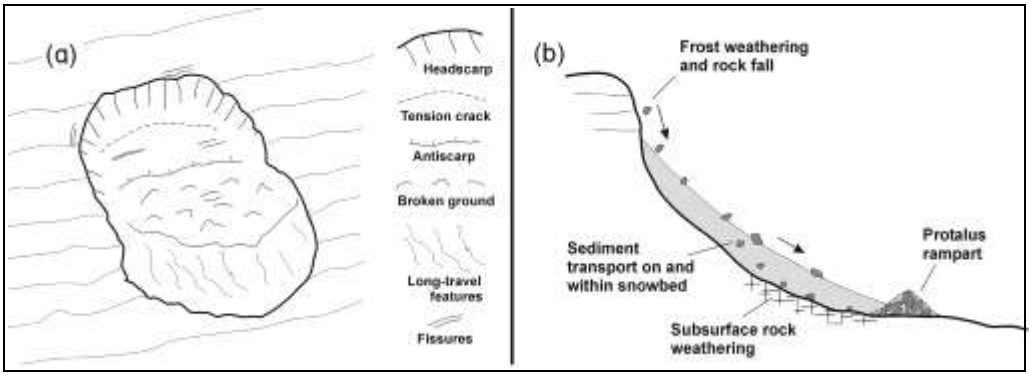


Figure 5. (a) Model of sub-cataclasmic slope failure (after Jarman); (b) Model of the formation of a protalus rampart by processes associated with a snowbed

The lithological differences between the St Maughans formation and the overlying Senni Formation are clearly significant in having provided the potential for slope failure to occur. The St Maughans strata, which is generally the weaker of the two, undoubtedly provides the primary seat of the main RSF features, both here and in other Black Mountain valleys possessing a similar lithological arrangement. The majority of the modern day springs and water seepages within the Olchon valley emanate in this formation (i.e below the Ffynnon limestone marker horizon), providing potential slip-plane surfaces for the collapse of the stronger sandstone members within the Senni Formation above. Rotational failure seems to have occurred in the immediate area of the Black and Red Daren cliffs, where the St Maughans beds have suffered from reduced cohesion and/or removal of support, allowing the upper Senni strata to collapse and back tilt, as witnessed by the form of some of the ridges and the attitude of the larger rock slabs. Lower down, translational slumping, sliding and flowage have carried debris towards the valley floor.

Although a precise classification of mass movements is difficult, these features at Black Daren and Red Daren can be usefully placed within a morphological typology devised by Jarman on the basis of RSF identified in the Scottish Highlands.[7] One of his key categories is described as ‘subcataclasmic’ (Fig. 5a), meaning that a semi-intact large scale slide has taken

place with reasonably clear margins. This type of landslip typically has a distinct headscarp (i.e. the Daren cliffs), accompanied by evidence of extensional forces in the form of fissures and small scale graben, as well as lateral tension cracks which are still observable today along the top of the Black Daren cliffs. Below the headscarp there is a depositional sequence consisting of successively, ridges and antiscarps (ridges with their steepest slopes on the upward-facing side) nearest the seat of failure, a middle section composed of more chaotic terrain, and the lower part characterized by long-travel features indicative of soil and rock flowage. The mapped geomorphology of the Darens appears to be broadly consistent with this model.

One intriguing question here is whether the whole of the Black Daren spur is a large scale extensional mass movement feature, deriving its form and position from lateral sliding away from the main headscarp and thereby opening up the small valley in between, or whether the spur is *in situ*, and the intervening valley is the product of other subaerial erosion processes. Close examination of the beds in both the cliff and the spur appears to indicate that they are laterally consistent. In particular, on the western side of the spur, the Ffynnon limestone is well exposed at an elevation of 450m. O.D, where it is up to four metres thick. This is compatible with its slightly higher elevation as well as its thickness in the cliffs at Red Daren (0.8 km. away). Five kilometres to the north at the head of the Olchon valley this same limestone bed occurs at 560m. and at a similar distance to the south it is about 390m., giving an overall regional dip of *c*.4°. The elevation of the Darens exposures are consistent with this trend.

This evidence tends to suggest that if substantial lateral movement to the whole spur has taken place, it has not involved significant vertical displacement. However, on a smaller scale, at the point where the spur is attached to the main valley side, there is evidence of the existence of tension cracks and graben forms, which indicate that extensional forces have been in play here. In addition, at the northern end of the spur, there is a tensional (wedge) fault involving a vertical displacement of about two metres (Plate 5). Overall, it seems likely that the small valley between Black Daren and the spur may have started out as a tension fissure, which then has been exploited and widened by subaerial processes, and has gradually isolated the spur. Although there has been some localized rock displacement within the spur, as a whole it does not appear to have suffered from substantial movement.

The depositional features

The determination of the exact origin of scarpfoot debris ridges in mountain areas is notoriously difficult because the evidence tends to rest on subjective morphological relationships. In many of these situations, mass movements, pronival processes (those associated with permanent snowbeds), and glacial action are all possible contenders for creating linear or arcuate landforms at the base of steep cliffs. Jarman has recently produced a salutary overview of the problems involved in the interpretation of such features in Wales.[8] Nevertheless, as a logical starting point, the debris ridges identified earlier in this paper (A – D, Fig. 2) appear to be related in various ways to mass movement, although they have varying character, and arguably some have been considerably enhanced or modified by non mass movement processes.

Ridge A is the most extensive and problematic of the ridges. It is closest to the main cliff and runs the full length of the cliff base, rising in elevation from north to south within the valley between the cliff and the spur. Although it can be traced continuously, its northern and southern sections have sharp crests whereas the middle third opposite the spur is a more

subdued. In the context of RSF, its disposition might suggest that it is an antiscarp ridge, but its markedly steeper side faces uphill, towards the Black Daren cliffs, which is not typical of a classic antiscarp ridge (Plate 6).

Given its profile and its composition of stacked boulders and large slabs of rock similar to those found in the scarp-foot talus, it is suggested here that the ridge is primarily a protalus rampart, or more strictly speaking, a pronival ridge. This proposition asserts that it would have been built up along most of its length by talus (scree) accumulation and rockfalls, under conditions in which a permanent snowbed (or possibly a niche icefield, discussed later) was once banked against the Black Daren cliff. Rock debris from the cliff above would have been transported both within the snowbank and across its the surface, largely by sliding, to its foot (Fig. 5b). The presence of a linear snowbed at this location enhances the likelihood that any meltwater and freeze-thaw action would have further reduced the cohesion of the local rock, favouring slope instability and mass movement. It is significant that the site has a north-easterly aspect, giving it maximum protection from solar insolation, and in a favourable position to receive snow blown from the west off the broad plateau area above. Shakesby, Coleman, and Carr[9] have pointed out that sites in the Brecon Beacons area which occur below escarpments lying transverse to the wind, and with maximum protection from the sun, are those where snowbeds (and cirque glaciers) would have existed preferentially during the last glacial period. Black Daren fits these criteria well.

Although according to Jarman,[10] slides have very few antiscarp ridges; *Ridge B* fits most closely to the idealised form of a simple antiscarp ridge (profile 2, Fig. 3), with its 3m. high scarp facing uphill, and a longer and steeper downside slope. This strongly suggests rotational movement, as suggested earlier. It may also be that *Ridge A*, at least in some parts of its length, was initiated as a similar ridge and then later enhanced by nival processes. *Ridges C and D* are much broader and at their surfaces are formed by a chaotic assemblage of boulders. These two ridges seem likely to have had a translational rather than a rotational origin. As noted earlier, the scarpfoot ridge (C) at Red Daren is still being enhanced from time to time by falling and rolling debris. In contrast, at Black Daren, because of the very much larger size of the scarpfoot ridge (A), any rockfalls from the cliff are currently being trapped in the linear trough between the ridge and the cliff foot and, if this process were to persist over a long period of time, would gradually lead to its infill.

Periglacial and paraglacial conditions

Even given favourable lithological and structural arrangements, for RSF to have actually occurred at the Darens would also have required the generation of impetus for failure, i.e. sufficient weakening of the lower slopes by the prevailing hydrological conditions or the removal of support by erosion, or both. The most likely circumstances in which the resistance of the strata to failure will have been readily overcome is in a periglacial (cold climate) environment. Under these conditions, elevated groundwater tables and high pore water pressures would have pervaded in the finer grained rocks, and high cleft water levels are likely to have occurred in the more competent strata. However, this by itself would not explain why RSF has occurred specifically at the Darens, and not more generally within the Olchon valley, despite the uniform geological set-up. In fact, the most widespread effect of periglacial conditions in the valley seems to have been to produce large amounts of slope debris which now blankets much of the upper valley slopes, giving them a distinctive smooth profile (Fig. 6). This process, which entails repeated freezing and thawing of the slope mantle and gradual

downward sludging of the material is known as gelifluction (sometimes referred to as solifluction, but strictly speaking this is a more general term for slope creep, not necessarily occurring in a cold climate).

Figure 6. Smooth geliflucted slopes on the western side of the Olchon valley, taken from Black Daren looking south.

In contrast to these smooth valley-side slopes, Black and Red Daren are markedly reminiscent of glacially truncated spurs found within glaciated valleys elsewhere in the mountain areas of Britain. There are also other features, notably the arête-like Cat's Back in the upper eastern side of the valley, which appear to have a glacial origin. Such morphology strongly suggests that within the Olchon valley, the attenuation of pre-existing valley-side spurs by glacial erosion may have produced the conditions for potential large scale slope failure at the Darens. The presence of a valley glacier is likely to have enhanced erosion by producing increased pore-water pressures in the adjacent valley sides, further weakening the rock. In other words the Olchon valley in part reflects a 'paraglacial' environment in which the landslips can be seen as essentially an adjustment to a previously created glacial landscape.[11] This concept has also been suggested in respect of the adjacent Honddu valley.[12]

Although it is of course appreciated that not all landslips in Britain require paraglacial oversteepening as a pre-requisite for failure (e.g. on the Cotswold scarp), all the cited examples of RSF in Scotland occur within the area glaciated by the Late-Devensian ice sheets, and the majority also occur within the Loch Lomond (Younger Dryas) stadial limits (*c*. 12,800-11,400 B.P).[13] In many of these cases, glacial breaching of watersheds has been identified as a significant factor in creating steep and potentially unstable slopes. However, as already noted, there is no sign of breaching of the head of the Olchon valley from the north by the Late-Devensian ice-sheet which emanated from mid-Wales. We therefore have to postulate either an ice-sheet glaciation which left no obvious evidence of glacial breaching or erosion at the heads

of the Black Mountain valleys, perhaps because slow moving cold-based ice was involved, or a local valley glaciation. In either case, glaciation of the Olchon valley has not left any glacial depositional landforms which have been recognized so far.

Similar questions about the possibility of recent valley glaciations in the eastern part of the Black Mountains at the Last Glacial Maximum have been raised by Thomas and Humpage.[14] They note that the Honddu valley bears no evidence in the form of glacial depositional features of recent ice sheet invasion, but does display compelling evidence of glacial modification, particularly below Llanthony. They suggest that it is possible that at the maximum of the last glaciation, Usk valley ice coalesced with ice at the mouth of the Honddu valley ice to create the moraine at Llanvihangel.

Cirque glaciation

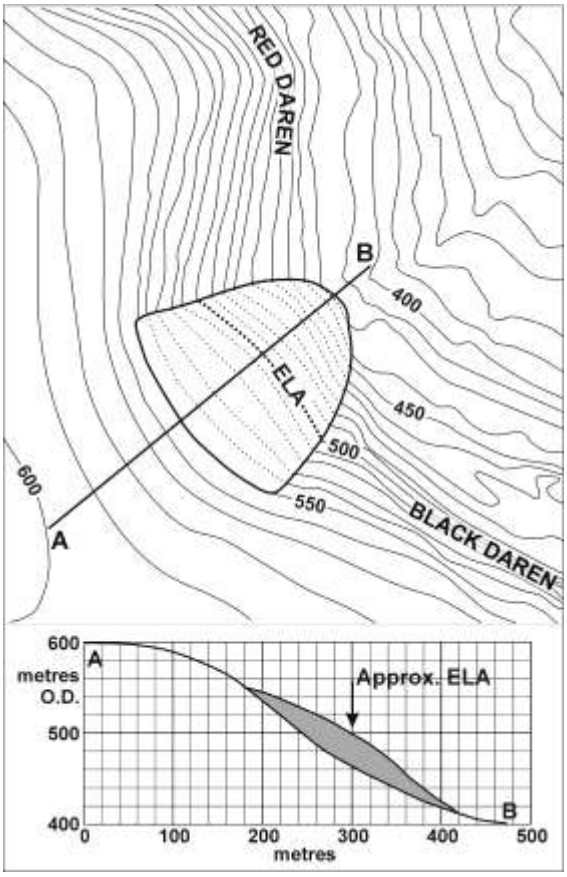
The likelihood, discussed earlier, that a permanent snowbank at Black Daren was instrumental in creating a scarpfoot ridge against the base of the Black Daren cliff raises the question as to whether a small niche glacier may have also existed here at some point in time. It is difficult to estimate how far up the cliffs the upper limit of a snowbank or ice body may have lain, and therefore to calculate how deep it was, but it seems unlikely that its depth would have been sufficient (> *c.*22m.) to have overcome basal shear stress in the ice-body and enabled any significant glacial movement. Although the steep inner face of the ridge (A) could be interpreted as an ice-contact face, the crestline of ridge shows no sign of glacial disturbance and moreover no striated clasts have been observed. The presence of glacial ice at this particular locality as a formative agent in the morphology of the ridge therefore seems unlikely on the evidence available.

A further interesting scenario is that the embayment between the two Darens is a former glacial cirque, as was first suggested by Clarke.[15] Although it does not fit the classic deep armchair hollow typical of those cirques created during the Younger Dryas stadial, the embayment has a bowl-like shape which has been modified by partial infilling by the drift mantle. It faces north-eastward and it certainly has no semblance of a fluvially produced v-shape valley. The two hillocks at its lower end, described earlier, are located in a rather anomalous position, but they do not appear to be related to the main Black Daren headscarp. They may therefore be moraines, as it is difficult to see what else they might be, but this would have to remain a tentative observation in the absence of any exposures in these features. Although there is an exposure of till on sloping ground about 200m. below the embayment, at Little Daren Farm (SO 295301), this deposit is not directly related to the two hillocks or to any other recognizable surface feature.

In a wider context, it is relevant that about 4km. away on the other side of the mountain ridge in the adjacent Honddu valley, there is similar eastwards-facing cirque-like embayment surrounded by a very obvious arcuate moraine ridge. The basal elevation of this hollow is c.400m, and the top of the backwall is just over 550m. The top of the backwall of the Darens embayment is less pronounced but lies at about 570m, and the basal lip of the bowl is about 410m. Allowing for the highest level of any ice present in the Daren embayment to be at least 20m. below the top of the backwall, this would place the equilibrium line altitude (ELA)[16] at *c.*490m.

For further comparison, the nearest well-documented cirque to the Daren embayment is at Craig-y-Cilau, *c.*16km. to the south-west (SO 196160).[17] Here, a basin has been identified which has an upper headwall at *c.*400m. O.D. and a base at *c.*310m. O.D., giving a theoretical

ELA of about 330m. O.D. Even allowing for a regional eastwards rise of this line, it is suggested here that the Daren embayment could well have supported glacial ice at the same time as the Craig-y-Cilau example. Whether the Darens ice was feeding into a contemporaneous valley glacier, or whether it represents a later independent glacial episode will need to await further investigation. On the basis of the results of glaciological calculations employed for Craig-y-Cilau and for elsewhere in the Brecon Beacons,[18] the putative cirque at the Darens is unlikely to be of recent (Younger Dryas stadial) origin. The ELA is too low compared with the cirques of known Younger Dryas age in the higher parts of the central Brecon Beacons, and there are no unambiguous glacial features which have the 'freshness of form' normally associated with the Younger Dryas stadial. A tentative reconstruction of the glacier has been attempted in Figure 7.



There continues to be much debate about cirque-like features within the Brecon Beacons National Park, and in this context any conclusions made about the origin of the Darens embayment must remain tentative, pending more detailed field evidence and quantitative analysis. Nevertheless, the embayment appears to be a good candidate for a shallow cirque glacier.

Finally, we may note that Clarke observed that the head of the Olchon valley also has a cirque-like form.[19] Here the headwall reaches to 600m. O.D. Below, there is a large mass of sediment disposed as a broad arcuate ridge lying across the valley at right angles to the stream. Exposures (e.g. at SO 269343) indicate this to be composed of glacial till, at least in part. In his review of glacial cirques in the Brecon Beacons, Evans has commented that there are several problematic valley heads in the Black Mountains,[20] and the Olchon valley is one of them.

Figure 7 (left). Reconstruction of a cirque glacier in the Darens embayment

CONCLUSIONS

The Darens represent an interesting example of the results of slope failure of competent rock strata over less cohesive finer grained lithologies. A combination of rotational slipping, rockfalls, and translational sliding have created the landforms seen today. The main scarpfoot

ridge (A) is believed to be a composite feature resulting from mass movement and nivation processes associated with snowbanks. The environmental conditions which provided a groundwater regime most conducive to mass movement is most likely to have occurred under cold-climate (periglacial) conditions during the late-Devensian glaciations, but the potential for failure was essentially provided by the paraglacial situation resulting from the last occupation of the Olchon valley by glaciers.

In attempting to unravel the chronology, it is clear that the last significant geomorphological event affecting the Darens was the occurrence of the major landslips. These are the most distinctive landforms in the upper Olchon valley, and moreover the area of deposition resulting from RSF appears to cut into the smooth geliflucted slopes of the valley on either side. There is no sign of the mass movement features themselves having suffered from subsequent gelifluction. Whether the Daren landslips took place as one semi-catastrophic event, or in several phases, is a debatable question. The presence of multiple ridges at Black Daren might suggest more than one phase of activity. If the arguments about the creation of Ridge A by paraglacial rock instability and pronival processes are accepted, then this episode, which it is suggested took place under cold climate conditions, is not necessarily the same episode which created the more chaotic ground lower down. Similarly, at Red Daren, the formation of the small scarpfoot boulder ridge would appear to be a separate episode from the earlier creation of the large landslipped bench on which it sits.

In Scotland, most of the examples of RSF recorded by Jarman appear to be of early Holocene age[21] and have occurred as a result of postglacial (i.e, after the Younger Dryas in the case of the North-west Highlands) relaxation of the valley sides, after the disappearance of the ice. Applying this idea to the Darens, then the Olchon Valley landslips, viewed as 'postglacial', could have occurred anytime after the Last Glacial Maximum, including the Younger Dryas and the early Holocene.

Whenever it occurred, the evidence set out above implies that the last glaciation of the Olchon valley, including any separate cirque glaciation, must predate the gelifluction of the slopes, since both the Darens embayment and the upper head of the valley appear to be affected by gelifluction processes. However, the temporal relationship of this last glacial episode within the Olchon Valley to the Devensian ice-sheet which pressed against the northern slopes of the Black Mountains and reached the Dore (Golden) Valley is not clear. In contrast to the many landforms of glacial deposition which have been assigned to this ice-sheet, no similar landforms have yet been identified in the Olchon, Upper Monnow, and Honddu valleys. One possibility is that the Devensian valley glaciers in this area have left no readily identifiable traces of depositional features. Another possibility is that the last glaciers to occupy the Olchon valley relate to an older glacial episode and any depositional forms have been subsequently subdued by erosion. The low-lying patches of till in the floor of the Olchon Valley would seem to reflect such an earlier glaciation. Several candidates for such a pre-Devensian glaciation of the Marches have been proposed, including Mid-Devensian, Wolstonian, and Anglian.[22] Generally in Herefordshire, tills lying outside the Late-Devensian ice-sheet limits, such as the Coddington till (part of the Risbury Formation) in the east of the county, have been ascribed to an Anglian-age glaciation (*c*.450,000 years ago).[23] However, specifically for the Olchon valley, this stratigraphical conundrum will need considerable further work to resolve, as no evidence is currently available which would allow for direct dating of the features examined in this paper.

On balance, although the evidence is by no means conclusive, perhaps the most reasonable working hypothesis is that the Olchon valley, together with the other eastern valleys in the Black Mountains, was last occupied by ice during the Late-Devensian, creating or refreshing the open valley form. Cirque ice in the Black Daren embayment is likely to have contributed to this glacier. However it is highly unlikely on the basis of current assumptions about its ELA that neither this embayment, nor the Olchon valley head, were reoccupied by ice during the Younger Dryas stadial. Instead, gelifluction of the slopes took place sometime after the LGM. Subsequent to this, perhaps in the early part of the Holocene, large-scale rock slope failure occurred as a long term response to the oversteepening of the slopes. Lastly, small-scale slope adjustments have continued to occur from time to time both at the Darens and also elsewhere in places with similar lithologies within the region, but overall the slope system can be considered to be largely arrested.

As this paper rests primarily on morphological analysis, it has undoubtedly raised more questions than it has answered. There is considerable potential for further investigations of the geomorphology of the Darens and of the valley as a whole. The mechanics of the mass movement phenomena at the Darens are poorly understood. Without the use of heavy equipment, it is not readily possible to determine the detailed internal structure of the depositional ridges and reach firmer conclusions about their origin in relation to RSF and other processes. As a basis for calibrating the significance of the main landscape-forming events, there is also an evident need to establish a more secure geochronology for the Quaternary history of the area. In particular, it needs to be determined whether the whole valley or just the cirques were glaciated during the Late-Devensian, and to clarify the timescale involved between paraglacial relaxation of the slopes and the occurrence of RSF at the Darens.

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[10] *Op. cit.* in note 7, p.166.

[11] The generally accepted definition of 'paraglacial' is '*non-glacial Earth-surface processes, sediment accumulations, landforms, landsystems and landscapes that are directly conditioned by glaciations and deglaciaiton*', Ballantyne, C. K., 'Paraglacial geomorphology', *Quaternary Science reviews* 21 (2002), pp.1935-2017.
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[13] *Op. cit.* in note 7, p.170.
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[15] *Op. cit.* in note 2, p.165.
[16] The Equilibrium Line Altitude represents the average elevation of the surface division between the accumulation zone and the ablation zone of a glacier. It is sometimes referred to as the firn line, and in the case of a cirque glacier, is normally calculated as being 3/5ths of the way up in terms of elevation. Because of the tentative nature of some of the evidence, this is the measure employed in this paper. More sophisticated measures are available, relating to steady state mass balance dynamics, e.g. in S.J. Carr *et al*, *op. cit.* note 3, pp.57-65.
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Charles Anthony and the events leading to the founding of the *Hereford Times*

By JOHN C. EISEL

Figure 1. Charles Anthony in 1854. (Hereford Reference Library)

In 1832 the Hereford Times*, the brainchild of Charles Anthony, the first proprietor and editor, began publication and it is still going strong today, although very much expanded from its original size of four pages. Charles Anthony was a prominent figure in the history of Hereford, and used the* Hereford Times *to campaign about various issues relating to the city. Indeed, so successful was he that he served as Mayor of the city on six occasions, and is regarded as the father of modern Hereford. However, his personal background and the circumstances of how he came to establish the* Hereford Times *have not been explored in detail: this paper is an attempt to repair that omission*.

BACKGROUND HISTORY

George Anthony and Mary Hedgins, the parents of Charles Anthony, were married at Llangarron on 12 April 1792, and their first child, Elizabeth, was christened there on 29 January 1794.[1] George Anthony's trade was given in a report that appeared in the *Hereford Journal* of 29 June 1796, which stated that George Anthony, a shoemaker of Llangarron, had been committed to the County Gaol the previous week, accused of stealing a mare belonging to Mr James Howells. Fortunately the assizes were due, and four weeks later the *Hereford Journal* reported that the assizes had finished the previous Friday (22 July) and that '*George Anthony*, charged with stealing a mare, the property of James Howells, was acquitted;…' Subsequently George and Mary Anthony moved to Hereford, where they lived in Broad Street, and they were there when Charles Anthony was born on 22 September 1802.[2] He was christened at St. John's, Hereford, on 6 March 1803.[3]

George Anthony used the *Hereford Journal* to publicise his business as a boot and shoe maker, and an advert that appeared in the issue of 26 September 1804 expressed his thanks for the patronage that he had received, of which he hoped a continuance, and informed the ladies that he had 'just received a choice selection of the most elegant and fashionable Patterns for Shoes, with a variety of fancy articles.'[4] Evidently there was not enough money in making bespoke footwear of this type, and on 18 April 1810 he advertised that he had just opened a warehouse for cheap ready-made shoes in Broad Street, and that there would be constantly for sale upwards of 15,000 pairs of shoes, with a variety of fancy articles. The bespoke trade would continue as usual, but 30 experienced journeymen cordwainers were wanted immediately.

Whether this was just hype or whether George Anthony actually expanded his business to this extent will probably never be known, but certainly the poor economic climate then prevailing was against him, his business failed in 1815 and bankruptcy followed. On 12 July 1815 it was announced in the *Hereford Journal* that George Anthony had assigned his goods to specified persons for the benefit of his creditors, and in the same issue it was also announced that his stock-in-trade was to be sold by auction. Then on 2 October 1815 there was an advert for meetings about his bankruptcy that were to take place in the Black Swan, Hereford, and a week later there was an announcement that a dwelling house in Broad Street, in the possession of Mr George Anthony, was to be sold by auction. This was held by lease from the College of Vicars Choral, the 29-year lease only beginning the previous year. On 30 April 1816, it was advertised in the *London Gazette* that George Anthony's certificate of discharge would be granted unless cause to the contrary was received by 21 May 1816. He lived only a few years after his bankruptcy, his death being announced in the *Hereford Journal* of Wednesday 14 April 1819:

> 'On Sunday last died, aged 53 years, Mr Anthony, shoemaker, of this city.'

THE MANCHESTER WAREHOUSE

With the loss of George Anthony's business and home in 1815 there was a need for income for the family, and this seems to have been provided by his daughters Elizabeth and Mary, although no doubt other members of the family were involved. To understand the background to this it is necessary to backtrack a few years.

In 1805 a new shop was built at what was then 2 Widemarsh Street, the first five-storey building in Hereford.[5] The building is still there, but has since lost its three top floors and is now no. 4. The pages of the *Hereford Journal* are silent about who first occupied this building, but on 31 July 1811 one T. Nelmes advertised that he had taken this warehouse which would be opening on 3 July selling 'Cheap and Fashionable Linen Drapery.' It seems that rumours spread that he had only opened for a few months to dispose of surplus stock from London, which he denied in an advert a fortnight later. He seems to have been prone to upset people, and on 11 December 1811 he found it necessary to put in an advert to refute what he claimed were false and malicious reports that had been circulated.

Figure 2. Hereford: No. 4 Widemarsh St., formerly No. 2, the site of E. & M. Anthony's 'Manchester Warehouse'. (Derek Foxton collection)

It is likely that he continued in business at 2 Widemarsh Street until at least 1814, as on 6 April in that year he advertised that he had taken no. 9 Widemarsh Street, next door to the entrance to the new markets, thanked those who had supported him since his commencement in business, and informed the public that he was opening the following Saturday.

After Nelmes left there is no clue about who was occupying 2 Widemarsh Street until the issue of 1 May 1816 when E. & M. Anthony advertised that the Manchester Warehouse, Widemarsh Street would open on 4 May with an assortment of drapery, mercery, hosiery and haberdashery at very much reduced prices.[6] The philosophy of the business seems to have been rather like Tesco's, 'pile 'em high, sell 'em cheap.' On 14 June 1820 it was advertised that the business would be closed for the next two days, and then reopen 'with a very Extensive Assortment of Goods, purchased agreeable to the unprecedented low state of the Markets.' Pigot's trade directory of 1822 recorded that Eliz. and Mary Anthony were linen and woollen drapers in Widemarsh Street, and on 30 October 1822 E. & M. Anthony of the Manchester

Warehouse at 2 Widemarsh Street advertised that they had received their winter stock at advantageous prices.[7] In July 1823 the firm became Anthony and Watkins, who advertised their new commodious premises at 2 Widemarsh Street and 2 High Town, which were to be opened on 12 July. New stock of linen and woollen drapery had been obtained from London and Manchester, advantage being taken of their local connections and also being manufacturers.[8] A shorter advertisement a fortnight later stated that 2 High Town had been owned by Mr John Allen, the bookseller, and that a connection had been made between the two premises.[9] The identity of the Watkins half of the partnership has not been established, but it may be more than a coincidence that the building was owned by a Mr William Watkins. However, the partnership does not seem to have lasted long, and an advert on 16 June 1824 for new stock of mercery and haberdashery referred to the firm as Anthony and Co., a name which was also given in an advertisement of 27 April 1825.

It seems that the business subsequently closed, as on 31 May 1826 Charles Anthony advertised in the *Hereford Journal* that he had reopened 'The Old Manchester Warehouse' at 2 Widemarsh Street, opposite Messrs. Bulmers, stocking a similar range of goods as previously, and also stating that there was no connection with the business at 2 High Town.[10] Although this is the first direct evidence of Charles Anthony being involved in the business, it seems that he may well have been involved from the start. When he was only about nine years old he left Hereford to make his own living, and was away for about six years, most of the time in Manchester.[11] A later account states that he was brought up by William Anthony, an uncle who was a Manchester textile manufacturer, and so gained experience in the textile trade useful when he returned to Hereford.[12] The dates suggest that he returned about 1816 or 1817, either when the business was first set up, or just after, and although young, his experience and contacts would have been invaluable.

With the re-establishment of the business in 1826, Charles Anthony was certainly very much in charge and with his new status he clearly felt the time had come for him to settle down. On 5 September 1826 he married Eliza Hawkins, eldest daughter of Mr James Hawkins of Monmouth, the ceremony taking place at Monmouth parish church.[13] His business obviously was important to him, and he continued to advertise in the *Hereford Journal*. He also diversified, and on 15 July 1829 C. & W. Anthony advertised that a shop with a stock of London hats had been opened at 4 Widemarsh Street, a premises formerly occupied by Mr Daniel Patrick, a draper. Four weeks later an advert calls it a 'New and Cheap Hat Warehouse.' The 'W' in 'C. & W.' was William, almost certainly Charles's younger brother.[14] On 18 August 1830 Charles Anthony advertised hop-sacking in anticipation of the hop harvest, and also twilled hemp sacks, an advert which included the New London Hat Warehouse at 4 Widemarsh Street. From a wood-cut in another, longer, advert of 3 November 1830 the premises at 2 Widemarsh Street can be positively identified.

However, despite this reliance on advertising in the *Hereford Journal*, at this time there was friction between Charles Anthony and Edwin Goode Wright, the editor of the *Hereford Journal*, and this was going to get much worse. Indeed, it is quite likely that this ill-feeling contributed significantly to Charles Anthony's decision to set up the *Hereford Times* in 1832.

THE FLOYD CASE

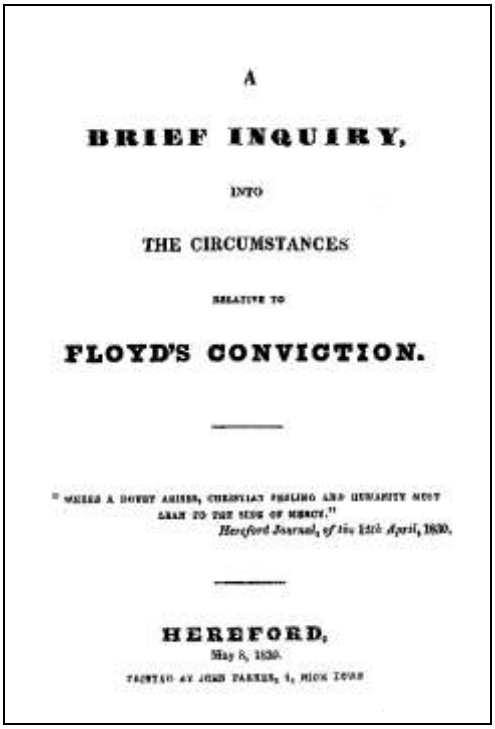
There is little doubt that Charles Anthony had a keen sense of justice, liked a good argument, and was persistent. These qualities were perhaps what led him to establish the *Hereford Times*, but there was a background of antagonism to Wright, the editor of the *Hereford Journal*, which may have provided the final spur.

Anthony's sense of injustice, and the first conflict with Wright, came in 1830 over a court case about the death of an old soldier, one Francis Wellington. He had walked into Hereford from his home in Lugwardine on 3 November 1829, the object being to collect his pension from the Excise Office. Being an old soldier and no doubt liking something strong to drink, he visited the Elephant and Castle in St. Peter's Street, where his relative affluence was noted. It is not too surprising therefore that on his way home he was attacked in Tupsley, beaten about the head and robbed, and only managed to struggle home many hours later. He was already in poor health, suffering from consumption, and subsequently died on 3 March 1830. Soon after the assault three persons, Robert Floyd, James Williams and John Roberts (alias Spencer) were arrested and charged with robbery on the highway,[15] to which murder was added after the death of Wellington. They were tried at the spring assizes which began on 25 March 1830 and at a preliminary hearing a true bill was found against the three men,[16] and the consequent trial started on 31 March. Long and conflicting medical arguments followed, and it was concluded it could not be proved that the assault had accelerated Wellington's death, and the charge of murder was dropped, but the other charge was proceeded with. All three men were found guilty, despite Robert Floyd having claimed that he had spent that night with a woman—no doubt of easy virtue—at a house in Bowsey Lane, and all were sentenced to death. There was a long report of the trial in the *Hereford Journal* on Wednesday 7 April, and in a news report on the opposite page, summarising sentences handed down at the assizes, it was stated that signatures were being collected on a petition in favour of Floyd; in view of later events it is very likely that Charles Anthony was involved in this petition. A week later it was announced that James Williams would be executed on the following Saturday, that Floyd had been respited until 15 May and that Roberts's sentence had been commuted to transportation for life.[17] With respect to Floyd, the *Journal* went on to say

> 'Circumstances have arisen, which place Floyd's participation in the crime of the other two in a questionable point of view, and caused a petition in his favour to the Judge. – Williams, almost on the brink of eternity, at present solemnly asserts that Floyd was *not* concerned in the robbery, whereas Roberts positively says that he was assisting in it, and there is certainly much difficulty in judging between them, but it is to be hoped that at the last moment Williams will tell the truth. It is perhaps better that a guilty man should escape, than one innocent one suffer, and where a doubt arises, Christian feeling and humanity must lean to the side of mercy.'

Obviously Wright had already made up his mind about the reliability of Williams's evidence. The execution duly took place outside the gaol in what is now Commercial Road, and despite Roberts's implication of Floyd, James Williams maintained to the last that Floyd had not been involved.[18] The report of the execution in the *Hereford Journal* went on to say, with respect to the claim that Floyd was not involved: 'but we deem it proper to state that a very different impression prevails with those competent to judge on the subject.'

Clearly the editor was again disagreeing in print with those who saw Floyd's conviction as a miscarriage of justice.



A

BRIEF INQUIRY,

INTO

THE CIRCUMSTANCES

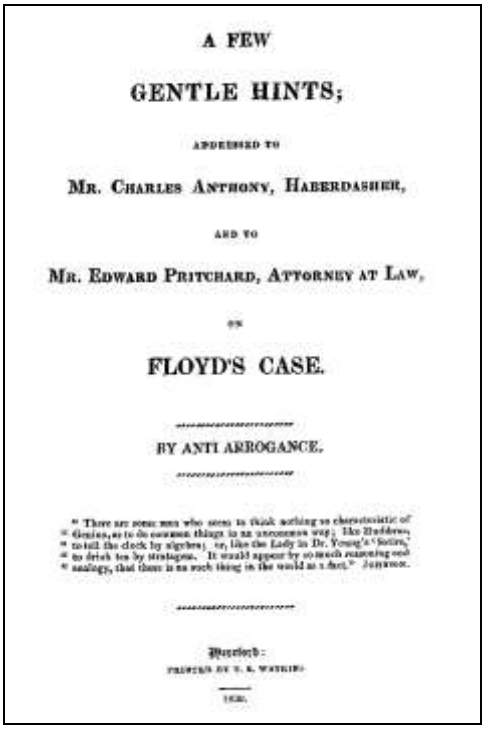
RELATIVE TO

FLOYD'S CONVICTION.

"WHERE A DOUBT ARISES, CHRISTIAN FEELING AND HUMANITY MUST LEAN TO THE SIDE OF MERCY."
Hereford Journal, of the 14th April, 1830.

HEREFORD,
May 8, 1830.
PRINTED BY JOHN PARKER, 4, HIGH TOWN

Figure 3. The title page of Charles Anthony's pamphlet about the Floyd conviction, which sparked off a battle of pamphlets



A FEW

GENTLE HINTS;

ADDRESSED TO

MR. CHARLES ANTHONY, HABERDASHER,

AND TO

MR. EDWARD PRITCHARD, ATTORNEY AT LAW,

ON

FLOYD'S CASE.

BY ANTI ARROGANCE.

" There are some men who seem to think nothing so characteristic of " Genius, as to do common things in an uncommon way; like Huddesus, " to tell the clock by algebra; or, like the Lady in Dr. Young's 'Satire,' " to drink tea by analogy. It would appear by so much reasoning and " analogy, that there is no such thing in the world as a fact." JOHNSON.

Hereford:
PRINTED BY T. A. WATKINS.
1830.

Figure 4. The title page of the final pamphlet in the series about the Floyd case, which was evidently intended to annoy Charles Anthony

However, those who considered the conviction as unjustified continued to press their case, and an analysis of the evidence against Floyd was printed as a pamphlet—anonymous but known to have been written by Charles Anthony—which was published on 8 May 1830, entitled *A Brief Inquiry into the Circumstances relative to Floyd's Conviction*. This bore on the title page the quote from the *Hereford Journal* which begins 'Where a doubt arises…', and the demand for the pamphlet was such that a second edition was published on the same day. A response published on 17 May was entitled *An Answer to the Brief Enquiry...* and written by John Rollings. Three days later Charles Anthony came back on the attack with a pamphlet entitled *An Exposure of the Scurrilous Misstatements contained in Mr Rollings' "Answer to a brief Inquiry, &c."*, and a similar pamphlet was written by Mr Edward Pritchard.[19] The final shot in this battle of words came in the pamphlet *A few Gentle Hints addressed to Mr Charles Anthony, Haberdasher, and to Mr Edward Pritchard, Attorney at Law of Floyd's Case*, written by 'Anti Arrogance'.[20]

This war of pamphlets tends to take attention away from what happened to Floyd. On Wednesday 12 May 1830 the *Hereford Journal* reported that Robert Floyd would be executed on the following Saturday if a reprieve did not arrive, which happened on the day that particular issue of *Hereford Journal* was published, when a respite until further notice was received. Then on 16 June it was reported that Robert Floyd had been finally respited and that the sentence would be commuted to transportation for life. This did not happen, as a free

pardon arrived in Hereford on 6 July 1830, reported the following day, and so Floyd was a free man. Charles Anthony and his collaborators had achieved their object, although at the expense of good relations with the editor of the *Hereford Journal*.

THE SWING RIOTS

In order to get the flavour of the next controversy in which Charles Anthony was involved, the economic background first needs to be explored. The year 1830 was marked by political tumult and agrarian unrest. At that period the agricultural labouring class was ill-paid, and even prudent workers had difficulty in making ends meet. Farmers were also having a difficult time, and in looking at ways of reducing costs were gradually introducing machinery for such jobs as threshing, traditionally a wintertime job for the labour force. This, coupled with bad harvests in 1828, 1829 and 1830, were the underlying causes of the 'Captain Swing' riots which began in 1830 and lingered on until 1831. There was, of course, no Captain Swing, but the name is derived from the word 'Swing' which appeared on some letters that were written, threatening action, the allusion probably being to the gallows. The unrest was mainly confined to corn-growing areas, where work tended to be seasonal. Typical symptoms of the unrest included the sending of 'Swing' letters; gathering together of agricultural labourers to bring pressure on farmers, demanding higher wages: incendiarism, including burning of ricks and barns, and breaking of machines, particularly threshing machines. Not all of these occurred at the same time, and generally areas where there was incendiarism tended to have low machine breaking, and *vice versa*. The area affected by machine breaking covered most of southern England, East Anglia and the south Midlands, and Yorkshire. Incendiarism was wider spread, with most counties being affected. Also, many of the farmers, who were caught in the middle and may have sympathised with the labourers, used the situation to try and get tithe charges reduced, and also rents.

The unrest began in Kent on 1 June 1830, even before the harvest, which was again a bad one, and this unrest in Kent lasted until the end of November. Next was Surrey, riots beginning on 3 August, and lasting into December, and Sussex on 17 October, lasting until 21 December. A number of counties flared up in the middle of November, and others not until December, although none of these were as long lasting as the three counties of Kent, Surrey and Sussex.[21]

What is certain that these events would have been watched with apprehension in case they were repeated in areas that had hitherto been quiet, and the newspaper reports of disturbances would have been closely studied. The *Hereford Journal*, in common with other newspapers, copied news items from other parts of the country, so the progress of the unrest would have been evident to the readers of the newspaper. Examples were made of those implicated in arson attacks, and the issue of 15 September 1830 carried a report of the execution of three labourers who had set fire to several mows of wheat at Kenmoor. They had been tried and convicted at Wells Assizes, and would have customarily have been executed in front of the county gaol, but in order to make an example, they were executed close to where the crime was committed. A week later the *Hereford Journal* carried an extract from a private letter from Seven Oaks to a gentleman at Brighton, which stated that most nights barns and corn stacks were being set fire to. In the same issue it was reported that a hay stack belonging to the Revd Mr Arundell, of Cheriton Fitzpaine [Devon] had been set alight.

The state of the unrest in Kent was a constant concern, and on 13 October it was reported that most of the threshing machines in the area around Dover had been demolished. A week later a quote from a correspondent to the *Morning Herald* informed the readers that 100

threshing machines in Kent had been destroyed and that 'It appears that threatening letters have been in many cases sent round signed "Swing".' The violence continued, and three weeks later the *Hereford Journal* informed its readers that 'We regret to state that the incendiary acts continue to disgrace the counties of Kent and Sussex, and have extended to Surrey.' Not all the unlawful acts were by agricultural workers, and on 24 November 1830 it was reported that eight persons, none of them agricultural workers, had been charged at Chichester with destroying agricultural property.

THE KENCHESTER CONTROVERSY

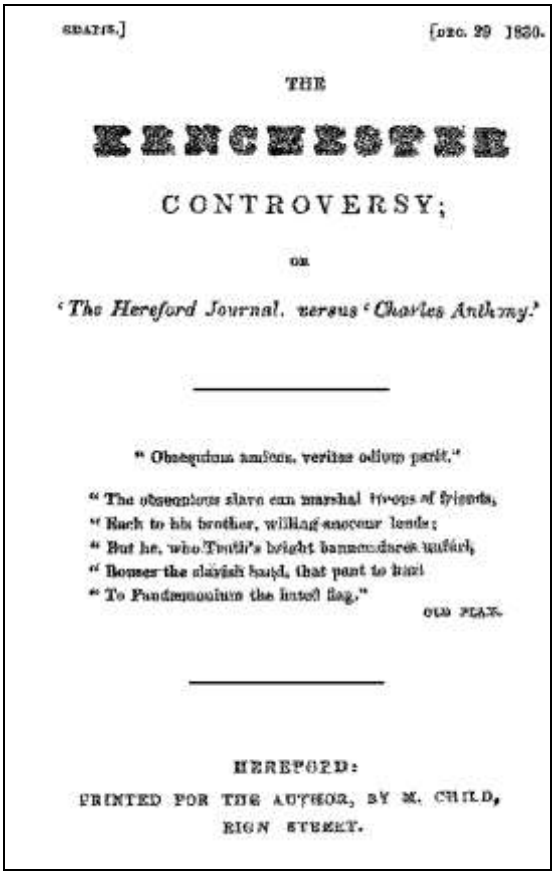
Against this background, a close watch would have been kept for trouble within the county. The first sign came in November 1830. A threatening letter, of 'Swing' type and dated 17 November, was picked up on the road at Whitney and delivered to the intended recipient, Mr John Monkhouse, a large farmer at Stowe, on 25 November.[22] Enquires were set afoot, and one Henry Williams, a tailor and preacher in the 'Ranter' sect, was arrested, and sent for trial at the next Quarter Sessions.[23] This letter was not publicised in the *Hereford Journal*, and its existence was only made know to a wider public when the trial took place in January 1831.

On the same day that John Monkhouse received the letter, there was a fire at Kenchester Court, in which ricks, part of a threshing machine, and a barn were destroyed. Immediately a letter describing this was sent from Hereford by 'MW', [Charles Anthony] which was published in the *Globe* of 27 November. A report of the fire appeared in the *Hereford Journal* of 1 December 1830, detailing the damage caused, and indicating that the magistrates were investigating what was thought to be the work of an incendiary. The editor was moved to say:

> 'We learn with pleasure that the agricultural labourers of the neighbourhood joined hand and heart with all present in the successful endeavours to arrest the flames.'

Wright also went on to claim that the fire had been misrepresented in the press, and quoted most of the letter by MW. He also quoted a letter from the *Courier* which claimed that ricks had been burnt at J. Griffiths', The Weir, where a train and slow match had been found, as well as the fire at Kenchester Court. Wright also called attention to an advert by J. Johnstone, of Mainstone Court, which referred to incendiary acts at Kenchester and Much Cowarne and called on brother farmers to get organised and stand firm. Nothing further was heard about the claimed incendiarism at Much Cowarne, however.

A week later, the *Hereford Journal* carried a copy of an affidavit by one Luke Fitzjohn, who supplied the information on which the letter to the *Globe* was based. There was also a letter from John Tomkins of the Weir, which stated that the account of the fire at Kenchester was much exaggerated, and a large advert about a meeting of the county magistrates that had taken place at the Shire Hall on 4 December, a meeting which was convinced that no acts of violence and outrage such as had taken place in some other counties had taken place.



SPARIS.] [DEC. 29 1830.

THE

KENCHESTER

CONTROVERSY;

OR

'The Hereford Journal.' versus 'Charles Anthony.'

"Obsequium amicos, veritas odium parit."

"The obsequious slave can marshal troops of friends,
"Each to his brother, willing succour lends;
"But he, who Truth's bright banner dares unfurl,
"Scorns the slavish band, that pant to hurl
"To Pandemonium the lictor flag."

OLD PLAY.

HEREFORD:
PRINTED FOR THE AUTHOR, BY M. CHILD,
EIGN STREET.

Figure 5. Charles Anthony's pamphlet about the Kenchester controversy makes it clear that it was a straightforward battle between himself and the editor of the *Hereford Journal*

Charles Anthony was not prepared to take criticism lying down, and on 15 December a letter from him appeared in the *Hereford Journal*, asking for justice, and stating that the paper did not publish a faithful copy of the report from the *Globe*, omitting part about average wages of agricultural labourers. It was also admitted that 'MW' was Charles Anthony. Wright could not restrain himself from commenting on the letter, which he did in a news item in which he referred to the 'amusing letter' from Charles Anthony, and went on to give him the following advice:

> 'We also recommend him to attend to his own business, and not to meddle with those things which do not concern him.'

This comment is unlikely to have gone down well with Charles Anthony, and on 29 December 1830 he issued a free pamphlet entitled

The Kenchester Controversy; or 'The Hereford Journal,' versus 'Charles Anthony.'[24]

The pamphlet shows Anthony was very aggrieved about how he had been treated, even being accused of sending 'Swing' letters himself to bolster his case, and clearly relations between him and Wright were at a very low ebb. This personal antagonism may well have proved the spur to his journalistic project, no further publicity about the matter appearing in the *Hereford Journal* after Anthony's letter of 15 December.

THE FOUNDING OF THE HEREFORD TIMES

As well as having a social conscience, Charles Anthony was also interested in politics, and the events leading to the Reform Act of 1832 would have been of great interest. The political tumult in 1830, the year in which the death of George IV precipitated the dissolution of Parliament, has already been mentioned. 'Reform' was the watchword, and the slow progress that was made and the obstacles in the way led to another general election which took place between 28 April and 1 June 1831. That naturally stimulated the press, and the *Hereford*

Journal of 27 April 1831 carried an advert for a new newspaper to be called *The Reformer*, which was to be published in Ludlow on a Saturday evening and distributed in Hereford and its vicinity on the same evening. Nothing further was heard of this, however. Another proposal that did not come to anything was one made by Mr Hill, who proposed to begin publication of a newspaper called the *Hereford Herald*, for which in the summer of 1831 he issued a prospectus, costing 1s. Although no advert for this has so far been traced in the *Hereford Journal*, it is known from later comments that interested parties were invited to subscribe to a loan, rather than issuing shares, and that the first issue of the paper would be published when stamp duty had been reduced.[25] Nothing further was heard of the *Hereford Herald* until the following year. Whether these proposed publications caused Charles Anthony to consider setting up his own newspaper will never be known, but at least it shows it was thought that there might be enough support for a new publication.

Despite the friction between Charles Anthony and E. G. Wright, it was necessary for Anthony to continue to advertise his business, and he had little option but to use the *Hereford Journal* for this purpose. Thus on 30 March 1831 he advertised that he had just returned from the manufacturing districts. However, times were hard, and in a letter to George Godber, a London cotton warehouseman and business associate, dated 1 July 1831, he stated that business was 'very indifferent.' He also discussed his difficulties in trying to sell the hat business, and was no doubt relieved to tell Godber in a letter of 10 July:

> 'You will be pleased to hear that I am likely to dispose of the hat business immediately & at a premium of £50.'[26]

The sale did go ahead, and a large advert for the Manchester Warehouse that appeared on 31 August 1831 also announced that C. & W. Anthony had sold the New London Hat business to Mr Henry Wheaton. Then, on 22 & 29 February 1832, Charles Anthony advertised that he had sold the Manchester Warehouse to Mr Edward Morgan. Hindsight shows that Anthony was reorganising his business so that he was in a position to launch the *Hereford Times*.

To print his newspaper Anthony needed a press, and made enquiries about a Napier printing press.[27] Then, in a letter dated 12 April 1832, he informed Godber that he had heard that the editor of the *Monmouth Merlin* had come into a large property and that his press and type would shortly be for sale. However, this came to nothing and a week later he wrote to Godber mentioning an agreement that he had made with Napier. A formal agreement to buy a 'Desideratum' press from Napier was drawn up and signed on 3 May 1832, with Godber signing on behalf of Anthony. The press cost £550 and was to be similar to one that had been erected by Napier for Egerton Smith & Co. of Liverpool, but with the addition of a register.[28] It was to be erected by 10 June 1832. However, when it was erected and tried out, Anthony wrote to Godber on 24 June 1832 saying that 'The Napier Machine has greatly disappointed us.'[29]

Meanwhile the matter of publicity had to be addressed. It is rather surprising that an advert for a prospectus for the new weekly paper appeared in the *Hereford Journal* of 18 April 1832, but perhaps E. G. Wright did not expect this rival to be successful, Charles Anthony not being a professional journalist. The advert informed the public that a free prospectus for the *Hereford Times* would be published on Wednesday 2 May, and that anyone who wished to become an agent for the new paper should contact Charles Anthony. It was the intention to illustrate it with an engraving of the printing machine, but there was a delay and in Charles Anthony's absence William Anthony wrote to Godber on 23 April 1832 saying that this had

not arrived by the morning's mail, that the prospectus was in the hands of the printer, and that it was needed! It arrived in time and the prospectus was printed and issued, a large advert in the *Hereford Journal* of 2 May 1832 stating that it was published that day, and listed a considerable number of places where copies could be obtained.

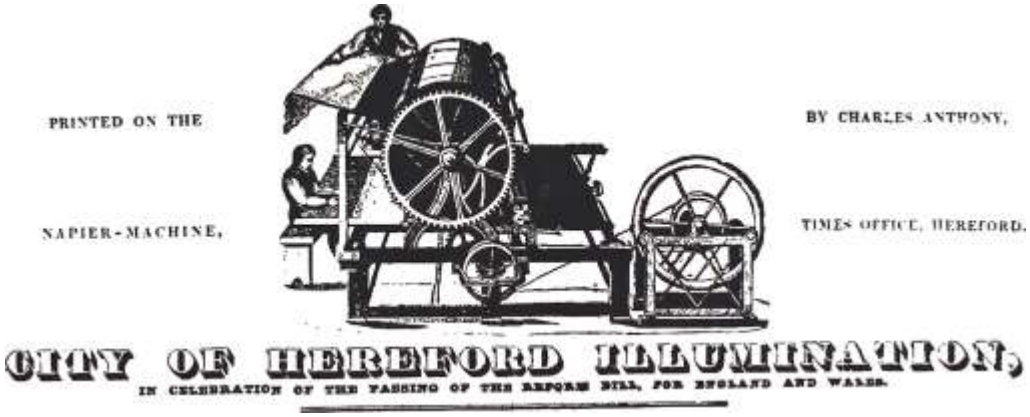


Figure 6. The Napier printing press

The engraving was also used in a broadside describing the illuminations in Hereford put up to celebrate the passing of the Reform Bill. At the top was the engraving of a printing machine and it was proudly proclaimed that this was printed at the Times Office in Hereford (Figure 6). Additionally, his new newspaper was advertised at the bottom of the broadside:

> 'The First number of the New Weekly Paper, the HEREFORD TIMES, will be published on Saturday afternoon, the 30th of June.'

It is evident that the engraving, which shows a printing press with two cylinders, was an advertising ploy. In 1824 Napier was commissioned by T. C. Hansard to make a cylindrical press of a new design, which was excruciatingly called the 'Nay-peer'. This design was not patented, but in 1828 Napier took out a patent for improvements in feeding the paper, and a further patent in 1830. It seems that the 'Desideratum' was the name of an improved version of the Nay-peer. [30]

This first issue was also advertised in the *Hereford Journal* of Wednesday 27 June 1832. Immediately beneath Anthony's advert was another advert, placed by Mr Hill, and we may suspect that the juxtaposition of the two adverts afforded some gratification to E.G. Wright!

EDUCATION, POLITICS, & c.
HAGLEY, NEAR HEREFORD
MR HILL'S long-established SCHOOL will be
OPENED again on the Twenty-fifth of July ensuing.
THE HEREFORD HERALD
Mr HILL deems it necessary thus publicly to remove an impression which has very generally obtained, that the Paper about to appear, called the "Times," is meant as a substitute for that previously announced by him, named the HEREFORD

> HERALD. He disavows all knowledge of, and denies any connexion with, the said "Times," the originator of which has disingenuously endeavoured to steal a march upon him.
> Firm to his original purpose, he pledges himself to the appearance of his Paper as soon as the Taxes on these Publications are repealed or reduced, which measure, he has high authority for asserting, will shortly occupy the attention of Government; and trusts to the industrious exercise of abilities, and the rectitude of his intentions, for obtaining the approbation and encouragement of the Public.
> Hagley, June 25, 1832.

The first issue of the *Hereford Times* duly appeared on Saturday 30 June 1832. The first column on the front page started with an 'Address' by Charles Anthony, followed by a 'Prospectus' which set out the aims of the new publication in the rather stilted language of the time, finishing with:

> 'The HEREFORD TIMES will not in one year be a fawning sycophant of aristocracy and a proud scoffer of the People;—and in the next, a dastardly panderer to the prejudices of the ignorant, and an unprincipled slanderer of the great. It will be a strictly independent Paper, free from the trammels of party, or the dominion of any set of men; but, the predominant spirit of its government will be in unison with the beautiful precept,—"Do unto others as you would they should do unto you."
>
> Whatever exposition may be given in this Prospectus, we cannot be confident of success, before a series of our Newspapers shall have been in the hands of the Public. Until that moment, then, this much we ask our Readers. If an unceasing care in collecting the most valuable information and instruction on all important subjects,—and indefatigable in obtaining early and accurate intelligence, and impartial and open field for men of all parties,—and, uncompromising but never personal strictures on men and measures, will merit your support, order our Newspaper, though but for three months;—at the expiration of that period, discard us for ever if we shall have falsified our pretensions or disregarded our principal and avowed object,—namely
>
> THE ELUCIDATION OF TRUTH'

All very commendable, but he was rather more forthright on the back page, where he took Mr Hill's proposed *Hereford Herald* to task, under the heading 'MR HILL'S UTOPIAN HERALD.' and saying, no doubt tongue in cheek, that 'We copy the advertisement, and thank our contemporary for placing it (no doubt with the most friendly intention) immediately under one announcing the publication of the HEREFORD TIMES.' Hill's advert was quoted in full, and the utopian nature of the proposal taken to task, pointing out the impracticalities of what was proposed, and also stating, in no uncertain terms, that there was no general impression that the *Hereford Times* was a substitute for the *Hereford Herald*, and that Mr Hill would never have any connection with the *Hereford Times*! Indeed, below this were printed the details of the *Hereford Times*, stating that Charles Anthony was the sole proprietor, and with a long list of agents for the newspaper.

That the *Hereford Times* had a political agenda was without doubt, and the editorial in the first issue hailed in no uncertain terms the newly-born Reform Bill, a cause that was referred to again in editorials in subsequent weeks. Also, Anthony was at pains to bring to the public's attention his new equipment and no doubt it was at his suggestion that the letter founders Caslon and Livermore of Chiswell Street, London, advertised the types cast at their foundry, in several issues beginning in that of 7 July. The following week an advert by David Napier appeared, extolling the virtues of his patent printing machine, stating that he had erected one in the printing office of the *Hereford Times*, and announcing that the proprietor had consented to allow any printer to inspect the machine. Then, on 21 July, a long advert—most of a column—was placed by Robert Harrild, of London, calling attention to his new and secondhand printing materials, and stating that he continued to manufacture composition rollers. The implication was, of course, that these rollers were used by Charles Anthony in his new and up-to-date printing press.

And what of the *Hereford Journal*? Evidently it did not want to give its rival the oxygen of publicity and no comment appeared in its pages. The only response was to print the next and succeeding issues of the *Hereford Journal* on a larger sheet of paper. In view of the mechanics of having the paper stamped with the duty mark, there must have been forethought about this.

LATER FORTUNES

While it is not intended to discuss in detail the later histories of the two newspapers here, it is relevant to say that the newspapers coexisted for exactly a century. During the nineteenth century both newspapers increased in both size and number of pages, but the *Hereford Times* had a dynamism that the *Hereford Journal* lacked. There was a break in publication of the *Hereford Journal* from 27 June 1925 until 6 February 1926, when it restarted as the *Hereford Observer incorporating the Hereford Journal*, a title that was reversed to the *Hereford Journal and Observer* on 26 June 1926. On 30 July 1932 the copyright was purchased by the proprietors of the *Hereford Times*, who closed it down. Charles Anthony had had his revenge at last![31]

APPENDIX

Henry Williams's letter to Mr John Monkhouse, Stowe, Whitney.

Nov. 17, 1830. Mr John Monkhouse.

SIR.-We as you call Rebells determine if you don't pull down your machine witch you do thatch your grain with, we shall come that way and will set you and all that you have with fire: remember in Kent they have set all that would not submit and you we will serve the same, for we are determined to mak you the poor better than they have be suppored yet, for they are starving at present so pull down your Thrashing Maschine or els Bread or Fire without delay: for we are 5 thousand men and will not be stopt.

(DIRECTION.) – *Leave this where it lies for John Monkhouse that Devill of a farmer of the Stow, Herefordshire: more papers about for you to look at.*

ACKNOWLEDGMENTS

Much of the work for this paper was carried out in the Hereford Reference Library, and I express my thanks to the staff for their unfailing help. Also to the staff of Herefordshire Record Office.

REFERENCES

[1] Herefordshire Record Office (HRO), microfilm MX 155.
[2] *Hereford Times* (*HT*) 30 September 1955.
[3] HRO, Microfilm MX 288.
[4] In a typescript for a book (unpublished) entitled *The Hereford Times Desk*, the author (John Armstrong) traces the descent of the Anthony family from Abergavenny, based on information taken from *The Genealogy of Anthony of Abergavenny and Allied Families*, Charles Anthony, privately printed (1919). I have been unable to locate a copy of this book in any of the major collections. On p.4 of the typescript it states, regarding this particular George Anthony; 'George (1769-1819) appears to have followed the family shoe-making business for 12 years after his father's death [1788] but in 1802 he also left Abergavenny. He moved to Hereford in order to manage that branch of his brothers' fustian business.' This is evidently incorrect, as George Anthony was resident in Llangarron in the 1790s, and two of his children were christened there. Nor is there any evidence of a drapery business in Hereford owned by any member of the Anthony family around the year 1802, the business being established rather later, for which see below. George Anthony was still a shoe-maker when he died. HRO, BC97.
[5] W. Collins, *Historical Landmarks of Hereford*, (1988 reprint), 105-6.
[6] This is the earliest reference to the Manchester Warehouse that has been traced to date. The Land Tax Returns show that in 1817 the building was owned by Mr William Watkins, and that the Land Tax of 10s. was paid by Miss Anthony. A later return gives her first name as Mary. HRO, Microfilm 43.
[7] It is most likely that these were Charles Anthony's older sisters, Elizabeth, christened in 1794 and Mary, christened in 1795, both at Llangarron. HRO, microfilm MX 155.
[8] *Hereford Journal* (*HJ*) 9 July 1823.
[9] John Allen advertised on 22 January 1823 that he had sold his business to T.B. Watkins, who would carry it on at his present shop. The sale by auction of Allen's stock was advertised in the *HJ* on 12 March, and the remaining miscellaneous items of stock were advertised for sale by auction in the *HJ* on 2 April. This did not include the printing press, type, etc. which would be sold by private contract.
[10] The coincidence of dates suggests that the closure seems to have been related in part to illness on the part of Mary Anthony, mother of Charles. Her death in January 1843 was recorded thus in the *Hereford Times*: 'Jan. 8, aged 73, at the residence of her son, Widemarsh-street, in this city, after sixteen years' most afflictive bodily suffering, borne with pious resignation, Mary, relict of the late Mr George Anthony. She was highly exemplary as a friend, wife, and mother.'
[11] *HT* 21 Feb. 1885. However, in HRO, BC97 (p.6) it states that Charles Anthony was sent to a private school at Holmer until he was $12^{1}/_{2}$ and that at the age of 13 he was formally apprenticed to the family clothing firm which had branches in Birmingham, Cirencester, Stroud, Merthyr Tydfil and Hereford. On balance I have taken the information given after his death in 1885, not being able to confirm the alternative version. It seems clear that the information given in *The Genealogy of Anthony of Abergavenny and Allied Families*, Charles Anthony, privately printed, 1919, has been airbrushed!
[12] *HT* 30 September 1955.
[13] *HJ* 6 September 1826. This recorded that 'Mr Charles Anthony, mercer of this city,…' married Miss Hawkins at Monmouth. He lamented her early death in a letter to George Godber, dated 18 July 1834. 'My house is desolate – I am a widower. My poor wife had just died, after being in a state of insensibility for nearly three days and nights – God bless her!.' HRO, BH6/1. A touching notice of her death which appeared in the *HT* of 19 July 1834 confirms the identification of the marriage:
'On Wednesday last, the 16th instant, aged 27, after a long and lingering illness of deep suffering, borne with greatest fortitude, Eliza, the beloved wife of Charles Anthony, Times Office, in the city. She was a sincere friend, an affectionate daughter, and a devoted wife.'
On 11 May 1835 he married at Holmer Ann Archibald, daughter of James Archibald Esq. of Holmer Court. The ceremony was performed by the Revd James Archibald, his future brother-in-law, at that time curate of Newent. *HT* 18 May 1835.
[14] Pigot's *Directory* of 1830 shows that the 'W' was William Anthony. Charles Anthony's younger brother William, one of twins, was christened at St. John's on 19 January 1806.
[15] *HJ* 11 & 18 November 1829.
[16] *HJ* 31 March 1830.
[17] John Roberts was one of a group of 215 convicts who set sail for Australia from Portsmouth on the transport Royal George on 25 June 1830. When the ship arrived in Tasmania on 18 October 1830, after a voyage of 113 days, this number had been reduced to 211.

[18] At the time of his execution James Williams was aged 19, and was a cripple with the nickname 'Crutchey'. Almost two years later, on 26 March 1832, his brother William Williams was also executed at the same place, being implicated in a murder that took place in a 'low brothel' in Quaker's Lane, Hereford (now Friar Street.). Broadsheet listing executions in Hereford, in Hereford Reference Library.

[19] Anthony's pamphlet was advertised in the *HJ* of 19 May 1830, to be published on 'Tuesday next' [25 May], at a cost of 3d.

[20] These pamphlets are bound into Herefordshire Pamphlets Vol. 13 in Hereford Reference Library.

[21] Summarised from Eric Hobsbaum and Eric Rudé, *Captain Swing*, 2001 edition. A detailed breakdown by county of the location and duration of the riots is given on p.170.

[22] The text of the letter is given in an Appendix.

[23] 'Ranters' was a derogatory term used for members of the Primitive Methodist Church. This cause was first established in Hereford in 1826, and the first chapel was opened outside St. Owen's Gate in 1838 and was used in this way until 1880. The building is still in existence, but has had varied uses over the years, including that of an early cinema; the ground floor is now a launderette, with living accommodation above. W. Gaines, *A Century of Witness. The Centenary History of St. John's Methodist Church, Hereford* (1980), pp.5-9.

[24] There is a copy of this rare pamphlet in Vol.2, T. T. Davies Collection in Hereford Reference Library.

[25] Stamp duty on newspapers was introduced in 1712 at a rate of 1d. per sheet ($^1/_2$d. per half sheet), raised to 2d. in 1789, $3^1/_2$d. in 1797 and 4d. in 1815. The resultant cost restricted newspapers to those much better off, who could afford 6d. or 7d. cost of a newspaper. From 1816 onwards, through the 1820s and early 1830s, there was agitation to reduce or abolish stamp duty, deeming it a tax on knowledge, and in 1836 it was reduced to 1d. It was finally abolished in 1855. Since newspapers could only be printed on paper which had been stamped to show that the duty had been paid, it was necessary to send the paper to the Stamp Office in London to have the stamp impressed on each sheet, and it was not until 1837 that regional Stamp Offices began to be established. All this required forethought and investment on the part of newspaper proprietors.

[26] Letters to George Godber are in HRO, BH6/1&2, and later letters will not be separately referenced.

[27] David Napier, born 1788, was a gifted engineer. He left Glasgow for London *c*.1810 and then worked briefly for Henry Maudslay, and then in 1815 became the foreman of an engineering workshop that specialised in printing presses. In partnership with the stationer Francis Baisler he set up a machine shop in 1818, repairing and then building printing machines, supplying a number of provincial papers. Most of the improvements that he made were said to be too elaborate and difficult to operate. *Oxford Dictionary of National Biography*, Vol. 40, 163.

[28] Egerton Smith had founded the *Liverpool Mercury* in 1811, and presumably had recommended the printing press that he was using at the period when the *Hereford Times* was founded.

[29] It is evident that the press used by Anthony for his jobbing printing had a wooden frame, as on 6 October 1833 he wrote to Godber in the following terms: 'I fear I can no longer do without an iron press - old Mcalister is for having a Columbian, made by Clymer – will you look in your directory for Clymers address, and procure and engraved specimen, with price, terms, &c and bring it down with you.'

[30] James Moran, *Printing presses: history and development from the 15th Century to Modern Times* (1978), pp.130-2.

[31] Details of the later history of each of the two papers can be found in *TWNFC* (1941), pp.114-25.

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William Chick, Herefordshire architect

By PHILIP J. ANDERSON

William Chick, later known as William Cheiake, was a prolific but now largely forgotten Hereford architect of the second half of the 19th century. Having been appointed Clerk of Works to George Gilbert Scott for the five-year restoration of Hereford Cathedral, he continued to work for the Dean and Chapter, both at the Cathedral and at other churches where they were responsible for the fabric. He was County Surveyor of Herefordshire for 31 years, mostly on a part-time basis, and in this capacity he designed or adapted many public buildings. He also had his own architectural practice, which was responsible for two new churches in the county, as well as several church restorations, vicarages and other domestic buildings. He enjoyed the patronage of the Clive family in designing substantial additions to their house at Whitfield, and through this connection was the architect of a new church in Warwickshire closely modelled on the Norman church of Kilpeck.

INTRODUCTION

Any account of the architectural history of Herefordshire will tend to dwell on the county's medieval heritage, its timber-framed buildings of the 16th and 17th centuries and its country houses of the Georgian and Regency periods. The Victorian era normally receives little notice, but, as in the rest of Britain, these years saw a great deal of new building, as well as the restoration of old buildings, and there was fierce competition among local architects for this work. Probably the best known of these local men is F. R. Kempson, architect of the Hereford Museum and Library building and what is now the Royal National College for the Blind, whose practice also spread across South Wales. However, it can be convincingly argued that the architect whose work had the greatest impact on Victorian Herefordshire was not Kempson, but William Chick.

EARLY LIFE

William Chick (1829-1892) was born in Beaminster in the north-west part of Dorset, where his father was a builder. Although he left Dorset as a young man, he retained family connections there, as evidenced by a letter he wrote from Beaminster in 1869 to Sir Edward Lechmere, for whom he was designing a new building for Hanley Castle Grammar School.[1] Apologising for his absence from the job through illness, he explains that he is staying in Beaminster for a few days for his health.

That corner of rural England might be thought infertile ground for a budding architect, but this was not entirely the case. Nearby just over the Somerset border lay the quarries from which Ham Hill stone was extracted for use in secular and ecclesiastical buildings. Chick himself was to acquire supplies of this stone from the quarries of John Trask to provide polychromy in some of his Herefordshire churches. Other members of the same family had a long-established business, Charles Trask and Son, at nearby Norton-sub-Hamdon creating woodwork by traditional methods for some of the leading church architects of the second half of the 19th century.[2]

Chick's own father worked for at least one architect with a national practice, William White, to whose designs he built a new vicarage in Beaminster.[3]

There were, therefore, several local connections which could have assisted a young man with a building background who wished to become an architect. Certainly in 1850, aged 21, he was in London, where he married Jane Sarah Crocker, a Dorset girl born in Cerne Abbas, and it was in London that his first son, also William, was born a year later.

It was probably also in London that he entered the employ of Henry Woodyer, one of the most prolific and respected church architects of his day.

Figure 1 (left). William Chick (Hereford City Library)

CLERK OF WORKS

Chick's first known work dates from 1853, when he was appointed by Woodyer as Clerk of Works for the building of St. Michael's College and church at Tenbury Wells.[4] This was a large and prestigious project, initiated by Sir Frederick Gore Ouseley, a clergyman and Professor of Music at Oxford, who wished to revive the Anglican choral traditions. To this end he funded the building of a choir school attached to a capacious church on a greenfield site outside Tenbury. The job must have carried considerable responsibility for the young William Chick, since Woodyer, with his large practice and based in Surrey, must have been in attendance only infrequently.

His performance must have been satisfactory, for he remained Woodyer's representative in the area and in 1857 signed plans on the architect's behalf for the rebuilding of Ullingswick Rectory and the restoration of the chancel of Pudlestone church.[5] It has also been suggested, although it is not documented, that in 1856 he supervised the rebuilding of Tretire church to the designs of T. H. Wyatt, another architect with a large nationwide practice.[6] He must have acquired a growing reputation, because in 1858 the Dean and Chapter appointed him as Clerk of Works for the restoration of Hereford Cathedral under the most prominent of all the architects of his day, George Gilbert Scott. He was to be paid 3 guineas a week and in addition his 7-year-old son, William, was accepted as a probationary chorister.[7]

The restoration of the Cathedral was extensive and took five years to complete. The previous 19th-century restoration by the Cottinghams, father and son, was still not satisfactorily completed. Walls needed to be underpinned, defective stonework replaced and numerous internal fittings repaired. Inevitably Scott could not be present frequently and it was again Chick who had the responsibility of dealing with the Dean and Chapter and the various builders and craftsmen. He would, for example, have supervised the installation of the magnificent ironwork chancel screen, designed by Scott and made by Skidmore of Coventry, which now has pride of place in the gallery above the entrance hall of the Victoria and Albert

Museum. When Scott wrote to the Chapter with estimates of additional items of work proposed, it was a letter from Chick with the relevant details which he enclosed.[8]

Although Chick's employment as Clerk of Works to the restoration terminated as from the date of the official re-opening, 30th June 1863, he remained the Cathedral's architect *in situ* for another fifteen years. In this capacity he remained subordinate to Scott, to whom additions such as a new credence table or the design of a new window were referred, and Chick's final report to the Chapter was in 1878, the year of Scott's death. In the interim he was responsible for numerous repairs and restorations, ranging from the replacement of windows and the re-leading of roofs down to the fixing of the new Gurney stoves and the provision of a water closet near the Cathedral.[9]

CHURCH RESTORATION

Chick's work at the Cathedral benefited his career in several ways. For one thing Scott employed him again as his Clerk of Works when called in to restore further Herefordshire churches: St. Peter's Hereford, Upton Bishop, Aconbury, Leominster Priory and Peterstow. Then in 1861 the Dean and Chapter sent the magistrates of the County of Hereford a certificate of the fitness of Mr Chick for the office of County Surveyor, to which post he was duly appointed.[10]

But perhaps his greatest benefit was that the Dean and Chapter employed him, in addition to his ongoing Cathedral work, to report on, and in many cases to repair or restore, churches for which the maintenance of the fabric was their responsibility in full or in part (often it was only the chancel for which they were responsible). Even while the main restoration of the Cathedral was still in progress, Chick was repairing the roof of St. Katherine's Chapel, Ledbury, and reporting on repairs required to the chancels at Lugwardine, Pipe and Lyde, and Canon Pyon.[11]

Chick was thus able to set up his own independent practice in Hereford—certainly by 1868 he had an office in Castle Street—comfortably buttressed by an enormous amount of work flowing from the Dean and Chapter, from his job as County Surveyor, although at the time this was only a part-time post, and the occasional job from Scott.

In his career Chick was responsible for about a dozen church restorations, either for the Chapter or working independently for the local vicar and parish, and was involved in several others when acting as clerk of works. He also carried out numerous inspections and made reports on other churches. To give an impression of his approach to restoration work, four examples can be quoted.

St. James, Ocle Pychard (1869)

This is a typical small church of the 13th and 14th centuries and provides a good example of the low budget, standard restoration that was the bread and butter of Victorian church architects. The *Hereford Journal* describes the problems that made these restorations so necessary, 'The church has for some years been in a state of decay, passing year by year from bad to worse, while from the effluvia arising from the interments inside the building the health of the parishioners became absolutely endangered.' The report also exposes those Victorian prejudices that run counter to modern day sensibilities, referring to 'the wretched sheep pen pews' (i.e. box pews) and 'the plastering which disfigured the walls.'[12]

The cost of the restoration was only £440 and for this the walls were underpinned, the drainage fixed, a new floor laid and paved with Godwin tiles, new windows inserted in place of decayed ones and the walls scraped of plaster and re-pointed. The 'sheep pen pews' were replaced by plain deal pews, and new altar rails, a stone pulpit and chancel stalls with carved ends were provided, as well as a new oak door to the north porch. Chick provided a design for a spire, but there were insufficient funds to build it, although a small spire was later added.

This was very much the standard package, carried out with little enrichment and for the minimum outlay. Yet the work was substantial, neat and effective, and was well thought of at the time. Today the interior of this well-cared-for church, although undoubtedly Victorian in character, still presents a pleasing and harmonious appearance.

St. Bartholomew, Thruxton (1866)

This was another low budget job, costing only £400 raised via a local restoration fund, but in this case the church was in better condition structurally and it was the re-ordering of the interior that was the prime object.

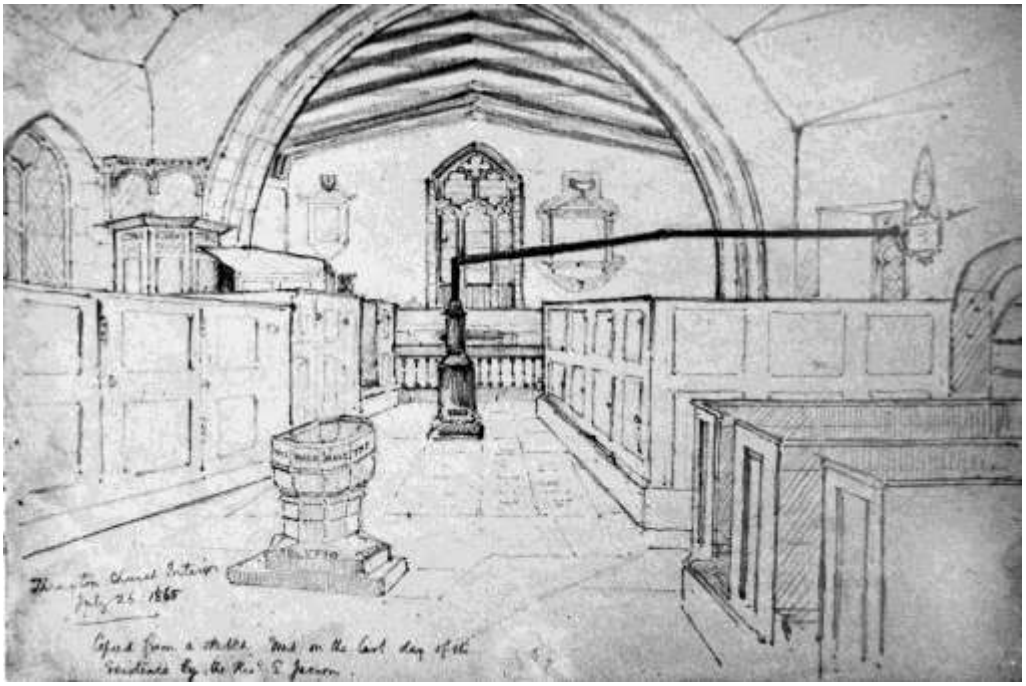

Figure 2. Revd E. Jacson's eastward view of the unrestored Thruxton church

The *Hereford Journal* described its previous state in Trollopian terms 'It was redolent of whitewash and plaster; a ceiling, undulating like a mole field, shut out from view an exceedingly good oak roof; the nave was encumbered with pews of old fashioned style, not inaptly denominated by the term "horse-box"; there was a heavy looking, lumbering gallery at the west end; and the discourses of the clergymen were delivered from a large and unsightly pulpit, quite in keeping with the sitting accommodation of the congregation, and beneath which

was a box and desk for that functionary of the parish who makes it his business to say the responses during the first part of the service, and his pleasure to go to sleep during the remainder.'[13] All these features (apart from the dozing functionary) are shown in two charming drawings by the incumbent at the time, the Revd E. Jacson, copies of which hang in the church. In addition the eastward view is dominated by a large black stove in the centre of the nave, whose pipe turns horizontally over the top of the pews to exit via a south window.

Needless to say, Chick's restoration swept away all these features and replaced them with pews, pulpit and choir stalls of conventional Victorian type. He also raised the height of the floor and covered it with Godwin tiles, and restored the attractive 17th-century south porch, which had 'all but tumbled down.'

This time there was money left over for some embellishments and Chick installed a reredos of stone and encaustic tiles, although this was later replaced by the present, more modest wooden one. He also designed an unusual wooden font cover in the form of an octagonal spire, its sides carved with geometrical designs. This remains in the church, but is no longer in use, with its raising mechanism missing. The ground floor of the tower was in use as a vestry and Chick was asked to provide more light to it. This he did by the ingenious means of installing a thick glass ceiling, laid on a heavy oak frame, to borrow light from the tower windows above. One section of the glass slides back on rollers to allow access into the belfry. The whole ensemble remains *in situ*.

The church's greatest treasure, which was installed at the restoration, is an exquisite fragment of 14th-century stained glass found by the Revd Jacson and depicting Christ on the Cross. This was restored by Hardman's and inserted in the tracery of the chancel south window (Plate 7).

Notwithstanding his radical re-orderings, Chick is quite often cited in contemporary reports for the conservation of historic features. At Thruxton it was observed that in re-laying the floor he preserved the squared-off jambs on the west side of the chancel arch, on which the rood loft would have rested. In the 1860s standards of accuracy and integrity in conservation work were not as demanding as they would become after the Society for the Protection of Ancient Buildings was founded in 1877, but it is interesting that contemporaries noted this side to Chick, as befits someone who spent so long working on an ancient cathedral. It was helpful that, as a local man, he was able to supervise building work closely. Where restorations were carried out to the plans of distant London-based architects, and no clerk of works was appointed, it was not uncommon for over-enthusiastic builders and ill-informed clergy and churchwardens to go well beyond the architect's intentions in 'improving' old fabric.[14]

St. Nicholas, Norton Canon (1868/9)

This was a more sizeable restoration job for Chick. Surprisingly there seems to be no contemporary newspaper reports of the project, but the Cathedral Chapter Act Books confirm that Chick provided estimates for the restoration, including roof, floor, seats and arches to the chancel and transepts.[15] The *Diocesan Year Books* tell us that the main body of the restored church was re-opened in September 1868 and, after further work, the chancel in September 1869.[16] Chick's plan of the restored church is in the archive of the Incorporated Church Building Society.[17]

The incumbent was the Revd C. J. Robinson, well known as the author of *The Manors and Mansions of Herefordshire*, for whom Chick had already provided a new vicarage next to

the church (Plate 8). The Dean and Chapter were responsible for the chancel, whilst the vicar and parish collected the funds for the remainder.

The exterior of the church today looks a little odd. Except for its tower, the church had been rebuilt in brick in the early 18th century. It has transepts to the north and south and, in order to accommodate Chick's splendid new internal arches to these, it was necessary to raise the height of the transept gables. Although the size and bond of the new bricks are carefully matched to the old, it seems not to have been possible to match them for colour, and the harsher red of the upper courses clashes uncomfortably with the softer 18th century bricks below - visible even in the black and white photograph below (Fig. 3). The 20th-century architect, H. S. Goodhart-Rendell, is scathing about the building in his card index of Victorian churches held by the National Monuments Record, and declares that it must be the work of an amateur.

Figure 3. Norton Canon church, north elevation

However, internally the restoration is much more successful. Its chief feature is the three new arches that Chick designed for the chancel and the two transepts. Here for the first time he uses his own brand of structural polychromy, or using building materials of contrasting colour for decorative effect. The arches and the columns on which they stand are made up of alternating bands of yellow Ham Hill stone, transported from Chick's native area, and brown Bath stone (Plate 9). Each of these colours is soft in tone and together they create a pleasing effect, quite different from the strident contrasts sometimes found in more 'muscular' Victorian churches. The arches are tall, the chancel arch a little taller than the others, and have complex mouldings. They rest on clustered columns and at the top of those supporting the chancel arch there is some excellent stone carving of naturalistic foliage and wheat sheaves.

In addition Chick designed fine new roofs, scissor-braced in the nave and boarded, with braces pierced by trefoils, in the chancel. As usual the church was re-seated and its floor paved with Godwin tiles. However the 18th-century altar rails and communion table were allowed to

remain, either in deference to the building's architecture or because of the Revd Robinson's churchmanship. The wooden reredos and pulpit of Jacobean character are made-up pieces incorporating some Flemish work.

St. Peter and St. Paul, Eye (1873)

By 1872, when Chick was commissioned to carry out a survey, the church was in poor condition.[18] The tower was cracked and in a dangerous state. There was also cracking in the walls and foundations and the tie-beams had been cut away, leading to the walls and arcades being pushed outwards by lateral thrust and the clerestory windows collapsing. The restoration was to cost £2750. Perhaps fortunately the incumbent, the Revd H. Rodney, was the uncle of Lord Rodney of Berrington Hall, who contributed £1000.

Figure 4. Eye church with Chick's re-built tower

As well as addressing all the structural defects, Chick completely re-built the tower. His design is based on its predecessor, but is broader, and has double, rather than single, belfry openings and a stair turret rising about the roofline at the south-west corner. Sir Stephen Glynne, the Victorian church-crawler, saw it shortly after the restoration and pronounced it to be in 'pretty good Early English style.'[19]

Internally Chick's restoration is particularly sympathetic (Plate 10). In the words of the *Hereford Journal*, 'he has made it his study not to produce a church of his own, but rather to restore the ancient church of Eye to its pristine beauty.' He repaired, or renewed as necessary, arcade columns, rebuilding the whole of the south arcade and erecting a new one, with an oak parclose screen, between the chancel and the north mortuary chapel, where the tombs were

restored at the expense of Sir George Cornewall of Moccas. The west gallery was, of course, removed and the church re-pewed, but with some carvings from the old pews incorporated.

Although the furniture and flooring are unmistakably Victorian, Chick's restrained work here has left a church that still has an authentically medieval feel.

NEW CHURCHES

Chick was commissioned to design three new churches in his career, all in different styles, but containing common elements that distinguish them from the work of other local architects.

St. Mary, Little Birch (1869)

This was a rare opportunity for Chick to design a new building with a large budget, and to show off his architectural skills with impressive results. The medieval church had been replaced by a church in the then fashionable neo-Norman style in 1841.[20] By 1869 the building was proving unsatisfactory for two reasons, as explained by the *Hereford Journal*. Its version of Norman architecture 'to our more advanced architectural knowledge could only be considered as an apology for that noble style' and 'has for a long time been a great eyesore to the present rector, the Revd S. Thackwell.' But even more serious than its aesthetic shortcomings, it had 'wretchedly thin and badly built walls, through which the rain absolutely penetrated at almost every storm from the south-west.' When consulted on the possibilities of effecting improvements, Chick advised a complete re-build. The Revd Thackwell accepted this advice and was to spend £3500 of his own money on the project, a considerable sum at a time when a basic small church could be built for not much more than £1000.

The Revd Thackwell's money enabled Chick to provide a building with many embellishments. It is built of sandstone with dressings of Ham Hill stone and consists of nave, a north aisle with a long north porch, a polygonal chancel and a south transept. There is no tower, but at the west end there is a tall and elaborate bellcote. All the walls are articulated by sturdy buttresses with setbacks. These are particularly effective round the chancel at the angles of the polygon. At the eaves of the chancel are large stone gargoyles in the form of winged creatures (Fig. 5).

In the interior Chick deployed his soft polychromy of alternating Ham Hill stone and Bath stone extensively; in the north aisle arcade, in the chancel and south transept arches, both of which are elaborately moulded, and in the window surrounds (Plate 11). The chancel in particular has many enrichments. It has a fine oak roof, the east wall contains geometric patterns formed by different coloured stone and it abounds with stone carving, executed by Henry Welsh of Hereford, including wheat, grapes, flowers and, up above, angel corbels. The ensemble is completed by some first-class ironwork by Hardman's of Birmingham; chandeliers, candle stands and a particularly fine low gated screen (Plate 12), although none of these seem to have been installed by the church's opening.

Figure 5. Little Birch church, the east end

The church is approached via a maze of lanes off the A49 and is little visited, but deserves to be better known as an excellent example of a Victorian country church.

St. Mary Magdalene, Stretton Sugwas (1877-80)

By 1877 the medieval church at Stretton Sugwas was in a dangerous condition and efforts to raise funds for the costly restoration that would be required had not been successful.[21] Salvation came in the form of Frederick Platt, a Yorkshireman who had moved to Herefordshire for the hunting and was living at Sugwas Court. He undertook to give the site for a new church a mile to the south of the old and to contribute to the cost of the new building. Although he moved back to Yorkshire before the project was completed, these pledges were honoured and further funds were raised by the parish to an overall total of £2500.

Chick was commissioned to provide plans for the new church. It was during this period, in 1879, that he changed his name to Cheiake, and it is this name that most reference books give as the church's architect.[22] His design is broad in plan, because to the north of the nave and chancel there are successively a north-west tower, north aisle, organ chamber and vestry. The church was to have been longer in proportion, but shortage of funds necessitated reducing the length of the nave by one bay. Chick used sandstone with Ham Hill dressings externally and applied his sturdy setback buttresses around the walls. But his work here is especially notable for two reasons.

Firstly he made extensive use of materials transported from the old church. Five windows were re-instated on the north side and Norman doorways were re-used. Old stonework was redeployed where possible and new stonework used sensitively to harmonise

with the old. He created a lofty chancel arch, but eschewed any use of his favourite polychromy. His east window was said to be copied from Madley church, where he had restored the chancel, and the west from Tewkesbury Abbey. Treasures from the old church were re-housed, most particularly the renowned Herefordshire School Romanesque carving of Samson and the Lion, which had been on the tympanum of the west door of the original Norman church.

Figure 6. Stretton Sugwas church tower

The second, and controversial, feature is the tower. The original intention seems to have been to re-build the tower of the old church, and timbers from it were indeed re-used. However earlier 19th century watercolours show that this tower was shorter and its timbers were used to form horizontal boarding.[23] The new version comprises a tall stone base surmounted by an extravagant display of rectilinear black-and-white timberwork. Even at the time there were objections about the perceived lack of harmony between this structure and its modern stone base, although this was excused because of the necessity of preserving the old tower, which in truth it hardly does.

The inspiration for the new design may have been the nearby church at Holmer, whose tower is also black-and-white on a stone base, although there the base is taller and the timberwork shorter. In recent years the rotting of timbers at Stretton Sugwas has led to the tower being reinforced with hidden modern materials, but it remains an eye-catching and picturesque landmark.

St. Denis, Pailton, Warwickshire (1883-4)

Nearly all Chick's work was within Herefordshire, with the occasional foray into one of its neighbouring counties. He worked on a vicarage at Halstock in Dorset, presumably through a family connection, but his only other long-distance job is the church at Pailton, near Rugby in Warwickshire.

Pailton was in the parish of Monks Kirby, whose large medieval church lies about a mile away. By the 1880s its population had grown to over 500, but the only provision for Anglican worship within the village was a room in the village school, where the desks had to be cleared from their week-day location for Sunday services to take place.[24] But after an appeal was launched in 1882, the village was able to lay the foundation stone for a new church in 1883,

and in 1884 the completed building was consecrated by the Bishop of Worcester. A report of this event in the *Rugby Advertiser* confirms that the architect was 'W. Cheiake, County Surveyor of Hereford.'[25]

The church he built is based externally on the famous Norman church of Kilpeck. It is by no means a copy, and is in brick, not stone, but its Romanesque style, its round apse and its general proportions evoke Kilpeck, whilst around the corbel table of the apse are carved heads, animals and foliage, based closely on those at the Herefordshire church (Plates 13 and 14).

A clue as to why a Hereford architect should be commissioned to design an evocation of Kilpeck church in a Warwickshire village can be found in the list of subscribers to the building fund.[26] The largest contributors, at £200 each, were Lady Mary Feilding, twin sister of the 8th Earl of Denbigh, and an anonymous 'True Friend' (perhaps the Earl himself, who was a Catholic convert, and may not have wished to be listed by name). The Earl was the largest local landowner with his seat at Newnham Paddox. Lady Mary was additionally the donor of the land for the church. A little further down the list with a £50 subscription was Mr Clive of Whitfield.

Charles Meysey Clive, owner of the Whitfield estate in Herefordshire, whose parkland extends to about a mile from Kilpeck church, had married Lady Katherine Feilding, the Earl's youngest sister. Between 1878 and 1880 he had employed Chick to design extensive additions to his house at Whitfield. However, in 1882 Lady Katherine died and Clive followed her a year later, both only in their early forties. Their portrait busts in Wormbridge church were sculpted by Mary Grant, who was also responsible for the effigies of the Earl of Denbigh's parents in the church at Monks Kirby.

It is highly likely, therefore, that the inspiration for a church based on Kilpeck either came from Clive as a memorial to his late wife, or, after Clive's death, from the Earl and Lady Mary as a memorial to both their sibling and her husband. No reference to any resemblance to Kilpeck has been found, either in the papers of the Building Committee or in newspaper reports, but the significance of this was perhaps kept as a private matter between the Clive and Feilding families.

Chick employed polychromy ubiquitously at Pailton, but for some reason, perhaps higher transport costs, abandoned his usual materials in favour of yellow Campden stone and red Hollington stone. Alternating bands are used externally on all the window surrounds and doorways, and internally for all windows, doors, chancel arch, piscina, sedilia and credence table. The result is not as successful as his previous uses of this technique. The contrast between the two stones is more strident compared to his usual materials, and perhaps there is just too much of it in a relatively low building.

Furnishings are fairly simple, but Chick supplied two appropriate touches. In the stone pulpit there is a convincing display of patterned Norman interlaced arcading, and on the font, squeezed between the underside of the large square top and its stumpy base are carved dragon-like Romanesque creatures, derived from those on the famous Kilpeck doorway (Plate 15).

The total cost of the church was £1752 7s. 4d., of which Chick's fee was £79 11s. 0d. However, he waived £5 of this sum to meet the cost of the credence table.[27]

DOMESTIC WORK

Given Chick's extensive ecclesiastical connections, it is not surprising that several of his domestic jobs were vicarages. He built four new ones, at Hampton Bishop, Lyde, Norton Canon and at Bryngwyn in Powys, and provided additions to at least eight others. As with his

church work, it was often in parishes where the Dean and Chapter were patrons to the living that he was called in, but not exclusively so. His best work for this building type can be seen in his new vicarages at Lyde and Norton Canon, of 1867 and 1866 respectively.

Lyde vicarage

Lyde is principally of stone and presents a pleasing asymmetrical ensemble of gothic elements. Chick's elevation drawings show roofs of various heights with two gables to the south elevation, one of them half-hipped.[28] There are bay windows and segmental headed windows. The ground floor windows have trefoils in their heads. Above are gabled dormers with decorative work in their heads, whilst the chimney stacks sport decorative tumbled-in brickwork. Back in 1857 Chick had drawn plans for a cottage by the river on the Belmont estate, which exhibit a full range of picturesque effects: thatch, rustic porch, curly bargeboards, lattice windows and a quaint oriel window.[29] His work at Lyde could be seen as the translation of that aesthetic into gothic garb.

Figure 7. Chick's drawing of the north elevation of Lyde vicarage

Norton Canon vicarage

Norton Canon vicarage is of red brick, still asymmetrical but slightly less irregular than Lyde. It is gabled and the segmental headed windows have voussoirs of alternating red and white bands in a Ruskinian style (Plate 8).[30] The entrance front has a wooden, gabled porch of a

suitably ecclesiastical type. Inside the principal staircase has a balustrade pierced by a multitude of trefoils, quatrefoils and other more complex geometric shapes.

St. Katherine's Hospital, Ledbury

Chick's connections with the Dean and Chapter also brought him two domestic jobs that were publicly very visible. He made various repairs and alterations to the Master's House at St. Katherine's Hospital, Ledbury, and then in 1867 he provided plans for the completion of the almshouses there.[31] A new range along the High Street had been designed by Sir Robert Smirke in 1822 and Chick's building continues this down to the corner of Bye Street.

Chick's facade is in keeping with Smirke's rhythm of gabled projections alternating with recessed elements without gables. However, in deference to the Market House and Ledbury's other black-and-white buildings, he added decorative timber-framing to the gables with wooden ventilation panels in their centres. He also provided three-light windows, instead of Smirke's of two lights, and added multiple chimney stacks to the roofline. To the rear he continued Smirke's verandah, but added decorative wooden railings, and above double gables with more timber framing. All his stone dressings for the almshouses are again of Ham Hill stone from John Trask's quarries.

Figure 8. Chick's new wing at St. Katherine's almshouses, Ledbury, the rear elevation

Canon Musgrave's house, Hereford

Chick's other prominent domestic building was in Hereford on the corner of Broad Street and King Street opposite the west end of the Cathedral. He designed extensive additions there to form a house for Canon Musgrave, a residentiary canon, who had also been Master of St. Katherine's Hospital.[32] This was an imposing stone house with gables. There was a stone gothic entrance porch on the Broad Street front, and both this front and that on King Street had pointed gothic windows under segmental relieving arches. Inside Chick's cross-section shows another fine staircase, but this time the balustrade looks as if it was of ironwork. The building later became a hotel, but was demolished in the mid 20th century.

Figure 9. Chick's elevation of the Broad Street front of Canon Musgrave's house

Chick was also responsible for other domestic work in Hereford, some in property owned by the Dean and Chapter, and some carried out as a commercial venture. The latter included the laying out of Hafod Road in 1885, where he also designed Number 48, Pen-y-bryn, for his own occupation.[33]

Country House work

One field where Chick had few opportunities was country house work. He provided additions to Brockhampton House, near Bromyard (1875) and did unspecified work at Caradoc Court, Sellack (1885). In 1872 he also designed the Yazor Lodge to the Foxley estate, an imposing gabled stone house. But by far his biggest country house commission was his previously mentioned work at Whitfield, where he designed a large new addition to the Georgian house, whose design is attributed to Anthony Keck, for Charles Meysey Clive and his wife Lady Katherine.

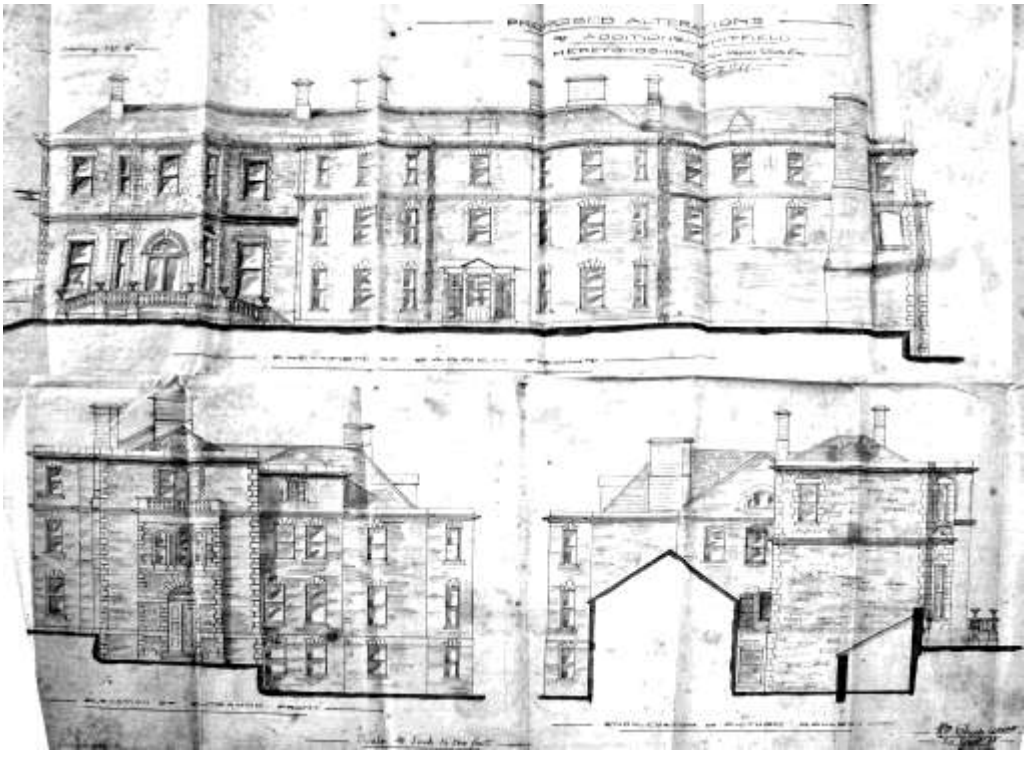

Figure 10. Chick's elevations for extensions to Whitfield. At the top is the garden front with his extension to the left. Bottom left is his entrance on the side elevation of the new wing. Bottom right is the side elevation at the other end of the house

Chick's drawings show loosely classical elevations.[34] The new entrance front on the side of his new wing has an element that breaks forward under a small segmental pediment with stone carving in it, and this breaks forward again to contain a round headed doorway with three round headed windows above, surmounted by a balcony. On the garden front his extension includes a double-height bay, with a round-headed garden door giving onto a balustraded balcony. Lady Katherine's family home at Newnham Paddox had recently been given a makeover in a French Renaissance style to the designs of T. H. Wyatt and there are echoes of this remodelling in Chick's designs.

Photographs in the Clive family collection show the large new west wing that Chick designed, its stone facades contrasting with the brick of the Georgian house. However, as executed, the wing looks rather different, its windows being mainly in a mullioned Elizabethan style, rather than the classical look of Chick's initial designs.

This west wing and an earlier Victorian east wing were swept away around 1950, when the architect, Philip Tilden, was called in by Lady Mary Clive to reinstate the original Georgian house, which, he wrote in his autobiography, 'looked like a pearl in a Victorian gothic oyster.'[35] However, some of Chick's work at Whitfield remains today. The third storey he added to the garden front of the Georgian house was retained. This replicates the two storeys below in a harmonious way and this time, in contrast to Norton Canon church, the brickwork is well

matched. The extra storey does perhaps make the facade rather top heavy and for this reason Philip Tilden recommended its removal, but Lady Mary Clive retained it to provide nursery space for her two young children.

Inside, the staircase Chick designed was modified in the 1950s, but at first floor level his balustrade pierced with quatrefoils, similar to that in Norton Canon vicarage, remains. His gallery at this level has an arcade of wooden Romanesque arches supported by clustered columns. The latter are said to be based on the columns that supported Hereford's 17th-century town hall, some of which were acquired by Charles Meysey Clive's father when the building was demolished, and for which a measured drawing by Chick exists.

PUBLIC BUILDINGS

Much of Chick's work in this sphere derived from his post of County Surveyor, to which he was appointed on a part-time basis in 1861 and in which he remained until shortly before his death in 1892. At first the job covered only buildings, but gradually responsibility was assumed for roads and bridges as well, until this workload grew so heavy that in 1880 a separate Surveyor of Roads was appointed. However in 1889 the jobs were re-amalgamated into one full-time post and Chick had to give up his private practice.[36]

The job does not seem to have been very well paid. An 1885 minute of the County Buildings Committee reports that Chick had asked for a bonus for recent extra work. Although satisfied that there were appropriate precedents for this, the Committee considered the practice unsatisfactory and 'they therefore refer the matter to the Council, recommending that some definite rule should be made whereby the remuneration of the County Surveyor may be prevented from being in any circumstances precarious.'[37] Perhaps this plea had some effect, because in 1892 Chick's successor was appointed with a reasonable salary of £400 per year.[38]

Chick worked on a wide range of public buildings: he repaired the pediment of the Shirehall; carried out numerous repairs to the Judges' Lodgings; made additions to the Militia Barracks in Harold Street, Hereford, and enlarged the workhouses in Hereford, Bromyard and Abbey Dore. A new type of building that was coming into use was the police station and Chick adapted existing structures for this purpose at Leominster, Ross-on-Wye and Weobley, whilst in Hereford he converted the Governor's House of the County Gaol to form the County Police Station.[39]

Schools form another part of Chick's oeuvre. He designed new buildings for Hereford Cathedral School and Hanley Castle Grammar School, Worcestershire, and extensions to Ledbury Infants' School. His work in this genre is best seen in his three new rural schools, Brinsop (1866), Much Birch (1865 and 1870) and Foy (1872).[40]

They are all asymmetrically gabled, Much Birch in stone and the other two in brick. Brinsop is sited near the parish church and has two appropriately ecclesiastical windows with plate tracery. Today it is much altered as a result of conversion to domestic use. The others have simpler segmental headed or bay windows. Foy is the best preserved externally today and still has its spindly slate-hung bellcote (Figs. 11 and 12). The sexes were segregated in these schools with separate boys' and girls' entrances and separate play yards outside. Much Birch and Foy also incorporate a schoolmaster's residence into the school building.

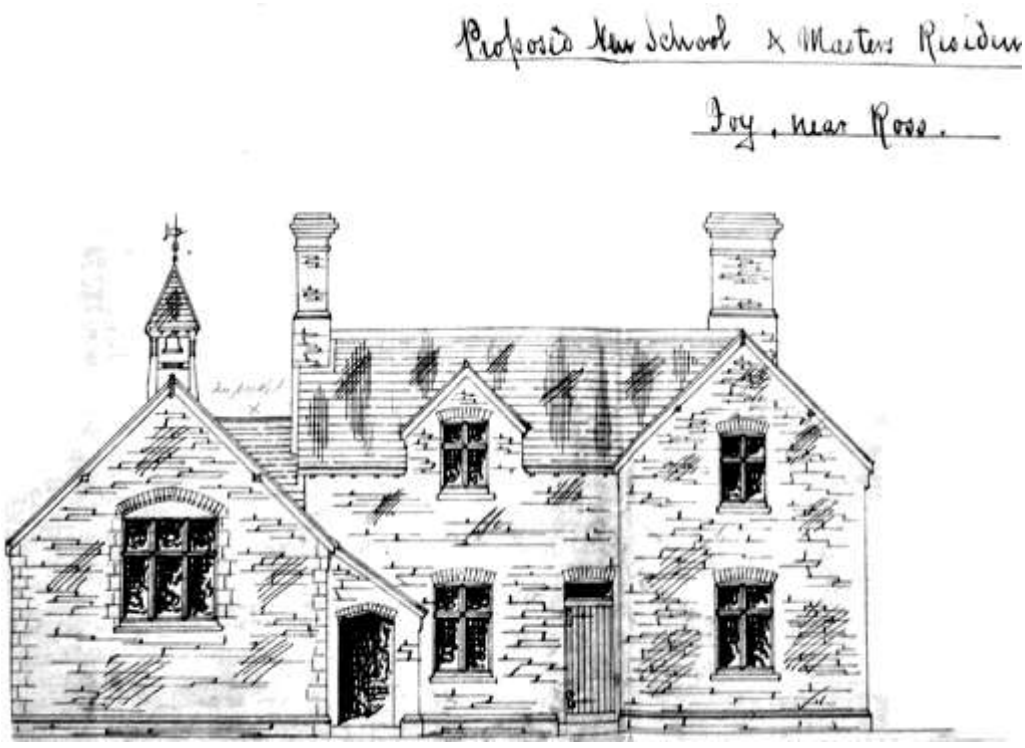

Figure 11. Chick's elevation drawing of Foy school

Figure 12. The Foy school building today

Another, and particularly high profile, job in the public arena was his restoration of the Ledbury Market House, which probably came to him because of his association with St. Katherine's Hospital. *The Builder* reported in June 1866 that restoration work had started under Mr Chick[41] and a year later the *Hereford Journal* informed its readers that the building had been stripped down to its timber framing, so the extent of the work must have been considerable. The architect, E. J. Bettington, was critical of the Victorian work in the Woolhope Club's *Transactions* of 1939. He found that the insertion of new internal stairs had caused movement in the framing and that windows were decayed because of poor quality materials. Perhaps Chick's budget was not generous, but, as in the case of his church restorations, his intervention, however imperfect, was no doubt instrumental in preserving an important historic building.

LATER YEARS

In his entry for Stretton Sugwas in the Herefordshire volume of the *Buildings of England* series Nikolaus Pevsner includes the throwaway remark that Chick later emigrated to Canada.[42] However this cannot be correct, because he remained active as County Surveyor until his resignation noted in the minutes of the meeting of the Roads and Bridges Committee of 10 February 1892.[43] He was replaced by Wakelam on 9 April 1892.

There is a tinge of sadness and decline about his later years. He appears to have severed all connections with the Dean and Chapter after 1878, perhaps because of the death of Scott, and jobs that he might have aspired to were now going to the Diocesan Architect, Thomas Nicholson. There was still his major work at Stretton Sugwas, Whitfield and Pailton to come, but increasingly, as the structures and scope of local government developed, his role as County Surveyor made more demands on him. For the last three years of his career this was his full-time occupation and he spent most of this time dealing with the minutiae of repairs to roads and bridges, which were suffering under the impact (sometimes literally) of the heavy new steam-driven agricultural machinery.

There is also some evidence of a growing eccentricity. First there is his decision in 1879 to change his name to Cheiake, a strange 'comic-posh' version of his former name. He signs himself only in this form for the rest of his career, and it is under this name that he and other members of his family are buried in Hereford City Cemetery.[44] It has been suggested that he wanted to distinguish himself from another William Chick who set himself up in Hereford as a jobbing builder.[45] There is indeed a William Daniel Chick who first appears in the 1881 census, but he was only seventeen when Cheiake was first used and is listed as a corn merchant's clerk. Possibly there was some sort of family bitterness involved. Perhaps more likely it was just a misguided attempt to give himself more *gravitas*. One senses that, as a son of a builder and an employee of both the Dean and Chapter and the local authorities, he was viewed as an artisan, but aspired to be regarded as a member of the professional classes. It may be that his substantial commission from the Clives of Whitfield around this time induced feelings of grandeur.

Another curious incident occurred in 1881 when Chick drew up plans for a new wash house at Bartestree Convent. In correspondence with the Mother Superior, her agent, a Mr Lambe, reports his dealings with Chick, who has been removed from the job and feels 'he is being pushed out of the work.' Chick, not unreasonably, asks for his 2½% commission for the drawings provided, and, when the Convent prevaricates, he suggests, whether sarcastically or

in seriousness, that if funds are short the Convent can repay him by doing his washing to the value owing.[46]

Certainly Chick suffered personal tragedy in his last years. His eldest son, William, disappears from the record after the 1871 census (could he be the William Chick who emigrated to Canada?). He had a second son, Edwin, and five daughters, but between 1887 and 1891 Edwin and two of his sisters died, all in their twenties or early thirties.

When Chick's own death came, shortly after leaving office, on 1 August 1892 at his house, Pen-y-Bryn, Hafod Road, Hereford, it was reported only in a three-line notice in the *Hereford Journal* and a similar notice in *Building News*.[47] Only his position as County Surveyor was mentioned. It seems he was already yesterday's man.

SUMMARY

As a young man Chick had the opportunity of working under two of the giants of Victorian architecture, Henry Woodyer and George Gilbert Scott. These men laid considerable responsibility on his shoulders and he seems to have given satisfaction, since he remained Scott's 'man' in Herefordshire for several years. Chick himself must have learnt from them an enormous amount about the practicalities of designing and restoring buildings.

As a result his work is nearly always accomplished and efficient and seems to have been well-received at the time. When funds permitted, such as at Little Birch church and Lyde vicarage, he could show real architectural flair and produce most attractive buildings. His distinctive use of Ham Hill stone for polychromatic effect was a successful innovation. Although he scraped the plaster from church interiors and destroyed their Georgian fittings in accordance with the taste of the time, he nevertheless was concerned to preserve old fabric, as shown by his sympathetic restoration at Eye and his judicious mixing of old and new materials at Stretton Sugwas. An antiquarian interest can be deduced from the fact that he became a member of the Woolhope Club.

But perhaps what impresses most is the sheer size and scope of his output. Especially in the 1860s and 1870s his workload was prodigious, and his churches, restored and new, vicarages, schools, police stations and private houses were spread all over Herefordshire. Some of the buildings he worked on were of the highest profile, such as the Cathedral, Ledbury Market House and St. Katherine's Almshouses opposite it.

Although a forgotten man today, no one made a greater contribution to the Victorian architecture of his adopted county.

ACKNOWLEDGEMENTS

I would like to thank David Whitehead, who provided me with references relating to William Chick and generally encouraged, and assisted with, my research. Thanks are also due to Michael Speak, who, via David Whitehead, provided information taken from his own extensive research into Victorian buildings in Herefordshire. I am also indebted to Mr and Mrs Clive for showing me photographs from their collection and giving me a tour of the Victorian features at Whitfield.

APPENDIX

William Chick, or Cheiake: a chronology. Compiled by Philip Anderson and David Whitehead with additions by Michael Speak (S).

1829	Born in Beaminster, Dorset
1853-5	Clerk of Works for Henry Woodyer at St Michael's Tenbury
1856	Rebuilt Tretire church – executant architect for T. H. Wyatt (S)
1857	Clerk of Works for Woodyer in the rebuilding of Ullingswick Rectory
	Restoration of the chancel of Pudlestone church
	Cottage plans at Belmont House, nr. Hereford
1859	Reports on the condition of the roof of St. Katherine's Chapel, Ledbury and executes repairs
1858-63	Clerk of Works for George Gilbert Scott during the restoration of Hereford Cathedral
1860	Much Birch church – addition of vestry and chancel – report (S)
1861	Appointed part-time County Surveyor of Herefordshire. Letter of fitness sent by the Dean and Chapter
	Clerk of Works for Scott's restoration of St. Peter's, Hereford
	Reports on the state of repair of the chancel at Lugwardine church
	Specification for further repairs to the chapel of St. Katherine's Hospital, Ledbury plus estimates for the repair of the Master's House
1862	Alterations to Much Dewchurch Rectory
	Estimate for the dilapidations of the chancel at Pipe and Lyde
	Clerk of Works for Scott for restoration of Upton Bishop church (S)
	Hereford: Governor's House, County Gaol – tender (S)
	Shirehall – improvements to Music Hall – report (S)
	Additions to Hereford Workhouse – tender (S)
1863	Clerk of Works for Scott in the restoration of Aconbury church
	Reports on repairs required for the chancel at Canon Pyon church
	Alterations to convert Globe Inn, Broad Street, into a private residence for the Dean and Chapter
	Ross police station, Brampton Street – additions – tender (S)
1864	Specifications for repairs of the chancel at Madley church
	Values dilapidated premises in Bye Street for the Dean and Chapter
1865	Specifications for the repairs of the chancel at Marden church
	Alterations to Newent Rectory
	Abbey Dore Workhouse – enlarged – tender (S)
	School and Master's house at Much Birch (S)
1863-66	Clerk of Works for Scott at Leominster Priory
1866	Reports on the dilapidated condition of the roof at Hentland church
	Estimates for the restoration of Norton Canon church, including roof, floor, seats and arches to chancel and transepts
	Directs restoration of Ledbury Market House

1865-78	Releaded the north transept, the roof of the vestry and the tower of Hereford Cathedral
	Restoration of windows over Booth's porch
1865-78	Specifications and repairs to tracery in SE transept window, the west window of the south transept and the windows and doors in south cloister
1866	Rebuilt the vicarages at Norton Canon, Pipe and Lyde and extended the vicarage at Putley
	Clerk of Works for Scott in the restoration of Peterstow church
	Built Brinsop School
	Restoration of Thruxton church
	Provided a house for Canon Musgrave in Hereford
1867	Extensions to Brinsop vicarage
	Restored Brinsop church
	Reports on the state of the chancel at Shinfield, Berkshire
	Plans for improving the drainage of the Master's House, St. Katherine's Hospital, Ledbury
	Plans for the completion of St. Katherine's Hospital, Ledbury
1868	Restored Norton Canon church
	Reports on the state of repair of the chancel of Little Dewchurch church
	Additions to Hereford Workhouse – cost £3470 – tender (S)
	Tender for the Herefordshire Asylum at Burghill (S)
	Additions to Hanley Castle Grammar School, Worcs.
1869	Rebuilt the church at Little Birch
	Restored Ocle Pychard church
	Rebuilt Hampton Bishop Rectory
	As part-time county surveyor repaired Moreton Bridge over the Lugg, made additions to the Militia Barracks, Harold Street, Hereford and a lock-up at Ledbury
	New building for Hanley Castle Grammar School, Worcs.
1870	Work at New Court, Ledbury
	Work at Halstock vicarage, Dorset
	Restoration of Kenderchurch church
1871	Hereford: 42 Broad Street (Herefordshire Country Club)
	Bryngwyn, near Hay – vicarage – tender (S)
1872	Work at Martinscroft, the rectory for Eaton Bishop
	Restoration of Bryngwyn church, Radnorshire, with John Pritchard
	Designed the Yazor Lodge, Foxley estate
	Extensions to Wigmore vicarage
	Parochial School, Foy
1873	Extensions to the Infants' School at Ledbury
	Plans and estimates for restoring the chancel at Woolhope church
	Reports on the chancel at Blakemere church

1874	Said to be living at Woodville House, Sutton St Nicholas
	Provided a new tower for Eye church and general restoration
	Further plans & specifications for the restoration of the chancel, Norton Canon church
1874	Reports on the planned restoration of Eign Mill, Hereford, for the Dean and Chapter – supervises work
	Dean and Chapter make a payment 'through Mr Chick' towards the building of Brockhampton (by Ross) School
1874	Plans for a new road at Tupsley for the Dean and Chapter
	The Moor Bridge, Bodenham – tender (S)
1875	Additions to Brockhampton House near Bromyard
	Further reports on the chancel at Blakemere. Dean and Chapter agree to rebuilding
	The chancel at Marden restored under Chick's direction
	Specifications for a new school and classrooms in Castle Street for the Cathedral School – work on the Headmaster's House (S)
	Reports on the state of repair of houses and buildings in Harley Court for the Dean and Chapter – lessee considers his estimate excessive
1876	Raised the roof of the Bromyard workhouse
	Reports on repairs required to the apse windows and buttresses in the chancel at Madley church
	Alterations to the Master's House, St. Katherine's Hospital, Ledbury – fee £40
	Specifications for improvements to the Cathedral School rooms – insulation and ventilation
	Mordiford Rectory – alteration – tender (S)
	Coston Hall, Aston-on-Clun, Salop, - alterations/additions – tender (S)
1877-78	Rebuilding Stretton Sugwas church
	Further alterations to the Master's House at St Katherine's Hospital, Ledbury
1878	Restoration of the chancel of Madley church
	St Devereux church – restored/reseated – report (S)
1878-80	Extensions to Whitfield
1879	Changed his name to Cheiake
	Inspected work at St. John's Methodist Chapel, St Owen Street, Hereford
1880	Farmhouse and outbuildings at Old Letton Court (S)
1881	Additions to Bartestree Convent, near Hereford – designed a new washhouse and is in dispute with the Convent about his fee
1882	Supervised repairs to the pediment on the Shirehall, Hereford
1884	Designed a new church at Pailton, Warwickshire – built in brick and modelled on Kilpeck church
	Weobley police station – additions – tender (S)
	Leominster police station – extensions – tender (S)

1885	Unspecified work on Caradoc Court, Sellack
	Laid out Hafod Road in Hereford and built no. 48
	Nos. 11-13 St Owen Street – plans (S)
	Iron girder bridge over the Lugg Rhea at Moreton on Lugg (S)
1886	Extensions to the Industrial Boys Home, Bath Street, Hereford – inscription plaque
	Broad Bridge, Bromyard – rebuilt – tender (S)
	Hereford: Nos. 1-7 Hafod Road- plans (S)
1888	Hereford: No. 15 Commercial Street – plans (S)
1889	Became full time County Surveyor on the creation of Herefordshire County Council
	More work at Bartestree Convent
	The restoration of Tregate bridge in SW Herefordshire
	Wigmore church – tower restoration – tender (S)
1892	Resigned as County Surveyor February 1892 and died on 1st August - monument in Hereford City Cemetery

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The County Surveyors of Herefordshire

By CHRIS PICKFORD

The text of this article was originally prepared in 1978 as part of a series of lectures to a W.E.A. group in Hereford. It was revised in 1984 but until now has been available only in typescript at the Herefordshire Record Office. It was offered to the Club for publication in 2010, as was the paper on William Chick which appears earlier in this issue. In 1999 a detailed paper on John Gethin was published in the Club's Transactions, *so the information on Chick and Gethin in this paper has appeared elsewhere. However, the notes on the other surveyors are valuable, so the sections on Gethin and Chick have been retained to illustrate their place in the sequence.*

THE POST OF COUNTY SURVEYOR

Up until the 1970s the heads of County Council departments held the title of County Librarian, County Treasurer etc. Many of these titles—some of them dating back several centuries—have disappeared, swept away by changes in local authority management structures in recent decades. This article offers a general overview of the succession of Herefordshire County Surveyors from 1820, when the first appointment was made, until 1933, with additonal brief notes on those preceding the local government reorganisation in 1974.

The date of first appointment to a salaried post of County Surveyor (or similar) varies from county to county, but Herefordshire was one of several English and Welsh shires where such a post was created in the opening decades of the 19th century.[1] This came about partly to ensure compliance with the provisions of the *Bridges Act* of 1803, but in some areas—as in neighbouring Shropshire where Thomas Telford was appointed as the first County Surveyor in 1787—such arrangements were already in place. Indeed, the very earliest dates of appointment are in Essex (1704), the North Riding of Yorkshire (1709) and Derbyshire (1713). In these cases, though, the appointments did not start a continuous succession.

In fact, the origins of the office of County Surveyor go back to the 16th century when the Tudor monarchs established the foundations of the modern system of local government. In the counties various administrative responsibilities were devolved upon the Justices of the Peace, meeting in their quarterly sessions, where they not only administered justice through the courts but also transacted County business. This included the repair of County bridges, upkeep of the County gaol and, as responsibilities widened, general responsibility for all property owned by or erected for the 'County' administration—county with a capital 'C'.

The earliest County surveyors, therefore, were architects and civil engineers. Although the title is most commonly thought of in relation to roads, it was not until 1889 that the counties (i.e. the newly-created county councils) assumed responsibility for highways. In the following list, therefore, the earlier holders of the post were mainly concerned with buildings. It was only after 1889 that the emphasis switched to roads. It was at about this time, in 1885, that the County Surveyors' Society was established as a national body to represent the interests of local authority surveyors and as a forum for professional discourse.

Finally by way of introduction, it may be of interest to note the dates of appointment of surveyors in the neighbouring counties. After Shropshire in 1787, the next were Gloucestershire (John Collingwood, 1817), Montgomeryshire (Thomas Penson, 1817), and

Radnorshire (Benjamin Wishlade, *c*.1817), Monmouthshire (Thomas Waters, 1826), then Worcestershire (Charles Day, 1830s). Also in the West Midlands, Warwickshire had a Bridgemaster (Henry Couchman, 1790) and later a County Surveyor of Bridges before finally adopting the title of County Surveyor in the 1850s.

HEREFORDSHIRE'S COUNTY SURVEYORS

JOHN GETHIN (1820-1831)

John Gethin was born in 1757 and lived for most of his life in the Herefordshire village of Kingsland. He was by trade a stonemason and in the course of his career he became noted for his ability in building and repairing bridges, to the extent that by 1800 he was regularly employed on work of this nature by the Justices of the Peace in Quarter Sessions. He worked mainly in the north of the county, and in particular on bridges on the rivers Lugg and Arrow. In 1785 he rebuilt Wergins Bridge on the Lugg at Sutton St. Nicholas near Hereford. Ten years later he collaborated with his brother Benjamin in the rebuilding of Aymestrey bridge, and in 1800 he reconstructed the bridge over the Arrow at Eardisland. Later in life, Gethin built bridges over tributaries of the river Wye at Willersley and Rhydspence, and his last recorded job for the County was the reconstruction of an arch in the Monnow Bridge at Llangua in 1831. Detailed accounts of his life and work have been given by G. H. Jack in 1931 and by P. S. M. Cross-Rudkin and P. T. Shaw in 1999.[2]

In the early nineteenth century, it gradually became common practice for the Quarter Sessions to appoint a suitably qualified architect or engineer as their official Bridge Surveyor. The work of the Surveyor involved the upkeep of bridges and County buildings, and it was no doubt in recognition of his long service to the County that on 27 May 1820 John Gethin was appointed as Surveyor of Bridges for the County of Hereford, thus becoming the first County Surveyor. He held office until his death at Kingsland on 24 May 1831, although as we shall see a separate Surveyor of public buildings was appointed in 1825.

CHARLES HEATHER (1825-1842)

Charles Heather's connection with Herefordshire began when he worked at Garnstone, Weobley, as superintendent or Clerk of Works for the architect John Nash. Heather had previously worked with Nash at Ingestre Hall, in Staffordshire, where the north front was rebuilt between 1803 and 1813. His employment at Garnstone seems to have come to an end in 1812 as on 1 July of that year he placed the following advertisement in the *Hereford Journal:*

> 'CHARLES HEATHER SURVEYOR & BUILDER
>
> Superintendent of the late Works at Garnstone, and at the Right Hon. Earl Talbot's, at Ingestre, Staffordshire, RESPECTFULLY informs the Nobility, Gentry and the Public, that he is about to establish himself in the above Branches, in the City of Hereford, where by strict attention to their commands, he most earnestly solicits the honour of their patronage, and support.
>
> N.B. Designs with plain Working Drawing made with accuracy and dispatch
>
> A Satisfactory Reference may be had by addressing a line to the above Nobleman, who will answer any inquiries relating to this Advertisement.'

In October 1812, he again advertised in the *Hereford Journal* '...to inform his Friends and the Public, that he has REMOVED from King Street, to the House in Widemarsh Street, occupied

by the late Mr Price, Joiner.' Again describing himself as 'Surveyor and Builder,' he stated that he proposed 'carrying on Business in the Building line in all its Branches - feeling competent (from his long experience to the execution in the best manner), of any thing that may occur in the above Professions.'

Little is known of his work in the years which immediately followed, but by 1825 he had become sufficiently well known to attract the attention of the Justices. He had, for instance, worked on the Judges' Lodgings in 1817. As already noted, John Gethin had been formally appointed as Surveyor of County Bridges in 1820, having for many years previously undertaken bridge work for the County on a regular basis. Gethin confined his activities to the area in which he had specialist knowledge, but within a few years of his appointment the Justices became aware of the need for a professional surveyor to be responsible for all County bridges and buildings. In November 1824 Quarter Sessions decided to dispense with Gethin's services and to appoint Charles Heather as 'Surveyor for the Shirehall, Judges' Lodgings, and all public buildings', noting in the minutes that Heather 'appeared to be a competent and proper person to be appointed to such office.' On further consideration, however, they decided to split the work between the two men, and at a meeting on 10 January 1825 they resolved to retain Gethin's services as Surveyor of Bridges, and to appoint Heather as 'Surveyor of all public buildings.'

Gethin died on 24 May 1831 and at the Quarter Sessions on 27 June the Justices appointed Heather as Surveyor of County Bridges in his stead, also confirming his appointment as Surveyor of the County gaol, Shirehall, and Judges' Lodgings. His official work is well documented in the Quarter Sessions records. As far as the buildings were concerned, he dealt mainly with repairs and alterations to the Shirehall, built in 1815-1817 to the designs of Sir Robert Smirke, and on works at the County Gaol which was designed by his old master, John Nash, and built in 1795-6. Specifications survive for repairs to the ancient bridge over the river Lugg at Mordiford and for a new bridge at Ponthendre, Longtown, both dated 1838, and early in 1841 he prepared specifications for repairs and maintenance of bridges at Pipe and Lyde, Wellington, Moreton on Lugg, and Laystone Bridge on the road from Marden to Wellington. After over sixteen years in office, he submitted his resignation in October 1841, but he was asked to continue as County Surveyor until the next Sessions in January 1842 when his successor was appointed.

Charles Heather died in 1845, and his will was proved in the Dean of Hereford's Consistory Court on 3 September 1845.

Throughout the period when he was employed by the County, Heather was active in private practice as an architect and as a building contractor. His documented work in the Hereford area between 1812 and his death in 1845 includes repairs and alterations to the rectory at Withington (1825-7) and Weobley vicarage (1827-8). He undertook, substantial alterations to the church at Ashperton including the building of a new western tower in 1839-1841. He designed a new gothic porch for St. Peter's church, Hereford, in 1836, and some years earlier in 1824-6 he prepared plans and specifications for the restoration of Dorstone church although it is not clear whether his scheme was carried out. In 1841 he acted as architect for repairs to the church at Much Cowarne after a serious fire on 28 January 1840, advertising for tenders in February 1841 and advising interested parties to obtain further particulars 'at the Office of Mr Charles Heather, County Surveyor, Widemarsh Street, Hereford.'

He occasionally advertised in the local newspaper, and two advertisements from the *Hereford Journal* of 1830 and 1831 are of particular interest. The first of these appeared in the paper on 6 January 1830:

> 'C. HEATHER, ARCHITECT,
>
> COUNTY SURVEYOR, & BUILDER in GENERAL, RETURNS his grateful Thanks to the Nobility, Gentry, Clergy, and the Public in this and the adjoining Counties for the very liberal Support and Patronage with which they have been pleased to honour him during a period of fifteen years, and to inform them (that for the greater facility of fulfilling his undertakings), he has engaged an ASSISTANT from LONDON, in the Drawing Department, which will enable him to furnish Architectural Designs, with proper Working Drawings, and Correct Estimates, as also Valuations of Dilapidations, and every kind of Work in the Building line on the shortest Notice.
>
> — The commands of those Gentlemen who may require his Services will be attended to with punctuality and despatch. Widemarsh-Street, Hereford, Jan. 1, 1830.'

This advertisement has an air of comfortable contentment as the Surveyor of County Buildings —he was not yet County Surveyor—reflected on the happy circumstances which had brought him to Hereford some fifteen years earlier. In the wake of his celebrations, however, Heather faced family difficulties and on 11 and 18 May 1831 he placed the following advertisement in the *Hereford Journal*:

> 'CHARLES HEATHER COUNTY SURVEYOR
>
> RESPECTFULLY acquaints the Nobility, Gentry, and the Public, that he still continues his Business as SURVEYOR AND BUILDER, in all its Branches, (although a report has been industriously circulated to the contrary), and will feel great pleasure in attending to the commands of those Gentlemen who may be pleased to honour him with a continuance of their patronage and support. Widemarsh-Street, Hereford, May 10, 1831.'

The rumours that he had given up his business no doubt resulted from an advertisement in the same paper on 6 April 1831 in which his son, William Heather, had announced that he had commenced business as a surveyor and builder in Eign Gate, Hereford. It seems that young William had set himself up in opposition to his father, and in his advertisement he expressed the hope that 'by assiduity, moderate charges, and strict attention to all orders' he might 'obtain a share of the patronage and support' of the gentry and the public at large. The additional publicity provided by this little controversy was timely, for John Gethin died in May 1831 and in June Charles Heather took sole charge of the County bridges and public buildings as County Surveyor.

HENRY ADAMS (1842)

Heather's successor was Henry Adams, who was appointed as County Surveyor at the Epiphany Quarter Sessions on 3 January 1842. His tenure of office was short and in June 1842 he tendered his resignation, having been appointed as Surveyor of Buildings to H.M. Customs in succession to the previous postholder, John Taylor, who died in 1841. Like Heather, Adams was primarily an architect. He seems to have been responsible for planning a new church at New Radnor, built in 1843-5 by Thomas Dashwood, and described in detrimental terms by

Richard Haslam in the Powys volume of *The Buildings of Wales*, (1979) as 'an extreme case of unsuitable rebuilding.' In February 1841 he had prepared plans for a new church at Little Birch, a village about five miles to the south of Hereford. This church was duly built to his design in 1841, but it too was unsatisfactory and in 1869 it was again entirely rebuilt to the design of William Chick.

JOHN GRAY (1842-1861)

John Gray was appointed as County Surveyor immediately after Adams's departure in June 1842. Little is known of his origins and training, but it seems that he was involved in the building operations at Hampton Court, the home of the Arkwright family, under the direction of the amateur architect Charles Hanbury Tracy, Baron Sudeley. This work was carried out in the period 1835 to 1841, but Gray continued to give his address as Hampton Park until at least 1847. Gray's private architectural work included Staunton Park, a large country house near Kington, built between 1843 and 1847 for J. K. King Esq, and demolished in the 1930s. He also prepared plans and specifications for alterations to the rectory at Stoke Lacy in 1852, and on this particular house he was also employed as contractor.

At this time, the County Surveyor was still chiefly concerned with bridges and with work on the County buildings. In 1854, for instance, John Gray prepared specifications for a new bridge at Poston, near Vowchurch, and other routine repairs to buildings and bridges are recorded in the Quarter Sessions records. Gray's term of office saw the creation of the County Police Force, and this brought additional work for the County Surveyor in designing lock-ups and police stations in each of the Petty Sessional Divisions. The Sessions minutes refer to Gray's work on such buildings at Ledbury and Ross on Wye in 1843-4, and plans, specifications and contract documents survive for lock-ups at Wigmore (1848), Leominster (1851) and Harewood End (1854). From these it is clear that Gray's designs were based largely on the Home Office memoranda on the subject issued between 1840 and 1846 which included specimen plans and specifications.

After leaving Hampton Park, John Gray moved to King's Acre, a locality in Breinton to the west of the city of Hereford, where he was living by March 1848. The 1851 census lists him at Veldiver or Veldimer, King's Acre, with his Cheshire-born wife Phoebe. They were both 55 years old. Gray was born in Ayrshire, Scotland. He was at the same address (shown as Veldemore) in 1861. He continued in office as County Surveyor until 18 March 1861 when he tendered his resignation.

WILLIAM CHICK (or CHEIAKE) (1861-1892)

Chick came to Herefordshire in 1853 as clerk of works for Henry Woodyer, the 'High Victorian' architect at St.Michael's College, Tenbury. The College was built between 1854 and 1856 for the Revd Sir Frederick Arthur Gore Ouseley, later Precentor of Hereford Cathedral, a leading figure in the revival of the choral tradition in Anglican church music. The building did much to enhance Woodyer's reputation as an ecclesiastical architect and led to several other commissions in the area. In 1857, the rector of Ullingswick near Bromyard carried out various alterations and improvements to his rectory house, recording in the parish register that Henry Woodyer had been employed as architect. Reference to the diocesan archives reveals that the rector was indulging in a mild deception, however, for the plans and specifications for the work were drawn up not by Woodyer but by William Chick, surveyor, whose address is given as St. Michael's, Tenbury. So began Chick's career as an architect in Herefordshire.

Soon after the completion of work at Tenbury in 1856, William Chick set himself up in private practice in Hereford. By 1874 he was living at Woodville House at Sutton St. Nicholas, a village some 4 miles north-east of Hereford. Competition was fierce, however, for his arrival in Hereford roughly coincided with the emergence of two other local architects of distinction, namely Thomas Nicholson (the diocesan architect) and Frederick R. Kempson. With them, and with others such as G. C. Haddon of Malvern and Hereford, he vied for work on churches, schools, vicarages, and for architectural work in general.

A brief survey of some of his work shows that he succeeded in capturing a share of the market. In 1862 he was responsible for alterations to the rectory at Much Dewchurch, and in 1866 he was engaged simultaneously on work on vicarages at Norton Canon, Putley, Pipe-cum-Lyde and on the house of the Canons Residentiary in Hereford. Later rectory or vicarage work included alterations and enlargements at Brinsop (1867), Hampton Bishop (1869) and at Eaton Bishop and Wigmore (both 1871). Outside the county he worked in Gloucestershire on Newent Rectory (1865-6) and in Worcestershire he designed a new range of buildings for Hanley Castle Grammar School (1868)

He was successful too in the field of church restoration. Acting as clerk of works to Sir George Gilbert Scott at Aconbury in 1863 and in 1869 he himself undertook the renovation of Brinsop church and designed a new building to replace the 1841 church at Little Birch. Later commissions included work on churches at Eye (1874), Stretton Sugwas (1877-80), and Pailton, Warwickshire (1884), and sundry works at Bartestree convent from 1881.

Busy as he undoubtedly was in private practice, Chick nevertheless found himself overshadowed by his rivals and it was perhaps for this reason that in 1861 he applied for the post of County Surveyor, vacant through the resignation of John Gray. He was duly appointed on 1 July 1861, and so began a term of office which was to last for over thirty years, during which he served both the Quarter Sessions and the first Herefordshire County Council, established in 1889.

In 1881, the main functions of the County Surveyor were still the provision of plans and specifications for new buildings and the oversight of structural repairs and routine maintenance. In 1882, for instance, Chick supervised repairs to the pediment of the Shirehall in Hereford which had weathered badly in the sixty or so years since the building was completed. However, the nature of the job was changing, and in particular the County Surveyor gradually assumed increasing responsibility for the network of main roads within the county. The increased workload was such that in January 1880 the Justices appointed Thomas Codrington as Surveyor of Roads for the County at an annual salary of £250, Chick (or Cheiake as he was by then known) continuing in office as County Surveyor. As early as April 1880 it was suggested that the two separate offices should be combined, but this did not come about until 1889 when, following Codrington's resignation, the new County Council created a full-time post of County Surveyor with responsibility for the superintendence of main roads and for the County buildings. In accepting office, Cheiake was required to give up private practice and to devote all his energies to County Council work. This he did until he resigned in February 1892.

In private life, Chick was apparently a rather enigmatic character with a liking for eccentricity. Later in life, he changed the spelling of his name from Chick to Cheiake on account, so it is said, of a jobbing builder named William Chick having set up in business in Hereford. The change seems to have taken place in the autumn of 1879, for the Sessions Minutes of 15 October record the adoption of 'the report of W. Cheiake, County Surveyor', but the actual report, presumably printed a few weeks earlier, bears the name of 'W. Chick.'

Cheiake only lived for a few months after retirement. He died in Herefordshire in August 1892. The census shows that Cheiacke and his wife Jane were still living at Woodville House at Sutton St.Nicholas in 1881, when their son Edwin (aged 17) is listed as an Architect's pupil. By 1891 William and Jane had moved to Hereford.[3]

HENRY T. WAKELAM (1892-1898)

The appointment of Henry Titus Wakelam as County Surveyor on 9 April 1892 marked a definite change in the character of the office and its holder, for whereas Cheiake had been an architect who had adapted to the role by force of circumstance, Wakelam was a professional civil engineer with experience of local government. He came to Hereford from the Urban District of Garston, near Liverpool, where he had served as Borough Surveyor, but he held office for only six years and resigned in 1898. He moved on to be County Engineer and Surveyor for Middlesex, and by 1901 he was living at Lismore Lodge in Heath Road, Twickenham. He became the President of the Institute of Municipal and County Engineers in 1915 and served as County Engineer for Middlesex until 1920. He was President of the County Surveyors Society in 1900-1901 and later served as its Secretary, 1915-1920.

The census shows that he was born at Willenhall in Staffordshire in about 1859 and that he lived at Oswestry, Shropshire, before moving to Garston and then to Hereford. In 1891 he was in Garston and the census lists him as the 33-year-old Surveyor to the Local Board. The family lived at 61 Island Road. Accompanying him to Hereford in the following year were his wife Mary and their twin daughters Edith and Alice, born at Oswestry.

Wakelam died at Croeswylan, Oswestry, on 18 January 1920, aged 62. The probate calendars show that he was living at 185 Ashley Gardens, Middlesex, at the time of his death. Probate was granted to his widow, Mary, and his Hereford-born son Henry Blythe Thornhill Wakelam, engineering pupil.

ALFRED DRYLAND (1898-1907)

Like Wakelam, Dryland was a County Surveyor truly cast in the local Government mould. Hereford was a stepping stone for Dryland who eventually succeeded his Herefordshire predecessor, Henry Wakelam, as County Surveyor for Middlesex. During the course of his career he held the surveyorship of no less than four counties, also taking an active role in local politics in later life. He was awarded the CBE in 1930. The obituary from the *Journal* of the Institution of Civil Engineers provides a detailed biography:[4]

> 'ALFRED DRYLAND was born at Aldington, Kent, on the 2nd March, 1865, and died at Kingston-on-Thames on the 26th November, 1946. After receiving his practical engineering training under the late Mr A. W. Conquest, A.M.LC.E., Borough Surveyor of Folkestone, he was appointed, in 1883, Borough Surveyor of Deal. From 1891 to 1898 he was Assistant County Surveyor of Kent, in charge of 136 miles of main roads in the north-west of the county, adjoining London. From 1898 to 1906 he was County Surveyor of Herefordshire and Engineer and Architect to the County and City Asylum; from 1902 he also acted as architect to the County Education Committee. In 1906 he was appointed County Surveyor of Wiltshire, and in 1908 County Surveyor of Surrey; whilst from 1920 to 1932 he was County Surveyor of Middlesex. He was a member of the Engineering Advisory Committee of the Road Board, and carried out the Great West, Great Cambridge, North Circular, Barnet, and Watford by-pass roads, the Western Avenue, and many other arterial roads and bridges in Middlesex, and was Engineer to the Joint Committee of Middlesex and Surrey for new bridges over the Thames at

> Chiswick and Richmond. The West Middlesex main drainage scheme was the result of a report made by him. He was awarded the C.B.E. in 1930. In 1935, 1936, and 1937 he served as Mayor of the Royal Borough of Kingston-on-Thames, and continued as an active member of the town council up to the time of his death.
> Mr Dryland was elected an Associate Member of The Institution on the 3rd March, 1891, and was transferred to the class of Member on the 10th January, 1911. He was also a Past-President of the County Surveyors' Society and of the Institution of Municipal and County Engineers and a former Member of Council of the Institute of Transport, and was a frequent contributor to the technical press on road engineering matters.
> In 1885 he married Edith Rose Constance, daughter of Mr H. R. Clarke, Magistrate and Collector in His Majesty's Indian Civil Service, and had two sons and one daughter.'

Dryland, clearly, was the most distinguished holder of the office in Herefordshire. As the obituary notes, he was architect to the County Asylum at Burghill and also, from 1902, to the County Education Committee. In the latter capacity he was doubtless responsible for the school building programme and alterations to existing buildings stemming from the 1902 *Education Act*.

The 1901 census shows that while he was at Hereford he lived at 'Drylands' off Southbank Road at Tupsley. He is described as a Civil Engineer and Surveyor. His wife Edith was born in India, and their household included three children who were all born in Kent, one in Deal (*c.*1889) and two at Meopham.

GAVIN H. JACK (1907-1933)

Gavin Jack was appointed as County Surveyor in June 1907 and he held the post until his retirement in March 1933. He had previously been Borough Surveyor in the urban district of Aston Manor, near Birmingham. During his term of office as County Surveyor the architectural side of the work increased as the County Council became responsible for more and more buildings. Schools in particular came under the wings of the County Surveyor, and the former Bluecoat school in Widemarsh Street Hereford, designed by Gavin Jack in 1914-15, is an example of the work of the period. Eventually the County Council established a separate Architect's department to supervise the building programme, and in April 1927 R. B. Brierley was appointed as Acting County Architect to take charge of this side of the work.

G. H. Jack was well known locally as an antiquarian and local historian. He contributed regularly to the publications of the Woolhope Naturalists' Field Club, of which he was president in 1915-16, and a by-product of his combined professional and amateur interests was the article on John Gethin, the first County Surveyor, published in the *Transactions* in 1931. He died on 21 September 1952, and it is fitting to note that an obituary notice is to be found in the *Transactions* for that year.

COUNTY SURVEYORS, 1933-1974

The remaining County Surveyors have not been researched in detail for this article, but the names of those who served the County Council in the forty years before local government reorganisation in 1974 were as follows: R. G. Gurney (1933-1946), C. J. Macdonald (1946-1949), H. N. Jenner (1949-1956, later at Hampshire), and D. H. Banks (1957-1974). Following the creation of the new County of Hereford and Worcester, W. R. Thomson, who had been County Surveyor for Worcestershire prior to reorganisation, was appointed to take charge of the two united Counties. Mr Thomson retired in 1976, and he was succeeded by V. B. Jones.

REFERENCES

[1] This summary draws on a brief account of 'The beginnings 1530-1885' in Allen Smith *A History of the County Surveyors' Society 1885-1985* (Shrewsbury, 1985) pp.9-15. For comparable single county studies, *see* Nancy Briggs 'The evolution of the office of county surveyor in Essex, 1700-1816' in *Architectural History* Vol. 27 (1984) pp.298-307 and Patricia Bell 'Surveying the County' in the *Bedfordshire Magazine* Vol.20 no.153 (Summer 1985) pp.3-10; For a neighbouring county, *see* Canon Brian Carne's 'Thomas Fulljames, 1808-1874' in *Trans. Bristol & Gloucestershire Archaeological Society* CXIII (1995) pp.7-20, esp. pp.10-11.
[2] Jack, 'John Gethin', *Woolhope Naturalists' Field Club Transactions* (*TWNFC*) (1931), pp.86-97; Cross Rudkin & Shaw, 'John Gethin, Surveyor of the County Bridges', *TWNFC* (1999), pp.404-421.
[3] For a full biography, please see the article by Philip Anderson in these *Transactions.*
[4] vol.27 (1947) p.497.

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The Great Flood of 1795

By JOHN C. EISEL

In the early years of the Hereford Journal *there is usually little reference to the weather, except when there were extremes such as hot and cold, drought and flood. The latter is exemplified by the extensive reports on the great flood of February 1795, the circumstances of which caused much damage in the county and further afield. In this paper the effects of the flood along the river Wye itself are examined, as reported in the* Hereford Journal, *although much damage was also caused along the tributaries to the river as well as along other rivers within the county, and in the country as a whole.*[1]

INTRODUCTION

The story begins in August 1794, when the travel writer Samuel Ireland made a journey down the valley of the river Wye, drawing interesting views as he went. How he travelled is not stated, but it was certainly by horse in the upper reaches, and possibly by boat lower down the course of the river. These drawings were designed to illustrate a book called *Picturesque Views on the River Wye*, the intended publication of which in the spring of 1795 was announced in the *Hereford Journal* of 24 September 1794. It was to be published at the same time as his book *Picturesque Views on the Upper or Warwickshire Avon*, but while his book on the Warwickshire Avon did indeed come out in 1795, that on the river Wye was not published until 1797.[2] However, the text still referred to his journey in the long, dry, summer of 1794. On 16 July 1794 the *Hereford Journal* remarked on the adverse effect of the drought on the crops. This lack of rain naturally affected the level of the water in the river Wye, and this was referred to by Ireland: 'This being a remarkably dry season, barges have been laying at Hereford for upwards [of] four months, for want of water to carry them.'[3]

However, the *Hereford Journal* did not report when the drought was broken and the barges began moving again. That there was still enough water for the boats that carried tourists in search of the picturesque is evident by the fact that on Wednesday 20 August 1794 the *Hereford Journal* reported that the Assizes had finished in Hereford on the previous Saturday and that the judges had set out for Monmouth, and that 'Sir Francis Buller, with a select party of gentlemen of the law on the Circuit, having made the excursion to Monmouth, down the River Wye, from Ross,…did not arrive till a late hour on Sunday.'

A CHANGE IN THE WEATHER

At the end of 1794 the weather took a turn for the worse, and at about Christmas time very cold conditions set in, not, however, commented on in the *Hereford Journal*. These extremely cold conditions were general across the country, and the series of mean monthly temperatures in Central England (CET) from 1659, compiled by Professor Gordon Manley, show that, at a monthly mean of -3.1ºC (converted, of course, from °F), January was the coldest month since records began.[4] Inevitably the rivers froze, including the Thames and Severn, and while the Wye is not mentioned in this context in the *Hereford Journal*, it is implicit in the events that unfolded. There is also independent confirmation of this as a man, born in 1778 and still alive in 1870, could remember that the ice at Ross at this time was a foot thick.[5]

The thaw that followed seems to have begun earlier in parts of Wales and on 4 February 1795 the *Hereford Journal* reported on the sudden thaw that had occurred at Cardiff the previous week, remarking on the quantity of ice that had come down the river Taff, which carried away a temporary bridge at Cardiff on the previous Tuesday so that the mail coach had to detour via Llandaff.

In Hereford the thaw began on Saturday 7 February, accompanied by very heavy rain. All this conspired to rapidly break up the ice in the river, and on 11 February the *Hereford Journal* reported: 'The Wye is swoln to an amazing heighth [*sic*], and the water is several feet deep in the ground floor of the houses which stand by the side of the river.'

Figure 1. Glasbury bridge

The level of the river peaked at Bredwardine on 10 February, and such was the impact that a note was made in the back of the parish register:

> 'On the tenth day of February in the year 1795 was the Greatest flood in the River Wye as was ever remembered by the Oldest Inhabitant then living in the Parish of Bredwardine.'[6]

Next day (11 February) it peaked in the morning at Hereford. As this was the day that the *Hereford Journal* was published, it was not until a week later it was reported that

> '…at six o'clock (the period of its greatest heighth) the River was two feet five inches higher than it was ever known in the neighbourhood, by the oldest inhabitant living.—

> Notwithstanding the velocity with which the current came down, the bridge at this city, has apparently sustained no harm;…'[7]

Other bridges on the Wye were damaged or destroyed. That at **Newbridge**, Radnorshire, was destroyed —not reported until 11 March—as was **Glasbury** bridge. Ireland tells us that the latter was built 'about fourteen years ago by the family of Edwards, under the direction of their father, the celebrated architect of Pont-y-Pridd.' He reported graphically that it was then '...little more than a wreck; every arch of it having been blown up by the torrent of ice, which poured down on the very sudden thaw, after the long frost in the beginning of 1795.'[8]

Figure 2. Hay bridge, from Fielding's *A picturesque description of the River Wye...'*, 1822. The undamaged arches of the bridge can be seen next to the near river bank

The toll bridge at **Hay**, completed in 1763, also suffered a similar fate, but in that case two arches were left standing.[9] The private toll bridge at **Whitney-on-Wye**, enabled by an Act of 1779 and rebuilt not long before the flood, was also swept away,[10] but the toll bridge at Bredwardine, built after an Act of 1760, was only damaged.[11] Bridges below this on the river were also damaged, including Hereford bridge, despite the earlier optimistic report about the latter quoted above. At this period the only bridge in Herefordshire below Hereford was that at Wilton, built after an Act of 1597.

Naturally, with the swift rise of the floodwater, there was a loss of livestock, although only two instances were reported, no doubt the tip of the iceberg. A butcher of Hereford was reported as having had thirteen sheep suffocated in a cot near the Tanbrook, and a poor widow of Kinley, near Letton, lost livestock and fodder to the value of nearly £200. There was also a

human cost. A poor man of Eigne was reported as being drowned on 10 February, in attempting to secure some property from the flood, and there was also a fatality at Hay. A farmer from Clyro, named Lloyd, attempted to cross Hay bridge, driving his horse before him. At the moment he reached the crown of the bridge it gave way, and Farmer Lloyd was drowned, leaving a widow and several children to bewail their loss: the horse survived. What made this particularly poignant was that Lloyd was delayed by attempts to dissuade him from crossing, and the delay cost him his life.

Figure 3. Whitney toll bridge is difficult to photograph in isolation, as the railway bridge, just upstream, always intrudes.

The floods caused havoc in Hereford itself, the houses south of the river being particularly badly flooded, where the occupants took refuge in the upper floors, having to be provisioned by boat. The cider warehouses on either side of the river, where the cider was stored before it was shipped down the Wye, were flooded:

> 'The cellars and cider-vaults situated on both sides of the River, were completely filled with water; and unfortunately a vast quantity of cider and perry was lost, from the vessels not be being properly stopped up before they were set afloat.'

The image of hogsheads of cider and perry floating around gives a startling insight into the extent of the flooding. Despite this devastation on the riverside, there were no reports of barges being lost or damaged.

Naturally enough, with the extent of the flooding, all means of road access to the city were flooded, and in some places were only passable in boats. When the waters receded the road near Lugg Bridge was impassable to wheeled traffic. Severe damage must have also been caused in Hampton Bishop, as the strength of the current forced the embankment, and the level of the water rose six feet in half an hour.[12]

Figure 4. The toll bridge at Bredwardine, damaged but left standing by the flood, *c*.1917

In all this gloom there was one possible cause for celebration. On 25 March it was reported that **New Weir** [Whitchurch] had been nearly destroyed, and that an application was to be made to Parliament to prevent it being rebuilt. New Weir was an obstruction to fish reaching the upper stretches of the river, and it was referred to a fortnight later when an advert appeared about the destruction of small fry in the river. An accompanying news item referred to 'the evil effects of New Wear [*sic*], as alluded to in a former Paper: Nevertheless, we trust the Public will not be inattentive to the prevention of any undue encroachment which may be attempted in the approaching repair of New Wear.'

The local news for February 1795 was dominated with news of the floods, with reports of the damage caused by floods in Shrewsbury, Worcester and Gloucester. What it did not report was that after 12 February the weather turned cold again, and this cold spell lasted well into March. The CET mean for February was 0.8 ºC, about 3.0 ºC below the long-term mean for the month.

THE AFTERMATH

While the damage caused by the floods in adjoining regions continued to be reported, in March the balance of the local news shifted to reports of social unrest, there being a shortage of grain and consequent famine in the poor. There were also references to the work that was necessary to put the bridges back into good condition. That at **Newbridge-on-Wye** was not mentioned in this context until much later, when an advert in the issue of 19 January 1814 asked for persons willing to contract for building a wooden bridge over the Wye at 'a place called New-Bridge in the parish of Llanyre' to send their proposals to the Clerk of the Peace for Radnor or that for Breconshire. What had happened in the time that had elapsed since the flood of 1795 is not clear, but this proposal was timely as it came just before another flood at the beginning of February 1814.

There was a more immediate response for the bridge at **Glasbury**. On 25 November 1795 there was an advert in the *Hereford Journal* for proposals to rebuild Glasbury Bridge in stone, which had been 'carried away on about the Tenth day of February last.' This seems to have been unsuccessful, and on 10 February 1796 another advert asked for those interested to attend the Radnorshire Quarter Sessions. In the event, no doubt due to the lack of interest in rebuilding the bridge in stone, or the cost, it was rebuilt in timber in 1800.[13] There was a similar happening at Hay, where the southern section of the bridge had collapsed, leaving two arches at the northern (Radnorshire) end. When the bridge was repaired, those two remaining arches were utilised, and those that had collapsed were replaced by a timber structure. Evidently this caused concern, and when the opening of the repaired bridge was announced in an advert in the *Hereford Journal* of 21 December 1796 it was thought necessary to add '…that it is perfectly safe for carriages of every description and weight.'

Another bridge that was rebuilt in timber was that at **Whitney**, which had had a very chequered existence.[14] After the its destruction in 1795, the preamble to a further Act of 1797 listed the misfortunes of the undertakers of the bridge and altered the requirements to a bridge of two stone arches and three wooden ones, seemingly to utilise the remaining arches against either bank. Meanwhile, the ford near the bridge again had to be used, and this was not always easy. In December 1795 a post-chaise attempted to ford the river here, but the river being too high, the post chaise overturned and the driver, horses, and three passengers were drowned.[15] Notice of the completion of the bridge was given in the *Hereford Journal* on 16 and 23 March 1803, together with a list of tolls and a warning that there should be no ferry or fording of the river within one mile of the bridge under a penalty of 20s.[16] The bridge was further damaged by floods on 6 February 1814, when part of the bridge was carried away, reported on 9 February 1814. A week later an advert offered a reward if timbers from the bridge were located, and threatening prosecution if they were purloined![17]

Although 1769 is the date that is usually quoted for the completion of **Bredwardine** bridge, this is not so, and the correct date of completion was 1764, some four years after the enabling Act of 1760.[18] In November 1770 there was a great flood in the Wye, which seems to have been the cause of damage to the bridge for which repairs were required the following year.[19] As part of the necessary fund-raising a toll house was built to raise money for the repairs and this was intended to be a temporary measure until enough money had been raised to clear the debts. However, as is not unusual, this did not happen and the toll house remained.[20] After the tolls were removed in the middle of the nineteenth century no money was spent on the bridge, until it was reconstructed in 1922.[21]

Despite the initial report to the contrary, Wye Bridge in **Hereford** was damaged in the great flood, and the *Hereford Journal* of 13 May 1795 carried an advert asking 'ANY person willing to undertake the Repairs of the Bridge over the River Wye, at Hereford, is requested immediately to view the same, and deliver an estimate of the expence to Dr Symonds, Chamberlain of the said City.' Evidently the advice of John Nash, the architect, was sought, as on 29 July 1795 another advert to bridge builders appeared, stating that considerable damage had been done to the bridge 'from the ice, and high floods, of the last Winter, in the foundation of the Piers and otherwise…' and asking for those qualified and willing to undertake the repairs 'according to the Plan proposed by Mr Nash, the Architect,...' to attend on Dr Symonds to inspect the plans and deliver proposals in writing. A meeting was advertised to take place on 15 October 1795 'to take into consideration the REPAIR of WYE-BRIDGE, and to chuse a Committee to examine the same.'[22] This was considered at the Quarter Sessions on 19 October,

which was then adjourned to 27 October for the sole purpose of taking the state of the Wye Bridge into consideration, and account for the money already laid out. However, it was not until 22 January 1798 that the final accounts for the money spent on the repairs to Wye Bridge were approved at the Epiphany Sessions, when a balance of £15 18s. 1½d. was left in the Treasurer's hands.[23]

Figure 5. Hereford: the river frozen above Wye bridge in December, 1892

The bridge at **Wilton** was another that was reported as being damaged in 1795, although there was no further reference to this in the *Hereford Journal*, nor any adverts asking for contractors to carry out repairs. Perhaps the report was exaggerated, as it seems likely that the bridge was in good repair. An advert in the issue of the *Hereford Journal* of 21 September 1780 stated that the bridge at Wilton was out of repair, and that proposals had to be sent to Mr Fallowes (Clerk of the Peace) in Leominster by 1 October. Then on 10 October 1786 it was reported that the bridge at Wilton had been presented as being out of repair, that proposals for its repair should be brought to the adjourned Quarter Sessions at the Shire Hall, Hereford, on 25 October. Less than four years later, on 16 August 1790, an advert informed the public that at the Grand Sessions the Grand Jury has presented Wilton Bridge as being ruinous and out of repair, and than anyone prepared to make repairs should sent their proposals to the Clerk of the Peace at the next Quarter Sessions. In view of this, the silence after the great flood of 1795 would seem to be significant, and that the repairs in 1790 had been successful.

Further down the river, since **New Weir** was in private ownership it is not perhaps surprising that any repairs that took place there were not reported. That some repairs were carried out is possible, but the iron works were declining. They were advertised as being to let on 22 May 1811, but it is uncertain whether they were ever used again. On 9 February 1820 the *Hereford Journal* reported gleefully that a weir belonging to the Duke of Beaufort had been completely swept away. This report was corrected on 8 March 1820, where it was stated that

the weir did not belong to the Duke of Beaufort, that it was in fact New Weir and that the damage was not as much as had been stated, also that the iron works had been abandoned for a considerable time. The term used in reference to the damage was 'blowing up' and this must refer, like Glasbury Bridge, to the effect of ice on the structure, there having been a period of frost. In 1825 a petition to remove New Weir was got up, and on 12 July 1826 it was reported that the section of New Weir adjacent to the lock had been removed down to the bed of the river.[24]

ACKNOWLEDGMENTS

Thanks, as ever, to the staff of the Hereford Reference Library for much help on many visits, and to the staff of Herefordshire Record Office, also to Brian Smith for information on the early history of Bredwardine Bridge.

NOTES AND REFERENCES

[1] For instance, the bridge over the Lugg at Aymestrey was carried away (Herefordshire Record Office (HRO), AC58/5). Much damage was caused to the bridges in Radnorshire, this being reported in the *Hereford Journal* (*HJ*)of 11 March 1795. 'The damage done by the late flood to the bridges in Radnorshire only, is calculated to amount to nearly ten thousand pounds. Besides Glasbury bridge, five on the river Irthon, were totally carried away - Hellig and Llanbadarn bridges, on the river Edow-Newbridge, on the river Wye, between Builth and Rhayader, with many others of less note have shared the same fate.' A fortnight later the *Hereford Journal* listed some bridges that had been destroyed in Shropshire, Staffordshire and Cheshire. The damage in Radnorshire must have been repaired, but on 23 February 1814 an advert in the *Hereford Journal* asked for contractors willing to rebuild several bridges over the river Irthon to send proposals to the Radnorshire Quarter Sessions. However, earlier that month there had been another flood and this must have been in response to damage caused then, and not twenty years before.

[2] In 1795 Samuel Ireland was embroiled in a controversy over some documents forged by his son William Henry Ireland which he had claimed to be Shakespearean relics, and which had taken in his father. This may well have caused the delay in publication.

[3] Samuel Ireland, *Picturesque Views on the River Wye* (1795), p.58

[4] G. Manley, 'Central England Temperatures.: monthly means 1659 to 1973' in *Quart.J.R.Met.Soc*. (1974), 100, p.395. The term 'Central England' covers the South Midlands to Lancashire, and so Herefordshire is on the fringes, but these statistics must reflect the pattern of what was happening in the county. That the cold weather was as prolonged in Herefordshire is confirmed by a memorandum placed by the vicar of Aymestrey in the parish register, which refers to '…the frost and snow which lasted with great severity for two months in the beginning of the year 1795,…'. Quoted in G.H. Jack, 'John Gethin, Bridge Builder, of Kingsland, Herefordshire' in *TWNFC* (1931), p.86.

[5] Henry Southall, 'Records of Meteorology on the Variations of Climate for this District of England' in *TWNFC* (1870), p.80. While relying on the accuracy of memory, even if the thickness of the ice is suspect, it confirms that the Wye did freeze over.

[6] HRO, AC58/5.

[7] It has been stated that the river Wye rose fifteen feet within twenty-four hours on 5 February 1795. This statement appeared in J. Duncumb, *Collections towards the History and Antiquities of Herefordshire*, Vol. 1 (1804), p.160, footnote, and was repeated in J. Brayley and J. Britton, *The Beauties of England and Wales* Vol. VI (1805), p.436, footnote. The contemporary evidence given in the *Hereford Journal*, which there is no reason to doubt, proves otherwise.

[8] *Op. cit*. in note 3, p.29.

[9] Fairs, G.L., *A History of the Hay* (1972), pp.254-5.

[10] Whitney Bridge is recorded in these transactions as being swept away at 6.00 p.m. on 11 February 1795. See Capt. F.B. Beaumont, 'Whitney Bridge and Whitney Ferry' in *TWNFC*, 1935, p.122. However, this is evidently an error, as by that time the river had passed its peak at Whitney, and the details are such that they must have been taken from the *HJ* of 18 February, quoted above, which refer to Hereford, but were clearly applied in this paper to Whitney. However, there is no reason to doubt Duncumb's statement (part of that quoted in note 7) that the flood 'did enormous damage through the whole county, destroying bridges, drowning cattle and sheep, sweeping off timber, &c.'

[11] The Act was 33G.II cap. 58, and was passed by the House of Lords on 19 May 1760. The trustees under that Act first met at the house of Richard Hancock, The Three Horse Shoes, in Bredwardine on 1 July 1760. (Minute book, 1760 –

1777, HRO, CF50/309. This was almost certainly an earlier name for the Red Lion.) The meeting was adjourned to the White Swan in Hay, and at that meeting it was agreed to borrow a total of £3,500 on the security of the tolls in Breconshire and Herefordshire. There is nothing in the minute book to indicate that this money was spent on Bredwardine bridge. On 5 January 1770 the trustees borrowed money for a period of 7 years, the total of capital and interest to be paid back being £600. Again there is nothing to indicate that this was spent on Bredwardine bridge. However, adverts in the *HJ* in the 1770s indicate that the trustees for the bridge acted separately from those for the turnpike trust, so there was almost certainly another minute book which has not survived. A present the exact date of building of the bridge, generally quoted to have been 1769, cannot be confirmed.

[12] This must have been The Stank, the large embankment by the Bunch of Carrots at Hampton Bishop, which protects the area from flooding.

[13] www.cpat,org.uk/projects/longer/histland/midwye/mwtransp.htm Accessed 27 January 2010. Also Crow, Alan, *Bridges over the River Wye* (1995), p.80.

[14] The Act of 1779 under which the toll bridge was established required that it should be built within three years of the Act being passed, and that it should be of stone. Almost immediately after completion the bridge collapsed because of poor foundations—not, unsurprisingly, reported in the *Hereford Journal*—and had to be rebuilt. Early in 1791 the replacement bridge was damaged by floods and became dangerous to traffic, so the ford had to be used in the interim. Unfortunately this resulted in the death by drowning of a man using the ford in July 1791 (*HJ* 27 July 1791). The bridge was rebuilt, the first stone being laid on 4 June 1793. *HJ* 2 & 23 February 1791, 12 June 1793.

[15] *HJ* 23 December 1795.

[16] The date of completion is usually given (incorrectly) as 1802.

[17] While the ownership of the bridge has been stated to have been in the hands of the same family for more than 100 years, at least one attempt was made to sell Whitney Bridge. This was offered for sale by auction at the Swan Inn, Hay on 25 February 1836, when it was a described as a freehold property, producing a well-secured income of £370 p.a. For details of ownership see *op. cit*. in note 10, pp.122-3.

[18] The *London Chronicle* of 24 May - 27 May 1760 reported that the relevant Act had received the Royal Assent on 22 May 1760. A contractor was engaged in 1762 (HRO, CF54/58, a reference I owe to Brian Smith), and the bridge was completed in 1764. The only documentary evidence of the date of completion so far discovered is a letter which appeared in the *St. James's Chronicle, or the British Evening Post* for 7 May - 9 May 1765, from 'Viator', dated at Hereford on 1 May 1765, discussing post routes from Gloucester to Brecon, one via Hereford and Bredwardine Bridge, and the other via Monmouth. Observations were made on both roads, one route being '…through Hereford, and over Bredwardine Bridge (which was built last Year)…' The bridge is also marked on an estate map of Brobury, drawn by Meredith Jones in 1765, which depicts it as having five arches, probably omitting the sixth small one because of lack of space, with the bridge painted pink to depict the stonework. Smith, B., *Supplement to Herefordshire maps 1577 to 1800* (forthcoming).

[19] *HJ* 22 November 1770, 20 June 1771.

[20] *HJ* 27 June 1771, 14 October 1773.

[21] *TWNFC* 1926, p. lxxiv.

[22] *HJ* 14 October 1795.

[23] *HJ* 24 January 1798.

[24] *HJ* 13 April, 4 May 1825, 12 July 1826.

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The Weather around Fownhope

By DAVID M. CLARK

We are pleased to see that our request to members for snippets of information about Herefordshire's weather in the past has borne fruit. As this is an occasional item, it may be that previous papers have contained a duplicate report.

This is an extract from the Fownhope Local History Group's database of events in or affecting the parish of Fownhope drawn from press, archive and other sources. The databases can be searched by date, source, and subject—in this case weather and natural disasters.We hope to have this resource available on our forthcoming website.

SOURCES

HJ: *Hereford Journal*
HT: *Hereford Times*
DUN: Duncumb's *Collections for a History of Herefordshire*
GW: Gwatkin correspondence, AR80/15 in Herefordshire Record Office

Year	***Mon***	***Day***	***Report***	***Source***
1615	1		deep snow until April	HWW
1770	11	18	floods worst within living memory - knee deep in homes at Hole in Wall	*HJ*
1770	11	22	floods. 3 days rain, coaches delayed	*HJ*
1776	1	18	deep snow, worst within memory, coaches stopped for week, several deaths including William Griffiths between How Caple and Sollers Hope	*HJ*
1789	6	24	floods following constant rains - Lugg and Wye meadows waterlogged	*HJ*
1791			heavy rains ended drought - boats back in motion on river	*HJ*
1792	5	2	blossom good	*HJ*
1793	7	17	heatwave - Hannah Bennett died instantly working in hayfield at Strangford - visitation of God	*HJ*
1795	2	10	great flood on River Wye, water rose 6 feet in half hour at Hampton Bishop, turnpike suffered	*HJ*
1795	2		river Wye rose 15 feet in 24 hours - beasts drowned, timber swept downstream	DUN
1797	12	6	floods Wye and Lugg meadows, coaches delayed	*HJ*
1799	2	6	snow caused mail from London to be delayed for 3 days	*HJ*
1799	11	13	floods damaged apples and timber between Hereford and Ross	*HJ*
1807	1	7	mild winter	*HJ*
1809	5	24	apple blossom just starting, damaged by storms later	*HJ*
1809	1	25	heavy snow, floods, damage to river banks	*HJ*
1811	5		Arabella Gwatkin account of great storm: miller, his niece, woman & 2 children near (Mordiford) bridge died - Hadley, tanner at Fownhope, injured, tobacco wet	GW

Year	*Mon*	*Day*	*Report*	*Source*
1811	5		storm, thunder at Mordiford, Pentaloe swell to 20 feet deep, corn mill destroyed, cott, barn, 4 villagers drowned - miller, servant, female cottager, daughter all lost, much destruction	*HJ*
1811	6		cloud burst near Mordiford last month, corn mill escaped, Hadley, tanner, injured, reports of other places, notably Shropshire	*HJ*
1814	1	19	snows - no news received by *Journal* from London, followed by floods	*HJ*
1816	4	24	snow foot deep east of Hereford	*HJ*
1818	3	11	hurricane hit wide area	*HJ*
1818	5	27	apple pear blossom at best [perhaps 3 weeks later than case in 2009]	*HJ*
1820	1	19	river Wye frozen over – no boats	*HJ*
1821	5	2	violent thunderstorms in area	*HJ*
1822	1	2	floods widespread	*HJ*
1825	12		storm hits Ross and Hay	HWW
1831	7	20	Fownhope visited by severe thunderstorm, lightning struck tree on Lechmere's land, stripped bark, splinters flew 43yds from tree	*HJ*
1845	7	9	thunderstorm, hurricane, caused flooding & damage, crops lost, appeal set up for Ross & neighbourhood	*HJ*
1852	2	7	floods on Wye , barges broke loose at Hereford	*HT*
1852	11		severe rainstorms - flooding	HWW
1854	1		great snows	*HT*
1874	5	16	Revd Thomas West keeping rainfall records at Fownhope vicarage, 1.71" in april, 0.61" March, compare Longtown, 2.56", 1.37"	*HT*
1875	7	17	flooding on Lugg at Mordiford - boats on main rd to Hampton Bishop	*HT*
1875	7	17	Revd Thomas West recording rainfall - 3.31" for June, compare 4.78" Longtown, 2.2" Hampton Court; 5.9" in july	*HT*
1875	10	2	cricket played till 2nd Oct	*HT*

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Archaeology, 2010

By RON SHOESMITH

As in previous years, I have included a section for each archaeological organisation that responded to my request for information. Once again most responded and their reports give a vivid picture of archaeological work throughout the county, including several fascinating and important sites. Unfortunately Archenfield Archaeology Ltd. suffered from the recession and has ceased to trade.

Our knowledge of the prehistory of the county continues to expand with further news of the Rotherwas Ribbon and traces of the Iron Age to the east of Holywell Gutter Lane. This all adds to the important work previously recorded to the north of the city at Wellington Quarry. Roman and later remains have been explored at Leintwardine—the Roman *Bravonium*. Herefordshire Archaeology have continued their woodland surveys and have organized an important excavation of a Bronze Age cairn as part of the Olchon Valley survey. Many sites throughout the county have produced medieval and post-medieval structures and finds, but probably the most important is the on-going archaeological work associated with the restoration of the Cathedral Close.

In every 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 (now called 'grey literature'), 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; if it is an event it is prefixed by EHE (Event in Herefordshire) to distinguish it from a site. 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 information about archaeological work in the county during 2010.

Nic Appleton-Fox (1953–2010) died in August and a simple funeral took place at the green burial ground at Westhope, near Craven Arms, and ended in Nic's favourite pub, the White Horse at Clun. Nic was not a member of the Woolhope Club, but was well known in archaeological circles from when he first started in the Central Excavation Unit and then moved to Cornwall. He also had stints abroad in Ecuador and Peru. Eventually he settled in Clun and worked for the City of Hereford Archaeology Unit for several years. He will be well remembered as co-director of the excavation that preceded the Cathedral Library building and, together with his other director, Richard Stone, prepared a 68-page interim report *A View from Hereford's Past*. He and Richard set up Marches Archaeology in 1995, doing much work in the Welsh borders as reported in earlier *Transactions* and including important sites such as Wigmore Castle.

GROUP AND UNIT REPORTS

ARCHAEOLOGICAL INVESTIGATIONS LTD / HEADLAND ARCHAEOLOGY (UK) LTD

ABBEY DORE, Tan Hill Farm (SO 385 305)

A watching brief during the excavation of six new stanchion footings for the construction of a suspended steel structure was undertaken at Tan House Farm, Abbey Dore. The stanchion footings were excavated to a depth of approximately 0.3m. and measured 1.0m. by 1.0m. The only deposits consisted of made-up ground, containing modern brick and rubble hardcore that had previously been used to construct the former sheep dip and concrete yard surface. Beneath the hardcore, a black topsoil overlaid by a redeposited red marl was encountered within the excavated areas, suggesting that this part of the farmyard was built up using redeposited material, conceivably from the construction of the backfilled sheep dip. (Mayes, S., in Hereford Archaeological Series (HAS) 850).

EWYAS HAROLD, The Search for Ewyas Harold Priory – Season 1 Interim Report (SO 386 286) [HSM 1833]

The first season of an archaeological research project aiming to locate the medieval priory at Ewyas Harold was carried out between 14 and 25 August. The project is supported through the Heritage Lottery Fund and is sponsored by Ewyas Harold History and Archaeology Group.

A total of three trenches were excavated in two locations: one in the grounds of St. Michael's church, east of Dulas Brook, which revealed no archaeology; two in the Priory field which is part of the scheduled monument of Ewyas Harold castle. The excavations targeted previously surveyed geophysical anomalies which had suggested the presence of structures in the priory field.

The remains uncovered included a stone surface which could relate to a surface within a structure or a corn-drying oven and evidence for wattle and daub structures. There was also evidence associated with the design of the castle outer bailey rampart and its subsequent collapse. The environmental information suggests the storage of grain and possible metal-working in the area. The faunal analysis, which shows species representation and their exploitation, seems to follow the utilization of cattle and sheep/goat, where mixed husbandry was applied to both species commonly found in medieval England. There was no strong evidence for the location of the priory and the pottery assemblage suggests ordinary domestic occupation probably related to the original medieval village (Doyle, D., HAS 876).

HEREFORD Cathedral Close Project Update (SO 510 398) [HSM 50004]

Headland Archaeology (UK) Ltd. is working alongside C. J. Bayliss Ltd. during the redevelopment of the Cathedral Close. The Heritage Lottery supported the £5 million project which will restore the close as an important public space and setting for the cathedral,after more than a century of heavy use and natural decay.

The first phase of the project began in late September 2009 and involved the redevelopment of the area to the south-east of the cathedral known as St. John's Quad. Historical accounts suggest that the quad is a possible location for an earlier cathedral that was attacked by the Welsh in 1055. Referring to the Saxon cathedral, in 1804 John Duncumb wrote:

> Its position is uncertain, but about 1650 Silas Taylor found, 'beyond the lines of the present building, and particularly towards the east, near the cloisters of the college, such

> stupendous foundations, such capitals and pedestals, such well-wrought bases for arches, and such rare engravings, and mouldings of friezes' as left little doubt in his mind that they were the foundations of the cathedral destroyed by Algar and Griffin.[1]

The recent excavations have revealed a deep foundation trench on an east/west axis in the southern part of St. John's Quad. The trench was largely robbed out, but large pieces of masonry belonging to a grand building were found within the fill. These may be similar to the foundations Silas Taylor described. The burials overlying the foundation trench dated to the 12th or 13th century, so the building was certainly destroyed prior to this date.

The stone cathedral described by Taylor is believed to have been constructed between 1020 and 1040; it was damaged by fire during a Welsh raid in 1055 and was replaced by the Norman cathedral which forms the heart of the modern-day building. It has been speculated however that the Saxon cathedral in its earliest form would have been constructed of wood rather than stone.

In the earliest deposits excavated, the remains of a substantial timber structure were found. An east-west beam-slot (foundation trench for a wooden building) was punctuated along its length by post holes (Fig. 1). One of these post-holes was nearly 2.0m. deep with a diameter of 0.9m. Unfortunately, the main part of this building lay outside the area of excavation, so its full size and form was not revealed. What is known, however, is that it must represent a substantial timber building, aligned on an east-west axis, which the pottery evidence suggests predates the 10th/11th centuries. Could this be a Saxon cathedral? Buried within the beam slot was the body of a juvenile possibly symbolising the founding of a new structure (Fig. 2).

Adjacent to the wooden structure were the remains of furnaces. Iron slag and melted lead were found associated with these brightly-coloured deposits, and the pottery evidence suggests a Saxon date (Fig. 3). The current interpretation is that this represents a builders' yard for the construction of the cathedral and other associated buildings. What was possibly a small square workshop was built on top of these deposits (Fig. 4).

The Cathedral Close served as the main burial ground for Hereford and neighbouring villages and the quad was found to be densely packed with burials—in all 1,050 were excavated ranging in date from the 11th to the 19th centuries (Fig. 5). Amongst the earliest are the stone cist burials that are believed to date from the 12th and 13th centuries (Fig. 6). The latest burials date to the early part of the 19th century after which the Close stopped being used for this purpose. The human remains are currently being assessed by a team of osteologists from Headland Archaeology; the aim is to build a picture of life and death in Hereford from Saxon times though to the post-medieval period. The bone assemblage can provide insights into the size of population, the proportion of males to females, life expectancy, causes of death, diet, medical care, social status and changes in religious practices through the ages.

Between the 14th and 18th centuries Hereford had a thriving textile industry which included working wool in fulling mills, linen weaving, the making of caps and hats, as well as the manufacture of leather gloves. From the osteological analysis a picture is beginning to emerge about the intensity and conditions of this type of work. There seems to be a high proportion of young and middle-aged women with osteoarthritis in their wrists and thumbs. Although this is quite a common joint disease, the fact that it seems to occur in one part of the body is usually taken to indicate that these individuals were undertaking some form of repetitive or stressful occupation. In this case weaving could be responsible for the symptoms observed and could indicate that girls from a very early age were doing this type of work.

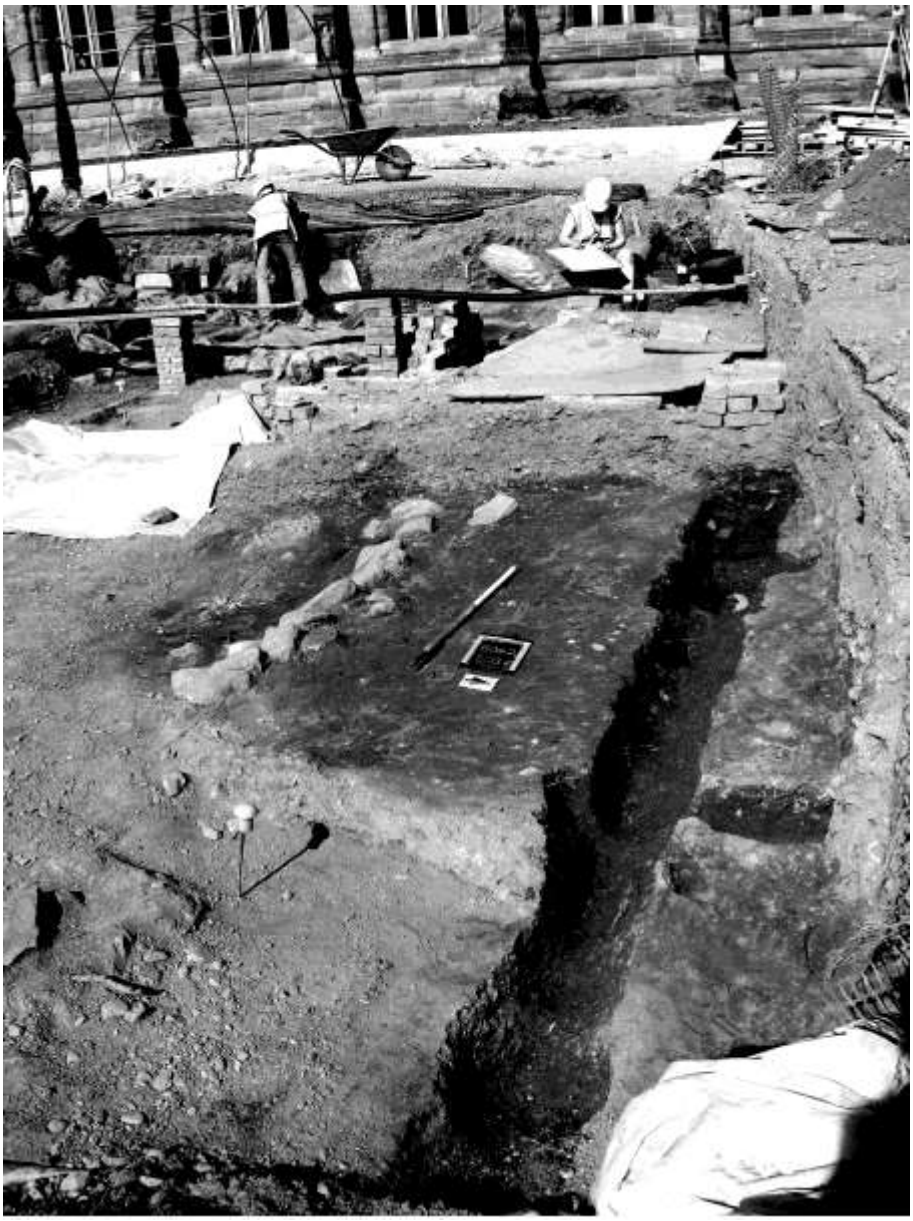

Figure 1. The beam slot of the east/west Saxon building at the northern extremity of the excavation.This could be one side of the Saxon timber cathedral

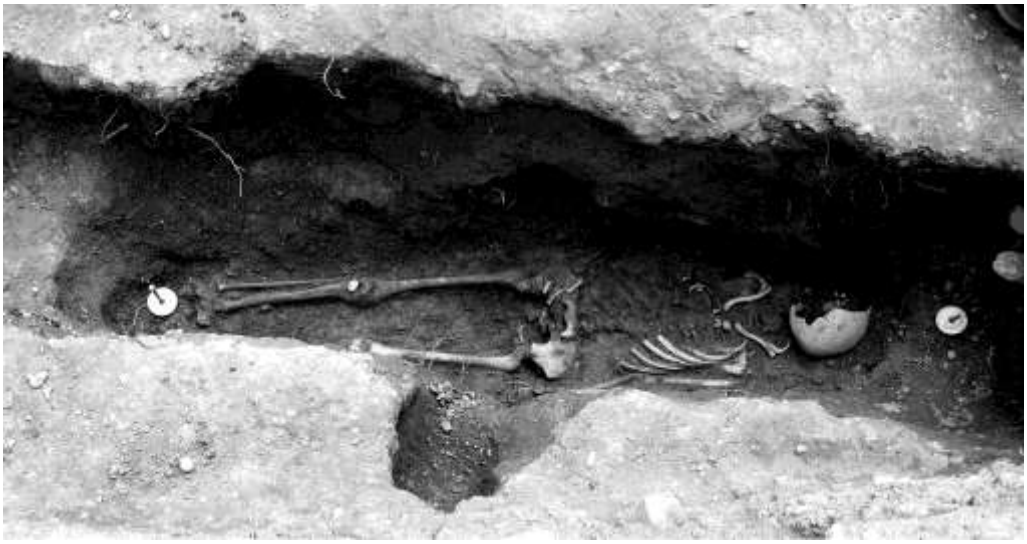

Figure 2. A burial found in the Saxon beam slot

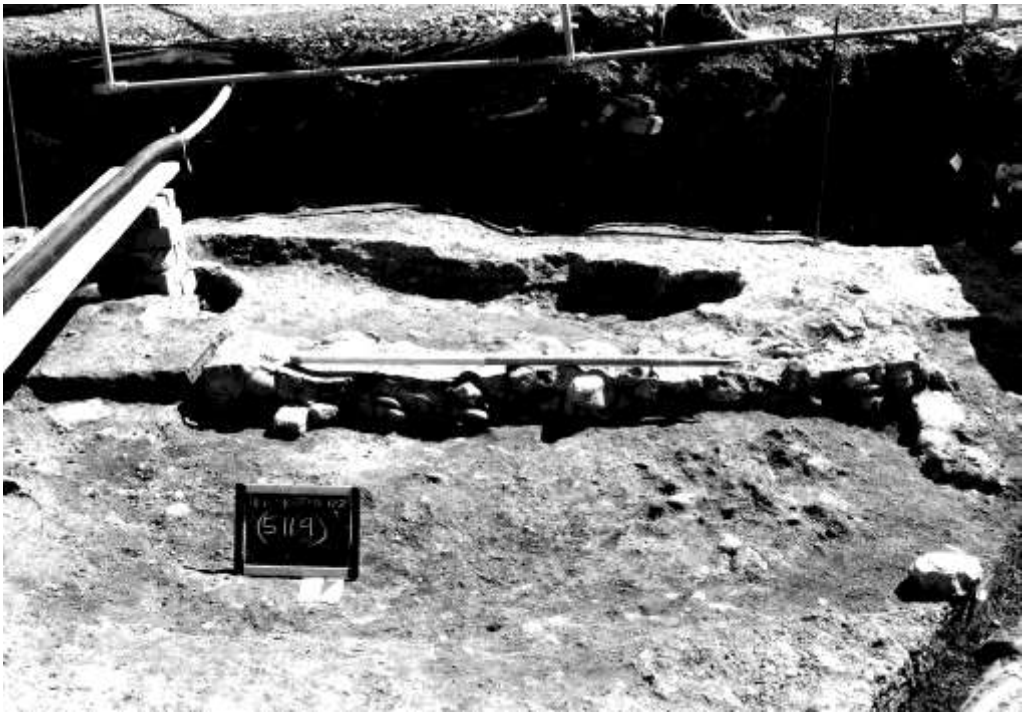

Figure 3. Saxon industrial deposits

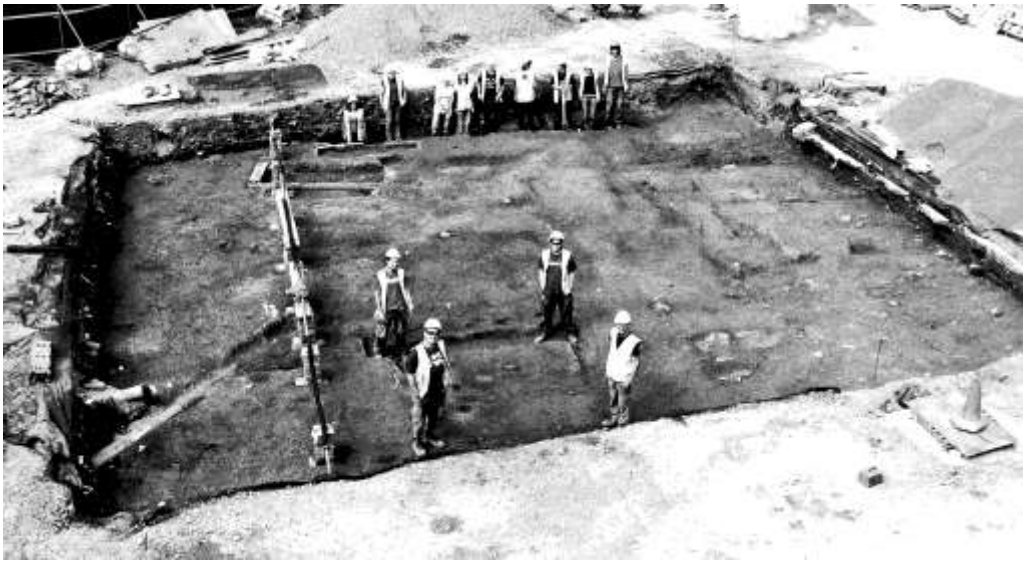

Figure 4. Excavation staff are positioned to show the early features. At the rear they are standing in the Saxon beam slot; the four in the forefront show the corners of the workshop building

Figure 5. The excavations were complex due to the intensity of burials, with many intercutting

Figure 6. Cist burials such as this date from the 11th to 13th centuries

There is also evidence for a big social divide in the medieval and later population, measured on the basis of the richness of their diet. Many individuals exhibit signs of malnutrition, which shows up in the teeth. On the other hand a number of the men buried in some of the more prestigious graves (either expensive, lined coffins, or stone-lined vaults/cists) show signs of a more opulent lifestyle. A condition caused by too much rich living is called DISH and results in ligaments and other parts of the body around the vertebrae turning to bone and preventing the individual from bending their back. Previous excavations on the close and around Britain have indicated that members of the clergy were particularly susceptible to this condition!

Figure 7. Violent death. This skull has both sword/axe and projectile wounds

Figure 8. Crotal found at the knee of a post-medieval burial. It was a real fear at that time that one could be buried alive

The excavations have also shed light on Hereford's violent past. Prior to the Norman Conquest a long-running series of battles with the Welsh ended with the some of the inhabitants of the city being burnt to death in the cathedral, the remains of which may well have been uncovered during the work in St. John's Quad. Other battles include the early 12th century feud between Stephen and Maud, and the Civil War siege of 1646. Most fatal injuries recorded appear to have been inflicted to the head, with one individual having two arrow wounds, another, a large musket ball wound, and a third having been struck by an axe (Fig. 7).

People's attitude to death is also becoming clearer. Even up to the 19th century there is evidence of pennies having been placed on peoples eyes to pay the 'ferry man'. Other finds include, unusually, a crotal [2] believed to be placed with people who feared being buried alive (Fig. 8).

Smaller excavations will take place around the close during the remainder of the redevelopment project, but it is envisaged that the St. John's Quad excavation will be the largest and the most interesting in its findings. Further analysis and interpretation will also be carried out on the finds and information acquired from the Saxon deposits underlying the burials. It is believed that the current excavations will make a very significant contribution to the story of Hereford's past.

HEREFORD Land adjacent to Holywell Gutter Lane (SO 542 391) [HSM 50002]

An archaeological evaluation took place on a 19.6 hectare plot of land currently in use as orchards on the eastern boundary of Hereford. Planning permission is being sought to construct new rugby pitches, clubhouse, indoor training building, car parking and landscaping, supported by enabling residential development of 190 units. A total of 22 trenches were excavated across the site, with a total area of 823.05 square metres. The majority of the trenches were in the north-western part of the site where the residential part of the development is planned.

Archaeological deposits and features were identified in two areas — across the western part of the hilltop and at the north-western corner of the site. The features all seemed to date from the late Iron Age to the early Roman period, and although the types of pottery seen were not necessarily diagnostic, they seemed to show a focus in the 2nd century AD. The presence of fragments of roof tile of Roman date in the topsoil on the west-facing slopes of the hilltop is a further indication of the extent of activity on the site. Samples taken from selected features contained small amounts of charcoal and burnt bone. There was nothing in the samples to indicate a particularly high level of activity at the site, whilst the combination of charcoal and bone could indicate a domestic origin, such as from a hearth.

Present on the site are a mixture of relatively small linear features, potentially forming rough enclosures, together with at least one much larger ditch, which might be considered to be a boundary of some description. The nature of the features, along with the types and range of pottery recovered, would most likely suggest some form of rural settlement and field divisions of a local character. There is nothing to suggest any military or formal element to this activity. The two concentrations may well represent evidence of separate parts of the same settlement. The presence of large amounts of colluvium (loose bodies of sediment that have been deposited or built up at the bottom of a low-grade slope) at the base of the west-facing slope masks the fact that potentially there was a fairly deep hollow between the two concentrations and that the two areas may have been geographically more separate than they appear today.

The evaluation also established that the original topography within the site was substantially different from how it currently appears. Deep hollows would have been present in the western part of the site where the ground slopes off steeply towards the wet ground. Due to the small sample size it is entirely possible that there are further hollows in the areas surrounding the hilltop. In archaeological terms this is important as some of the features identified were cut into the colluvial material and others were only visible at a lower level, cut into the natural subsoil (Dingwall, K., HAS 849).

HEREFORD, Church Farm, Rotherwas (SO 536 383) [HSM 51968]

The building is Grade II listed and was originally an 18th-century stable block associated with Rotherwas Manor House (Fig. 9). The work comprised an archaeological watching brief and a Level 2–3 historic building survey. Apart from footings of the original building the archaeological watching brief did not reveal any other evidence of archaeology around the

building. The historic building survey revealed modifications consisting mainly of inserted or removed partition walls, blocked windows and doorways and some inserted doorways and windows (Doyle, D., HAS 854).

Figure 9. Church Farm, Rotherwas

HEREFORD Rotherwas Ribbon Geophysical Survey (SO 526 373)

A multi-method geophysical survey was carried out on fields adjoining the site of the 'Rotherwas Ribbon' on the southern edge of Hereford.[3] The project was funded by English Heritage through Herefordshire Council. A three-tier approach was implemented with the aim of mapping variations in local geology, geomorphology and drainage; discrete magnetic features associated with any possible continuation of a linear feature and; structural information relating to any feature that might exist within the site. Three types of survey equipment were used to achieve this.[4] The survey identified a clearly-defined sequence of distinctive magnetic anomalies on an alignment which corresponds well with the expected location of the Ribbon. It also identified a possible natural channel on a slightly different alignment to that suggested for the Ribbon. The exact relationship between these features and the structure and composition of the Ribbon would need to be the subject of further investigation (Boucher, A., and Bartlett, A., HAS 847).

LEOMINSTER Grange Court Lapidarium (SO 350 259)
An architectural stone record was undertaken at Grange Court. The *lapidarium* is located to the east of the main building and has been incorporated into a modern conservatory attached to the rear of the building. An inventory of loose stone was created giving detailed assessments of type and condition of each of the 35 loose architectural stones identified during the course of the work (Mayes, S., HAS 848).

LEOMINSTER Grange Court Ground Monitoring ((SO 350 259) [HSM 48872]
Archaeological ground monitoring was undertaken in response to a planning application to demolish and remove the footings of the previous buildings attached to the historic fabric of Grange Court. An area approximating 90m^2 was archaeologically monitored on the northern side of the Court. No finds of archaeological importance were observed (Mayes, S., HAS 853).

BORDER ARCHAEOLOGY

HEREFORD, Kemble House Car Park, Aubrey Street, (SO 509 399) [HSM 51612]
Excavation of this important site ahead of a proposed social housing development revealed evidence of early settlement activity, possibly dating back to *c.*1050 AD, as indicated by finds of domestic pottery and glass. The site appears to overlie the King's Ditch, a linear feature shown on recent aerial (LIDAR) images to comprise a shallow defile running southwards roughly along the line of Aubrey Street to a point just below the Wye Bridge.

Historically, the ditch represented the line of the former boundary between the cathedral parish of St. John and the parish of St. Nicholas.

The excavation comprised a 1.0m. reduction of the proposed development area, measuring 17.0m. by 13.5m., within which two trenches were excavated, one measuring 3.0m. by 3.0m. and the other 10.5m. by 8.0m. These were step-excavated to ensure stability. Several masonry walls, probably representing building foundations associated with the 18th century street frontage, were revealed during the course of the reduction phase together with a cobbled surface which probably served as an entrance or alley between adjacent properties.

Further excavation revealed a number of earlier features, including several large pits containing animal bone and horn cores, with leather recovered from one of these. The pottery assemblages from these features contained significant Saxon and Norman pottery with very little attributable to periods after the 12th century.

HEREFORD, Widemarsh Street Refurbishment, (SO 510 402)
The recent refurbishment of the road and pavements in Widemarsh Street and Maylord Street was carried out under archaeological observation between January and October 2010. The ground-works encompassed the western extent of Maylord Street and the southern part of Widemarsh Street between High Town and the site of the medieval Widemarsh Gate at the junction with Blueschool Street. Primary observations were carried out on Central Networks engineering excavations, generally to formation level (550mm below kerb height) at which depth only make-up material and hardcore for the road and services, both current and redundant, were revealed. Four drainage trenches and two collector pits were excavated below this level and, although cutting below the road material, no significant archaeological deposits were encountered. It would appear that any earlier road surfaces had been removed by later, deeper excavation.

No evidence of the Widemarsh Gate was revealed but further ground-works revealed a masonry wall foundation on the east side of Widemarsh Street projecting into the line of the present roadway and, probably representing part of an earlier street frontage. Apart from the these remains, the only deposits of interest were seen – again beneath Widemarsh Street – at a depth of between 1.0m. and 1.2m., directly above the natural gravel. Revealed in the collector pits and three of the pipe trenches, these deposits varied between the east and west sides of the carriageway but are tentatively interpreted as palaeo-soils relating to former marshland.

Phase 2 of the ground-works comprised the removal of the road surface to allow for repaving with setts, and during this phase of works the vaulted cellarage beneath the existing 'Past Times' premises was recorded prior to structural reinforcement works being carried out.

KINGTON, Land between Crabtree Road and Harp Yard Chapel (SO 297 566) [HSM 51842]
A single evaluation trench measuring 13.0m. by 2.0m. was opened by machine in April 2010 within the building footprint of a proposed residential development. Two features of probable post-medieval date were revealed — a section of gully, the precise function of which was not established, and the possible cut of a wall, no longer extant, running north-east/south-west, which, based on associated fragments of building material that appeared to relate to of the original structure, appeared to be of post-medieval date. Fragments of post-medieval pottery and clay pipe were also recovered from the material filling the original construction trench. No other significant structures, features or deposits were revealed. Natural deposits were exposed at a depth of some 0.9m.

LEINTWARDINE, Former Veterinary Surgery, Church Street, (SO 405 740) [HSM 51992]
A 4.0m. by 1.0m. evaluation trench and a test pit measuring 0.5m. square were opened in October on behalf of Marches Veterinary Group within the footprint of a proposed development. The test pit was subsequently abandoned due to the presence of concrete foundations associated with the modern surgery building.

The site is close to the presumed location of the eastern defences of the Roman defended settlement of *Bravonium*. Previous archaeological work undertaken during the construction of the veterinary surgery in the early 1970s identified evidence of a timber-laced rampart, possibly associated with the Roman defensive circuit, along with evidence for a possible roadway of Roman date running east-west.

The trench was excavated by hand; the uppermost deposits consisted of a sequence of cultivation soils and occupation deposits of medieval and early post-medieval date, containing quantities of iron slag and smithing bottom fragments attesting to metal-working activity in the immediate vicinity. Underlying these deposits, a wide, deep ditch was partially revealed running north-south. The substantial depth and profile of the ditch suggest that it probably had a defensive function and may well have formed part of the eastern defences; it was probably constructed during the mid to late 2nd century AD. The ditch appears to have been largely backfilled by the 4th century AD, possibly as part of an expansion of extra-mural occupation outside the earlier defensive circuit during the late Roman period.

LEINTWARDINE, Swan House, Watling Street, (SO 405 740)
In December 2010 a programme of archaeological evaluation was carried out. It was located within the Scheduled Area. Two 2.0m. square trenches were opened and revealed evidence of a pit containing prehistoric pottery possibly from a Bronze Age urn, although this remains fairly

speculative without other supporting evidence. No occupation deposits, finds or features of Roman date were identified although post-medieval deposits and features were present. The relatively low ground level of 127.5m. OD suggests that the area was terraced in the post-medieval period, presumably when the Swan Inn and its yard and outhouses were built—a view supported by the archaeological findings.

LEINTWARDINE, Community Centre, High Street (SO 404 741) [HSM 5184]
Four interconnecting trenches were excavated manually in the car park adjoining the Community Centre on behalf of Leintwardine Village Hall and the Community Centre Committee. The excavations were carried out prior to the installation of a new ground-source heating system. Previous excavations undertaken in 1991 to the rear of the Community Centre had revealed the remains of a substantial timber building of early- to mid- 2nd century date in the southern part of the site, together with a complex of successive intercutting pits of Roman date.

The excavation revealed a considerable depth of cultivation soil, probably associated with landscaping during the construction of the existing school building in the mid 1840s. Underlying this was evidence of earlier occupation, comprising a number of features containing Roman pottery, although only three of these appeared to be of Roman date. The pottery assemblage as a whole contained an unusually large percentage of fine tableware, possibly indicative of high-status occupation in the immediate vicinity. Other finds included a small quantity of ferrous and non-ferrous metalworking debris, some of which may have been of Roman date and possibly represented evidence of small-scale metalworking activity nearby. A rough floor surface of possible Roman date was partially revealed in one of the trenches. Several linear cuts containing sandstone rubble were also identified; possibly these were for wall or building foundations subsequently robbed-out.

LEOMINSTER, Former Lambourne Site, Ryelands Road, (SO 349 259) [HSM 51991]
Archaeological observation was carried out between June and August on behalf of Thomas Vale Construction Ltd. prior to development for housing. The ground-works area encompassed the site of the modern building together with the area to the west of a former cider works and the western part of gardens attached to Westbury House, a substantial town residence which occupied the site of the present Aldi store, located to the east of and outside the development area. Based on the results of previous investigations, it was considered probable that evidence relating to post-medieval brickworks and the medieval town ditch would be revealed during the course of the ground-works and this proved to be the case.

Although the evidence is unfortunately inconclusive, substantial sections of a ditch or ditches were recorded at several locations, the most complete running north-east/south-west in the north-west part of the site. This was found to align precisely with another ditch section located to the south-east, which appeared almost certainly to be part of the same feature. Although no finds were recovered from the ditch, its substantial dimensions, being more than 5.0m. wide and 2.0m. deep, suggest it may originally have served a defensive function.

This feature appeared to have been subsequently filled in with material that contained at least some evidence of kiln waste, consistent with the presence of brick manufacturing activity on the site during the 19th century, additional evidence for which was also identified during the course of the ground-works in the form of kiln remains. The date and function of the ditch are uncertain, although it appears to predate the period of brick-making activity and may possibly

be part of the medieval defensive circuit. Evidence for the ditch had been revealed immediately to the east of the study area during the course of salvage recording in 1994 during construction of the KwikSave store, now occupied by Aldi, which also produced evidence of subsequent (late 18th century) backfilling.

In addition to the possible brick kilns and associated features, there was evidence of several sets of structural remains. In the northern quarter of the site there was a masonry wall made of mortared, rough-hewn flat stones standing to a height of some 0.5m. The masonry suggests a post-medieval date and the structure may represent a boundary wall associated with the gardens of Westbury House, as shown on historic maps of the town. A second mortared masonry wall was observed on a different alignment; it appeared to bear no relation to the other one.

On the western side of the site was a group of features that included a shoe-shaped deposit of charcoal and clinker close to brick structural remains suggestive of a fireplace, possibly part of a demolished post-medieval dwelling. This may represent the source of some of the material found in pits immediately to the north and west comprising brick, mortar and charcoal.

A late 19th century cider works formerly occupied the property to the east of the site, which continued in operation until the 1960s. A substantial quantity of cider bottles and glass, apparently of late 19th/early 20th century date and presumably from the former works, were found on the site. Several dumps of these bottles were also observed in the north-east and southern parts of the site.

LEOMINSTER, Brierley Court Farm, Brierley, (SO 490 561) [HSM 51593]

Ten evaluation trenches were opened in March on behalf of S & A Group Ltd. in fields to the west of Brierley Court Farm, an area approved for development as seasonal agricultural workers' accommodation. Additionally, a single substantial drainage trench, extending some 30.0m. along the eastern boundary of the site, was excavated under archaeological observation.

This area occupies a favourable location close to but slightly above the level of the fertile floodplain of the River Arrow, which would presumably have attracted human settlement throughout much of prehistory and later periods, being within easy reach of the riverine environment while also enjoying some protection from flooding due to its elevated position.

Previous archaeological fieldwork has revealed substantial evidence of prehistoric and Roman occupation further to the west of the proposed development and it was anticipated that the present investigation would yield similar results. However, while some of the features revealed may represent postholes and pits of prehistoric date, this remained unproven due to the paucity of finds, and a number could clearly be identified as animal burrows or similar natural features. Significantly, no evidence of the intensive later prehistoric and Roman settlement activity previously recorded in 2004 was identified during the course of the fieldwork, suggesting that the eastern extent of this activity lay some distance to the west of the present site.

LEOMINSTER, Old Priory, Pinsley Mead, (SO 499 594) [HSM 51342]

In July 2010, an archaeological observation of ground-works was carried out on behalf of National Grid relating to a replacement gas main extending approximately east/west across Pinsley Mead — an amenity area located immediately north of the Old Priory building and within the Leominster Priory Scheduled Monument Area. Previous excavations in 1979

revealed evidence of a clay lining, possibly associated with fishponds alluded to in historical sources; however, no evidence of this material was identified.

MORETON ON LUGG, Upper House Farm, (SO 498 546)
Three evaluation trenches were opened in February 2010 immediately west of a range of poultry units at Upper House Farm prior to ground-works relating to a proposed broiler-unit extension. Positive results had been obtained from previous archaeological investigations carried out nearby and several undated crop-mark sites are known. Trenches measured 40.0m. by 2.0m. were excavated to an average depth of 0.5m. Contrary to anticipated results, the trenching revealed only features relating to late 19th and 20th century land drainage

COTSWOLD ARCHAEOLOGY

ROSS-ON-WYE, Trenchard House, Edde Cross Street, (SO 598 243)
An evaluation exposed a series of make-up/levelling deposits, apparently relating to the terracing of the site during the post-medieval period. A cobbled surface was also identified. (Sheldon, S., CA typescript report 10095*).*

MONMOUTH ARCHAEOLOGY

GANAREW, Little Doward Camp, (SO 541 159 to SO 538 161)
A programme of archaeological work was carried out for the Woodland Trust during the installation of a water pipe in the north-west corner of the Camp. A concentration of broken limestone was encountered on the inner edge of the rampart, where the pipe ran through a break in the rampart. The main finds of bone fragments, charcoal and the few sherds of Native and Roman pottery came from this area of the pipe trench.

Nearby, also on the Little Doward Camp, the soil associated with the roots of a fallen tree was brought to Monmouth's attention. A quantity of Native pottery (including Malvernian ware) and bone fragments was retrieved. The site was subsequently excavated by Herefordshire Archaeology (Clarke, S., and Bray, J.).

WORCESTERSHIRE HISTORIC ENVIRONMENT AND ARCHAEOLOGY SERVICE

HEREFORD, Hereford Academy, Stanberrow Road, Redhill (SO 501 380) [HSM 50062]
An archaeological excavation was undertaken on behalf of Hyder Consulting (UK) Ltd, on behalf of Willmott Dixon in partnership with Herefordshire Council. They intend to construct a new academy with sports pitches, car parks and other ancillary features. This will involve the erection of new buildings on a current sports field, followed by the demolition of the existing school buildings and construction of further sports pitches.

The project aimed to further record and clarify the date, nature and location of archaeological and palaeoenvironmental remains identified during the previous evaluation (HSM 49313).

The excavation revealed a dynamic natural landscape with a braided channel system migrating across the valley bottom, now culverted as the Bailey Brook. Environmental analysis indicates that this environment changed from a tree-lined water course to open wet floodplain or marsh. The earliest feature revealed was a Bronze Age burnt mound, which was truncated by a later ditch of unknown date. This burnt mound sat beside a watercourse that had been largely removed during later fluvial action in the Iron Age. The site as a whole was subject to

landscaping during the construction of the existing school which began in 1959. In an attempt to level out the natural slope, large quantities of imported material were dumped across the site sealing the underlying deposits with up to 2.35m. of modern overburden.

No finds pre-dating the modern landscaping of the site were recovered during the excavation, although a single sherd of Bronze Age pottery and three medieval sherds were retrieved during the initial evaluation (Webster, J., Daffern, N., Pearson, E., and Wilkinson, K., WHEAS 1724).

MORETON-ON-LUGG, (Phases 1a, 7, 8 and 13c) Archive Statement (SO 503 473) [HSM 43223]

Archaeological salvage recording was undertaken in 2008 and 2009 at the Moreton Camp extension to Wellington Quarry on behalf of Tarmac Ltd. as part of an ongoing programme of archaeological investigation. They form part of an Archaeological Mitigation Strategy that was designed by Entec UK Ltd. and informed by extensive salvage recording in the former quarry areas and by a pre-determination evaluation.[5]

The salvage recording undertaken in 2008–9 has again demonstrated the potential of the area to produce Neolithic, Bronze Age and later prehistoric archaeology. Although not as dense as in other areas, some of this activity is likely to be related to the archaeological remains discovered during the 2006 excavation and to the barrows on the east of the site. The Neolithic and Early Bronze Age deposits reflect sporadic and probably seasonal use of this low-lying landscape by local communities with an increasingly more constant presence indicated from the Middle Bronze Age onwards by the construction of small structures, burial monuments and burnt mound activities, and by the Iron Age in the establishment of field systems. Later careful management of the landscape is evidenced by the extensive water-meadow system established in the late 18th or early 19th century.

Further analysis of these and all previously recorded archaeological remains discovered within the former military base will now be undertaken. This analysis and subsequent reporting is expected to be completed by summer 2011 (Mann, A., WHEAS 1747).

HEREFORD, ROMAN ROAD

Archaeological work was undertaken by the service between 2002 and 2005 along the course of the Roman Road in Hereford, on the 2.25km. stretch of the A4103 from the Tillington Road to Stretton Sugwas. The 98-page report was not published until 30 March 2010, but it is now available at the Herefordshire SMR office.

HEREFORDSHIRE ARCHAEOLOGY

Staff of the county archaeological service undertook a number of grant-aided projects in 2010. These involved a number of partner organisations, including English Heritage, the Forestry Commission, Herefordshire Nature Trust, the Wye Valley Area of Outstanding Natural Beauty and The Woodland Trust. The principal field projects undertaken involved the excavation of a series of trenches in order to establish the extent of the ‘Rotherwas Ribbon’, a second season of excavation at Olchon Court in partnership with Manchester University, and a final season of excavation at New Weir iron works at Symonds Yat West.

Other field projects undertaken in 2010 included: the exploratory excavation and recording of a series of tree throws immediately below Merlin’s Cave in Symonds Yat, and the

excavation of part of the deserted medieval settlement at Bredenbury as part of a community project. Aerial survey work continued as for previous years, along with the core activities of advice on development proposals and works, monument and countryside management, maintenance of the County Sites and Monuments Record, and a variety of outreach and community partnership work.

BREDENBURY, Old Bredenbury, (SO 614 560) [HSM 31140] [EHE 1847]
This is a Community Investigation—a project led by Bromyard and District Local History Society, with support from Herefordshire Archaeology. The project is funded through the Your Heritage Grant, Heritage Lottery Fund.

The project focuses on land that once formed part of Bredenbury Court Estate and gardens, which was established through the mid 1700s to late 1800s. Preserved within the landscape are earthworks relating to the church and houses of the displaced settlement, bought by the Court in order to establish the estate parklands. Also included within the landscape are the remains of past field systems, track-ways and a likely farmstead. The course of the old turnpike road (the original A44), redirected when the parkland was established, also survives as a substantial hollow-way within the west of the survey area. Survey work identified past field boundaries and track-ways as well as platforms associated with the settlement.

A series of small trenches and test pits were excavated over part of the deserted village site. Low walls and stone-sett paths were recorded associated with a post-medieval smithy. Beneath this were a pair of parallel, well-coursed, stone wall foundations approximately 0.5m. wide and 4m. apart. Approximately 5m. to the east of the eastern-most wall was a line of three rock-cut post holes, again aligned with the two walls. Pottery recovered from the fills of the post holes and from deposits directly associated with the walls suggest a 13th or early 14th century date. It is suggested that the medieval remains relate to the site of the original manor house (Atkinson, C., HAR 290).

BREDWARDINE: Church Orchard; A Community Field Investigatio,n (SO 335 446), [EHE 1836]
Between August and October 2010 Church Orchard, located to the north of St. Andrew's Church, was the subject of detailed and geophysical surveys led by the Bredwardine and Brobury History Group with training and guidance provided by Herefordshire Archaeology's Community Archaeologist.

The site is located at the northern end of a prominent ridge overlooking the River Wye with the old ford crossing to the east. Very little is known of the site, but its prominent position and close proximity to the church, the core of the medieval village and the castle means that it is probable that features relating to the medieval period survive. The survey identified numerous terraces and track-ways indicating that the present field had once been subdivided into smaller parcels of land. The survey also identified a World War II trench overlooking the river crossing. The geophysical survey indicated very little in the way of buried features with the exception of an area to the east where the site of a structure noted on a 1772 Estate map was identified (Atkinson, C., HAS 289).

HEREFORD, Hereford City Defences: A Conservation Management Plan, (SO 513 407) [EHE 1852]
The medieval cathedral city of Hereford has been surrounded by its stone walls for about eight

centuries, though it has been fortified for even longer. Militarily obsolete since the end of the Civil War, the gates were all demolished in the 1790s and, with the growth of the Victorian city, stretches of the walls were demolished or concealed behind new buildings.

By the eve of the Second World War the city was facing a growing problem as the steadily increasing volume of through-traffic, still following its medieval route through High Town, Broad Street and across the old Wye Bridge, was causing accidents, congestion, pollution and damage to historic buildings. The strategic solution arrived at by central government was to bypass the city to the west, widening Victoria Street and building a new bridge over the river. The city's response was that a circulatory boulevard should be linked to such a scheme, carrying traffic around the north side of the city to take further pressure off the ancient central streets.

In 1949, George Cadbury, a member of the West Midland Group on Post-War Reconstruction and Planning, wrote a pamphlet suggesting that this offered an unprecedented opportunity to 'open up the city walls for their historical interest, and at the same time make Hereford a Precinct City [with a pedestrianised centre] by using the old surrounding moat and Sally Walk as a by-pass.' The Woolhope Naturalists' Field Club, representing the county's historical and archaeological interests, offered their view that:

> 'These ancient remains are an integral part of the history of the city and a heritage which any city should be proud to possess and preserve with loving care. The opportunity now available of demarcating, exposing and preserving the remains of the walls and the site of the ditches throughout the whole circuit of the defences, would give to the city of Hereford a feature which we believe to be unparalleled in this country.'

They argued that there was scope for recreating the tree-lined walk that had surrounded the city in the 18th century, when the edge of the ditch had been marked by willows, giving it the name 'Sally Walk' (a common corruption of *Salix*, the Latin species name for willow)—the name still attached to Bath Street well into the 19th century. They further suggested that the walls, thus revealed, should be restored by specialist masons and the former ditch laid out as gardens or even, in places, re-excavated and refilled with water. This ran counter to one proposal from Whitehall (the Ministry of War Transport), which had suggested that the new road could itself be placed in the re-excavated ditch.

It was to be another twenty years before work on the A49 improvements and the inner relief road was completed, construction work having finally commenced in 1965. Many aspects of the post-war vision for the city walls were realised in the process. The best-preserved sections of the western wall facing Victoria Street were cleared of super-incumbent buildings, restored by specially-trained masons and opened up to public view; further sections on Blue School Street and Bath Street were accorded similar treatment (Fig. 10). But, by 1968 traffic volumes had already increased to such an extent that the re-creation of the tree-lined Sally Walks of the 18th century was scarcely an option. Moreover, the demands of traffic engineering and modern retailing had overtaken the conservation imperative to the extent that the north-western corner of the walls had to be taken down and reconstructed on a new alignment, and there were further losses of fabric along the new inner relief road, on New Market Street and Blue School Street.

Figure 10. The city wall and one of the two surviving bastions in Victoria Street

It is now more than sixty years since George Cadbury's original proposals were first published and forty years since the restoration of the walls. Since then, parts of the city walls, particularly, but not invariably those parts in private ownership, have deteriorated significantly to the extent that they appear on the current Heritage at Risk Register (English Heritage 2009) as 'condition poor', priority category 'C'. It is also the case that the post-war vision of Hereford made more attractive to visitors who would wish to see 'the ancient city, with its walls and cathedral' has not yet been fulfilled, because the potential of the walls as a component of the tourist-historic city has never been fully realised. Though now (mostly) visible from the inner relief road and bypass, access to the walls varies from the discouraging to the impossible (nowhere is the wall-walk accessible to the public), and the most interesting features – the two surviving bastions – are in poor condition in private hands. Nor is there any on-site interpretation to explain to visitors or citizens what it is that they are seeing, or that they are passing through the defended perimeter into the ancient cathedral city.

The impending re-design of the inner relief road and the perceived need for longer-term heritage-led regeneration in the city offer an opportunity to re-visit the post-war vision, to complete the work of a previous generation of city and transport planners, and to return the medieval defences to their central role in shaping the identity of the city. But there are challenges in accommodating a desire to 'soften' the inner relief road. Current proposals to upgrade what is at present a service road within the city wall on Blue School Street to carry

circulatory traffic are difficult to reconcile with the historical role of the city defences and their significance as a container or framework for the absolutely distinct townscape within.

A recent characterisation study of its historic townscape concluded that Hereford is – measurably and objectively – one of the best-preserved major historic cities anywhere in England, with only one minor street added within the walls since the Middle Ages.[6] The city walls are an integral part of that historic townscape and any enhancement of them will add materially to the historic character of the city as a whole. A number of simple measures are outlined in this plan to do just that, without the necessity for any capital-intensive programmes of works. Properly maintained, made more accessible, displayed and interpreted within an improved setting and properly promoted, the city walls can play a leading role in a broader campaign of heritage-led regeneration (Baker, N., HAR 292).

HEREFORD, ROTHERWAS: Further Investigation of the Rotherwas Ribbon Stage 1a: LIDAR Survey (SO 525 376), [EHE 1848]

This report presents an analysis of LIDAR survey data relating to the vicinity of Rotherwas. The survey and analysis was part of a programme of further work to evaluate the enigmatic 'Rotherwas Ribbon' (first discovered in 2007),[7] and was funded by English Heritage. The primary data were collected and supplied by the Environment Agency (Geomatics Group).

The survey did not identify significant topographical evidence to support the identification of a possible extension of the Ribbon. The vicinity of the Ribbon appears to have been subject to a combination of intensive agricultural activity and (perhaps) colluvial accumulation significantly masking landforms which may have existed in a Neolithic/Bronze Age context. However, the survey has elucidated the broader landscape context of the Ribbon site, and particularly indicates the location of the known length of the Ribbon in a key topographical mid-slope position between the Wye flood-plain to the north and the rapidly rising ground of Dinedor Hill to the south.

More widely, the survey has provided a high resolution LIDAR dataset (including Digital Surface and Digital Terrain Models) for an important part of the Rotherwas historic landscape which includes visible multi-period remains from the medieval period to the 20th century. The Lower Bullingham Scheduled Monument earthworks (Scheduled Monument HE 216) now emerge as a well-preserved medieval field system including a rectilinear group of fields associated with ridge and furrow and a network of hollow-ways. Moreover, the survey has demonstrated that the field system within the Scheduled Monument is just one part of a more extensive system which once extended over a significant area, and which still survives as a much reduced pattern of ploughed-down boundaries under the modern field systems to the south-west of the railway line (Atkinson, C. & Bapty, I., HAS 280).

HEREFORD, ROTHERWAS, Further Excavation of the Rotherwas Ribbon Stage 2, (SO 525 376), [EHE 1851]

With funding from English Heritage and the kind permission of the landowner, a joint team from Herefordshire Archaeology and the Worcestershire Historic Environment and Archaeology Service (WHEAS) undertook excavations on the projected line of the so called 'Rotherwas Ribbon' in February and March 2010.

The Ribbon is an unusual and enigmatic Neolithic or Early Bronze Age linear structure consisting of a 6 to 8m. wide stone surface located within a linear hollow. A 67m. length of the

Ribbon was identified, uncovered and partly excavated in 2007 during a archaeological recording exercise in advance of the construction of the Rotherwas access road.[8]

Key questions arising from the 2007 excavation include the precise function of the Ribbon; its extent; its exact date and period of use; and the relative interplay of natural and cultural processes in the creation of the structure. As part of an evolving further research process, additional geophysics was undertaken in late 2009. The geophysics survey (undertaken by Headland Archaeology—see above) positively indicated the likely presence of a linear feature extending north and south from the known Ribbon section.

Figure 11. One of the trenches across the Rotherwas Ribbon from the west. The illustration shows the Ribbon; the curvelinear ditch; and a modern drainage pipe

In order to test the geophysics evidence, five 30 by 3m. evaluation trenches were excavated along the possible extension of the Ribbon. The investigation process included appropriate programmes of geoarchaeological and palaeoenvironmental sampling and analysis, and an OSL[9] sampling programme. The results across the five trenches revealed multi-period archaeological deposits dating from at least the Mesolithic to the Roman periods.

One probable further section of the Ribbon was certainly identified, in a trench to the north of the new access road, and this has tended to confirm the likely date and cultural context of the Ribbon. Elsewhere a complex series of deposits were found where hollows/channels were associated with stone surfaces of varying dates. In a trench adjacent to the Rotherwas Futures site a probable Bronze Age burnt mound sealed earlier pits and surfaces. By contrast, the features in two trenches south of the access road were mainly of Roman date, and suggest the presence of a Roman settlement in this locality. Meanwhile, in another trench an ancient

water channel (probably active in the Neolithic/Bronze Age period) has emphasised the role of alluvial processes in this part of the earlier prehistoric Rotherwas landscape (Fig. 11).

The preliminary artefact, geoarchaeological and environmental studies have amplified contextual understanding of the Ribbon and its environs, although a clear interpretation of the Ribbon remains elusive at this interim stage.

An Assessment/Interim Report has been prepared, and this sets out a programme of post-excavation work (including additional geoarchaeological, palaeoenvironmental analytical and scientific dating analyses) which will attempt to further address key research questions (Bapty, I., & Williams, D., HAS 281).

LLANVEYNOE, Olchon Court, Evaluation excavation, (SO 279 326), [HSM 51623]

An evaluation excavation was undertaken as part of a larger project intended to identify, record and investigate earthworks in the environs of Olchon Court. This was the first trench to be excavated on the southern side of the building complex. The location of the trench was agreed after the owners had expressed an interest in the depth and type of deposits in this area with a mind to possible building alterations.

A trench 3m. long and 2m. wide was excavated by hand through part of a vegetable patch. Immediately below the topsoil was a cut containing a mid-20th century foul-water drain. This had cut through a layer of densely-packed rubble dating from the late 17th to the mid-18th century which overlay the hard natural clay. It would appear that the rubble layer had been purposely spread in order to provide a well-drained and level platform onto which a series of single-storey barns were erected.

This small excavation has indicated that, despite the proximity to the medieval elements of Olchon Court, the area appears to have been levelled or terraced during periods of substantial development. This presumably involved the demolition of earlier structures and the removal of any associated deposits in order to achieve a hard and level surface from which to begin the next construction phase. It would appear that, due to the lack of stratigraphy at this location, a significant amount of levelling down had occured in the late 17th or early 18th century. This may suggest a significant period of development and re-modelling of Olchon Court and its immediate environs (Bishop, L. and Hoverd, T., HAR 280).

LLANVEYNOE, Olchon Court, The excavation of a Bronze Age cairn, (SO 279 326), [HSM 51613]

The excavation of a round cairn at Olchon Court Farm was carried out during the summer of 2010 and was undertaken in partnership with staff and students from Manchester University. The mound had been discovered during Herefordshire Archaeology's Olchon Valley Survey, and geophysical survey had suggested a complex structure with a series of elements attached to a central walled cairn. Initially, it was conjectured that the whole might represent a Cotswold-Severn type long cairn, constructed around a primary ‘rotunda grave’.

Once the site had been stripped it was evident that a series of field walls were attached to the round cairn, but that the latter was also surrounded by a stone kerb, which had retained a turf mound built over the stone cairn in a series of phases. Interspersed within the layers of turf in the secondary mound were a series of cremation burials, one of which was associated with a segmented faience bead.

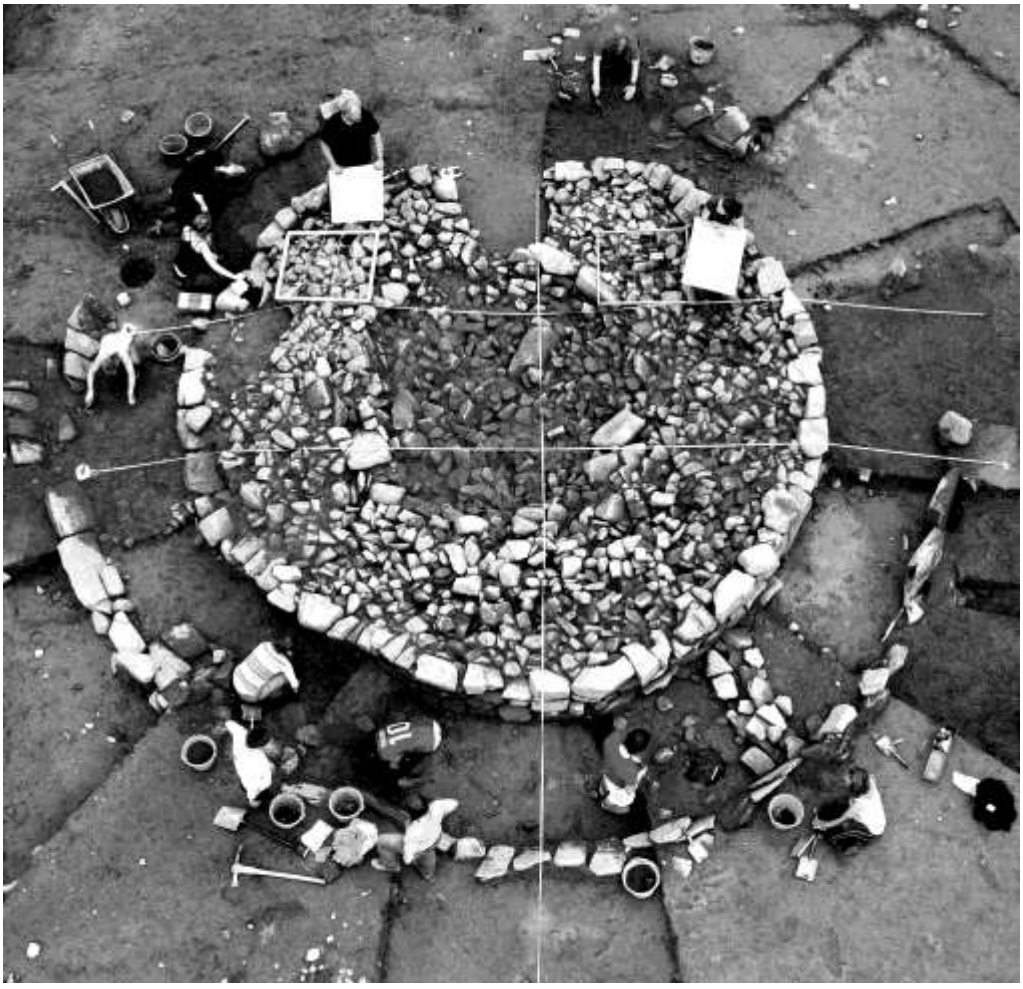

Figure 12. The Olchon Court Bronze Age cairn at the end of the excavation

The primary cairn was retained within a well-built wall, which survived for several courses. When first revealed, this closely resembled a small passage grave. Rather than being truly circular, its plan was flattened on the southern side and pointed to the north. There was a blocked, formal entrance on the southern side, although this proved to be a 'dummy', the passage disappearing a little way into the cairn. This entrance faced toward a distinctive local topographic feature—the Red Daren. The 'chamber' or court area was offset towards the entrance, rather than being at the true centre of the cairn. This was filled with a mass of stone which appeared to have been carefully placed, giving the impression of collapsed corbelling, to the extent that individual stones had been pitched beneath the surrounding ring of massive retaining stones.

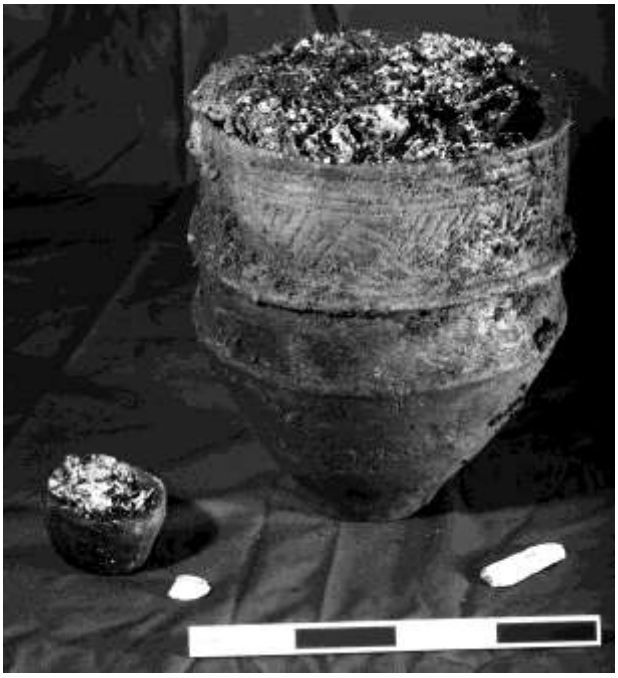

Figure 13. The primary cremation burial at the centre of the Bronze Age cairn at Olchon Court

However, once this mass of stone had been removed, the pit containing the primary burial was revealed. This was a multiple cremation contained within a collared urn, associated with an accessory cup, plano-convex knife and thumbnail scraper (Fig. 13), It was only at this point that the Bronze Age date for the monument as a whole was finally determined.

It is possible that, while the structure formally represents a ring cairn, the extreme structural similarities with Neolithic passage graves were not accidental. It is conceivable that the cairn was deliberately constructed in such a way as to evoke an already ancient monument in an advanced state of dilapidation (Fig.12). (Hoverd, T., Ray, K., & Thomas, J., forthcoming).

WHITCHURCH, Merlin's Cave, Trial Excavations, (SO 556 153), [HSM 51836]

A member of the public reported that archaeological artefacts, (flint, animal bone and pottery), had been unearthed by recent tree throws at the base of a cliff close to Merlin's Cave in Symonds Yat gorge. In partnership with the Forestry Commission and Overlooking The Wye, (HLF), the site was examined and it was noted that five trees had recently been blown over, resulting in small but deep areas of localised disturbance. Pottery, flint and bone fragments were recovered from three of these areas of disturbance. An assessment of the potential of the area was then made by cutting back into the areas of disturbance and recording the exposed sections. It was noted that the artefacts appeared to be contained within a series of *in situ* deposits immediately above a natural soil. This was buried beneath a modern soil, on top of which was the spoil from the early 20th century excavations of Merlin's Cave.

During the course of cleaning one of the tree throws, the articulated remains (pelvis, femurs and patellae) of a human being were discovered. The remains appear to have been buried in a relatively shallow grave cut, aligned on a roughly north–south axis. The grave was clearly sealed by a series of deposits that appeared to closely resemble those from other tree throw sections where prehistoric finds were recovered. The burial was excavated and recorded by Professor A. Chamberlain, of the University of Sheffield. The length of the femurs and shape of the pelvis would suggest a well-built, (1.8m. tall) male. A fragment of bone was removed for dating purposes, but the rest of the burial was left undisturbed. The cleaned sections and bases were then backfilled. The artefactual evidence would suggest that there has been human activity on the site from the Neolithic to the end of the Romano-British period.

The stratigraphic relationship of the burial to the deposits found to contain artefacts would indicate a prehistoric date. It is hoped that further, small-scale work will be undertaken on the site in the near future (Bishop, L., & Hoverd, T., HAS 284).

WHITCHURCH, New Weir, (SO 559 156) [HSM 1589]

Small scale excavations were carried out at New Weir Forge over a four-week period during May 2010. The purposes of the excavation were to provide information that can be used to inform the future management of the site through a Conservation Management Plan; to involve local volunteers in archaeological investigative works; and to provide information for future interpretation of the site. Little work has been carried out on forges of this date in the county and the Marches, so the information gained will also be an important addition to industrial studies both locally and nationally.

Three further areas were investigated in 2010, based in part on surface evidence and partly on the results of a remarkably successful geophysical survey carried out prior to the excavation. Remains associated with the former leat at the eastern end of the dam wall were uncovered and recorded. A section of dam wall was revealed and recorded. One of the trenches initially excavated in 2009 was expanded in order to define the iron-working area tentatively identified as part of the rolling mill (Dorling, P., forthcoming).

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2 Crotals are hollow, orb-shaped objects made of metal, often bronze, with a slot cut in the side and a metal ball inside. They first appear in the Bronze Age. Larger crotals were often used on horse-drawn vehicles or harness, when they were known as ‘rumblers’.
3 Shoesmith, R., Reports of Sectional Recorders – Archaeology 2007, *TWNFC* Vol 55, 2007, pp.132–5.
4 A Geonics EM31, a Bartington 1m fluxgate array and a Geonics EM38 MKII.
5 Entec UK Ltd., 25th February 2004
6 *Herefordshire Archaeology Report 266*, 2010.
7 See note 3.
8 See note 3.
9 Optically Stimulated Luminescent dating.

Natural History, 2010

By BERYL HARDING

A further thirty-seven churchyard plant surveys have been carried out this year. With approximately another fifty to go it is hoped that the survey of the county will be concluded next year.

27 April *The church of St. Mary, Ross-on-Wye*
This one of the largest churches in the county and its churchyard is also very extensive. Overlooking Ross it can be seen for miles around.

The churchyard is surrounded by mortared stone retaining walls apart from that to the south where there is also a paling fence and hedge. The gravestones are of varied stone types with a good lichen cover on the older ones. The turf is close mown around the church but has been allowed to grow longer further away and around the graves where it is very herb rich. There are 55 species of herbaceous plants, 4 of grass, 1 of fern, the Wall Rue growing in abundance on the stone walls, and 9 species of trees all well grown and giving a park like appearance to the churchyard. 17 species of bird were recorded and the presence of many moles noted.

The church of St. Michel and All Angels, Walford-on-Wye
The church is situated in a scattered village with woodland some distance away on rising ground to the east. It is surrounded by mortared walls with an old railway embankment outside to the west. Some of the paths are re-used grave slabs and other old gravestones line the east wall.

The turf is both mown and fly-mown and is herb-rich with 51 species of herbaceous plants, 1 of grass, 1 of fern (again, abundant Wall Rue) and 6 of trees. A lime tree walk had been planted from the gate to the entrance as the 'Lane of Remembrance to those killed in WWI. 14 species of bird were recorded also abundant signs of moles and rabbits, and the presence of bats in the church.

The church of St. Michael's, Hope Mansell
This is in a small village with surrounding woodland. The tiny church is on a raised mound. Part of it is Norman with 12th/13th century additions It was restored in 1889 when the large copper beech was planted. It is surrounded by mortared stone walls buttressed to the south along the road. Most of the gravestones are *in situ* with some table-topped and the lichen growth is abundant on their east sides.

The grass is hardly mown and herb-rich with 50 species of herbaceous plants, 3 of grass, 1 of fern and 6 of trees. 11 species of birds were recorded with signs of many moles and bats in the church itself.

The church of St. Michael and All Angels, Brampton Abbots
It is in a small but rather exposed village surrounded by pasture and arable land. It has a rebuilt 14th-century timber porch and a timber bell turret on a renewed but impressive substructure inside the church which we were unable to see as the door was locked because of falling roof

tiles. The boundaries are a mix of mortared and drystone walls with a lych gate. The older gravestones are still *in situ* to the south.

The grass is mown and fairly herb-rich with 42 species of herbaceous plants, 3 of grass, 2 of fern and 4 of trees. 12 species of birds were noted – Goldfinch had been present at all these sites and a Wood Warbler was heard here. Mole hills were abundant.

11 May *The church of St. Giles, Goodrich*

It is in the middle of the scattered village not far from the large castle and overlooked by Coppet Hill. The 13th-century nave and chancel form a single chamber renovated in the 19th century. The south porch and thin west tower with its tall broach spire are 14th century renovated in 2002. The boundaries consist of mortared walls with a hollow-way by the north-east corner and a spring within a stone built surround.

The grass is mown and very herb-rich with 62 species of herbaceous plants, 8 of grass, rush and sedge, 1 fern and 9 species of trees including a large cedar of Lebanon and a very large plane tree of 3.5 metre girth. There are primroses and snowdrops in early spring. 14 species of bird were recorded including nesting House Martins. The turf had many mole and ant hills.

The church of St. Margaret, Welsh Bicknor

Under the hillside close to the Wye, the church is built of Tintern sandstone with bands of shelly yellow sandstone plus ornamental pillars of black stone. Built in 1858-9, externally it is a mixture of 'Norman and Early English' with a large churchyard cross. The boundaries are of mortared and drystone walls with flat capstones.

The grass is mown and has 37 species of herbaceous plants, 2 of grasses, 2 of ferns and 3 of trees. 8 species of birds were recorded with evidence noted of deer, mole and rabbits. There was no access to check for bats.

The church of St. Swithin, Ganarew

Built in 1849/50 by J. Pritchard of Llandaff it consists of nave and chancel with a small stone bell-turret and spirelet. It is in the style of 'Decorated'. The boundaries consist of mortared stone walls.

The grass is mown with 37 species of herbaceous plants, 4 of grasses and rush, 2 of ferns and 4 of trees. 13 species of birds were recorded.

The church of St. Dubricius, Whitchurch

One of the few with this dedication it is immediately by the Wye. The church is 13th century with Victorian renovation. The nave and chancel have 14th-century single framed roofs. There is also the restored tomb of the Gwillim family whose heiress, Elizabeth Postuma Gwillim, married John Simcoe – the founder of Toronto.

The boundary to the east is the river Wye and to the north a stream flowing into it, otherwise there is a fence with a hedge, and a stonewall. There is a churchyard cross with a medieval base and Victorian restored top.

The grass is mown and very herb-rich with 57 species of herbaceous plants, 6 of grasses and rush, Hart's Tongue fern and 10 species of trees including a yew of 2m. girth and a Tulip Tree. 10 species of birds were recorded.

The church of St. Matthew, Marstow
Built in 1855 it consists of a nave and chancel with a steeply gabled bellcote. It had been relocated from a regularly-flooded site to the south-west on the Garron, where the area of the churchyard remains. It is bounded by mortared stone walls with capstones.

The grass is mown and has 47 species of herbaceous plants, 6 of grasses and wood rush, 2 of fern and 3 of trees including a wychelm planted at the same time of the church rebuild. 10 species of birds were recorded plus evidence of bats in the porch.

25 May *The church of St. Mary the Virgin, Kington*
This is one of 2,335 churches in the whole country with the same dedication, very popular with the Normans, who built churches near to their castles. It is lies on a hill on the western edge of town. The oldest part is the keep-like tower of *c*.1200 on the south side which was originally detached and has a three-tiered shingle broach spire. The external staircase is Victorian. In 1847 the church was restored and enlarged and added to in 1873/4. As the site rises steeply all the boundary walls are retaining walls and of mortared stone work. Very few of the original gravestones are still in position.

The turf is mown and has 13 different species of grasses and rush, it is fairly herb-rich with 48 species of herbaceous plants, 3 of ferns and 15 species of tree. In fact it is planted up and maintained to resemble a parkland with the variety of trees. Only 7 species of birds were recorded, perhaps because it was a cool, cloudy morning with very few flying insects around.

The church of the Blessed Virgin Mary, Clifford
It is located in woodland far from the village. In fact, Clifford is one of the largest parishes in England. Originally of 6,500 acres, 400 were lost in 1853 when Hardwick parish was formed. The church was probably built by the monks of Clifford Priory in the 13th century. Itwas restored in 1898. In a recess in the north wall of the chancel is an effigy in oak which is thought to be one of the oldest in the country, dated *c.*1280, and perhaps of the founder of the priory as it is dressed in vestments similar to Bishop Aquablanca in Hereford cathedral. The chancel is early 13th- and the nave late 13th- century. The west tower is 18th-century incorporating older material and with a crenellated top.

The boundaries consist of drystone walls and hedges with a stone built lych gate at the entrance. Many graves remain *in situ*. The turf is only partly mown and consequently very herb-rich with 57 species of herbaceous plants, 8 of grasses, 3 of ferns and 10 of trees. Only 4 species of birds were recorded and the presence of bats noted in the church.

The church of St. Mary, Brilley
Originally a chapel in existence by 1281, it has a single nave and chancel. The latter has a lower ceiling, or baldachino, inserted at the east end. During the Commonwealth it was decreed that such ceilings should be ripped out but Brilley and Michaelchurch in Radnorshire are the only ones to have retained them – perhaps due to their remoteness. The chancel was rebuilt in 1890.

There is a thin unbuttressed west tower with an overhanging pyramidal roof built in 1912 with a clock and a fine ‘gold’ weathercock. The boundaries are varied with one mortared wall and others of hedges and a paling fence.

The churchyard is extremely large and contains a preaching cross with a sundial. Many of the graves are still *in situ* and quite a few are table-topped. Inside the church are two cast

iron grave slabs inscribed 1669 to the Hare family. The wife was the daughter of Shropshire iron master and these resemble those found in Downton church.

The grass is mown round the graves but is otherwise left so the turf is herb-rich with 50 species of herbaceous plants including pignut, which is always a good indicator of species richness, 6 species of grasses and rush, 4 of fern and 4 of trees including a very large yew opposite the south porch. 5 species of birds were recorded plus various hirudines hunting for insects overhead and swallows nesting in the porch.

The church of St. Thomas à Becket or St. Thomas of Canterbury, Huntington

South-west of Kington it is fairly remote although within a small village. The church site is on a circular mound and the building is a thick walled single chamber of *c*.1300-20 with three renewed 16th-century windows. Also of that date is the timber bell turret on posts above the square 17th-century tower.

The boundaries are marked by banks with hedges and one retaining wall by the south entrance. Some graves remain *in situ* while others have been re-arranged in rows – the newer graveyard is to the north side.

The grass is fly mown and fairly herb-rich with 48 species of herbaceous plants, 7 of grasses and rush, 3 of ferns and 12 of trees including conifers and both types of yew. 7+ species of birds were recorded, also a wood mouse and there was evidence of bats in the church.

10 June *The church of St. Mary, Sarnesfield*

Of Norman origin with a very narrow south aisle of *c*.1190. Other parts are early 14th century including the tie-beam roof over the nave, the west tower with louvred upper windows and the south porch timbers. In the churchyard is a plain tomb-chest to John Abel d.1674, aged 97. He was the designer of many fine timber buildings in Herefordshire including the screen at Dore Abbey, and constructed a powder mill during the siege of Hereford in 1645 for which he was given the title of 'King's Carpenter'.

The boundaries are mainly drystone walls and a wire fence to the east beside a steep drop to a wooded hollow. The turf is mown but poor with 20 species of herbaceous plants, 6 of grasses, 3 of ferns and 6 of trees.

The church of St. Peter, Birley

The Norman nave has an original south doorway and both early and late 13th-century windows. The chancel is of the same age but with 14th century ballflower decoration on its arch and the south chancel is late 14th century built for the family at Birley Court. There is a decorated Norman font. The square west tower is *c*.1200 with a slightly projecting shingled bell-stage and pyramidal roof. The shingles need renewing every twenty-eight years or so.

The boundaries are mostly mortared stone walls. The turf is mown and fairly herb-rich with 44 species of herbaceous plants, 3 of grasses and 9 of trees including a large spindle. The presence of bats in the church was noted and 4 species of birds.

The church of St. Mary Magdalene, Eardisley

It would appear that the present nave constituted the whole of the Norman church and at the end of the 12th century a narrow south aisle and chapel were added with an extended chancel built c.1300 and a further north chapel in the 14th century. The church is renowned for its fine

Norman font of c.1150 which as Pevsner says 'is, side by side with the font of Castle Frome, the most exciting piece of the Norman School of Herefordshire, for composition and even more for preservation.' The remains of the castle motte are still visible behind the church. A crenellated square west tower is at the north-west corner of the church was rebuilt in 1707. but lost its earlier features. The boundaries consist of mortared retaining walls and a lych-gate. The turf is mown and is very herb-rich with 59 species of herbaceous plants, 1 of ferns, 9 of grasses and rush and 10 of trees including a large Wellingtonia beneath which logs have been left for invertebrate use and shelter. The presence of bats in the church was noted and that of moles in the churchyard with 16 species of birds recorded.

The church of St. James the Apostle, Kinnersley

This is a comparatively rare dedication for an English medieval church. The most impressive feature of the church is the mighty 14th-century north-west tower with its vertical lines and saddleback-roof projecting from the north aisle and looking rather like something in France. Parts of the church are Norman with later 13th-century additions. It was restored in the 1868 with the later nave and chancel wall and rafter decorations designed by Bodley.

To the east is the old castle site reconstructed as a house in *c.*1588 but retaining its 5-storied battlemented tower The boundaries are a mixture of fences and hedges with a high brick wall beside the Castle - there is also a churchyard cross.

The turf is mown and is moderately herb-rich with 43 species of herbaceous plants, 7 of grasses, 2 of fern and 8 of trees. Adjacent to the churchyard is a large Ginko in the castle grounds. It was moved in 1903, then already 180 years old, and obviously survived this upheaval. Its leaves are harvested today for medicinal purposes.

Evidence of bats in the church was noted and 8 species of birds were recorded. There is a large thicket in the churchyard which contains a fox den.

24 June. *The church of St. Michael and All Angels, Lingen*

An old site beside the castle motte and near the Augustinian nunnery of Limebrook Priory *c.*1189. The present church was the third and total rebuild of 1890, again needing a partial rebuild in 1953 after fire destroyed the roof. The west tower is 16th century with a timber bell stage and shingled spire of 19th century. The tower clock is dedicated to those that were killed in WWI.

The boundaries are marked by mixed hedges and trees. The turf is fly-mown and moderately herb-rich with 40 species of herbaceous plants, 7 of grasses including Tufted Hair Grass and 11 of trees. The presence of bats was noted in the church and 8 species of birds recorded.

The church of All Saints, Kinsham

The site is Norman with a single nave and chancel (13th century) and restored in the early 18th century retaining some medieval features plus the 12th-century font bowl. It is built of local limestone rubble and roughcast with a tiled roof and small bell-cote. There is a squint on the south wall and it still retains its medieval altar with its crosses but now beneath the chancel steps. Kinsham is not found in the Domesday book but Lower Kinsham was part of the Shropshire manor of Humet on the boundary. Presteigne had the priest's share with Kinsham which had the king's share. It survived the Reformation becoming the parish church for both Upper and Lower Kinsham.

The churchyard overlooks the gorge cut in the last Ice Age, known as Kinsham Dingle to the Victorians and as 'one of the most picturesque views in Herefordshire, or indeed, in any county' according to the notes in the church.

The church is next to Kinsham Court. The boundaries are marked by hedges. The turf is fly-mown and not herb-rich with 25 species of herbaceous plants, 1 of fern, 5 of grasses and 9 of trees. The presence of bats was noted in the church with 10 species of birds recorded.

The church of St. Barnabas, Brampton Bryan

Situated by the castle remains it was originally built *c*.1240 but rebuilt in 1656 for Sir Robert Harley after its destruction during the Civil War—only one of five built during the Commonwealth. The whole village also was mostly destroyed and then rebuilt with minimum time, labour and expense. Compared with other churches its breadth is out of proportion to the length (36ft. x53 ft.). The fine double hammer-beam roof is believed to have been taken from the castle banqueting hall so the church was rebuilt to accommodate this. It has some later Victorian alterations and a Victorian bell turret.

The boundaries are marked by the enormous, trimmed and undulating yew hedges. Apparently the clippings are sent away for use in medication for cancer treatment. The turf is fly-mown and moderately herb-rich with 44 species of herbaceous plants, 9 of grasses and sedge, 3 of ferns and 7 of trees. The presence of bats in the church was noted with 13 species of birds recorded.

6 July. *The church of St. James, Wigmore*

The church is away from the main street built on the hillside and a raised circular mound above the village. The site is Saxon in origin and the later Norman church was founded by the Mortimer family of the nearby castle. The church has a wide very early Norman nave with herringbone masonry visible on the inside and outside of the north wall. The west tower, the chancel and south aisle and arcade are 14th century while the nave roof is 15th century and largely intact. The broad west tower is 14th century.

There is a steep drop to the houses below so the stone walls are all retaining. The top of the churchyard cross has been renewed. Very few graves remain *in situ* and some have been placed against the church wall. The grass is mown but overshadowed by trees and not herb-rich with only 39 species of herbaceous plants – the whole area was brown and very parched by the summer's dry weather on our visit; 9 species of grasses were recorded, 10 of trees and shrubs with the presence of many bats in the church noted and 12 species of birds recorded.

The church of St. Andrew, Adforton

Built in 1875 it is one of the county's newest churches. It is simple and small with an apsidal chancel and a wagon roof. Until 1875 the only church for Adforton was the Methodist chapel built in 1863 so Church of England members had to walk two miles to Leintwardine or Wigmore on very poor roads. This church opened as a chapel of ease attached to Leintwardine and regarded as a daughter chapel until 1973, when the parish of Adforton was finally founded. The church is also used as the village hall and as a new site there is not much land attached.

The boundaries consist of a mix of hedges and some retaining stone walls with little land between them and the building. The grass is mown but not herb-rich with 33 species of herbaceous plants, 8 of grasses and sedges, 2 of fern and 5 of trees and shrubs. 11 species of birds were recorded.

The church of St. Mary's, Bucknell
The age of the site may be 12th century or earlier but it underwent restoration in 1870. It has a fine timber roof and trusses and the font bowl is Norman, or possibly Saxon. It is on a raised circular churchyard and has a steeple with a shingle bellcote.

The boundaries are marked by mortared walls some retaining, with a steep drop to a stream to the south. Some of the older graves are still *in situ*.

The turf is mown and moderately herb-rich with 48 species of herbaceous plants, 8 of grasses, 1 fern and 8 of trees including the ornamental weeping pear known locally as 'the devil's pear'. Signs of bats in the church were noted and 9 species of birds were recorded.

The church of St. Giles, Downton-on-the-Rock
The ancient 12th century parish church stood in the village but has become a ruin with little left today. The present church was built in 1861-2 in the grounds of Downton Castle at the expense of the Lord of the Manor, Andrew Rouse Boughton Knight. It is a gem of a church in a pretty setting raised slightly above the surrounding fields and reached via a long drive. It has a tall, slender south-west tower and broach spire not quite separated from the church It has high quality furnishings and decoration with an elaborate reredos.

The boundaries consist of mortared stone walls and some graves are still *in situ*. The turf is mown but not herb-rich with 34 species of herbaceous plants, 1 of fern, 5 of grasses and 2 of trees. Bats were noted in the church and 5 species of birds recorded.

22 July. *The church of St. Lawrence, Canon Pyon*
It is a pre-conquest church given to the Dean and Chapter of Hereford Cathedral by two Saxon ladies, Wulviva and Godiva. The village originally surrounded it but has gradually been built further away. The wide nave and chancel are undivided except by an old screen. The north and south arcades of the 13th century lean dramatically. The tall crenellated tower is in three stages and helps to support the south arcade by flying buttresses. The main features inside are the misericords carved with various animals and the 15th century font.

The boundaries consist of mortared walls and a lych-gate. The turf is mown quite closely having 41 species of herbaceous plants, 6 of grasses, 2 of ferns and 11 of trees. Evidence of bats were found in the church, a stoat was seen and 10 species of birds recorded.

The church of St. Mary, Kings Pyon
It has a raised circular churchyard on a high mound. It is built of sandstone and tufa. The eastern part of the nave and south doorway are Norman, the church was lengthened and rebuilt in c.1180-1200 with later 13th and 14th century additions and a fine nave roof. The short crenellated west tower is originally 14th century.

The boundaries are of mortared retaining stone walls with some graves still *in situ* to the south. The turf is mown and very herb-rich with 52 species of herbaceous plants, 7 of grasses, 4 of ferns and 8 of trees. A large *Wellingtonia* was planted in the small adjacent village green to mark Queen Victoria's Jubilee. Evidence of bats in the church was noted and 6 species of birds recorded.

The church of St. Mary the Virgin, Wormsley
The original church was Norman but the site is older. In Domesday Wormsley was owned by the Bishop and Roger de Lacy. The Augustinian priory at Wormsley was founded in 1216

three-quarters of a mile from the church. A cartulary of the priory mentions a 13th century hermit living nearby. The nave is 12th century and lengthened 100 years later, the small turret and bellcote are late 13th century and there has been some Victorian restoration. It is a Redundant Church maintained by the Churches Conservation Trust.

The two large chest tombs in the churchyard are for Richard Payne Knight and Thomas Andrew Knight. The churchyard itself is very attractive in a beautiful setting with boundaries consisting of old layed hedges. The turf is sheep-grazed for much of the year but unfortunately very poor with only 10 species of herbaceous plants, 7 of grasses and 4 of trees and shrubs. Evidence of rabbits was present with that of bats in the church – in fact the roof has special openings designed for bats. 3 species of birds were recorded.

The church of St. Mary the Virgin, Yazor

The manor of Yazor was held by Llanthony Priory in Breconshire until the Reformation. The original church, dedicated to *St. John the Baptist*, lay beside Yazor Court and was partly 13th century. It was dismantled in 1855. Its churchyard is still used for burials as the new one of St. Mary's is not licenced. The newer church was planned by Uvedale Price and built in 1843. The dark and atmospheric interior has many Price family monuments transferred here and is of Early English style with a tall, needle-sharp spire flanked by two *Wellingtonia* which together can be seen for miles around. The newer church is maintained by the Churches Historic Trust.

The boundaries of the new church are mortared walls while that of the old church consists of hedges and fencing.

The management of the grass is minimal with only 17 species of herbaceous plants and 6 of grasses, the maximum number of trees was 7 occurring mostly in the new church. 7 species of birds were recorded and the presence of bats noted in St. Mary's

3 August. *The church of St. Andrew, Hampton Bishop*

Hampton Bishop belongs to the Bishop of Hereford The church is mostly Norman with 13th century additions. The north tower has Norman windows with a black and white timber-framed top storey and a steep shingled, pyramid roof. In the Lady Chapel is a rare stone medieval reredos and the roof timbers are also medieval.

The boundaries are varied with mortared stone walls, hedges and a row of Irish yews.

The turf is mown and not very herb-rich with 36 species of herbaceous plant, 6 of grasses, 2 of ferns and 5 of trees. The presence of bats was noted in the church with 10 species of birds recorded.

The church of the Holy Rood, Mordiford

Near to Mordiford bridge the church nave has a Norman south doorway with a newer chancel and central tower added in the 13th century; the latter was rebuilt in 1811 and positioned externally to the south-west. The original tower had a large green 12ft. dragon with a red mouth and tongue painted on the outside, recalling the story of the Mordiford dragon.

The boundaries have stone retaining walls with a brick wall to a garden on the south side. Many graves are still *in situ* to the east.

The turf is mown and not very herb-rich with 36 species of herbaceous plants, only Yorkshire fog grass and 7 of trees. 8 species of birds were recorded. No bats were recorded as the building was locked.

The church of St. Peter, Dormington

In the centre of a small village the site is probably earlier than the *c*.1300 nave and chancel. There is a west tower with a shingled broach spire, the kingpost of which has rotted giving a list to the spire and weathercock. It is now in need of repair and an appeal has been set up. The church was restored in 1877 and is now a Grade II listed building. Most important is the small Norman door knocker in the shape of a feline head. The work is reminiscent of that seen at Kilpeck. [The actual one on view nowadays is a replica with the original in safe keeping.] Was it a sanctuary knocker?

Amid houses the boundaries consist of mortared stone walls apart from the new area to the south. The turf is fine-mown and not herb-rich with 31 species of herbaceous plants, 4 of grasses and 5 of trees with 6 species of birds recorded and the presence of bats noted in the church.

The church of St. Mary the Virgin, Stoke Edith

Originally the church was dedicated to St. Edith, the daughter of King Edgar and the Abbess of Wilton (in Wiltshire)

The 14th century west tower has a recessed needle-spire which was 158ft. high in the 17th century, but had 35ft. taken off in the 1940s when it became unsafe and the remainder was capped. The Foleys of Stoke Edith had the main body of the church rebuilt in brick in 1740 with a 5-bay nave with high windows built of brick and stuccoed.

The boundaries are marked by wooden paling fences apart from the yew hedges to the south. Many grave stones are still *in situ* with a special enclosed area to the east for Foley family memorials.

The turf is fly-mown occasionally but poor with 23 species of herbaceous plans, 3 of grasses and 2 of trees. 14 species of bird were recorded. Without inside access no check for bats could be made but there must be some in the tower.

The church of St. Peter, Lugwardine

There is a Norman nave and chancel but the site must be older and stands on a raised circular mound. The chancel is 13th century with the thick base of the original north tower to the east side of the north aisle. The remainder and the west tower is 15th century. It was restored in 1871-2 with the interior classicised by flat ceilings and galleries at the west end. It was enlarged to seat 440 people for a village with a population then of 790.

The boundaries are of stone retaining walls and in the north-east corner is a memorial for those killed in WWI. The turf is closely mown but also poor with only 24 species of herbaceous plants, 6 of grasses and 3 of trees. 4 species of birds were recorded; with no access there was no check made for bats.

12 August. *The church of St. Mary and St. David, Kilpeck*

The chancel has windows from *c*.1300 and the bellcote is of 1864 carved with 'Norman arch work' otherwise the splendid and little altered church is of *c*.1140-50, comprising a nave, square chancel and an apse and probably built by Hugh de Kilpeck. It is one of the most perfect Norman village churches in England with sumptuous carvings on the south doorway and many stone figures along the exterior corbel table. It lies adjacent to the castle earthworks but may owe its fine details to the presence here from 1134 of a small cell of the Benedictine abbey of Gloucester. There are signs of an adjacent deserted medieval village site and dowsing

in a nearby field revealed megalithic stones and Roman remains, none of which have yet been excavated.

The boundaries consist of drystone retaining walls with the deserted medieval settlement to the north and the castle motte and outer bailey above to the east. Many gravestones are still *in situ* with fine carved tops. Some have had their lichen cover cleared on their south sides but not on the north. A newer churchyard has been made in the outer bailey.

The turf is mown and fairly herb-rich with 45 species of herbaceous plants, 6 of grasses, 1 of fern and 8 of trees including both types of yew and an English elm. 17 species of birds were recorded and the presence of rabbits and moles noted also that of bats in the church..

The church of St. Dubricius, St. Devereux

Another of the few dedicated to this saint and the only village in the country bearing his name in the French, the Welsh form being Dyfrig. The earliest mention of the church is 1353 in the Bishop' registers, probably forming part of the religious house of Wormbridge which was a community of Knights Hospitallers. The west tower stands on a man-made mound which suggests that it could have been built as a lookout for further defence of nearby Kilpeck castle. Built of rubble and ashlar dressings of sandstone, parts of the nave date to late 13th century and the chancel to late 14th ; the three-stage west tower is also 13th century.

The boundaries consist of retaining stone walls. The turf is mown and very herb-rich with 52 species of herbaceous plants, 8 of grasses and sedge and 7 of trees and shrubs. 8 species of birds were recorded and presence of bats noted.

The church of St. Peter, Wormbridge

Some remnants of 13th century work remain in the lower part of the unbuttressed west tower. The bell-stage, parts of the nave and all of the chancel date from the restoration of 1851-9 when, as Pevsner says, 'it was violently restored.' The boundaries are a mixture of post-and-wire fences with hedges, a stone wall beside the road to the north and to the fields to the south where the remains of a deserted medieval settlement have now been ploughed out.

The turf is mown and fly-mown and has 37 species of herbaceous plants, only Timothy grass but 13 species of trees including both types of yew, oak, sycamore and small leaved lime. 5 species of bird were recorded but no bat presence was recorded as the church was locked.

The church of St. Mary, Kenderchurch

Small and alone on a hill above the main Abergavenny road, beside the Pontrilas saw mills, it consists of a nave, chancel and Victorian bellcote. Of older features the restoration of 1871 has left hardly anything apart from a 16th century south doorway, a Norman font with chevrons, the chancel wagon roof with small bosses, the Jacobean pulpit and the top of the 15th century screen.

The boundaries are mostly banks and hedges with steep drops to the north and south. A few graves remain. The turf is fly-mown occasionally and is herb-rich with 44 species of herbaceous plant, a good variety of 8 species of grass and 12 of trees and shrubs including both types of yew, sweet chestnut and spindle. 7 species of birds were recorded but no bat recording took place as the church was locked.

Whitman's Hill quarry and woodland, 2010

By JANET PARRY

Monitoring of the leased area as agreed in 2007 has continued this year with 8 visits being made by Club members. Again, the nesting Peregrine meant the first visit to the quarry was not possible until later in the year and a plant survey was not made until 1 September due to other problems, though visits were made to the woodland to monitor and maintain the bird and dormice boxes, mainly in May. Most visits have been carried out by Janet Parry (JP) who is the locally situated Club member and who also joined in a 'Champions' site visit with members of Earth Heritage Trust and the local Champions team and helped with one of the school education days organised for Nunnery Wood School in Worcester in November.

The Quarry

The vegetation continues to extend its range. The *Buddleia* is getting very extensive and starting to obscure the accessible quarry face. Traveller's joy is creeping ever further over the rock faces, the Silver Birch is getting more established and the bunds are becoming well colonised with a range of plants. The Teasels which were widespread last year, were much fewer this year but there was a great deal of Gromwell and *Hypericum*. More Ash seedlings had germinated making a potential Ash forest in places but the Oaks seemed less frequent. The wild Strawberry, Ploughman's Spikenard and Bristly Oxtongue were thriving. Most of the plants listed in 2009 were rediscovered but some of the early annuals were missed as the visit had to be so late in the year when most of the vegetation was dried up. No new species were noted. Large White, Red Admiral, Comma and Peacock butterflies were seen in September attracted by the large number of *Buddleja* flowers.

The ponds were not resurveyed as the water was very low but both Lesser and Greater Waterboatmen and Whirligig beetles were seen on all ponds. The level of water varies with the weather and the clump of Bulrushes is growing well. The woodland detritus continues to build up in the ponds and provide food for a greater range of species.

The Peregrines nested in the quarry again and were monitored by Ray Bishop. They hatched 2 chicks which fledged at the beginning of July and were seen about the site on several woodland visits. The birds were in evidence during the September monitoring session. The bird records have been sent to the British Trust for Ornithology.

The quarry continues to be recolonised with the same range of plants as it had initially and some woodland plants and tree seedlings are encroaching. The Champions team are hoping to clear some of the vegetation from the easily accessible quarry faces. There was a request for another of the more difficult slopes beyond the ponds to be cleared, so some professional geologists could carry out research in the quarry which would not seem to be a problem from a botanical point of view.

The Woodland

The woodland vegetation is very stable and was not recorded in detail again. The Herb Paris reappeared in May in the usual places but the Greater Butterfly Orchid discovered last year was not found this year. The Wild Garlic and Bluebells continue to make a great display in late April. Some of the older trees were blown over in the winter creating more open areas and one

knocked down a dormouse box which was resited. Eight of the 12 bird boxes were occupied and yielded 23 Blue Tits, 35 Great Tits but no Nuthatches. Birds also took over 2 of the 6 Dormice boxes and added another 14 Blue Tits, giving a final total of 72 birds for the woodland, down on the 82 recorded last year and the lowest number yet. A dormouse nest was built in the same box as last year though the occupants were not seen this year, movement was recorded. One box hosted a woodmouse nest. The bird records have been entered on the Herefordshire Ornithological Club database and appear in the Woolhope Club Transactions as well as the Herefordshire Nature Trust journal *Flycatcher*. Dormice have been reported to 'Herefordshire Action for Mammals'

The fungus foray planned did not take place due to very dry weather in autumn and a lack of fungi. Hopefully next year will be more productive.

Conclusion

This year has seen further reclamation of the quarry by vegetation and it is beginning to build up pockets of soil necessitating some clearance for geological purposes. The woodland continues to be a good habitat for small birds, dormice and woodland plants. Club members hope to continue monitoring the area over the time of the lease and passing on the records to the appropriate bodies. The Champions team is now in charge of maintenance and promotion of the site and the Club will continue to liaise with them and help in their projects when possible.

Ornithology, 2010

By BERYL HARDING

January continued the bitter December weather with a sustained cold period and intermittent snow. Apart from a brief lull, February continued unrelentingly cold with more snow and concluded with rain and gales. The overall winter of 2009/2010 was recorded as the coldest for thirty-one years.

All of which gave concern about the survival of our smaller birds such as those of the tit family and also the tiniest—the Goldcrests and winter-visiting Firecrests. The latter were flocking into Britain from Europe in unprecedented numbers during the early winter heralding even colder weather to come. National data suggests that the populations of both have plummeted as a result of recent cold years as they are notoriously vulnerable to low temperatures – not only from their body temperature aspect but also because their insect prey become less available in winter. The (BTO) British Trust for Ornithology's Garden Bird Watch Scheme also recorded a higher than average influx of Goldcrests into gardens to accept alternative food sources. Wrens are also small and vulnerable to the cold but they at least are prepared to share their night shelter and reap the benefit – the maximum number recorded is sixty-three in one nestbox! It is hard to imagine how those at the bottom manage to breathe.

With the influx of winter visitors large flocks of Fieldfares were reported from January to March, many of which were prepared to make use of garden feeding. Also, Crossbill flocks of up to thirty were seen—they usually remain further north but were driven southward by the weather. At Moreton-on-Eye, near Leominster, a 2 hectare field of fodder beet with a past growth of oilseed rape had been allowed to run to seed and attracted many Linnets. This number swelled with mixed flocks of other finches until by 12 January a total of 1,170 were counted of which the majority were Linnets. Large numbers remained for some further days until only a few finches were feeding on what remained..

Ravens are early nesters with pairs establishing territories and nests during February so the date of the first clutch of eggs averages 5 March with the young possibly fledged by early May or even sooner. Since 1988 the population has been spreading eastward.

However, the nesting season really begins with the Long-tailed Tits collecting material by the end of February. By the last two weeks of March the Blackbird, Robin and Song Thrush have completed their nests and a week later the Dunnock is making use of low shrubs or ivy cover. By then, a few Greenfinches have also begun to nest , often in loose colonies. All these, apart from Long-tailed Tits, will attempt further or multiple broods during the summer which is an enormous expenditure of energy on the part of the parents.

Things get busier in April with Chaffinches nesting followed by the immigrant warblers and the Cuckoo laying. Reed Warblers can continue nesting until August. Although it is the changes in day-length, rather than temperature alone, that triggers off the pairing and nesting urge this staggered response by different species allows more flexibility in finding food, although obviously those migrant species that rely on tiny flying insects or 'aerial plankton' require the later warmer weather. According to H.O.C. reports, the first sightings of Sand Martins was 19 March at Brockhall Gravel Pits, the Swallow on 24 March followed by the House Martin on 30 March - both at Wellington Gravel Pits.

Although Kingfisher numbers can drop over a cold winter if they have not moved south,– as they cannot fish if the water freezes over, they usually bounce back in the breeding season and can make up their numbers fast. However, it is hard work, especially for the male. He digs the nest hole tunnel of up to 1m. deep into the bank where the female then lays up to ten eggs and he feeds her as she sits, also taking his turn to incubate. Once the eggs have hatched he may already have dug a second hole which the female will move into to lay more eggs leaving him to look after their first family. Now he has to feed the first brood as well as taking turns with his mate's second clutch. One male was recorded helping three females at once thus looking after six nests that year!

For much of the early part of the year high pressure over Europe kept the wet westerly winds at bay, consequently it became the driest first six months of the year since 1929. The weather continued cool and dry but sunny into early April and May with the 'real' summer arriving in late June. The rare event of the Iceland volcanic ash cloud and its dispersal during April and May did delay some migrant returns even though much ash was at a high altitude.

Cuckoo numbers have been falling steadily (by 61% since 1985). A number of reasons have been suggested: perhaps reduced key food sources such as caterpillars; deteriorating conditions on their migration routes or on their over-wintering grounds in sub-Sahara Africa. It is hope that the current research on migrant birds in West Africa will identify some of these pressures. Difficulties are further compounded by it being a brood-parasite so its population is interlinked with that of their host species i.e. the Dunnock and some warblers. In the latter case their numbers have also been falling.

The Nature Trust's Nestbox Scheme has produced the following results for the last nine years:

	2010	**2009**	**2008**	**2007**	**2006**	**2005**	**2004**	**2003**	**2002**
Sites recorded	29	30	29	33	30	27	29	23	16
Boxes available	818	939	961	943	983	825	766	824	567
Boxes used	510	508	519	639	578	510	467	431	282
% used	**62.3**	**54.1**	**54.0**	**67.8**	**58.7**	**61.8**	**60.9**	**52.3**	**49.7**

Species Results for 2010

Species	**Sites**	**Nests**	**Eggs**	**Hatched**	**Fledged**	**Success**
Pied Flycatcher	12	82	539	459	404+	74.9%
Blue Tit	28	227	1944	1483	1199+	61.7%
Great Tit	28	184	1203	1001	878+	72.9+%
Coal Tit	1	1	9	9	9	100%
Nuthatch	7	10	49	45	44	89.7%
Redstart	3	5	31	16	16	51.6%
Wren	1	?	?	?	?	No access
Marsh Tit *	3	24+	23+	9	9	37.5%

* 2 Marsh Tit nests failed but 1 had 100% success with 9 young fledged. The cause of this double failure is unknown but could be either due to lack of food or the death of one or more of the parental pair leaving the survivor unable to cope.

Recorders are not always able to visit the nests in time to detail all the changes especially those with a large number of nests per site and/or several sites; hence the +sign. Some also record for the BTO as well as Herefordshire Nature Trust (HNT). As usual, the Trust is very grateful for the time and effort spent by the recorders.

Comparative annual success rate in fledging for the various species

Species	**2010**	**2009**	**2008**	**2007**
Pied Flycatcher	74.9% -12 sites	67.2% - 13 sites	63.0% - 13 sites	41.4% - 12 sites
Blue Tit	61.7% - 28 sites	73.1% - 29 sites	64.7% - 29 sites	63.6% - 33 sites
Great Tit	72.9% - 28 sites	75.3% - 30 sites	68.1% - 29 sites	61.2% - 32 sites
Marsh Tit	39.1% - 2 sites	-	-	50.0% - 1 site
Coal Tit	100% - 1 site	100% - 1 site	56.2% - 2 sites	100.0% - 1 site
Nuthatch	89.7% - 7 sites	87.9% - 7 sites	73.2% - 8 sites	77.9% - 11 sites
Redstart	51.6% - 3 sites	80.0% - 4 sites	63.1% - 2 sites	85.7% - 3 sites
Wren	?% - 2 sites	? - 1 site	? - 1 site	Failed 1 site

Wren nest sites can be recorded but not the subsequent success or failure of each occupancy.

Pied Flycatcher only Results

2000	24 sites	140 nests	669 eggs	494 fledged	73.8% success
2002	14 sites	96 nests	685 eggs	263 fledged	38.4% success
2003	14 sites	109 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	96.6% success
2007	12 sites	107 nests	636 eggs	263 fledged	41.4% success
2008	13 sites	81 nests	582 eggs	367 fledged	63.0% success
2009	13 sites	93 nests	525 eggs	353 fledged	67.2% success
2010	12 sites	82 nests	539 eggs	404 fledged	74.9% success

As can be seen, the number of sites fell drastically after 2000 yet the totals for both sites and nests seem to be fairly average since then with the number of eggs laid per nest averaging 6.5 per annum overall. Flycatchers gradually moved eastward after the nestbox scheme first started but the population now seems to be contracting westward again.

This year, recording at one large site with nearly 100 nestboxes was lost due to the illness of the recorder. It is very suitable for Pied Flycatchers and last year 7 nests were recorded from which 28 young were successfully raised and ringed. We are enormously grateful to him and his wife for the many years of recording there and the consequent long-term details obtained, especially for the Flycatchers. It is to be hoped that another volunteer will be able to continue in 2011.

While the Flycatcher count was lost there, the number of nests at another site rose to thirteen compared with four in 2009, but the fledging result averaged out at 75.8% in 2009 compared with 77.7% this year. So there was no great population gain except that the increased number of nests may give still better fledging results in 2011.

On one site a second brood of Blue Tits was successfully fledged by 28 June which is quite late in the season. Another doughty Blue Tit sat tight while the drilling of the box lid took place. Again this year a bigamous Pied Flycatcher male served two nests and successfully raised both broods.

It is easy to assume that a harsh winter will lead to lower breeding figure, however, with good weather later at critical times in the season it can still become productive as the fewer surviving adults may compensate by producing more young per nest. With the driest April and May for twenty years many nestbox-using birds such as tits and Pied Flycatchers had a productive year with relatively low brood failures. Some HNT recorders commented that they found fewer or no corpses remaining in the boxes this year. The dry weather largely contributed to this year's breeding successes compared with the adverse effects of trying to incubate and/or feed young during the wet springs of 2008 and 2009.

Although the HNT nestbox results for the past few years show fairly constant averages for the fledging of Great Tits, data from the BTO Nest Recording Scheme over many more years indicates that nationally 11% fewer chicks are being produced per breeding attempt now than was the case back in the mid-1970s. The decline is partly due to reduction in clutch sizes which have fallen from an average of 8.3 eggs to 7.2 in the past forty years. An even greater drop in brood sizes over the same period from 7.6 to 6.1 suggests hatching failure may also be increasing. Work in the Netherlands has shown that warmer springs have stimulated caterpillars to emerge earlier and develop faster pupating; by the time chicks have hatched and are no longer available thus leaving the parents to hunt for other less accessible food.

In contrast to these nestbox-using birds, Barn Owls, of which 75% now use artificially constructed nest sites, appear to have had a disappointing season with average brood levels falling to the lowest for a decade. The extremely cold winter of 2009/2010 may have left many females in poor condition so influencing their clutch sizes and also their vole prey population.

The Little Owl is an introduced bird with a number of releases across the UK during the 19th century. Throughout its native European range numbers are now falling and similarly in Britain. It has a sedentary habit with a small home range which perhaps is no longer providing sufficient food all the year round. A drier climate may be limiting the available number of soil invertebrates and insects which constitute its main food source and perhaps the rise in the Buzzard population may have played a part in its decline. They nest close to humans using walls, buildings and trees in parks and gardens but have hitherto shunned nestboxes. The BTO are now trying to redress this with a specially designed box. The birds are site-faithful often spending their whole lives within the immediate vicinity of their nest—one female has now used the same box for eight years. It is hoped that many more people may follow suit in providing these.

There is the good news that almost all of our day-flying raptors are increasing in number, largely due to conservation efforts, less persecution and reduced pesticide use. Buzzard numbers, at one time depressed by the spread of myxomatosis in rabbits, are now soaring; introduction schemes have helped Red Kites to regain lost ground; the Peregrine population has more than trebled since the 1960s and Hobbys are thought to be taking advantage of the spread of their dragonfly prey northward and have increased in number by approximately 23%. However, Sparrowhawks have fallen back slightly since 2005 according to counts by BTO volunteers but not on the scale of the Kestrel losses which are not only severe at 20% but also rather a puzzle. Formerly it could be blamed on agricultural intensification but today many landowners have adopted schemes to help wildlife, for example, by leaving field margins

uncultivated and unsprayed. The Kestrel hunts other birds as well as beetles, worms and a variety of small mammals but their favourite prey is the short-tailed or field vole which thrives in the mixed sward of field edges and road verges. The Kestrel's hovering technique looks exhausting but with eyesight sensitive to ultra-violet light they are able to detect the reflective urine trails around the burrows of their prey thus speeding up the time spent hunting.

One of the predicted effects of climate change is the further movement north of southerly species. Two in particular have been the Little Egret and Cetti's Warbler. Since 1996 the Little Egret has spread across the southern half of Britain with over 750 pairs nesting during 2008 and are now to be found in Herefordshire. Since Cetti's Warblers first nested in Kent in 1972 the population has risen by 2008 to at least 2,260 singing males across eight Welsh and thirty English counties south of Manchester. It is to be hoped that the recent cold winters do not cause a decline in their numbers. Like other reed warblers it is small (5.5in. or 14cm.) and difficult to see amid dense freshwater vegetation but with a loud and explosive song given in abrupt bursts. Despite the numbers recorded in nearby Wales none have, as yet, been officially recorded in Herefordshire—perhaps due to their secretive nature. Britain's commonest warbler, the Willow Warbler, has on the other hand declined severely. The fail rate seems to be at the egg stage and more research is needed.

The dry weather continued into early July giving parched lawns then rain arrived with strong winds. August was warm but very wet and September variable with a mix or temperatures. By 21 September mixed flocks of Swallows, Sand and House Martins had still not yet flown south. The early drought was more than made up for during October which was the wettest on record with some flooding.

By 20 October Whooper Swans were returning in large numbers, three weeks earlier than usual. In late October thousands of Waxwings were coming into Scotland and gradually filtering southward in small groups. Progress was slow as they could find plenty of berries *en route*. They are rapacious feeders descending *en masse* and will clear a site once found. They are an infrequent visitor but when they do come they arrive in force and the biggest last irruption was in 2004-2005. Their arrival not only signifies a cold winter to come but also a poorer berry crop in Europe.

During December HOC Garden Birdwatch revealed a very busy period for the month with thousands of birds coming into gardens to feed, even the Raven, and all three types of woodpeckers became common visitors. December was nationally the coldest for one hundred years with persistent frosts which remained for several days. The hoar frosts were quite beautiful with spicules of ice building up further each day until the main shaft could total several millimetres. At Wormbridge it registered -18°C on 3 December with Shobden recording the lowest U.K. temperature late on Christmas Day at -16.9°C. Parts of the Wye also became frozen during the month. Again, one is left hoping that many birds would survive yet another cold winter.

An interesting report has been sent from Robin Thorndyke who is a volunteer at the Hereford Museum Resource Centre, where he works with the taxidermy and the egg collections. He came upon a stuffed Bittern with a luggage label tied to its leg bearing the words:

> 'Found shot and in a dying state by Mr George Marshall of Breinton Manor Farm, Breinton, December 1925'

Mr Thorndyke was intrigued because he could find no mention of this in the *Transactions* for 1925 or 1926, which was odd as Bitterns have been notoriously rare in the county since the 19th century. He has been researching George Marshall's diaries in connection with his other researches and found the following entries:

> 'Thursday 10th December 1925. Fine, warm. To Hereford in the morning…Brown had been pruning in Bulmer's Orchard, found Bittern with two legs broken, just alive. They are rare in this county.'
>
> 'Friday 11th December 1925. Fine, slight frost. To Hereford in the morning, took Bittern to Morgan at the Free Library, he is going to skin it.'

These appear to be the sole references to this rare bird other than the luggage label, so Mr Thorndyke 'is pleased to have given it added provenance after 85 years of languishing in a museum cupboard.'

George Marshall kept short but accurate diary notes on the weather over several decades. As a fruit farmer he had a particular and obvious interest in frosts. From 8 November until 8 December 1925, he noted that there had been a prolonged spell of cold weather, starting with 'very cold N.E. winds' blowing for four days from 8 November, followed by frost on 11 November increasing to '5° frost in the porch but probably 10° of frost in the open.' Frost continued through November to early December when a sudden thaw set in on the 8th/9th—this was when the Bittern showed up. [N.B. these temperatures are in Fahrenheit.]

Although rare, Bitterns were considered a delicacy by the gourmet and a feisty game bird to the 'sportsman' as they put up a good fight once wounded! Had this unfortunate bird been merely wounded rather than killed for that reason?

Living mostly to the east of the country they tend to move westward only during cold weather so are not often seen here. The last confirmed sighting by HOC was of a freshly deceased adult at Totnor, near Fownhope in February 2009 and a previous sighting at the Arrow Fisheries, near Leominster, on 8 January, 2002 , where it remained for a day or two.

Weather Statistics, 2010

By ERIC WARD

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	9.0	-0.8	17/20	70.9	15.0 (17th)	14
February	11.0	-3.5	5/7	46.0	16.0 (9th)	14
March	14.5	-4.5	7/7	56.5	17.0 (3rd)	13
April	21.0	0	4	23.2	15.0 (16th)	9
May	29.0	1.5		64.8	9.0 (17th)	11
June	29.5	5.5		36.0	46.0 (5th)	9
July	29.0	10.0		44.0	35.0 (29th)	14
August	26.5	7.5		127.8	6.0 (4th)	17
September	22.0	4.0		49.9	11.0 (2nd)	20
October	19.5	-2.5	2/1	65.0	11.5 (3rd)	18
November	14.0	-9.0	11/10	56.9	20.0 (13th)	14
December	7.5	-11.2	20/21	29.3	15.0 (29th)	14
Total				**670.3**		**167**

Highest day temperature:	29.5ºC	26th June
Lowest night temperature:	-11.2ºC	25th December
Wettest day:	25th August (47.0mm)	
Wettest month:	August	
Driest month:	April	
Nights with frost	air 63; ground 70	

Weather Summary 2001 to 2010

Year	*Total rainfall year mm.*	*Wettest day mm*	*Date*	*Days with rain*	*Highest temp. deg C*	*Lowest temp.deg.C*	*Days air frost*
2001	737	43	Jul. 17	204	29.5	-5.5	37
2002	797	36	Oct.13	180	30.5	-5.5	11
2003	485	28	Jun. 22	231	33.5	-5.0	40
2004	698	26	Aug .3	182	3 l.0	-5.0	17
2005	656	40	Jul. 24	156	31.0	- 5.5	17
2006	759	30	Aug.17	172	35.0	- 4.0	27
2007	940	103	Jul. 20	184	28.0	-6.0	22
2008	982	50	Mar.15	191	29.5	-6.0	32
2009	870	46	Jan. 5	176	30.0	-6.5	42
2010	670	47	Aug.25	167	29.5	-11.2	63

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

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