TRANSACTIONS

OF THE

WOOLHOPE
NATURALISTS' FIELD CLUB

HEREFORDSHIRE

"HOPE ON"

"HOPE EVER"

ESTABLISHED 1851

VOLUME XLVIII 1996

PART III

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Proceedings, 1996

SPRING MEETINGS

FIRST MEETING: 13 January: Mrs. M. Tonkin, president, in the chair.

The Sectional Recorders for Archaeology, Buildings, Geology, Herefordshire Field-names, Industrial Archaeology and Ornithology gave their reports for 1997 which are printed on pp. 589-621.

SECOND MEETING: 27 January:

This meeting was cancelled due to snow.

THIRD MEETING: 10 February: Mrs. M. Tonkin, president, in the chair.

Dr. Ruth Williams and Mr. J. G. Hillaby gave an illustrated talk on 'Herefordshire Areas of Outstanding Natural Beauty.' Dr. Williams is the officer responsible for the area extending from Mordiford to Chepstow, two thirds of which is in England and one third in Wales. It is one of the forty-one areas in England and Wales. The aim is to conserve and enhance the natural beauty of the landscape; to meet the need for quiet enjoyment of the countryside, and to have regard for the interests of those who live and work there. The area is run by a joint advisory committee consisting of some twenty bodies. The management plan is to evaluate the rich natural resources, to be alert to pressures especially the revolution in agriculture, and to progress through partnerships to implement various policies. The Malvern Hills area of outstanding natural beauty was designated in 1959 but so far has no officer. It is the eighth smallest area and only recently has an assessment taken place and a management plan produced.

FOURTH MEETING: 9 March: Mrs. M. Tonkin, president, in the chair.

Mr. I. Lesser explained that the Field-name Survey of all the parishes in Herefordshire was carried out over a number of years involving over 100 persons. Some 125,000 field-names had been listed and over 1,000 booklets sold. A number of members had studied various field-names and reports on the following were given: Bells; Deserted Medieval Villages; the name Byfield/Bylet; Castles; Flax; Limekilns; Cinders; Marden/ Offa's Palace; Legends and Folklore; Linguistic Associations; Roman Indicators such as black, street, chester and arbour.

Detailed reports are printed on pp. 434-89.

SPRING ANNUAL MEETING: 30 March: Mrs. M. Tonkin, president, in the chair.

The assistant-secretary reported that the club had 783 members.

Mrs. Tonkin reviewed the club's activities during the year and made special mention of the work which has been done to the club's library in the Woolhope Room. She gave her address 'Herefordshire Toll-houses, Then and Now (1996).' which is printed on pp. 398-433.

Mrs. J. E. O'Donnell was installed as president for 1996/7.

FIELD MEETINGS

FIRST MEETING: 11 May: HOLME LACY

Members visited Holme Lacy House which is now a hotel run by Warner Holidays Ltd. In 1354 the site passed by marriage of a de Lacy to the Scudamore family. In 1545 John Scudamore built a brick house replacing an earlier one. His son John was created Viscount Scudamore in 1628 and he restored Abbey Dore Abbey. His son built the present house of local sandstone. It was commenced in 1674 and includes the fine plaster ceilings. It was probably designed by Hugh May and was built by Anthony Deane. William Atkinson added the porch and balustrades 1828-31 and the hall and staircase were erected on the site of the old kitchen courtyard for Sir Hugh Lucas Tooth. In 1919 it was bought by Mr. Noel Wills and in 1934 Mrs. Wills gave it to Herefordshire County Council and it became a hospital for ladies. In 1981 the National Health Service handed it back to the County Council. It was purchased by Mr. Gray Hughes who sold it to Mr. Towdith an Australian hotelier and in 1992 it was acquired by Mr. Tony Hamed who has let it on a long lease to Warner Holidays Ltd. It has been sympathetically restored and opened as an hotel in 1995. Extra accommodation has been added in brick in keeping with the house and the gardens are being restored.

Holme Lacy Church is now in the care of the Churches Conservation Trust. It has a nave and south aisle of equal widths separated by an arcade of the late 13th and early 14th centuries. The west tower dates from the 14th and 15th centuries. There are many monuments to the Scudamore family including the table tomb of John Scudamore who died in 1571.

SECOND MEETING: 25 May: USK AREA

In the morning Penyclawdd Court near Abergavenny was visited. The stone house dates from the early 16th century with a Renaissance parlour block added about 1625. A knot garden has been created and there is a well-stocked herb garden. Behind the house are earthworks of the original settlement. In the afternoon the first visit was to the Gwent Museum of Rural Life in Usk which portrays life in the Welsh border country from Victorian times up to the end of the Second World War. Next visited was the priory church of St. Mary which was founded about 1160 by Richard de Clare as the conventual church of a priory of Benedictine nuns. The two-storied gate-house standing at the western entrance to the churchyard is the only other remaining part of the priory. Today the church consists of a nave, east tower and north aisle; the chancel and transepts were destroyed at the Reformation. The 15th-century rood screen was refurbished and painted in 1877. Outside

the west porch is the tomb of the Jesuit priest, David Lewis, who was implicated in the Titus Oates Plot and was hanged and burned in Usk in 1679. The ruins of Usk Castle date from the 12th to the 14th centuries with a shell keep, 1115-74, and towers of the 13th century and the chapel and hall built by Elizabeth de Clare in the 1320s. Since 1926 the Humphreys family have been restoring the gardens.

THIRD MEETING: 22 June: ALBRIGHTON AND WORFIELD AREA, SHROPSHIRE

The morning was spent at David Austin Roses Ltd., the leading specialist in roses. The display garden covers 1½ acres of the 120-acre site where 900 varieties of roses are grown. The afternoon was spent in Worfield where Lower Hall was visited by the kind permission of Mr. and Mrs. Dumbell. The house which has been restored over the last thirty years is timber-framed of two storeys and attics of which the back dates from the late 16th century and the front from the early 17th. It had been the home of the Bromley family. The four-acre garden surrounds the house with the river Worfe providing special features. The church dedicated to St. Peter is built of red sandstone consisting of a chancel, nave, north and south aisles and a tower at the west end of the south aisle dating mainly from the 14th century. Extensive restoration was carried out in 1862. The alabaster tombs dated 1588 and 1726 to the Bromley family are of good quality.

FOURTH MEETING: 20 July: KYRE PARK

The house which is not open to the public was the home of the Pytt family and dates from medieval times with improvements in 1754 probably by William Hiorn. The 29-acre gardens laid out in 1754 have been neglected but are under restoration. A guided tour of the gardens indicated what has already been done. Nearby were seen the 14th-century dovecote, the tithe barn of 1618, the almshouses founded in 1675 for eight widows, now converted into five dwellings, the former walled garden and the church dating from the 12th century, but rebuilt and a chapel added in the 14th century. Extensive restoration was carried out in 1992-4. Inside are monuments to the Pytt family dated 1672, 1702 and 1807.

FIFTH MEETING: 14 August: BOTANICAL GARDENS AND ASTON HALL, BIRMINGHAM

Members toured the Botanical Gardens which are run by the Birmingham Botanical and Horticultural Society. The 15-acre site known as Holly Bank was acquired in 1829 and laid out by J. C. Loudon in 1830 and opened to the public in 1832. The Tropical house was built in 1852, the Palm house in 1871 and the Terrace Glasshouses in 1873. The red brick cottage designed by Samuel Teulon was incorporated into the gardens in 1930. The gardens contain plants, shrubs and trees from all over the world. The afternoon was spent at Aston Hall which was purchased by Birmingham Corporation in 1864 and has 43 acres of park around it. The house was built by Thomas Holte, 1571-1654, and was commenced in 1618 and completed in 1635. It is constructed of red brick with stone facings and quoins and is one of the last great Jacobean houses to be built in Britain. Inside were seen find examples of plaster ceilings, panelling and fireplaces.

SIXTH MEETING: 7 September: COSMESTON LAKES AND LLANTWIT MAJOR AREA

This meeting was the president's choice. The morning was spent at Cosmeston Lakes near Penarth where a park warden gave an illustrated talk on the history of the Cosmeston Lakes and their flora and fauna. The park covers ninety hectares of which about half has been designated a SSI. A little distance away there is a medieval village where several houses have been rebuilt and furnished as they may have been in the 14th century. After lunch Llantwit Major which was never a chartered borough was visited. The town hall though much restored was probably built by Gilbert de Clare in 1290. Important houses are Ty Mawr, 16th century, Plymouth House, 17th century, and the ruined Castle, 16th century. The parish church of St. Illtud occupies the site of the monastery of St. Illtud founded in the 5th century. It dates from the 12th to 14th centuries and is clearly in two sections. The oldest part is the west church containing Celtic crosses and stones. The later part contains a stone Jesse reredos and wall paintings. After the Conquest the monastic site became a grange of Tewkesbury Abbey. Finally visited was Dyffryn Gardens where there is a series of gardens enclosed in clipped yew hedges; these include the Paved Court and the Pompeian Garden. The oldest is the Rose and Kitchen Garden surviving from about 1600.

DORSET VISIT: 28 August-4 September

Thirty-two members left Hereford at 9 a.m. to spend a week based at the Dorset College of Agriculture and Horticulture at Kingston Maurward.

After coffee at the Highwayman Inn the party proceeded to Shaftesbury for a picnic lunch and a short visit. Here were seen the ruins of the Benedictine abbey founded in the 880s by King Alfred the Great for women, his daughter Aethelgeofu being the first abbess. It was one of the most important in the country and was dissolved in 1539. Several excavations have taken place and in the museum alongside were seen artefacts dating from the Saxon period to the 15th century. Nearby stands King Alfred's Kitchen the only timber-framed house in the town and Gold Hill a very steep cobbled street with stone houses said to be built from the stone from the abbey.

The next stop was at Fiddleford Mill at Sturminster Newton to look at part of the manor-house built 1374-80 for William Latimer, the sheriff. Now uninhabited and unfurnished, fine carved arch-braced, collar beams with cusped wind-braces were seen in the solar wing and an original window with two trefoiled lights. The three-bay hall has a gallery over the screens passage and a good roof with two tiers of cusped wind-braces.

A brief stop was made at Blandford Forum, a Georgian town rebuilt about 1760 after a fire in 1731. There was just time enough to find a cup of tea.

The college was reached soon after 5.30 p.m. and after settling in and the evening meal Mr. Ward gave an introductory talk on the week's programme.

The first visit on Thursday was to Sherborne Abbey constructed of Ham Hill stone as a Saxon cathedral, then a Benedictine monastery and after the Dissolution it became the parish church. After the fire in 1437 a great rebuild of the nave and choir took place with some fine fan vaulting. The engraved glass reredos in the Lady Chapel is 1867-8 by Whistler and the modern E. bay was added to it in 1921 and is the work of W. D. Caroë.

At Sandford Orcas Manor members were met by the owner Sir Mervyn Medlycott who gave a brief history of the house and took members around it. It was built of Ham Hill stone about 1533 around a courtyard with a hall block and a single storey solar wing. In the upper N.E. room there is a good overmantel with the arms of James I.

Trent Church dedicated to St. Andrew has a 14th-century spire rebuilt in 1908-9 and is one of only three spires to be found in Dorset. Inside were seen the fine bench ends of *c.*1500 and a good rood-screen with rib vaulted coving with bands of foliage.

After a picnic lunch in the grounds Sherborne Castle was visited. Known as 'The Lodge' it was built in 1594 by Sir Walter Raleigh, in shape a rectangle with hexagonal turrets. In 1617 it passed to the Digby family who added the wings. It is still their's today and contains collections of paintings, books and porcelain. The stables date from 1759, the orangery 1779 and the park was laid out by Capability Brown from 1756 to 1777.

The final visit was to Sherborne Old Castle on the N. side of the lake now in ruins. It was built by Bishop Roger of Salisbury 1107-35 as a strongly defended palace. Sir Walter Raleigh received it in 1592 but he moved to the new castle in 1594. The old castle was abandoned after the Civil War but the 12th-century gatehouse and some arcading and decorative windows survive.

On the return journey to college a roadside halt was made to view the Cerne Giant, the 180 ft. figure cut in the turf on the chalk hillside.

After the evening meal Mr. Nigel Hewish, the head gardener at the college, gave an illustrated talk on the Gardens of Dorset with special reference to Kingston Maurward.

On Friday morning the first visit was to Stinsford Church dating mainly from the 13th century and associated with Thomas Hardy and his family who lived at Higher Bockhampton. In the churchyard were seen the various Hardy tombstones including the one to Thomas Hardy himself in which his heart was buried. Stinsford is the Mellstock of Hardy's novels and poems.

In Dorchester, the Dorset County Museum was visited. It was founded in 1846, moved to the present site in 1883 into purpose-built galleries designed by G. R. Crickmay, the architect for whom Hardy worked in 1870. The museum expanded in the 1930s, again in 1970 and is actively collecting to represent modern culture and the environment. There are displays of archaeology, geology, and natural history as well as the agricultural history of the county and the reconstructed study from Hardy's house, Max Gate.

Next visited was Portland Castle which has been in the care of English Heritage since 1984. It was one of Henry VIII's fortifications along the coast from Kent to Cornwall, built to defend England against the French. It is constructed of Portland stone in the shape of an open fan and cost just under £5,000. The two-storey gun battery faces towards the sea and at the rear is a central keep, octagonal internally, with a wing on either side.

A picnic lunch was eaten on the isthmus at the Portland end of the Chesil Beach overlooking the Fleet, the brackish lagoon between Chesil Beach and the Dorset coast. Portland Museum owes its existence to Dr. Marie Stopes who purchased 217 Wakeham and Avice's Cottage in 1929 and gave them to the people of Portland. Restoration of the two cottages (Avice's was built in 1640 by Bartholomew Mitchell) took place and the

museum, one of the oldest in Dorset, was opened in the summer of 1930. A major extension at the rear was completed in 1976. Portland life is displayed in the museum.

The final visit of the day was to Lulworth Cove where members walked down to the cove to view the circular natural harbour surrounded by high, limestone cliffs.

After the evening meal Dr. Mark Corney gave an illustrated and enthusiastic talk on hillforts with special reference to Maiden Castle.

First visited on Saturday was the Neolithic hillfort at Maiden Castle covering some fifty acres. Dr. Mark Corney led the party around it and explained its significance. It was excavated by Mortimer Wheeler 1934-8 and dates from *c.*3000 B.C., but was enlarged and rebuilt over the centuries.

At Abbotsbury after looking at the audio-visual programme and the displays in the information centre members were guided along the stream to the nesting site where the swans were fed. This swannery has existed for six hundred years and is looked after by the Strangeways family, now earls of Ilchester.

After lunch at the Ilchester Arms in Abbotsbury the Hardy Monument was visited. It stands on the 770 ft. contour on Black Down. It is an octagonal stone tower 70 ft. high built in 1844 to commemorate Nelson's Flag-Captain, late Admiral Sir Thomas Hardy. Despite being windy it was a good viewpoint and in the area are ten barrows of the Middle Bronze Age.

Wolveton House, the home of Captain and Mrs. Thimbleby was next visited. From 1480 to the late 18th century it was owned by the Trenchard family and then passed to the Hennings, Weston and Bankes families. The gatehouse with two round towers of coursed limestone rubble probably dates from the 14th century and joins on to the E. end of the main house which appears to be early 16th century. In the 17th century there were extensions and rebuilding around two courtyards but in the late 18th and early 19th centuries the old chapel, south range and half of the entrance front perished. Inside were seen 17th-century plaster ceilings, and carved woodwork, a great stone staircase of *c.*1580 with a pierced balustrade of round-headed arches and a new moulded plaster ceiling of *c.*1862 in the great hall. Restoration work to the house and garden is taking place.

The final visit was a walk up to Hardy's Cottage which was the birthplace of Thomas Hardy, 1840-1928. It was built *c.*1800 and acquired by the National Trust in 1948 and has been carefully restored. It is constructed of cob with a thatched roof.

As usual Sunday morning was free when some went to morning service and others walked around the college grounds.

After lunch the first visit was to Athelhampton House and its twenty acres of gardens. It is one of the finest examples of 15th-century domestic architecture in the country built of Portesham limestone, consisting of a battlemented hall with an oriel window, an early Tudor wing to the left and a gable and tower to the right. Inside there is good linenfold panelling, heraldic glass in the windows, timber roofs and Ham stone fireplaces.

Last visited was Puddletown Church with features dating from the 12th century. Of interest were the fine 17th-century box pews and gallery at the W. end. In 1910 the chancel

was extended and the N.E. chapel enlarged. There are a number of monuments to families who lived at Athelhampton House including Sir William Martyn, its builder, 1503.

On Monday a slightly earlier start was made to reach Poole Quay to catch the ferry to Brownsea Island which is the largest island in Poole Harbour and owned by the National Trust since 1961. 248 of its 500 acres are a nature reserve. Members were able to wander as they wished. Some visited the nature reserve whilst others followed the various paths. Avocets were seen in the reserve and some were lucky enough to see red squirrels. The church was built in 1854 by Colonel Waugh who at that time owned the island.

The next bit was tricky - a ferry from Brownsea to Sandbanks followed by a car ferry to Studland. After a picnic lunch at Studland Bay the party travelled to Swanage to board the train to Corfe. The railway from Swanage to Wareham operated from 1885-1972 but now a steam railway largely run by volunteers operates from Swanage to Norden just N. of Corfe. The journey took some twenty minutes and then members walked from the station into Corfe to visit the castle. It was given to the National Trust in 1981 by Mr. Ralph Bankes whose family had owned it since 1635. During the Civil War the Parliamentarians deliberately destroyed it. The ruins crown the summit of a natural steep-sided hill and date from the 11th to the late 15th century. The majority of the party climbed to the top.

The last stop was at Bere Regis Church dating largely from the 13th and 15th centuries and restored by Street in 1875. Of special interest is the nave roof, the finest in Dorset, constructed of oak with elaborately carved bosses on the trusses.

Wimborne Minster was the first visit on Tuesday morning. After watching the 14th-century astronomical clock chime at 10 a.m. the party was divided into two groups for a tour of the church. It was founded as a nunnery *c.*705 and destroyed by the Danes late in the 10th century. The college was dissolved in 1537 and all the collegiate buildings were destroyed. The church is 186 ft. long and dates from Norman times with restorations by Wyatt in 1857 and Pearson in 1891. The chained library founded in 1686 contains 240 ancient, mainly theological books for the use of the citizens of Wimborne.

Despite a heavy drizzle members walked up on to Badbury Rings, an Iron Age hill-fort of *c.*350 B.C. with three banks and ditches, some 60 ft. deep. Its circumference is about one mile.

After lunch Kingston Lacy House was visited. It was designed by Sir Roger Pratt for Sir Ralph Bankes and built of brick 1663-5 comprising nine bays by seven bays of two storeys and attics and a semi-basement. Between 1835 and 1846 it was modified by Barry when the house was faced with Caen stone and Portland dressings and the Carrara marble staircase was created. Inside were seen a fine collection of paintings, furniture and ceramics. The original formal gardens were swept away and landscaped in the 18th century by Barry. The gales of recent years destroyed many of the old and rare trees but these are being replaced by the National Trust.

The party returned to Wimborne to visit a museum depicting the life of E. Dorset created in the Priest's House. This probably dates from *c.*1500 with a cross-wing added *c.*1600.

The final visit of the day was to Deans Court. Unfortunately it was not possible to visit the house as the owners had been called away but the party was taken around the garden now mainly of lawns, trees, a semi-wild wooded area and a few formal flower beds. The herb garden contains over 100 varieties and the walled kitchen garden is surrounded on two sides by a serpentine (crinkle crankle) wall said to be the second longest in the country. Many specimen trees were lost in the January 1990 storm.

After the evening meal an informal meeting was held.

Before setting off for home Nigel Hewish took us on a walk around the college gardens. The house was built of red brick in 1720 for George Pitt who married Laura Grey from the Elizabethan manor house some distance away which has been restored as a private residence. In 1794 William Pitt encased the house in Portland stone. Originally the gardens were laid out by Capability Brown. After the First World War the Hanburys bought the estate and re-furbished the gardens. During the Second World War the gardens became a wilderness and the lake silted up. In 1947 Dorset County Council purchased the estate for a Farm Institute. On the walk were seen herbaceous borders, roses, half-hardy perennials and in the walled garden plants suitable for Dorset gardens.

After coffee at the college we travelled to Cranborne Manor Gardens for a picnic lunch followed by a visit to the gardens. The Cecil family had them laid out in the early 17th century and they have been enlarged in this century with a series of gardens surrounded by walls and yew hedges.

Tea was taken at the Stretton House Hotel at Cirencester. Mrs. Tonkin, acting president during the week, thanked Keith for his safe driving and helpfulness, Mr. Tonkin for the historical and architectural background on the area and places visited but above all Mr. and Mrs. Ward for arranging and administering the visit and providing such a varied programme. The weather was kind, not too hot. It was an enjoyable and happy week.

AUTUMN MEETINGS

FIRST MEETING: 5 October: Mrs. J. E. O'Donnell, president, in the chair.

Mr. S. B. Webb gave an illustrated talk on 'Herefordshire Photographers.' He said that Richard Bustin who was head of the Hereford School of Art was the first commercial photographer in Hereford in 1856-8. He had premises at 24 Victoria Street, later in Widemarsh Street and finally in Palace Yard where he would have had a studio and changing rooms. The family business closed in 1968 and the Bustin collection of photographs is at the Hereford Records Office.

By 1867, in Hereford there were six photographers, two in Ross, two in Bromyard, two in Ledbury, one in Leominster and one in Kington. In Leominster in the 1860s there was Edward J. Evans at 22 Burgess Street, who died in 1912 aged 82, T. H. Winterbourne at Waterloo House was a friend of Alfred Watkins, Robert Jones in Broad Street and W. A. de Ath at 7 Broad Street whose business closed in the 1940s. At the turn of the century there were five in Ross. Richard Davies was situated in Gloucester Road but he destroyed

a lot of his material before he died. William Yates of Kingsland moved to 13 High Street, Kington (now Sergeants) where the whole of his stock was burnt.

After 1897 with the coming of the printing press and script photographers were able to sell their photographs to newspapers. The *Hereford Times* in 1936 had a press photographer named Johnson who took photographs of animals and attended the markets and shows.

SECOND MEETING: 26 October: Mrs. J. E. O'Donnell, president, in the chair.

Mr. P. Thomson, B.Sc., gave an illustrated talk on 'Herefordshire in the Ice Age.' He explained that some of the most convincing evidence for former glaciation in Herefordshire is the superficial deposits found particularly in the north and west of the county. The most characteristically glacial features are moraines which contain a variety of sizes and shapes of fragments ranging from fine clay, through sand and grit to pebbles and boulders. Such a mixture is typical of the deposits left as ice melts. Had they been deposited in water the fine and coarse fragments would have settled in different places and in different conditions. Not only do the deposits contain a variety of size of material they also contain a variety of types of rock. The rocky fragments are known as erratics and were some of the evidence used by 19th-century geologists as an indication of the extent of former glaciation. In cases where the origin of the rock can be recognised the erratics enable the route followed by the ice to be reconstructed.

In the more recent Herefordshire glacial deposits, found mainly west of Hereford and the Lugg Valley, many of the erratics are of local origin but there are a number whose origin is in mid-Wales. These include igneous rocks from the Llandrindod area, fossil bearing sediments from mid-Wales, vein quartz which could have come from a number of places, and Hanter Hill gabbro found mainly in the thick deposits between Mortimer's Cross and Kington, which must, of course, have come from Hanter Hill near Kington.

Some of the features of our local landscape were compared with areas, mainly in Norway, where there has been rapid retreat of glaciers in the past 250 years or so. Corrie glaciers in large, north facing, armchair-shaped hollows in the Jotunheim mountains were compared with similar ice-free hollows on Braeriach in the Cairngorms, and these were in turn compared with a much smaller, but similarly shaped, north-east facing hollow at the head of the Olchon Valley. This may never have contained a moving corrie glacier. It may instead have been occupied by a long lasting snow patch - in which case it would be better referred to as a nivition hollow.

In a similar manner pictures of the Nigardsbre were examined and the alternation of moraine and impounded lakes were compared with the moraine features at Stretton Sugwas and Staunton-on-Wye, and the former lake flat of Letton 'lakes' where the Wye now executes one of its meanders.

One of the consequences of this invasion of the county by ice was disruption to and diversion of some of the rivers. Landscape features resulting from diversions are well seen in the middle Lugg Valley where Byton Moor is a remnant of a lake formerly impounded between Byton and Presteigne, whilst the spectacular but small Kinsham Gorge was cut

by water escaping from the lake by what must at the time have been the lowest point in the rim. Gorges of similar origin are found between Sned Wood and Mere Hill and at Downton Gorge through which the river Teme was diverted after its earlier route through the Aymestrey gap was obstructed by ice and/or deposits.

Following the retreat of the ice the gravels which underlie the flood plain of the Lugg and Wye were deposited as glacio-fluvial material.

In concluding it was noted that to the east of the lower Lugg there are gravel-capped hills such as Sutton Walls, Nash Hill and Kingsfield whose gravels appear to have come from the catchment of the Lugg, Teme and Clun. They now appear as river terrace fragments over thirty metres above the present Lugg flood plain and are evidence of an earlier and more extensive glaciation.

THIRD MEETING: 16 November: Mrs. J. E. O'Donnell, president, in the chair.

This meeting was the thirty-fourth F. C. Morgan lecture and was held at the Hereford Education Centre, Blackfriars Street. Mr. J. H. Marsden, B.A., M.R.T.P.I., gave a talk on 'The Role of Natural Areas and the Countryside Character Programme as a framework for delivering the UK Biodiversity Plan in Herefordshire.' The biodiversity action plan originated at the Rio de Janeiro summit meeting in 1992. The UK set up a Steering Group in December 1995 and the government responded to the Group in May 1996. The plan sets out fifty-nine key steps to safeguard the country, to conserve and enhance habitats and species at local, national and international levels to provide a varied environment. Many organisations such as English Nature will be involved to carry out the plan. The UK already has some of the best protective and conservation legislation in the world. Mr. Marsden as head of the team covering the counties of Gloucester, Hereford and Worcester was able to give examples of work that has already been carried out. Of 4,000 S.S.I.'s in England there were 290 in the three counties. Among the international sites are Downton Gorge, some sites in the Wye Valley woods and the rivers Wye and Lugg. In the first instance it is hoped to protect the species such as two types of chad, song thrush, skylark, bats and the brown hare, all of which need a different environment. To implement the plan the local community must be involved and carried out by local personal consent.

WINTER ANNUAL MEETING: 7 December: Mrs. J. E. O'Donnell, president, in the chair.

Officers for 1997 were appointed. The accounts for the year ending 31 December 1995 were presented and adopted. These are printed on p. 397.

Mrs. R. Skelton of the Archaeological Research Section and Mrs. B. Harding of the Natural History Section gave reports on the work of the two sections which are printed on pp. 624-34.

The work on cleaning and checking the club's journals and books was well under way. The committee has agreed that the office of honorary librarian would be replaced by a sub-committee of three members and the assistant-librarian of the Hereford Library as a

professional adviser. For security reasons the keys to the library's bookcases would be held in the Reference Section of the Hereford Library.

To mark the 150th Anniversary of the Club it is planned in 2001 to publish a special publication on various aspects of the county written by members.

DATA PROTECTION ACT

Names and addresses of members are held on a word processor mailing list which is not circulated outside the Woolhope Club membership. If you wish to be taken off the list, please inform the Assistant-Secretary, Mrs. M. Tonkin, Chy an Whyloryon, Wigmore, Leominster, Herefordshire HR6 9UD.

WOOLHOPE NATURALISTS' FIELD CLUB

Receipts and Payments Account for the year ended 31 December 1995

1994 £	£	RECEIPTS	1995 £ p	£ p
		Receipts from investments		
		Interest on investments		
32.64		3½% War Loan	32.64	
46.20		Hereford & Worcester CC Loan ...	56.72	
1,751.82		National Savings Investment ...	1,856.88	
109.10	1,939.76	Bank & Building Society Interest ...	97.01	2,043.25
		Other receipts		
5,920.20		General Subscriptions (less refund)	6,823.05	
83.90		Sale of Publications ...	600.75	
0.00		Grants, Donations, Legacies ...	2,482.30	
1,344.73		Tax Repayments	0.00	
450.00		Transfer from other sections ...	150.00	
28.00		Miscellaneous	0.00	
57.48		Natural History Section ...	40.19	
563.94		Archaeological Research Section	507.45	
1,899.78		Field Names Survey ...	415.73	
12,566.88	22,914.91	Field Meetings (Net) ...	10,799.06	21,818.53
		Bank Balances at 1.1.1995		
		Current Accounts		
1,108.71		General Account	454.71	
1,188.63		Subscription Account ...	1,120.83	
308.09		Natural History Section ...	70.71	
		Archaeological Research Section	362.25	
1,029.15		Field Names Survey ...	670.53	
1,014.40		Field Meetings	1,096.72	
		Business Reserve Accounts		
727.90		Subscription Account ...	6,827.85	
710.35		George Marshall Fund ...	694.50	
2,241.56		Field Meetings	2,301.94	
		Building Society Accounts		
1,616.45		Field Names Survey ...	2,820.95	
		Archaeological Research Section	318.81	
307.21		Natural History Section ...	249.18	
0.00				
	10,488.53			16,988.98
	68.66	Cash in Hand		73.53
	29,197.10	National Savings Investment		30,948.92
	64,608.96			71,873.21

Note: The Club owns £932.70 War Stock and has Deposit Loans with Hereford and Worcester County Council amounting to £1,040.

I have audited the above Receipts and Payments Account and certify it to be in accordance with the Books, Bank Statements, and Vouchers of the Club.

(*Signed*) D. HAIGH
Honorary Auditor
14 April 1996

Presidential Address

Herefordshire Toll-Houses - Then and Now (1996)

By MURIEL TONKIN

INTRODUCTION

The late 17th century to the late 19th century was the age of the Turnpike Trusts. Two hundred years ago there were no planes, no cars, no railways and few canals - in other words a road system for packhorse traffic. The condition of the roads was so bad and they were so badly maintained that improvements had to be made for the development of wheeled traffic. When this developed in the late 17th century the parishes were unable to provide the required standard of highway maintenance. A nationwide system of turnpike roads came into existence. These were established under individual Acts of Parliament for each stretch of road and were administered by local trusts. The first act was in Cambridgeshire in 1663 but it was the 18th century before some 2,000 acts were passed especially between 1750-70. A General Turnpike Act was passed in 1773 to speed up the parliamentary process. Between 1700 and 1750, 400 acts were passed and between 1751-90 a further 1,600 acts. By 1840, 22,000 miles of turnpike roads in England with nearly 8,000 toll-gates and bars were in existence.

An act defined a stretch of road which had to be maintained by the trustees named in the act and in return they could charge tolls to cover the expenses of making the road and maintaining. it. Toll-bars and their associated toll-houses were constructed at the expense of the trustees at intervals along the roads and in them lived the toll-keepers who collected the tolls laid down by the trustees. These toll-houses were usually built projecting into the road. An act was normally granted for twenty-one years and then renewed for a further twenty-one years. When the County Councils were formed in 1888 they took over the maintenance of these roads and the Trusts were wound up.

In the later 18th century and early 19th century a number of acts of Parliament were passed as a result of the Agricultural and Industrial Revolutions. These included the Tithe Commutation Act of 1836. This led to the compilation of Tithe Maps and their Apportionments for the great majority of parishes in the country. On each tithe map every field-name and building is given a number and the apportionment shows against each number the owner, occupier, names, use, size and amount of tithes.

Over a period of years members of the Woolhope Club have transcribed the field-names from every tithe map and its apportionment for the county of Herefordshire. These date approximately 1836-45 and cover 260 parishes and townships. All have been published in booklet form.

As this period is approximately half way between the passing of the General Turnpike Act in 1773 and the end of the turnpike trusts by 1888 it was decided to collect all ref-

erences to turnpike or toll-houses from these surveys and attempt to discover how many still exist and where.

Bryant's Map published in 1835 has also been used and a list made of all T.B.s i.e. toll-bars marked on it.

These two sources of 1835-45 have been used as a base from which to discover where toll-houses once stood and where any exist today.

Some general information about the turnpike acts and their trusts provides a picture of the road system throughout the county.

ACTS RELEVANT TO HEREFORDSHIRE

1721 Ledbury
Ledbury to Bromsberrow 3 miles
Ledbury to Rye Meadow, Much Marcle 4 miles
Ledbury to Broad Field, Aylton 3 miles
Ledbury to Stoakes Court, Stoke Edith 6 miles
Trumpet to Stretton Grandison 2 miles
to parishes of Canon Frome and Castle Frome 3 miles
to place called Wick, Colwall 3 miles
to Little Malvern 3 miles
to end of the parish of Eastnor in a road leading to Tewkesbury 2 miles
67 trustees. First meeting July 1721 at Green Dragon, Ledbury

1726 Gloucester to Hereford
Route 1. Lea, Ross, Bridstow, Harewood, Birch, Callow to St. Martins.
Route 2. Lea, Linton, How Caple, Upton Bishop, Foy, Woolhope, Fownhope, Hampton Bishop to St. Owens.
68 trustees for Gloucester, 80 plus the mayor and aldermen of Hereford.
First meeting 14 June 1726 at Swan and Falcon, Hereford.

1728 Leominster
Battlebridge to Hope-under-Dinmore
Hope-under-Dinmore to Bodenham
Leominster to Docklow
Mill Street to Stockton to Brimfield
Leominster to Orleton
Leominster to Mortimer's Cross to Easthampton
Mortimer's Cross to Aymestrey Bridge
Cholstrey to Eardisland
West Street to Monkland Bridge
Barons Cross to Ebnal
West Street to Ivington Bridge
73 trustees plus all J.P.s. First meeting 1729 at Royal Oak, Leominster
The longest stretch 4 miles

1730 Hereford

Hereford to Stretford's Bridge, Dilwyn
Hereford to top Dinmore Hill
Hereford to Moor of Bodenham, parish of Bodenham
Hereford through Mordiford and Lugwardine to Stoke Edith
Hereford to Pontrilas Bridge, Kentchurch
Hereford through Stoke Lacy to Bromyard
Hereford to Weobley
Hereford over Five Bridges to Fromes Hill
Hereford to Bredwardine Passage
Hereford to Peterchurch
Hereford to St. Weonards
Hereford to Hoarwithy passage through Holme Lacy and Aconbury
Hereford to Eckley's Green, Norton
Hereford to Fryer's Gate to Sugwas passage
More trustees added. First meeting 1 July 1730 at Swan and Falcon, Hereford. No toll-house to be erected within one mile of Bromyard. Average of stretches seven miles.

1751 Ludlow First

Ludlow through Woofferton and Little Hereford to Monk's Bridge
Ludlow to house called Maidenhead, Orleton
39 trustees plus Ludlow officials. First meeting June 1751 at The Angel, Ludlow. No toll-gate to be built on Tenbury Bridge or within one mile of it.

1752 Bromyard

Bromyard to Half Ash in Docklow about 4 miles
Bromyard to Herefordshire Lake, Whitbourne about 4 miles
Bromyard to Perry Bridge, Stoke Bliss through Edvin Ralph and Collington and Kyre about 4 miles
Bromyard to Sapey Wood, Upper Sapey about 4 miles
Bromyard to Bishop's Frome about 3 miles
Bromyard to Wooferwood Gate, Bromyard 2 miles
Bromyard to Herefordshire Lake in Bromyard 3 miles
150 trustees. No turnpike house to be built within 100 yards of Sapey Bridge.

1756 Kington

Kington through Welch Hall lane to end of the county
Kington to Brilley Mountain
Kington to Bollingham in Eardisley
Kington to Spond to Almeley Wooton and through Holmes Marsh to Almeley
Kington to Lyonshall, Sarnsfield and Norton parishes to Eckleys Green
Kington through Lyonshall and Pembridge to Eardisland
Kington to Titley and Stansbach under the side of Wapley Hill to Staple Bar
Kington to Lyonshall to Knoaks Bridge to Milton House
86 trustees. Side gates can be erected leading out of or within Kington.
Tolls to be collected after 23 June 1756.

1756 Ludlow Second

Ludlow to Knighton in Radnorshire passing through Herefordshire

1758 Blue Mantle Hall (FIG. 1)

Stretford Bridge to Wistanstow in Shropshire

1767 Presteigne

These turnpike roads linked up with those for Kington

As previously mentioned the original acts were normally renewed with amendments every twenty-one years. In 1769 Hereford trustees applied for a renewal stating that the 'roads... are at present very ruinous, and almost impassable for travellers and carriages, and cannot be widened and effectively repaired without the Act of Parliament.' A further act was granted in 1789 when the trustees requested two new roads: one to Hoarwithy through the parishes and townships of Lower Bullingham, Rotherwas, Dinedor, Holme Lacy, Ballingham, Little Dewchurch and Hentland. As the road over 'Dinedor Hill is dangerous' it was proposed to make a new road through Lower Bullingham, Rotherwas and Dinedor to join a road at Bury Cross. In 1772 roads were to be improved from Welsh Newton over Broad Oak Green, through Garway, Kentchurch, Pontrilas and Ewyas Harold to Ponttanant in Clodock. A further stretch was to be improved or repaired from Skenfrith Bridge to Broad Oak Green to Cross Hands 'beyond the New Inn' to join the turnpike road from Hereford to Ross.

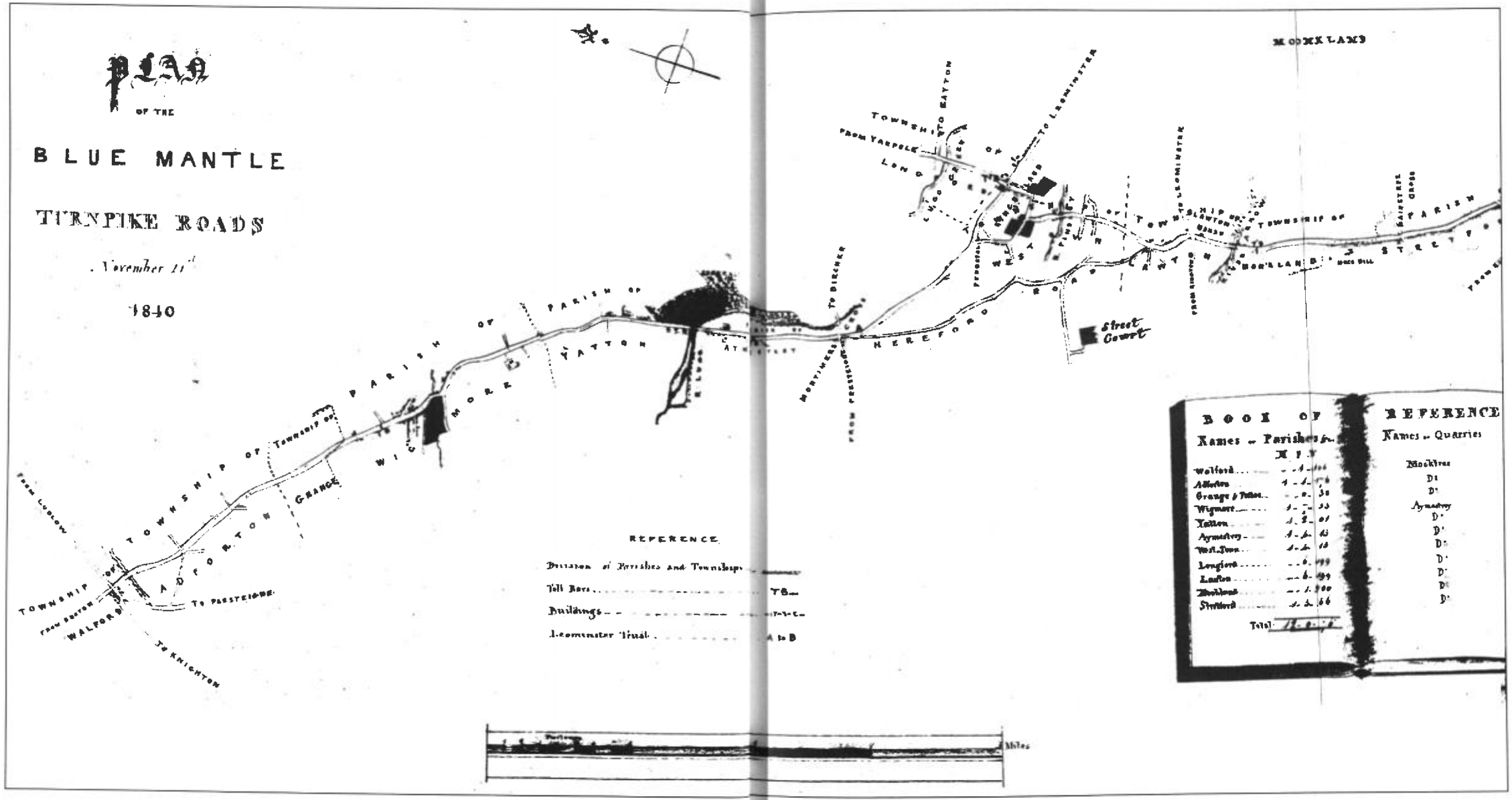
The above acts are a selection of those that have come to light. The road system looked like spokes of a wheel radiating from Hereford and around the market towns.

Each act followed a set format which detailed the roads from place to place, the names of the trustees and their powers. The number of trustees varied from at least thirty to eighty and all the justices of the peace for the county. The trustees comprised the local landowners and parsons reflecting the local influence and social standing.

The qualification to be a trustee was that he in his own right or in the right of his wife was in possession of rents or profits out of freehold or copyhold land a clear value of £100, or as heir apparent of an estate of freehold or copyhold lands of £150 yearly, or had a personal estate, or a real and personal estate valued at £4,000. The qualification changed as time went by.

The trustees could 'erect and set up, or cause to be erected and set up, any Toll Gate or Gates, Bar or Bars, Chain or Chains, in, upon, or across any Part or Parts of the said Roads, and upon the sides thereof respectively, and also across any Lane or Way leading into or out of the same and may erect, or provide a Toll House with a suitable Out Buildings and Conveniences at, or near each Toll Gate; and may from time to time, afterwards, remove, alter or discontinue such Toll Gates or Toll Houses, or any of them, as they, the said Trustees shall think expedient; and also, may take in and inclose from the said Roads, convenient Garden Spots for the said Toll Houses respectively, not exceeding one eighth part of a Statute Acre to each Toll House.'

The trustees set their table of Tolls, a sign-board was put up on the toll-house and the collector living in the house collected the tolls. The money collected was used to



Plan of Blue Mantle Hall Turnpike Roads, 11 November 1840, showing T.Bs. at Arrow (England (Corners), Aymestrey (Bacon Lane) and Wigmore. H.R.O. F76/9/14

improve and maintain the roads, i.e. 'for amending, widening and keeping in repair several roads.'

Minute and Account Books were to be kept and in addition numerous regulations were laid down.

The acts are most annoying as they never state the actual place where the toll-houses and gates were to be erected or those to be pulled down. They were put up on the turnpike roads at positions to catch the users from different directions. The cottages were often placed at the beginning and end of each turnpike stretch or where other roads joined such a stretch. They were usually found at junctions where one would expect to find them, but often on parish boundaries and on the edge of towns and the larger villages which had markets. In order to catch the users the buildings often stood partly into the road and thus in 'modern' times were very vulnerable for demolition.

The Trusts minutes, order and account books which have survived as well as various documents among the Quarter Sessions papers, estate papers and census returns all help to explain the story of the turnpike age. In particular the order and minutes books are very detailed with the trustees meeting once a month.

TOLL-HOUSES ON THE HEREFORDSHIRE FIELD-NAME (TITHE) SURVEY

Seventy sites were identified from the 260 parish/townships of the Herefordshire Field-name Survey, thus 26.9% were useful. These sites were found in forty-nine towns and parishes. A further fourteen references mention 'turnpike piece' or 'turnpike meadow.' Looking at the towns one site was shown for Hereford, three for Bromyard, none for Kington or Leominster, six for Ledbury and two for Ross. Kington and Leominster must have had toll-houses on their outskirts. One parish had three sites, eleven had two sites and the others one.

Table 1. The list of sites from the Field-name Survey.

Parish	*Grid Ref.* all SO	*Field No.*	*Field-name*
ACONBURY	524327	*342*	*Lucy's Meadow including Turnpike House and Garden*
ACONBURY	495349 (Callow)	*111a*	*Turnpike House and Garden*
ACTON BEAUCHAMP	685488	*385*	*Roads, Waste & Turnpike House*
ALLENSMORE	470369	*27*	*Toll House*
ASTON INGHAM	669212	*2825*	*Lea Line Toll House and Garden*
ASTON INGHAM	671233	*521*	*Turnpike House and Garden*
ASTON INGHAM	681233	*495*	*Turnpike House*
BRAMPTON BRYAN	358727	*160*	*Toll House and Garden*
BISHOPS FROME	681465	*1032*	*Toll House etc.*
BREDWARDINE	330449	*35*	*Turnpike House and Garden*
BRIMFIELD	527669	*776*	*Turnpike House and Garden*
BRIMFIELD	546682	*709*	*Turnpike House and Garden*
BROMYARD	658544	*149*	*Turnpike House and Garden*
BROMYARD	706535	*745*	*Turnpike House and Garden*
BROMYARD	658549	*210*	*The Keeper's House and Garden*
BURGHILL	467452	*322*	*Whitmore Pool Turnpike House*
BURGHILL	484456	*684a*	*Portway Turnpike House etc.*
CASTLE FROME	673444	*207*	*Garden & Turnpike House*

CLEHONGER	458378	*137*	*Toll House and Garden*
COLWALL	754401	*333*	*Turnpike House and Garden*
COLWALL	731403	*853*	*Old Turnpike House and Garden*
CUSOP	231427	*6*	*Toll House and Garden*
CUSOP	234423	*61*	*Toll House and Garden*
EARDISLAND	414577	*456*	*Legion Cross Turnpike House and Garden*
GARWAY	481213	*763*	*Toll House and Garden*
GOODRICH	566205	*221*	*Turnpike House and Buildings*
GRENDON BISHOP	597572	*259*	*Turnpike Road Leominster to Bromyard - House on map*
HAMPTON WAFRE	584574	*508*	*Toll House and Garden etc.*
HENTLAND & HAREWOOD	525242	*506*	*Tretire Turnpike House, Buildings, Smith Shop and part of Garden*
HENTLAND & HAREWOOD	539248	*527*	*Turnpike House*
HOPE-UNDER-DINMORE	512531	*61*	*Toll House and Garden*
LEA	654220	*20*	*Toll House and Garden*
LEDBURY	709386	*969*	*Homend Turnpike House and Gate*
LEDBURY	714370	*1682*	*Southend Turnpike House and Gate*
LEDBURY	700373	*1680*	*New Street Turnpike House and Gate*
LEDBURY	713376	*1622*	*Horse Lane Gate and House*
LEDBURY	715386	*1634*	*Bradlow Turnpike House and Gate*
LEDBURY	704368	*1678*	*Wharf Turnpike House and Gate*
LLANDINABO	517283	*30*	*Toll House*
LLANGARREN	497211	*1357*	*Turnpike House and Garden*
LUDFORD	512531	*42a*	*Whitcliff Turnpike House*
LUSTON	484642	*628*	*Toll House*
MADLEY (Chilstone)	394390	*639*	*Turnpike House etc.*
MADLEY	401367	*1500*	*Round Turnpike House and Garden*
MARSTOW & NEWCOURT	550209	*52*	*Turnpike House and Garden*
MONKLAND	438585	*126*	*Turnpike House at Arrow Green*
MONKLAND	460577	*218*	*Monkland Turnpike House and Garden*
MUCH DEWCHURCH	483312	*575*	*Toll House and Garden*
MUCH DEWCHURCH	458338	*137*	*Three Horse Shoes Tollhouse and Garden*
MUCH MARCLE	655331	*328*	*Turnpike House and Garden*
ORLETON (Wooferton Crossing)	512682	*732*	*Turnpike House*
PEMBRIDGE	382606	*341*	*Milton Turnpike Cottage and Garden*
RICHARDS CASTLE	510726	*920*	*Turnpike House and Garden*
ROSS	608241	*143*	*Toll House and Garden*
ROSS	597232	*453*	*Toll House and Garden*
STOKE EDITH	602410	*249*	*Turnpike House and Garden*
STOKE BLISS	636626	*157*	*Turnpike House*
STRETTON SUGWAS	465425	*13*	*Turnpike House and Land*
STRETTON SUGWAS	459418 (Brockhall)	*114*	*Turnpike House and Land*
TITLEY (Shawls)	331591	*189*	*Turnpike Gatehouse and Garden*
UPPER SAPEY	690643	*219*	*Turnpike House and Garden*
VOWCHURCH	390359	*523a*	*Toll House*
WALFORD	596214	*239*	*Coughton Toll House*
WALFORD	587205	*696a*	*Toll House and Garden*
WEOBLEY	390497	*555*	*Ivy Turnpike Cottage and Garden*
WHITBOURNE	722559	*678*	*Turnpike House and Garden*
WHITCHURCH	557183	*743*	*Turnpike House*
WIGMORE	412693	*160*	*Toll House and Garden*
YARKHILL	618449	*281*	*Turnpike House*
YARPOLE	478653	*380*	*Toll House*

TOLL-BARS ON BRYANT'S MAP OF HEREFORDSHIRE OF 1835

137 sites were identified and found in forty-nine towns and parishes. Looking at the towns five sites were shown for Hereford, two for Bromyard, three for Kington, two for

Ledbury, eight for Leominster including its out-parish, and two for Ross. Two parishes had three sites, nine parishes had two sites and the others one. The seventy-seven sites listed under Table 2 are those on Bryant's map and not on the Field-name Survey.

Table 2. The list of sites on Bryant's map, 1835, not shown on the Field-name Survey

Parish	*Grid Ref.* all SO	*Location*
ASHPERTON	638427	Lower Town
AVENBURY	651524	Burgess Farm
AYLTON	663380	Priors Court
AYMESTREY	426650	Bacon Lane
AYMESTREY	423636	Mortimer's Cross
BODENHAM	572499	Cornetts
BODENHAM	541517	Saffrons Cross
BOSBURY	688428	Newhouse
BRAMPTON ABBOTS	616265	Gatsford
BRIDSTOW	588244	Wilton
BRIDSTOW	584243	Bannut Tree
BROMYARD	651552	Fair Cross/Milvern Lane
BROMYARD	645537	Panniers
BROMYARD	650544	Piccadilly
BYTON	370635	
COMBE	348638	
CRADLEY	743483	Brook House
EARDISLAND	419583	Broad Bridge
EARDISLEY (Willersley)	315475	Old Crow
GOODRICH	582192	Kerne Bridge
HEREFORD	522407	Aylestone
HEREFORD	506401	Barton
HEREFORD	507392	Black Marston
HEREFORD	505401	Whitecross
HEREFORD	516396	St. Owen Street
KENTCHURCH	395275	Pontrilas
KENTCHURCH	412258	
KIMBOLTON	519612	Stockton Cross
KINGSLAND	445616	Corners
KINNERSLEY	329487	Kinnersley West
KINNERSLEY	340494	Halfway House
KINGTON	303569	Sunset
KINGTON	292567	Old Kington (Church)
KINGTON	299564	Kingswood
LEDBURY	709383	Knapp
LEOMINSTER	492604	Marsh
LEOMINSTER	495595	Poplands
LEOMINSTER	488591	New Street
LEOMINSTER	493591	West Street
LEOMINSTER	495589	Sandpits (Ryelands)
LEOMINSTER	497575	South Gate
LEOMINSTER	507585	Eaton
LEOMINSTER	462594	Burnt House (Cholstrey)
LINGEN	358673	Old Shop
LITTLE HEREFORD	575684	Ledwich Brook
LUGWARDINE	565414	Bartestree
LUGWARDINE	535418	Lugg Bridge
MATHON	721457	Holling's Hill
MORDIFORD	574389	Larport
MORETON ON LUGG	502459	

MUCH MARCLE	656333	
MUCH MARCLE	656332	
MUCH MARCLE	657333	
NASH	312622	
NORTON CANON	376487	Eccles Green
PIXLEY	655396	Old Trumpet
PIXLEY	652404	Cinders
PRESTEIGNE	317647	Frog Street, Stapleton
ROSS	610256	Over Ross
ROSS	599239	Copse Cross
SARNESFIELD	359503	East of Sallies
SHOBDON	397618	
STAUNTON-ON-ARROW	335608	Titley
STAUNTON-ON-ARROW	341613	Broadford
STAUNTON-ON-WYE	340462	Black House
STOKE LACY	617492	Upper House
STRETFORD	441564	South of Bainstree Cross
TARRINGTON	624408	Churchill
THRUXTON	450346	Winnall Common
UPPER SAPEY	704635	Common
UPTON BISHOP	640269	Crow Hill
UPTON BISHOP	632284	Grendon
UPTON BISHOP	630286	Old Gore
WESTON-UNDER-PENYARD	641225	Ryeford
WESTON-UNDER-PENYARD	645221	Hownall
WEOBLEY	393522	Whitehill
WIGMORE	402676	Dickendale

COMPARISON BETWEEN FIELD-NAME SURVEY AND BRYANT

An analysis of the two sources is interesting. Of the 137 sites on Bryant's map only 60 appear on the Field-name Survey which means that there are 77 sites on Bryant's map which are not on the Survey. There are 10 sites on the Survey not on Bryant's map making a total of 147 sites.

The sites on Bryant's map are marked as a T.B. indicating a Toll Bar. Did toll-bars have houses? One assumes that if there was a toll-bar there must have been a person at hand to let the traffic pass through and collect the toll money. There is evidence that there were houses with the toll-bars as will be shown from the use of census returns. The collection of the tolls at named toll-bars and toll-houses are shown on the annual treasurer's accounts of the Trusts. Named persons at the sites are mentioned in the minute books of the Trusts.

Toll-houses and toll-bars are found in eighty-eight parishes in the county. It is obvious that turnpike roads did not pass through every parish.

The question is how many toll-houses are surviving in 1996 but much altered.

STANDARD OF ACCOMMODATION

In all the acts the trustees were free to construct toll-houses wherever they thought necessary but no instructions were laid down as to the size of the building or accommodation for the toll-keeper and his family. It seems that very few, if any, of the early houses survive. Any that do will have been changed almost beyond recognition.

No doubt the first houses would have been quite small as money collected from the tolls would in the first instance have to be invested in constructing and maintaining the roads. On the other hand a gate-keeper was needed to collect the money.

None of the renewal acts examined refer to the taking down of any particular toll-house and the building of a replacement, although the trustees had the power to do so. This must have happened but no records of rebuilding have been found, as yet, in the acts.

Order Books for Bromyard 1775-93, Ledbury 1836-57 and a Minute Book for Ross 1838-54 survive. These provide some information. More useful are the sale descriptions when the toll-houses were sold off in the 1870s. The census returns for 1851 shed much light on the size of the families and the dual occupation of those living in them.

When offered for sale on 11 September 1877 the following three examples show the size of the houses.

Blacklands. 23 ft. long, 11 ft. wide, 10 ft. to the eaves - 9 in. brick walls with Bath stone dressings to the windows etc. covered with Broseley tiles and crests. Entrance porch covered with tiles with lead hips. Good condition, little whitewashing only needed. Living room with brick floor. Bedroom with board floor, oven etc. Road near the house is about 33 ft. between the fences but opposite the house is only 18 ft. wide.

This is an example of the toll-house projecting into the road.

Cinders. 13 ft. long, 12 ft. 6 ins. wide, 9 ft. to the eaves and has a wing on each side 7 ft. long, 10 ft. wide and 6 ft. 6 ins. to the eaves. 9 in. brick walls, covered with slates with lead hips. The centre part is the living room with brick floor and an oven. One wing is a bedroom with a board floor and the other a pantry with a brick floor. The floors require repairing. The garden is about eleven perches and has the closet in it.

Newtown. 26 ft. long, 12 ft. 6 ins. wide and 9 ft. to the eaves. 9 in. brick walls covered with slates with lead ridge and hips. A living room, one bedroom and a space occupied with a bed. In good condition, a little whitewashing only needed, the oven out of order. A closet near the house with a small plot of ground adjoining enclosed and a garden about twenty-six perches 'detached with the ash tree standing and growing thereon.'

When the railways were constructed in the county the roads were re-aligned and toll-houses affected. The following two instances indicate this.

The Ross Turnpike Trust Minute Book for March to December 1853 shows the coming of the Gloucester to Hereford railway when the old toll-house had to be pulled down and a new one built at Hownall. The standard of accommodation is described as 'a good and convenient cottage with Privy and Pigstye.' ... 'The new house to be placed so as to command the three different roads.' Messrs. Pearson & Son provided an estimate for it for £143. In November 1853 they were paid £151. 4s. 4d.

Correspondence from 1 April to 12 August 1873 between Sale (clerk to the trustees) and R. D. Green Price (Presteigne Turnpike Trust) show the coming of the railway and the road to be changed at Corton. It was stated that a new toll-house should be built before the old one 'interfered with.' The railway company were prepared to build a new house or give the trustees £70 to build their own. It appears that a new one was erected as

the Corton toll-house was valued for sale on 4 October 1877 at £120 and described as 'A new Stone built house with Slate Roof contains Kitchen with one Chamber on same floor and a good pantry. There is a cellar underneath Kitchen and of the same size. It has also an outhouse with good oven for baking, with a pigstye, privy etc. adjoining. Is capable of great improvement at a moderate outlay.'

Very few plans have been traced but the following are of interest:

a design for a toll-house at Southend (Ledbury) May 1826 (FIG. 2); an undated plan for the intended toll-house on the Marsh Broad (Leominster) (FIG. 3). This seems to be a single-storey building with an overall size approximately 22 ft. by 15 ft. The minutes for 21 January and 26 May 1829 in the Leominster Turnpike Trust Minute Book state that a new toll-house was erected on Marsh Broad. FIGURE 4 is a plan for a toll-house at Hope and the building account for Hope toll-house (FIG. 5) implies that it was built 1833-5 at a cost of £205. 10s. 5d. FIGURES 6 and 7 are for an undated and unnamed toll-house but found among the Hampton Court Estate records. Two architect's plans exist for a toll-house at Presteigne dated 17 March 1854 by Benjamin Lawrence, architect, Monmouth. (FIG. 8).

The external measurements do not differ greatly from those mentioned above. The estimated costs of £100 and £120 are slightly less than that for Hownall a year earlier at £143.

Plan No. 1 shows a living room and a bedroom each 11 ft. 6 ins. by 9 ft. 6 ins. In addition a coal store under the stairs, a wash house 8 ft. by 5 ft. 6 ins. and a pantry 4 ft. 6 ins. by 2 ft. 3 ins. Outside is an attached W.C. 4 ft. by 2 ft. 6 ins. The overall size is 13 ft. by 21 ft. plus a bay window. The height is 15 ft. to the eaves and 21 ft. to the top. The estimated cost about £100.

Plan No. 2 shows a living room internally 10 ft. by 12 ft. and two bedrooms 10 ft. by 12 ft. and 8 ft. 6 ins. by 12 ft. The external measurements are 22 ft. by 15 ft. The height is 15 ft. to the eaves and 20 ft. to the top. The estimated cost is £120.

EVIDENCE FOR BUILDINGS AND REPAIRS

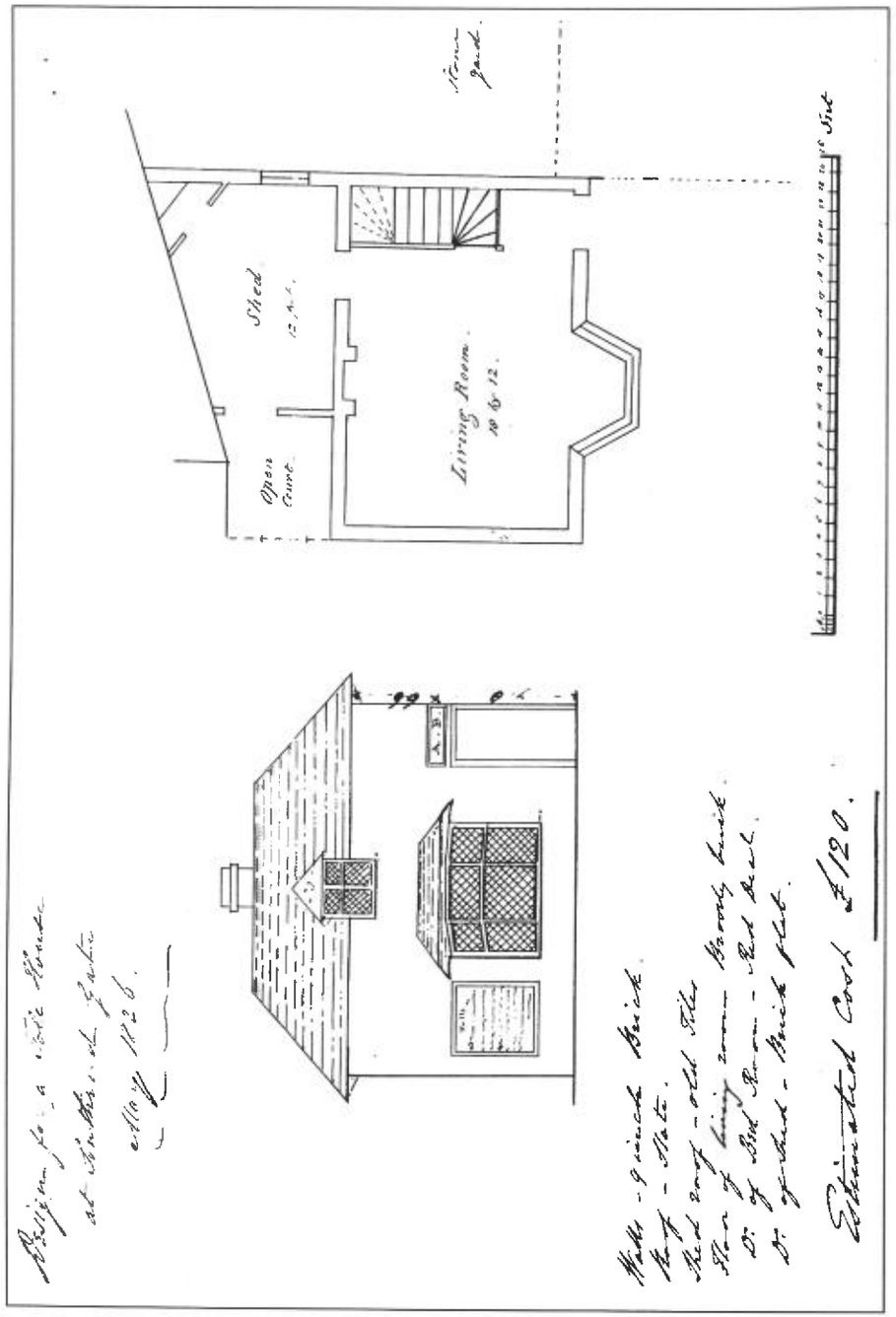
Some interesting information is gleaned from the Bromyard Order Books (1775-1793), the Ledbury Order Books (1836-57), the Ross Turnpike Trust Minute Book (1838-54) and the Leominster Turnpike Trust Minute Books (1759-1869).

Bromyard

5 September 1775. George Badham to be paid £100. 16s. 7d. to build a turnpike house and turnpike gate near Siftons and a house and gates at Herefordshire Lake.

5 July 1791. A turnpike gate to be erected across the turnpike road leading from Bromyard to Herefordshire Lake in the parish of Whitbourne between a gate which goes up to a farm called Huntlands and the turnpike gate at Herefordshire Lake.

6 August 1793. Mr. John Jenks to see that the turnpike house and gate at or near Herefordshire Lake in the parish of Bromyard is erected.



H.R.O. G2/III/16a

FIG. 2
Design for a toll-house at Southend (Ledbury) May 1826.

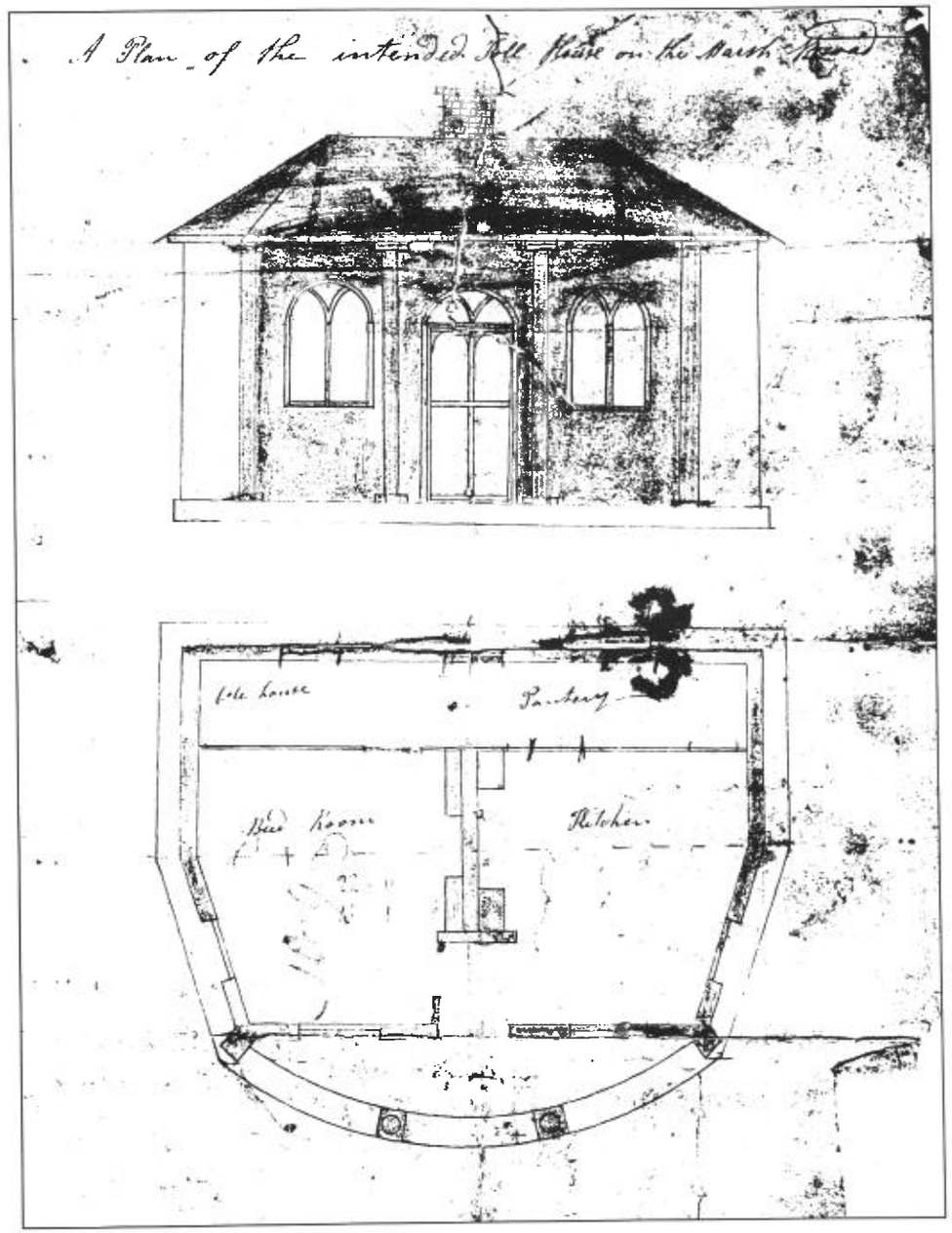


FIG. 3
Plan for intended toll-house on Marsh Broad (Leominster). Built pre-1829.
H.R.O. A63/III/42/23

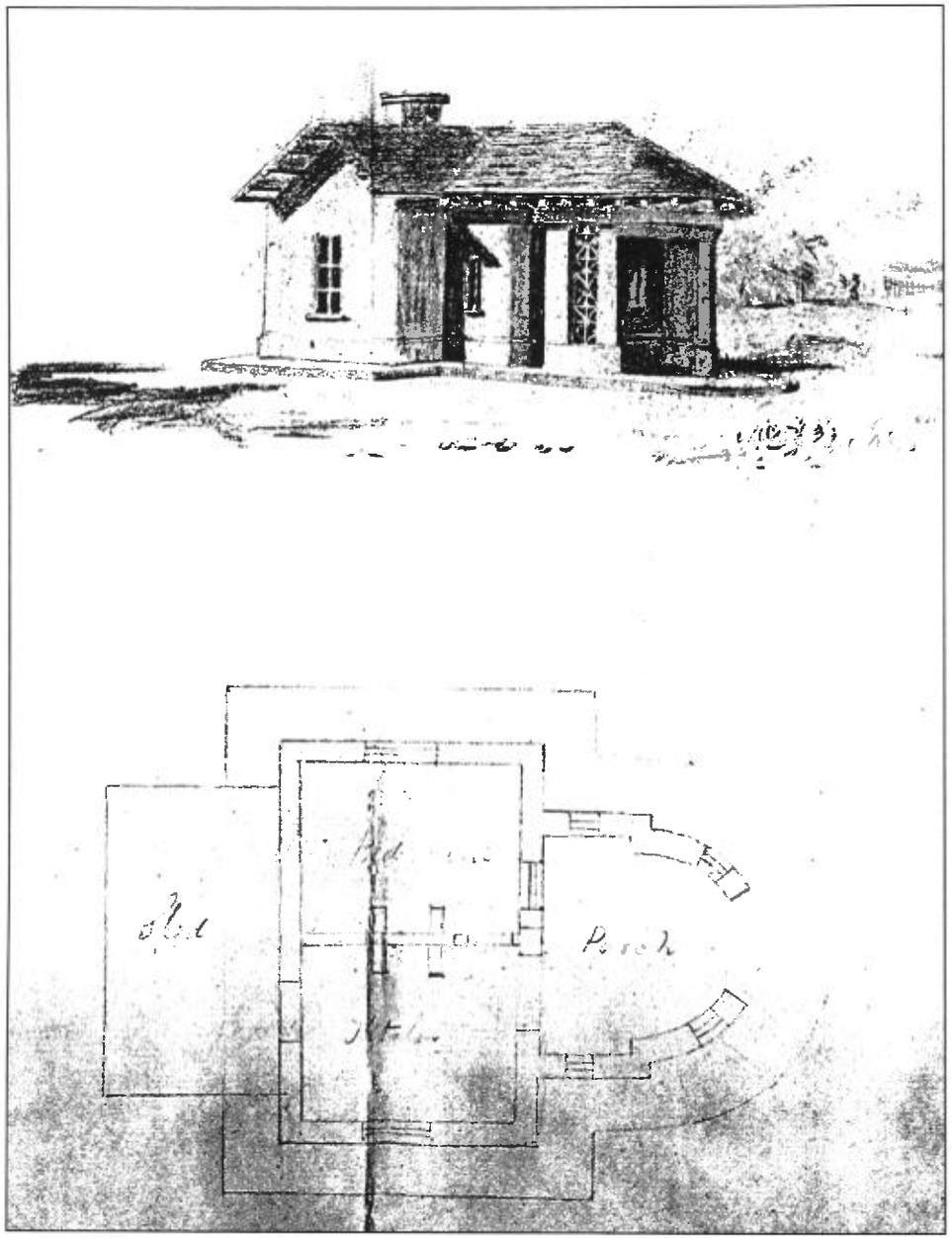


FIG. 4
Plan for Hope toll-house.

H.R.O. A63/III/42/23

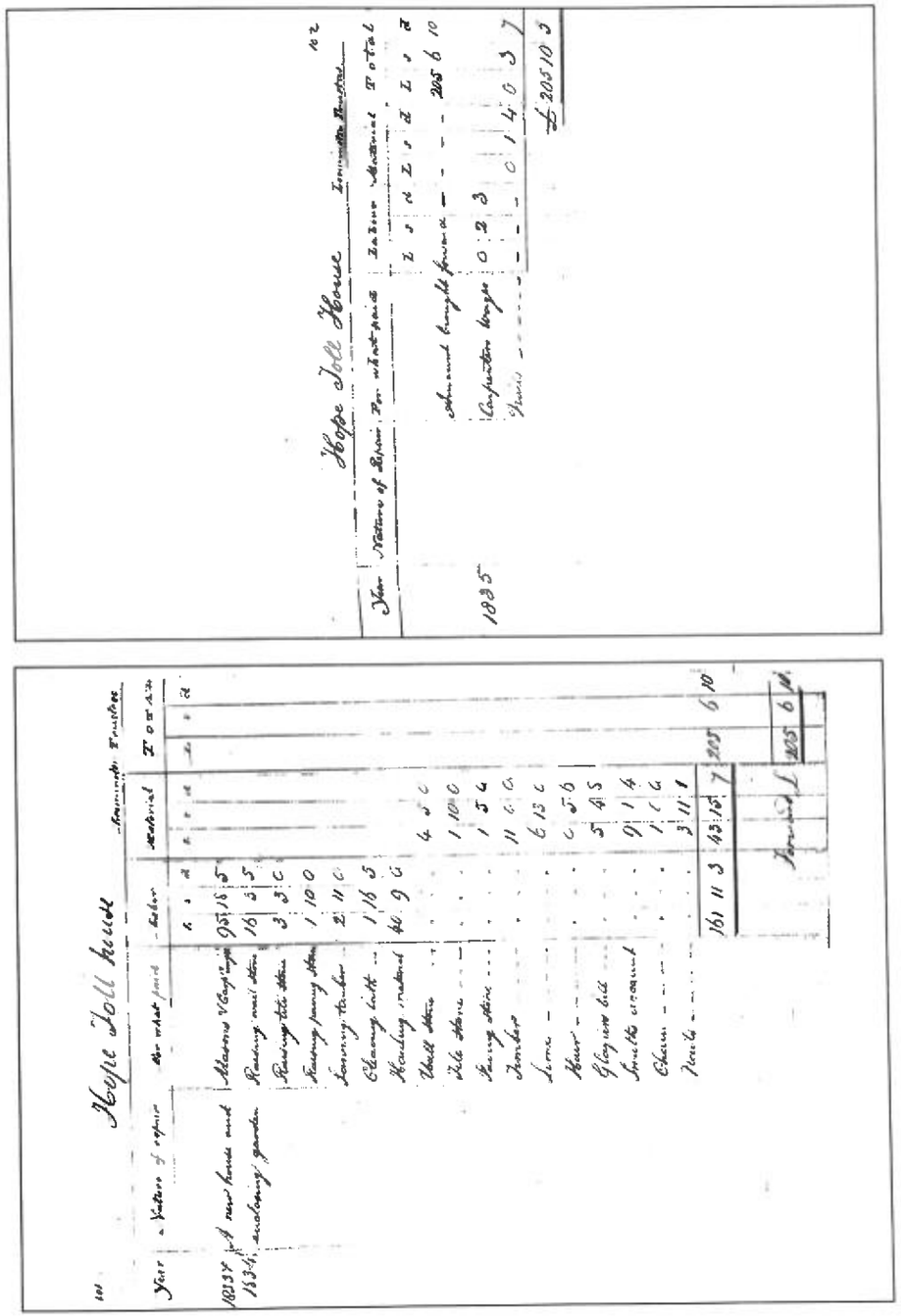
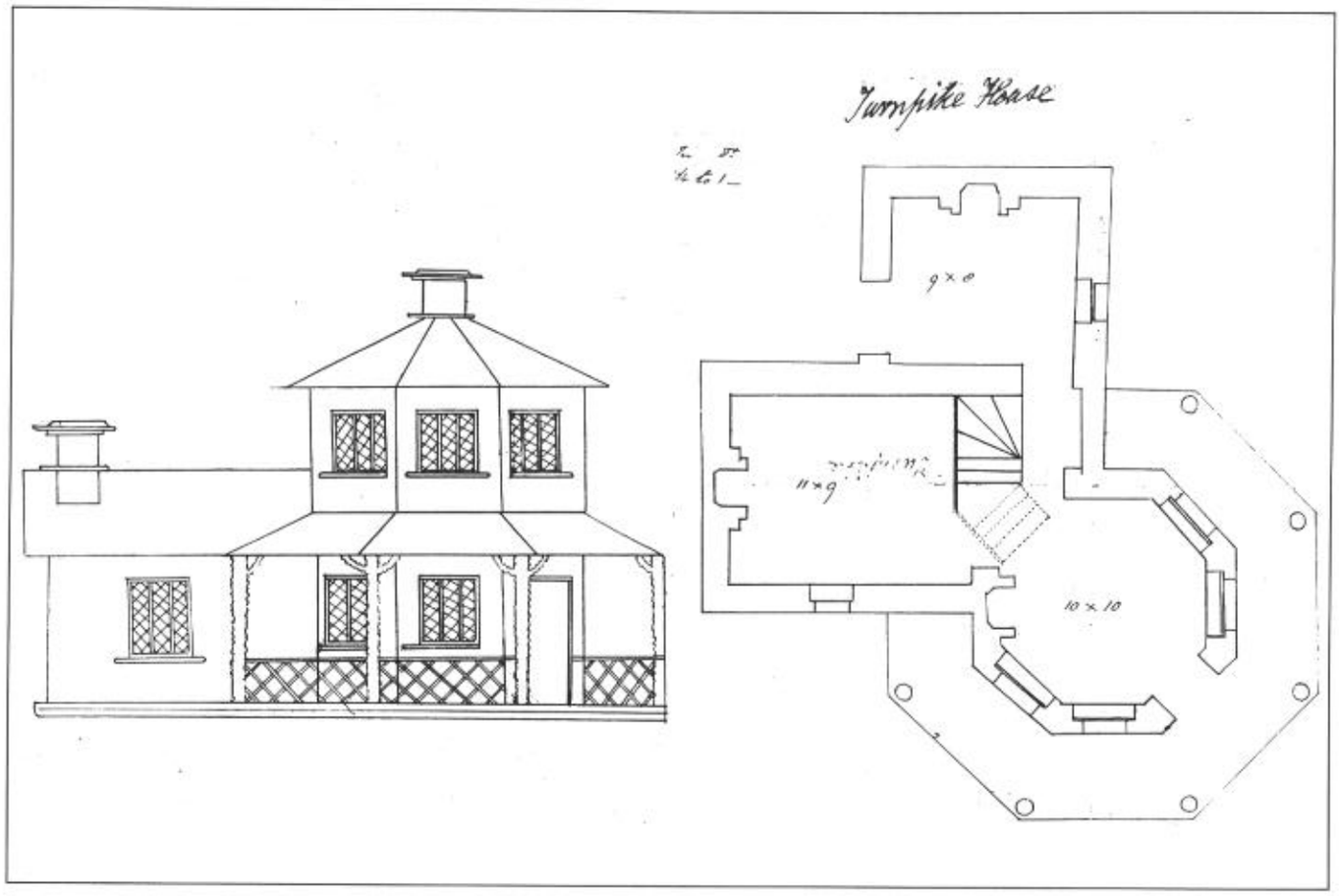


FIG. 5
Building account for Hope toll-house, 1833-5.

H.R.O. E41/290



FIGS. 6 and 7
Plan for turnpike house, not named or dated.

H.R.O. A63/III/42/23

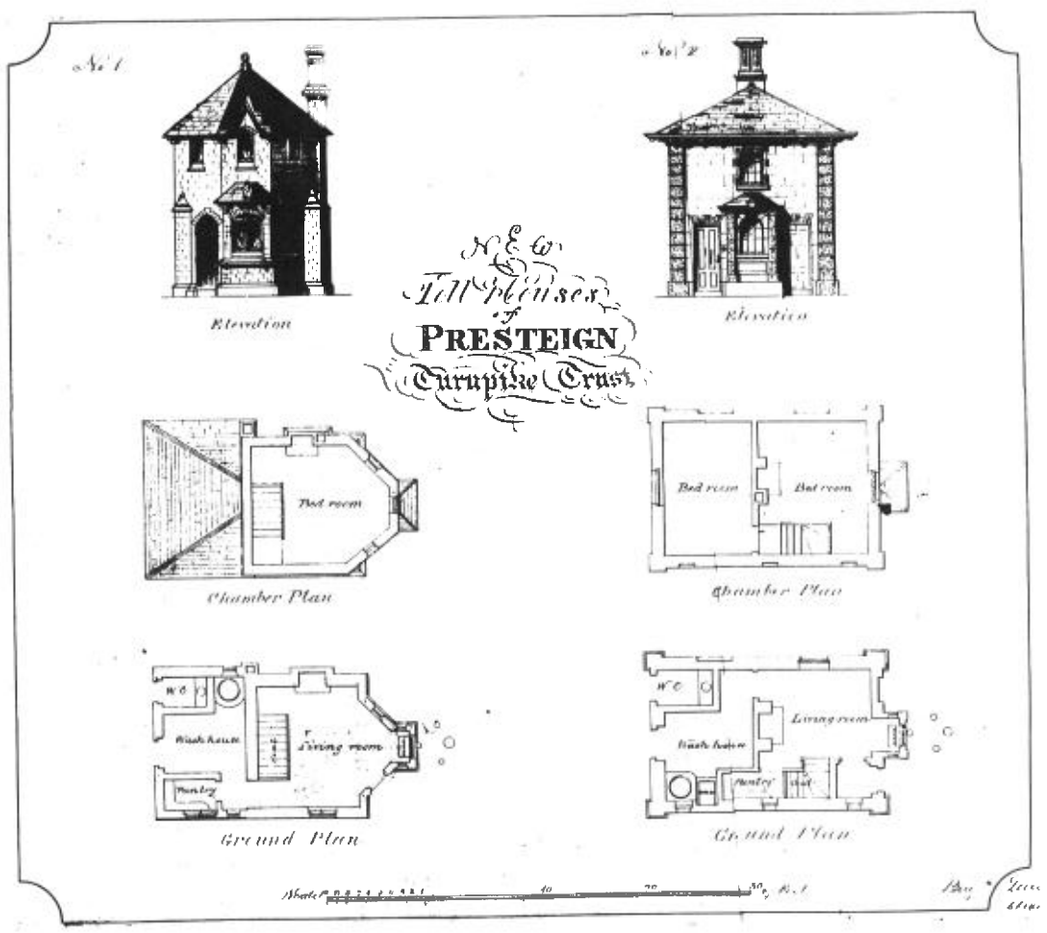


FIG. 8
Plans for Presteigne toll-houses by Benjamin Laurence, architect, Monmouth, 17 March 1854.

H.R.O. W24/1-3

5 July 1791. A turnpike gate to be erected across the turnpike road leading from Bromyard to Bishops Frome at or near a place called Munderfield Stocks.

5 July 1792. Another turnpike and gate to be erected on the turnpike road leading from Bromyard to Stoke Lacy within half a mile of Stoke Lacy Church.

30 August 1784. The Revd. John Walker could at his own expense remove the present turnpike gate at the High House across 'any other part of the road within the parish of Upper Sapey.'

2 July 1776. John Fido, junior, was paid £5 5s. for his stone wall which was taken down to widen the road at Petty Bridge.

16 October 1778. William Milton was paid 19s. for 'hedging and quicksetting' where the road was widened near Murrall's House. William Fincher was paid 7s. 6d. for hedging where the road was widened near his place.

An advertisement in the *Hereford Journal* dated 28 November 1827 states that the Bromyard Turnpike Trust Trustees under the act of 1822 were to meet at the Falcon Hotel, Bromyard, on 11 December 1827 to consider erecting 'a Toll-Gate across the Turnpike Road leading from the town of Bromyard aforesaid towards Ledbury, at the bottom of Summer Pool Hill in the parish of Bishops Frome, ... also about 3 other Toll-Gates on the sides of the said roads leading towards Ledbury, the one at such Toll Gate at or near Summer Pool Hill aforesaid, across a certain highway leading towards Acton Beauchamp, another ... near and below the village of Bishops Frome across a certain highway there leading towards China Court, and the third ... at or near a place called Frogend, across a certain highway there, also leading to China Court, and also about removing the Toll House and Gate now standing at Stanley Hill, near to a Blacksmith's Shop.'

This is an example of the trustees at work after the passing of the 1822 act. No proof has been found as yet that toll-houses were built at these locations but there was one already in existence at Stanley Hill. China (Cheyney) Court, Frogend and Stanley Hill are all sites on the Ordnance Survey maps.

Ledbury

30 September 1836. Repairs to be made to Horselane toll-house and the roof over the back room of Southend toll-house.

28 July 1837. Homend toll-house to be repaired or build a new one.

25 August 1837. Recommended to build a new toll-house at the Homend and the road to be altered 'to go through the corner of the Stream Meadow.'

27 January 1843. A new floor at the Homend toll-house cost £4 4s. (It seems that the new one was never built).

28 October 1842. The toll-house and gate at the foot of Hollings Hill to be moved to the top of the said hill.

28 November 1842. The above was done and Mr. John Drew was paid £16.

30 June 1843. Toll-house at Chances Pitch needs repairs £10.

31 October 1845. At Chances Pitch toll-house, the roof over the bay window to be covered with lead and zinc spouts be put up to the eaves.

25 April 1856. It was suggested to move the Chances Pitch toll-gate to a site about 300 yds. on the north of the lodge to Eastnor Castle and build a new toll-house. Mr. Matthews produced a tender for £60.

30 May 1856. Mr. Bright wished to buy the old (above) toll-house.

25 February 1853. The toll-gate in Bye Street needs re-erecting across Little Marcle road, thus a need to look for a site and build a new toll-house.

29 April 1853. Mr. John Hopkins to build a toll-house, remove and re-erect the gates for £59 to a site 'a few yards on west of a gate leading to Fair Tree Farm' and to be completed by June.

Leominster

13 April 1761 or 1781. A new toll-house to be erected between Pinsley Bridge and Lugg Bridge on Eaton Road.

14 April 1812. John Meredith was paid £9 for a piece of land for a garden for Botolphs Green (Southgate) turnpike.

8 September 1818. Arkwright allowed £100 towards building Hope and Pike (Docklow).

27 July 1820. New turnpike house erected at Poplands for £101 12s. 10d.

28 April 1837. Poplands house enlarged.

22 January 1828. Bargates house removed.

21 January and 26 May 1829. New toll-house erected on Marsh Broad. (FIG. 3)

7 October 1829. Toll-house on New Street Road.

18 March 1835. New toll-house leading to Dishley. (Ryelands)

19 May 1840. New toll-house at Brimfield.

Ross

10 June 1840. A chimney and grate to be put at the back of the turnpike house at Wilton.

10 October 1849. £10 spent on alterations to Wilton turnpike house. From Q/RD/1/9. 30 July 1795 the Trustees 'recently altered part of the turnpike road from the top of an enclosure called Kirkham Close in Bridstow, to the village of Wilton-on-Wye, so that a new road and toll-house have been completed. For £25 5s. the old or former toll-house at Wilton with the garden and part of the old turnpike road is sold to William Wiltshire, gent, of Wilton.

13 October 1847. Turnpike house and gate at Corps Cross to be removed to the top of the hill near The Dung Pits.

10 September 1851. A drain at Corps Cross needed covering as it was considered 'dangerous and a nuisance.'

11 September 1850. Spent £3 on a pump and £3 to rebuild the privy at Marcle.

10 December 1852. The house at Ryeford to be whitewashed and ceiling tiles repaired and £5 allotted to put up a privy.

12 February 1851. The oven at Colborough Gate needed repairs and Lord Ashburton as landlord had to be informed. This is an example where the trustees were renting a house at £5 per year from Lord Ashburton for use as a toll-house.

10 April 1850. A new floor and other repairs at Walford not to exceed £4 15s.

11 January, 8 February, 8 March, 12 April, 10 May, 1854. A new toll-house must be built at Walford and agreed to spend £40-50. Two tenders of £102 and £85 were received for building a new house and a tender for £92 to repair the present one. Two estimates for repairs of £75 and £58 12s. 7d. were received. It was agreed to accept Mr. Weaver's estimate of £58 12s. 7d. and then the matter was postponed. So what did happen?

14 August 1839. Hownall turnpike house roof repaired, painted and the inside whitewashed. A poplar growing near the chimney was cut down as it prevented the chimney drawing.

9 November 1842. At Hownall, Mr. Lucas to alter the lamp at the house 'so as to render it serviceable to the new road there from the Lea Bailey Hill and also that he do see immediately to the placing of a door in such turnpike house convenient for the gate keeper to attend to the gate erected at the mouth of such new road and also a window for a look out there.'

9 October 1850. Hownall turnpike house and wall to be whitewashed and the cost not to exceed 10s.

9 March, 13 April, 11 May, 12 October, 19 November, 14 December, 1853 and 11 January 1854. Hereford and Gloucester Railway Co. offer either to build a house at Hownall or allow the trustees the money to build themselves. The trustees agreed that the Railway Co. should build the house and it provides a plan and specification 'of a good and convenient cottage with Privy and Pigstye for the purpose of the Trust' ... 'the new house to be placed so as to command the three different roads.' The trustees change their minds and decide to build themselves with the Railway Co. paying. The trustees also agreed to pull down and sell the old turnpike house at valuation to Mr. Nicholls. The plans were amended and Messrs. Pearson & Son were to build the new house for £143. They were eventually paid £151 4s. 4d. The Railway Co. claimed the old turnpike house but finally gave up the claim and Mr. Nicholls was to have it and 'take it down forthwith.'

WHO LIVED IN THE TOLL-HOUSES?

Although the various turnpike acts are very detailed they do not state the location of the houses or the names and occupations of the occupants. A very useful source for the persons who were the gate-keepers and toll collectors living in these houses are the census returns. A number of parishes in the county on the 1851 census have been looked at. This census is only a few years later than the dates of the tithe maps and their apportionments.

ACTON BEAUCHAMP	Toll House	James Preece, 46, and wife, gardener
AVENBURY	The Burgess Turnpike	John Bray, 34, wife and 3 children, labourer
AYMESTREY	Tollgate (Bacon Lane)	Sarah Williams, 70, widow
	Mortimer's Cross	Elizabeth Price, a servant
BODENHAM	Tollgate	Sarah Bowkett, 70, widow, daughter and 3 grand-children
BRAMPTON ABBOTTS	Gatsford Bar	Mary Parsons, 53, widow

BRIDSTOW	Wilton Toll House	Charles Bullock, 50, wife and 3 children, malster
		John Weston, 28, toll collector
BROMYARD	Broad Bridge	John Palmer, 27, wife and 4 children, joiner
	Erysett (Yearset)	Thomas Comby, 27, wife and 2 children, labourer
	Churchyard	Helen Lipscombe, 39, unmarried, sister and niece
	Toll House	
	Petty Bridge Gate	William Palmer, 41, wife and 6 children. He was Supt. Collector of tolls under the Trustees
	Picadilly Gate	Thomas Vaughan, 39, wife and 4 children, carpenter
	Milvern Lane	Francis Vaughan, 73, wife, daughter and grand-daughter
	Sheep Street	George Harris, 78, widower
	Down Toll Gate	William Field, 40, wife and 4 children, stone mason
BURGHILL	Portway Toll Gate	Susannah Gurmin, 72, widow and servant
	Turnpike Gate	Thomas Palmer, 42, wife and child
COLWALL	Chances Pitch Gate	John Woodhouse, 60, and wife, framework knitter
DOCKLOW (HAMPTON WAFRE)	Turnpike	James Brewer, 38, wife and 5 children, farm labourer
EWYAS HAROLD	Pontrilas Gate	Phillip Watkins, 52, wife and 1 child
GRENDON BISHOP	Bilfield Gate	William Bullock, 37, wife and 4 children, agricultural labourer
HAMPTON (HOPE-UNDER-DINMORE)	Toll Bar	James Salisbury, 29, wife and 3 children, groom at stable
HOLMER	Shelwick Toll Gate	Ann Cross, 66, widow and grand-daughter
KENTCHURCH	Turnpike Gate	Catherine Barret and daughter
KINGSLAND	(Corners)	James Jones, 45, wife and 3 children, agricultural labourer
KINNERSLEY	Turnpike House	George Hanley, 34, wife and 3 children, labourer on turnpike road
LEDBURY	Bye St. Turnpike	William Meredith, 55, wife and daughter, shoemaker
	Hazle Turnpike	Esther Webb, 80, and grand-daughter aged 11
	Homend St. Turnpike	Mark Meredith, 57, wife and son, shoemaker
LEOMINSTER	Poplands	Samuel Price, 50, and daughter
	West St. Turnpike	John Price, 20, draper
MADLEY		Phebe Husbands, 71, widow
MONKLAND	Arrow Green Village	Ann Davies, 57, and daughter
		John Jones, 63
MUCH COWARNE	Witchend Pike	William Prosser, 47, wife and 5 children
ORLETON	Turnpike House	Hannah Passey, 40, daughter and son, labourer
PEMBRIDGE	Milton Gate	Thomas James, 43, wife and 5 children, agricultural labourer
PIXLEY	Cinders Turnpike	Joseph Firkins, 39, wife and 7 children
	Trumpet Turnpike	George Hill, 41, and wife, labourer on turnpike roads
ROSS	Corps Cross Gate	George Starr, 68
	Marsh Gate	James Dalimore, 48, and wife
	Over Ross Gate	William Hall and wife
STRETTON SUGWAS	Brockhall Gate	Thomas Cross, 49, wife and 3 children, shoemaker
	Toll Bar House	Immanuel Witherstone, 31
TARRINGTON	Toll Gate House	Edward Williams, 58, wife and son, shoemaker
TITLEY	Shawl Turnpike	John Tippins, 32, wife and 2 children
VOWCHURCH	Turnpike Gate	James James, 54, wife and son, shoemaker
WHITBOURNE	Turnpike House	Thomas Pingrieff, 41, wife and 2 children, postmaster

The parishes were selected at random and the 48 entries represent one third of the total number of sites on the tithe apportionments and Bryant's map. Full details of each household have not been listed. The head of the household was normally the gate-keeper and toll collector. Where the head of the household had an occupation his wife acted as the gate-keeper and toll collector. Shoemakers and labourers were the most common dual occupations. A quarter of the toll-house keepers were women, mainly widows. The younger age group of the men had a separate occupation.

These entries appear to confirm that where a T.B. (Toll Bar) is shown on Bryant's map and not indicated on the tithe apportionment there was a toll-house at the site. Three examples are Burgess, Gatsford and Pontrilas. Thirteen houses but much altered still exist out of the forty-eight listed above.

The later census returns for 1861 and 1871 provide much the same information and indicate that tolls were still being collected and the houses occupied by toll collectors.

END OF THE TURNPIKE SYSTEM AND DISPOSAL OF THE BUILDINGS

From the dates of the various acts there must have been toll-houses erected soon after their passing. As previously mentioned the acts were renewed every twenty-one years and during the period covered by this study toll-houses were being built and repaired. Changes were taking place; Highway Acts of 1835 and 1862 created Highway Boards to levy rates on parishes to maintain the roads and bridges. In 1894 these were taken over by the District Councils. Railways had arrived and had taken away a lot of the traffic from the roads. The need for toll-houses and collectors was no longer necessary. By about 1870 on the expiration of an act the trustees of the individual turnpike acts decided to dispose of their toll-houses.

As some toll-houses were rented from the local landowner these were automatically at his disposal. Those which were the property of the trustees had in the first instance to be offered to the landowner of the adjoining land. If the appropriate landowner did not wish to purchase the toll-house then the trustees could advertise their properties for sale.

Between 21 January 1870 and 5 January 1878 J. A. Arkwright of Hampton Court was being paid £3 9s. half yearly for the toll-houses at Hampton Park and Cornet Gates. Lord Ashburton was being paid £5 annually for Coldborough turnpike house. These properties would thus revert to the owners.

SALES AND CONVEYANCES

A large number of valuations and conveyances have come to light. These are too detailed to record each one in full in this paper but examples will be given and the others shortened. They are listed under the various turnpike trusts in alphabetical order.

Blue Mantle Hall expires 30 June 1870 (FIG. 9)

Arrow Green	8 August 1870 sold to Mr. Cave for £4
Aymestrey	2 August 1870 house pulled down and materials sold to Mr. Powell for £4 (FIG. 10)
Kingsland (village)	3 March 1871 sold to Mrs. C. C. Evans for £10
Wigmore	14 August 1870 sold to Mr. Ward for £10 (FIG. 10)

FINAL STATEMENT

OF THE

ACCOUNTS of the BLUE MANTLE HALL TURNPIKE TRUST, in the COUNTY OF HEREFORD, between the First day of January and the Thirtieth day of June, 1870.

INCOME.

	£	s.	d.
Balance due from the Treasurer	41	6	11¼
Revenue from Tolls	120	0	0
Incidental Receipts	"	"	"
One year's allowance from the County of Hereford, for repair of Roads over and at the ends of County Bridges, to Christmas, 1869	15	0	0
Ditto, Half a year, to 30th June, 1870	7	10	0
Transferred from Sinking Fund	200	0	0
To Sale of Turnpike Houses, Gates, Tools, and other property of the Trust	30	0	0
	£413	16	11¼

EXPENDITURE.

	£	s.	d.
Manual Labour	65	0	11
Materials	29	8	9
Team Labour	21	19	0
Tradesmen's Bills	4	3	4
Toll House and other alterations	"	"	"
Damage	"	"	"
Salaries—Treasurer	5	0	0
Clerk	12	10	10
Surveyor	15	0	0
Law Charges	"	"	"
Interest of Debt	9	15	10
Debts paid off	200	0	0
Incidental Expenses	2	11	2
By Balance carried down	47	17	3¼
	£413	16	11¼

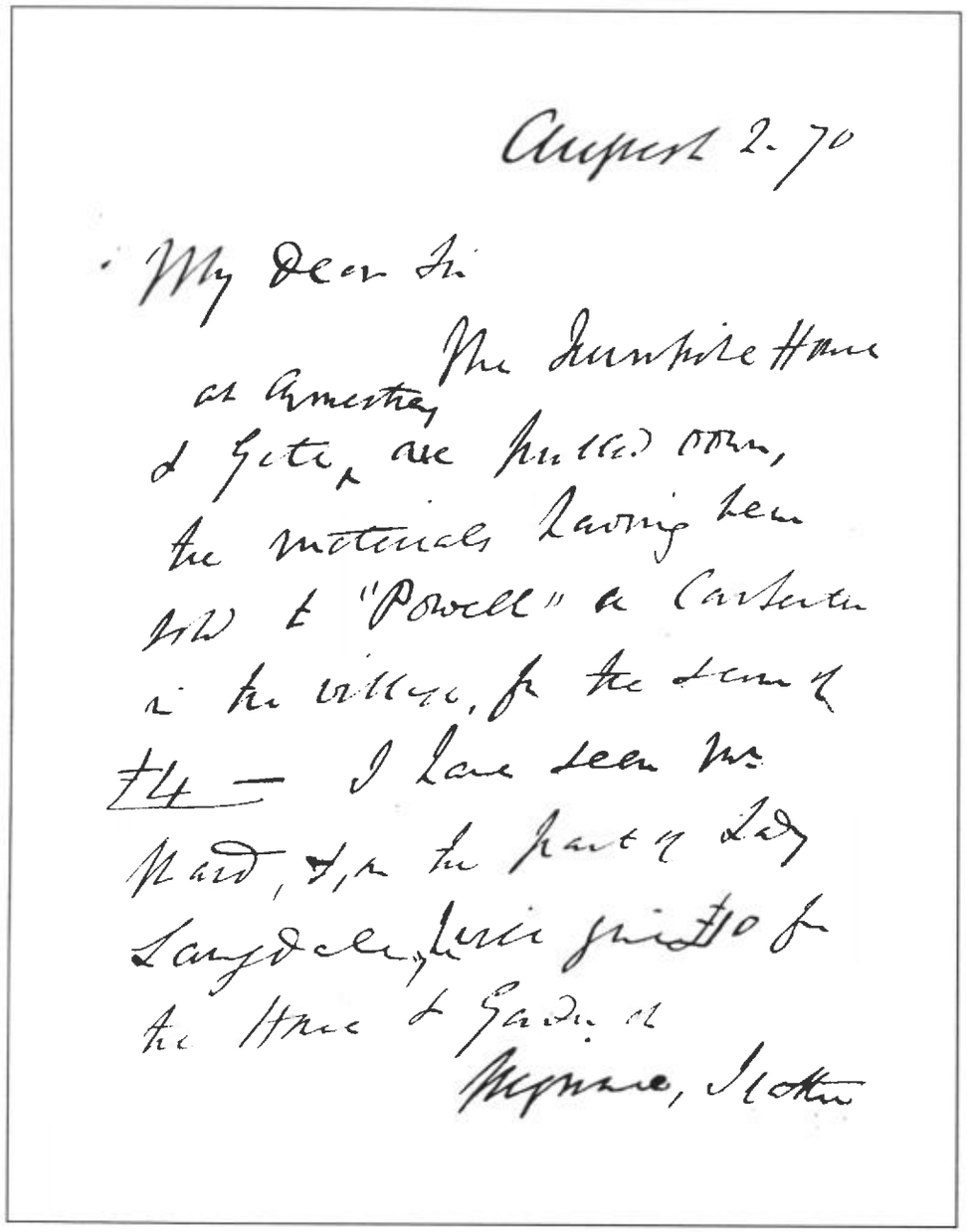
APPROPRIATION OF THE BALANCE.

	£	s.	d.
By proportion to Leominster Highway Board	17	7	7
By ditto to Wigmore ditto	23	3	9
By ditto to Weobley ditto	5	5	11
	£47	17	3¼

At a Meeting of the Trustees of the Blue Mantle Hall Turnpike Trust, held at Mortimer's Cross Inn, in the Parish of Aymestrey, in the County of Hereford, on Wednesday the 12th day of October, 1870, the above Statement was audited and allowed, and the Balance appropriated as above set forth, pursuant to the Statute 30 and 31 Vict., Cap. 121, Sect. 3.

JAS. K. KING, *Chairman.*

FIG. 9
Final Statement Blue Mantle Hall Turnpike Trust, 30 June 1870. H.R.O. N41/ Box 2515



August 2. 70

My Dear Sir

The Turnpike House at Aymestrey & Gate, are pulled down, the materials having been sold to "Powell" a Carpenter in the village, for the sum of £4 — I have seen Mr. Ward, & he has sent to Langdale, Lewis giving to the House & Garden at Wigmore, Herefordshire

FIG. 10
Letter 2 August 1870 stating (a) Aymestrey (Bacon Lane) turnpike house pulled down (b) Wigmore house and garden sold for £10.

H.R.O. N41/ Box 2515

Bromyard Sales on 30 October 1875

Bellfield (Bilfield)	Sold to Thomas Bullock, farmer of Bromyard, lessee of the tolls for £58 ... 'all that cottage or tenement situate in the parish of Grendon Bishop ... erected ... known as The Bellfield Gate.'
Broad Bridge	Sold to Edward Bickerton Evans, Whitbourne Hall, Esq. for £105
Down	Sold to Edward Bickerton Evans, Whitbourne Hall, Esq. for £120
High House	Sold to Baldwin Henry Bent, gent. of High House, Upper Sapey for £63

On 1 October 1839 the trustees sold the old site or parcel of land whereon the old toll-house stood at or near a certain place called the High House together with all building materials and garden land belonging bounded on the east by the turnpike road leading from Bromyard to Stanford Bridge and on all parts by the estate of Joseph Best of Dutshill, who owns the adjoining estate for £25. 'This now useless as a new toll house and gates late erected.'

Milvern Lane	Sold to Thomas Bullock, town of Bromyard, lessee of the tolls for £75
Panniers Lane	Sold to John Millechamp, Bromyard, boot and shoe manufacturer, for £29
Petty Bridge	Sold to Thomas Bullock, Bromyard, lessee of the tolls for £150
Piccadilly	Sold to William Eckley West, gent. of Bromyard for £70
Sandy Cross	Sold to William Barneby, Esq. of Saltmarshe Castle for £44
Sapey Bridge	Sold to Thomas Bullock, Bromyard, lessee of the tolls for £27
Sheep Street	Sold to John Godfrey Devereux, Bromyard, grocer for £36

Kington Sales on 1 April 1878

Church) Hergest) Titley)	The trustees of the Rt. Hon. Jane Elizabeth Harley, Lady Langdale deceased by her will dated 21 February 1872 sold for £90 the freehold of 'The Church Toll House' near the church in Kington; 'The Hergest Toll House situate at Hergest' and 'The Titley Toll House in the parish of Staunton-on-Arrow near the village of Titley' ... the sites thereof with gardens
Sunset	Sold to Thomas Bowen, gent., Portway Villa, Kington, for £35

Ledbury

Bosbury	31 October 1871 sold to John Pitt, Temple Court, Bosbury, Esq. for £30 'all that ... toll house called the Bosbury Toll House situate near the village of Bosbury aforesaid at the junction of the roads leading respectively from Bosbury and Bromyard to Ledbury
Bradlow	27 October 1871 sold to John Martin, Upper Hall for £50 'situated at the Cross Roads at Bradlow in the parish of Ledbury aforesaid and adjoining the Ash bed Coppice...'
Chance's Pitch	27 October 1871 sold to Thomas Griffith Peyton, Esq., The Bartons, Colwall for £35 'situate at the Camp Hill on the road leading from Malvern Wells to Ledbury in the parish of Colwall'

Fair Tree	27 October 1871 sold to John Martin, Upper Hall for £50 'situate in the parish of Ledbury near the Fair Tree Farm on the road leading from Ledbury to Little Marcle together with the parcel of garden ground'
Homend	27 October 1871 sold to John Martin, Upper Hall for £60 'situated at Ledbury aforesaid at the junction of the Hereford and Bromyard Roads together with the stable parcel of garden ground...'
New Street	31 October 1871 sold to Michael Biddulph, Esq. for £80 'situate in New Street ... together with the parcel of garden ground'
Horse Lane	31 October 1871 sold to Michael Biddulph, Esq. for £100 'situate in the horselane in the town of Ledbury together with the weighing machine in front of the said messuage'
Stanley Hill	30 October 1875 sold to Francis Pitt, New Birchend, farmer for £52 'all that cottage.. situate in the parish of Castle Frome ... together with the garden...'
Trumpet	1 November 1871 sold to William Homes of the Castle, Munsley for £30 'situate at the Trumpet ... together with the parcel of garden ground'

Leominster repealed after 1 November 1869

On 18 September 1869 Russell & Son, auctioneers and valuers, valued all the materials of the houses and land belonging to the Leominster Turnpike Trust. They were sold by auction at The Oak, Leominster, on 6 October 1869 in 23 lots. (FIG. 11) The gates, posts and rails were sold off separately. From these two documents one gets the names of all the toll-houses, their valuation price, the sale price and the persons who bought them.

Toll-house	Valuation	Sale Price	Purchaser
Brimfield	£40	£40	Mr. H. Tyler
Cholstrey	£6		
Docklow	£31 10	£31 10	J. Arkwright Esq.
Eaton	£65	£65	Thomas Burlton, Esq.
Elms Green	£2 2s.		
Green Lane	£15		
Hope	£105	£105	J. Arkwright, Esq.
Lady Meadow (Luston)	£16	£16	Mrs. Thomas
Marsh	£47 10s.		
Pits (Sandpits, Ryelands)	£10	£13 3s.	Mr. R. Ward
Poplands	£20		
South Street	£8		
West Gate	£30		

From the 6 October 1869 account is seems that those houses where no sale price is stated, the buildings were sold off as materials along with gates, posts and rails.

Leominster/Ledbury

Blacklands	10 December 1877 the materials sold to J. Hopton, Esq., Canon Frome Court for £10

LEOMINSTER

TURNPIKE TRUST.

TO BUILDERS, CONTRACTORS, & OTHERS.

Messrs. RUSSELL AND SON

Have received instructions from the Trustees of the above Trust,

TO SELL BY AUCTION

AT THE ROYAL OAK INN, LEOMINSTER,

On Wednesday, the 6th day of October next,

At 4 o'clock in the Afternoon, in such lots as may be agreed upon at the time of Sale.

THE STRUCTURE

AND

MATERIALS for REMOVAL,

Of the several Toll-Houses at the Poplands, Cholstrey, West Gate, (with stables), Sandpits, South Street, Elm's Green, Eaton, and Green Lane. Also the

TURNPIKE GATES,

POSTS, RAILS, PALES, & PUMPS

At the several above mentioned Toll Houses, and at Hope, Docklow, Brimfield, Marsh, and Lady Meadow Toll Houses.

Every Purchaser will be required to pay down the amount of his purchase money at the time of sale and to enter into a contract for the removal of the Gates, Posts, Rails, and Pumps, at his own expense on the 3rd day of November next, and for making good the surface of the Highway, where interfered with, and for removal of the Materials of the several Toll Houses on or before the 20th day of November next.

Any further particulars may be obtained from Captain Demay, Surveyor of the Trust.

(By order),

THOMAS SALE.

Leominster, 18th September 1869 *Clerk to the Trustees.*

H. WENT, PRINTER AND STATIONER, SOUTH STREET, LEOMINSTER.

FIG. 11
Notice of sale of Leominster Turnpike Trust toll-houses, 18 September 1869.
H.R.O. N41/ Box 2587

Cinders — 4 January 1878 sold to Richard Homes, The Castle, Munsley for £65

Newtown — 2 July 1878 sold to R. Hawkins for £60

For full descriptions of these houses see p. 408.

Ludlow First and Second and Caynham

Messrs. Giles and Millward, auctioneers of Ludlow were employed to value the toll-houses as they stand or if they have to be pulled down and sold as materials on 20 November 1872. The act was repealed after 1 January 1873 and the toll-houses 'will be of no use... the trustees wish to dispose ... all have been valued and permission given to sell.'

Brampton Bryan — Offered to T. Willoughby Hart Sitwell, Ferney Hall, Clungunford who on 30 December 1872 stated that he did not intend to exercise his right of pre-emption. 1 January 1873 sold to James Edwards, Brampton Bryan, shoemaker, for £80

Little Hereford — 1 January 1873 sold to Harriet Shenton, Manor House, Brimfield for £45 on the condition 'that the land between the said toll house and the said road or highway being about eight yards long and four yards wide shall be added to and form parcel of the said road in compliance with the Statute 34/35 Vict. chapter 115 Sect. 17.'

Whitcliffe — 1 January 1873 sold to Elizabeth Monro, Ludford Park, widow, for £40 'situate on or adjoining the Turnpike Road leading from Ludlow to Wigmore...'

Presteigne

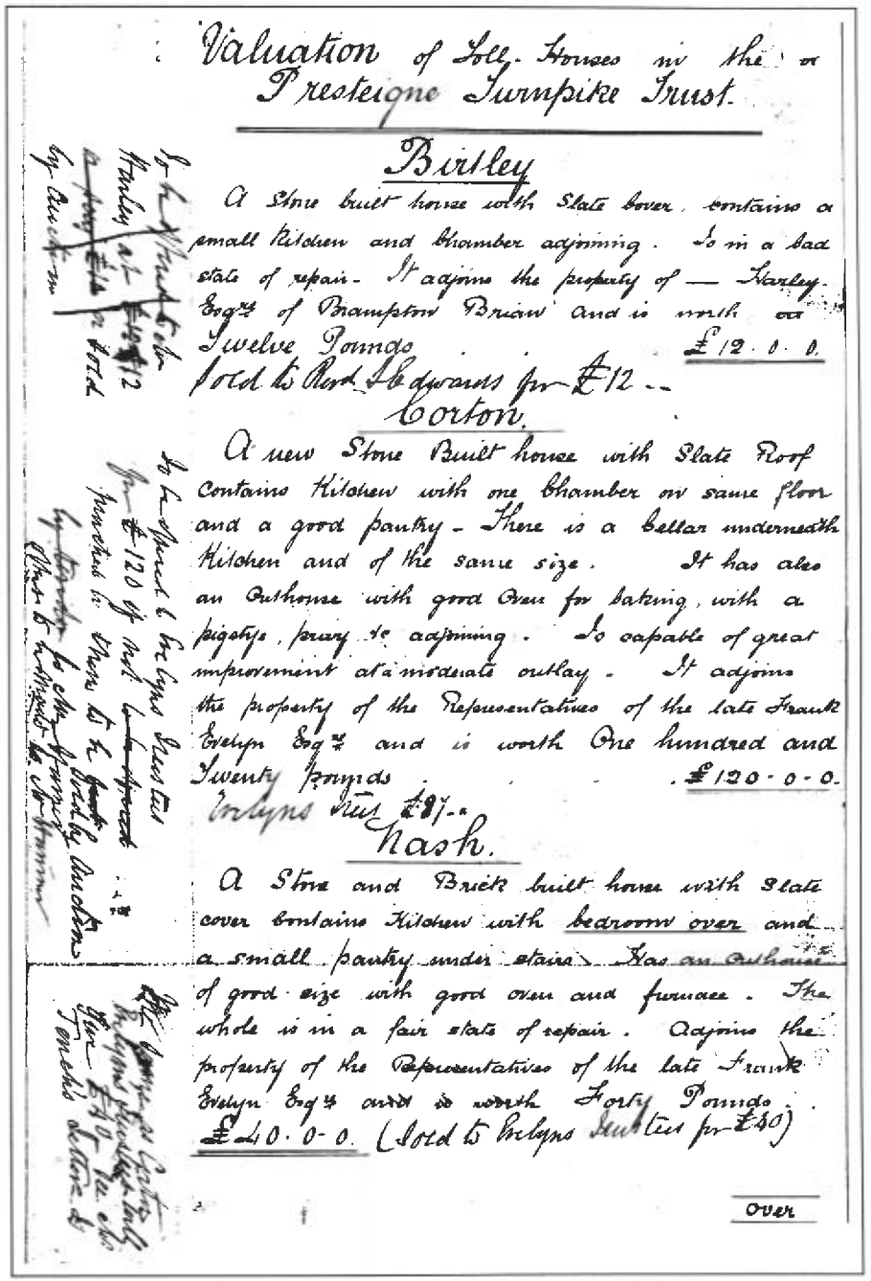
On 4 October 1877 H. Hamer, surveyor of Kington, valued all the toll-houses in the Presteigne Turnpike Trust (FIG. 12). This document is of extreme interest as it gives a full description of each property, its value, the sale price and the purchaser. A precis for each property follows:

Birtley — Stone built house with slate roof contains a small kitchen and chamber adjoining. In a bad state of repair. Valued at £12 and sold to Revd. S. Edwards for £12

Corton — New Stone house with slate roof contains kitchen with one chamber on same floor and a good pantry. A cellar underneath the kitchen of the same size. It has an outhouse with good oven for baking with a pigstye, privy etc. adjoining. Is capable of great improvement at a moderate outlay. Valued at £120 and sold to the trustees of the late Frank Evelyn Esq. for £87

Knowle — Built of brick with a slate roof. It contains a kitchen, back kitchen and a chamber on the same floor with privy etc. The kitchen has a good Yorkshire stove and the back kitchen has a capital oven etc. There is also a small garden attached which has been enclosed from waste land on the roadside. Valued at £30 and sold for £5

Mortimers Cross — Stone built with slate roof containing kitchen sleeping chamber on same floor and a small back kitchen. It has a good oven for baking



Valuation of Toll-Houses in the Presteigne Turnpike Trust.

Birtley

A Stone built house with Slate Cover, contains a small Kitchen and Chamber adjoining. Is in a bad state of repair. It adjoins the property of — Stanley Esqr of Brampton Bryan and is worth as Twelve Pounds . . . £12. 0. 0.

Sold to Revd S. Edwards for £12 --

Corton.

A new Stone Built house with Slate Roof Contains Kitchen with one Chamber on same floor and a good pantry - There is a Cellar underneath Kitchen and of the same size. It has also an Outhouse with good Oven for baking, with a pigstye, privy &c adjoining. Is capable of great improvement at a moderate outlay. It adjoins the property of the Representatives of the late Frank Evelyn Esq^{re} and is worth One hundred and Twenty Pounds . . . £120 - 0 - 0.

Evelyns Trus £87 - -

Nash.

A Stone and Brick built house with Slate cover contains Kitchen with bedroom over and a small pantry under stairs. Has an Outhouse of good size with good oven and furnace. The whole is in a fair state of repair. Adjoins the property of the Representatives of the late Frank Evelyn Esq^{re} and is worth Forty Pounds . . . £40. 0. 0. (Sold to Evelyns Trustees for £30)

over

FIG. 12
Valuation of toll-houses in the Presteigne Turnpike Trust, 4 October 1877, by H. Hamer, surveyor, Kington. Note the house descriptions, to whom sold and prices paid.
H.R.O. N41/ Box 2515

	and a plentiful supply of water through an iron pump. It is not in a good state of repair but has a small garden. Valued at £25 and sold to Lord Bateman for £25
Nash	Stone and brick built house with a slate roof containing a kitchen with bedroom over and a small pantry under the stairs. It has a good size outhouse with good oven and furnace. It is in a fair state of repair. Valued at £40 and sold to the trustees of the late Frank Evelyn Esq. for £40
Presteigne	Stone built house with a slate roof containing a good size kitchen with a chamber adjoining. It has a good oven and pigstye and a small garden. Valued at £30 and sold to Sir H. I. Brydges (no amount stated)
Shobdon	Stone built with a slate roof containing a small living room with a chamber adjoining and a small pantry. It has a small outhouse and is in a bad state of repair. Valued at £20 and sold to Lord Bateman for £11 and is to be removed
Stapleton	Stone built house with a slate roof and contains a kitchen with a bedroom over. The kitchen has a good Yorkshire stove and an oven for baking. It has a pigstye and privy etc. but is in a bad state of repair but capable of improvement at a small outlay. Valued at £35 and sold to Miss Bronlow for £28
Wooferton Chain	Brick built with a slate roof containing a kitchen, chamber and back kitchen fitted with an oven etc. It is in a good state of repair and has a small garden which has been enclosed from the road. Valued at £45 and sold to J. and L. C. B. Barlow, Winslow near Manchester, timber merchants, for £45
Wooferton Crossing	Brick built with a slate roof and similar to Wooferton Chain but not in such good condition. Valued at £35 and sold to Jonas Foster, Moor Park, Ludlow for £35

These were sold on 28 June 1878.

The following properties which belonged to trusts not named in the sale particulars were also sold.

Red Witchend	25 October 1875 sold to James John George Graham, Much Cowarne, clerk, for £22
Stockton	25 October 1870 sold to the Guardians of the infant and Baron Rodney for £30
Lea Line	30 October 1874 sold to Benjamin Hartland, Little Dewchurch for £30
Bredwardine	26 December 1878 sold to Sir George Cornewall, bart., Moccas for £35 'situate on the side of the road leading from Bredwardine Bridge to the said town of Hay'
Willersley	28 October 1879 sold to Mrs. Percy Merrick for £40 and on 23 December 1879 James Phillips was paid 12s. for taking down the toll-gate and rising posts

On 28 October 1868 the Hereford Trust wishes to sell the toll-houses at Wye Bridge, St. Owen, Friars, Widemarsh Chain, Straddle Bridge, Llancloudy, Castle End, Pontrilas, Small Ashes, Fromes Hill, Stretton Sugwas, Bush Bank and Larport Lane. The final statement dated 30 December 1868 of the Hereford Turnpike Trust shows an income of £759 15s. 2d. from the sale of the turnpike houses, gates, tools and other property of the trust.

On 1 November 1868 as owners of the adjoining lands the Governors of Guy's Hospital were offered the following toll-houses: Chilston £40, Straddle - , - £35, Callow £30, Brockhall £60 and Stretton £20.

These two documents are useful as further evidence as to the location of the toll-houses and their disposal in accordance with the law which laid down that in the first instance the adjoining landowners were to be given the opportunity to purchase before they could be put up for sale.

Of the sixty-two sale particulars only five, Down, Milvern Lane, Sheep Street (all Bromyard), Elms Green (Leominster) and Birtley are not listed from the Field-name Survey and Bryant's map. The amounts paid for the toll-houses show a great variation reflecting their condition and sites. In those cases where good descriptions of the properties exist, the standard of accommodation, the building materials, whether they were of one or two storeys and in good or a bad state of repair is clear. The purchasers were many and varied including local landowners and others who could see an opportunity to make a little profit from them or in some cases simply for demolition. The dates of the sales indicate the abolition of the respective turnpike trusts usually at the end of a twenty-one year renewal period. Unfortunately any documents relevant to the individual sale of the toll-houses in the Hereford and Ross areas have not yet been found.

RECOGNISABLE TOLL-HOUSES STILL SURVIVING WITH ADDITIONS AND MODIFICATIONS

Table 3. Recognisable Toll-houses surviving in 1996 with additions and modifications

Parish	*Grid Ref.* All SO	*Location*	*Source*
ASTON INGHAM	669212	Lea Line	S
AYMESTREY	423636 (PL. XLIV)	Mortimer's Cross	B
BODENHAM	541517 (PL. XLV)	Saffron's Cross	B
BOSBURY	688428	Newhouse	B
BRAMPTON BRYAN	358727		S
BREDWARDINE	330449		S
BRIMFIELD	546682		S
BROMYARD	658544 (PL. XLVI)	Petty Bridge	S
BROMYARD	708535	Yearset	S
CASTLE FROME	673444	Stanley Hill	S
COLWALL	744403	Chances's Pitch	S
CUSOP	234423		S
HAMPTON WAFRE	584574		S
HENTLAND & HAREWOOD	525242	Tretire	S
HEREFORD	506401	Barton	B
HOPE-UNDER-DINMORE	512531 (PL. XLVII)		S
KINGTON	303569	Sunset	B

KINGTON	299564	Kingswood	B
LEDBURY	700373	New/Bye St.	S
LEOMINSTER	495589 (PL. XLVIII)	Sandpits/Ryelands	B
MADLEY	394390	Chilstone	S
MUCH DEWCHURCH	483312		S
ORLETON	512682		S
PIXLEY	652404 (PL. XLIX)	Cinders	B
RICHARDS CASTLE	510726 (PL. L)		S
STAUNTON-ON-ARROW	341613	Broadford	B
STOKE EDITH	602410		S
STRETTON SUGWAS	459418 (PL. LI)	Brockhall	S
TITLEY	331591	Shawl	S
UPPER SAPEY	690643		S
WEOBLEY	390497	Ivy Turnpike	S

B = Bryant's map 1835 S = Field-name Survey

TOLL-HOUSES NOT SHOWN ON FIELD-NAME SURVEY OR BRYANT'S MAP, 1835

A little explanation is necessary concerning 14 toll-houses which have not shown up on either the Survey or Bryant's map. One could assume that they were built later than the Survey or Bryant's map, but proof of this has not been found in all cases. Recognisable toll-houses exist at 8 sites. (Table 4).

In Bromyard, Churchyard, and Sheep Street have gone but The Down and Sandy Cross still exist and were sold on 30 October 1875.

At Kington, toll-houses survive at Floodgates, Headbrook and Hergest. David Viner in his paper on 'The Kington Turnpike Trust (1756-1877) and the Kingswood Toll-house' published in the *Transactions,* XLV (1987), 733-42, states that Floodgates and Hergest date from 1857 replacing Church (Old Kington). Hergest and Church were sold 1 April 1878. Headbrook is referred to in an indenture of 28 May 1837 as 'a messuege cottage or dwellinghouse ... lately erected ... by Thomas Griffiths,' the Trustees of the Turnpike Trust (Kington) paying an annual peppercorn rent.

Under Presteigne Turnpike Trust, Corton was built post-1873 and was valued for sale along with Birtley and Wooferton Chain on 4 October 1877.

Coldborough was needing repairs in 1851, Elms Green was sold on 6 October 1869 and Red Witchend was sold on 25 October 1875.

No information has been found regarding the toll-house at Shelwick.

Table 4. Recognisable Toll-houses surviving in 1996 with additions and modifications not shown on the Survey or Bryant's map, 1835

Parish	*Grid Ref.* All SO	*Location*
BROMYARD	673548	Down
BROMYARD	676569	Sandy Cross
KINGTON	285571	Floodgates
KINGTON	303564	Headbrook
KINGTON	287562	Hergest
LINGEN	367689	Birtley
MUCH COWARNE	620478	Red Witchend
ORLETON	520684	Wooferton Chain

Table 5. Toll-houses known to have existed, but not shown on the Survey or Bryant's map, 1835, and not surviving in 1996

Parish	*Grid Ref.* All SO	*Location*
BROMYARD	655548	Churchyard
BROMYARD	654547	Sheep Street
HEREFORD	527429	Shelwick
LEOMINSTER	502564	Elms Green
PRESTEIGNE	321634	Corton
UPTON BISHOP	631286	Coldborough

CONCLUSION

The aim of this paper was to use the Field-name Survey to see if the field-names were indicators for the existence and survival of toll-houses. Bryant's map of 1835 was used as a second source with the two documents providing a base dating from the second quarter of the 19th century.

The various acts mentioned gave a picture of the road system in the county. The few plans of the houses, the information in the Order and Minute Books and the details from the sale particulars have thrown some light on the size and the standard of accommodation of the buildings. The census returns gave details of the people and their families living in them.

No attempt has been made in this paper to study the administration of the turnpike system i.e. the toll charges, the amount of money collected and how it was used, or the trustees who were responsible for carrying out the rules and regulations laid down in the acts.

The documentary evidence found has been invaluable and for the sake of clarity has been written in what is virtually note form. The toll-houses were single and two storied buildings. The appearance of the single-storied ones resembled lodges to country houses. New ones were being built in the 1830s, for example Poplands in 1837 and Dishley (Sandpits, Ryelands) in 1835, as well as Hownall in 1853 and Corton in 1873 when the railways came.

With the end of the turnpike system in sight many buildings were not kept in repair. As the road system was constantly being improved many were in vulnerable and hazardous locations. Hence many became derelict and were candidates for demolition like those that had been built projecting into the road.

The two main sources have proved fascinating in making it possible to discover where the toll-houses stood. When visiting the sites one realises why so many have gone and at St. Owen's Cross (SO 539248) a local resident said that the toll-house there was knocked down by an American tank during World War II.

Of the 147 sites listed, 31 toll-houses although much altered but with some recognisable features survived in 1996. (Table 3). This is over 20%, a worthwhile statistical sample. Of the 30 survivals 21 were shown on the Field-name Survey and the other 9 on Bryant's map. The Survey showed more than twice the number on Bryant. The Field-name Survey

is therefore an indicator for the study of toll-houses and the turnpike age which lasted from the early 18th to the third quarter of the 19th century.

Taking into consideration the 14 toll-houses which have been found mentioned on p. 430 and the survival of 8 of them (Table 4), it means that a total of 161 sites have been visited of which 38 toll-houses with recognisable features survive, a 23.6% survival.

ACKNOWLEDGEMENTS

I am grateful for the use of the various records at the Hereford Records Office which have provided much background information. Also I thank my husband for travelling with me around the county visiting all the sites and photographing those toll-houses which still stand.

APPENDIX

The Leominster act of 1728 laid down a turnpike road from Leominster to Docklow and in 1752 the Bromyard act laid down one from Bromyard to Half Ash in Docklow, thus the two roads meeting at Docklow, actually in Hampton Wafre parish. Along the stretch of road from Bromyard to Docklow (Hampton Wafre) between Bredenbury and Docklow there was a toll-house and gate at Bilfield, no longer there. In the *Hereford Journal* of 22 October 1828 the following account of an accident which took place between the two gates gives some idea of the wheeled transport system before the emergence of the train, the car and the plane.

> 'An accident of an alarming, but, happily of no very serious nature, occurred to the Leominster and Kington mail, on Monday s'nnight, when descending the steep pitch approaching the Blithfield (Bilfield) turnpike, between Bromyard and Leominster, one of the horses proved refractory, and the driver (not the regular coachman, who is unwell) from no want of skill or care, was unable to clear the gate, consequently, the splinter bar caught the post. The concussion was so great that the pole was wrenched out, the traces snapped, and the horses completely detached from the carriage. The coachman, and three out of the four passengers, were unseated; the former, and one of the latter (a female) only were hurt, and they, fortunately, but slightly. The guard, perceiving the danger, had got down before the shock. The horses went on with the pole etc. to the next gate, where, we understand, one of them fell, and was so much lacerated that it is expected it might be destroyed.'

SOURCES

Acts of Parliament, Turnpike Trusts.

Blue Mantle Hall, 1758. (See 1824 act, personal copy).

Bromyard, 1752, Hereford Record Office (H.R.O. hereafter), K38/Ce/vi/13.

Hereford, 1726, H.R.O. K38/Ce/vi/6.

Hereford, 1730. H.R.O. K38/Ce/vi/9a, 9b.

Hereford, 1772, H.R.O. J74.2.

Hereford, 1789, H.R.O. J74.1.4.

Kington, 1756, H.R.O. D74/6.

Ledbury, 1721, H.R.O. K38/Ce/vi/5.

Leominster, 1728, H.R.O. K38/Ce/vi/8a.

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Ludlow Second, 1756, Shrewsbury Record Office

Presteigne, 1767, see Viner, ref. 8 these *Transactions,* XLV (1987), 742.

Bredwardine Bridge Trust, Minute Book, 1888-94, H.R.O. AA70/2.

Bredwardine toll-house sale, 1879, H.R.O. AF57/3/16.

Bromyard Turnpike Trust, Order Book, 1775-87, H.R.O. D95/1.

Bromyard Turnpike Trust, Order Book, 1787-93, H.R.O. D92/2.

Bryant's Map, 1835, H.R.O. T70/27.

Census Returns, 1851, various parishes in Herefordshire, H.R.O. H.O./
Hereford Journal, 28 November 1827, 22 October 1828.

Herefordshire Field-name Survey (*c.* 1836-45) by members of the Woolhope Naturalists' Field Club at H.R.O.

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J. Richardson, *The Local Historian's Encyclopedia* (1986), 169-70.

Ross Turnpike Trust, Minute Book, 1838-54, H.R.O. Q/RWE/33.

Toll-house Plans, H.R.O. A63/III/42/23. F76/9/14. G2/III/16a. W24/1-3.

Toll-house, Sales, H.R.O. Herefordshire Quarter Sessions (Q.S. hereafter), Enrollment Books (1870-8), Q.S.Q/CE/1. Q.S.Q/CM/4. H.R.O. N41/Boxes 2515 and 2857 (not calendared). H.R.O. AA70/14. H.R.O. 57/3/16. H.R.O.Q.S. Q/RD/1/9.

D. Viner, 'The Kington Turnpike Trust (1767-1877) and the Kingswood tollhouse,' *Trans. Woolhope Natur. Fld. Club,* XLV (1987), 733-42.

Whitney and Bredwardine Turnpike Trust, conveyance 1878, H.R.O. AF/57/3/16.

Wyeside Turnpike Trust, Minute Book, 1849-79, H.R.O. AA70/14.

The Herefordshire Field-Name Survey

By RUTH E. RICHARDSON

INTRODUCTION

It is probable that every used piece of land has, or had, a field-name in order to allow for ease of designation when working or visiting the site. The majority of these names concerns the quality of the soil, shape of the field, prevalent vegetation and agricultural use. Therefore, they can demonstrate changes in the landscape, tracing features, pond sites and survivals such as natural woodland. A minority of names preserves the history of the fields giving ownership names, some of which can be confirmed from other sources, or by recording significant events, which may be less easy to verify.

The archaeological field-names are relatively few but can provide indicators that show an area is worth investigation. A significant field-name does provide a statistical probability of the existence of a feature. They are, therefore, an archaeological tool to be used with evidence gained from fieldwalking, geophysical surveying and aerial photography. However, while place-names have been studied, little systematic use has been made of field-names mainly because they are not easily available for larger areas.

The primary source for field-names in the county of Herefordshire is the tithe maps and accompanying schedules, or apportionments, which resulted from the Tithe Commutation Act of 1836. The Herefordshire survey was produced between 1838-46, a very narrow date range which not only provides a 'snap-shot' of the county but also allows the field-names to be systematically compared. Some counties already had enclosure maps so did not warrant a full survey. Herefordshire had few enclosure awards though the Woolhope Group used these to supplement the tithe survey where necessary. Indeed, as the field-names for every parish have now been published, Herefordshire has the first complete coverage readily available for any county in Britain.

METHOD OF COLLECTION/PART I: All involved were volunteers and the organisation followed a set procedure.

(a) Tithe maps are so large that comparing more than two is impossible. Therefore, the maps were redrawn to a uniform, and reduced, scale of 6 ins.: 1 mile by Geoff. Gwatkin of Ross, a cartographer. This allows comparisons between parishes, and with ordnance survey maps, so the actual fields can be located.

(b) Volunteers copied the field-names from the original schedules in Hereford Record Office.

(c) Each parish list was then checked. Each was then typed and the typing checked.

(d) Lists of the parishes were sent particularly to the parochial church councils and schools of the newly available parishes. Once orders were taken, the master copies were taken to the county council offices at Nunnery Wood to be printed; they were able to cope with the largest maps. A working party was then convened to make up the booklets. The

team worked so well that by the last years the procedure could be put into operation by a telephone call. Indeed, a survey of this size could not have succeeded without such quiet efficiency.

Those involved in the publication throughout included: myself, Clarence Attfield, Beryl Harding, Graham Sprackling, Elizabeth Taylor and Mary Thomas. Monica Beavan, Ivor Lesser, Muriel Tonkin and Ruth Wride typed many parishes. Sue Hubbard and the staff of Hereford Record Office helped. A full list of those who collected the field-names and gave additional help when needed will be available in Hereford Record Office. The committee wish to record their appreciation.

PUBLICATION DETAILS: Publication began in 1987 with nineteen parishes, more being added annually, usually twice a year, until all were published in the autumn of 1993.

number of people involved - 118 (collecting/publishing)

number of fields copied - 125,367

number of parishes/townships - 260, in 222 booklets

cost - from £1.25 to £4.50 per parish (total set £542)

number of booklets sold - 8,500 + (sales continuing)

PURCHASERS INCLUDE: Several full sets have been sold to e.g: the Archaeological Service of Hereford and Worcester County Council, The English Place-Name Society, Hereford Record Office, The Bishop of Hereford's Library and Hereford Sixth-Form College. Local parishes have been bought by libraries, schools, parish councils, parochial church councils, landowners, farmers and the general public. The low cost has encouraged people to send in older, and additional field-names for the second part of the survey - to discover the age of the recorded names.

PART II: This is recording field-names from other sources such as wills, deeds, sales documents, leases, etc. The information is published regularly in the *Transactions of the Woolhope Naturalist's Field Club.* People are asked to provide

field-name found / its date / source / location using tithe number

The information is required whether the field-name is the same as, or different from, the tithe field-name as only in this way can the ages of the field-names be properly assessed. This part of the survey is on-going and the accumulating information, which may have been collected as incidental to other research, will provide an increasingly important resource.

THE BRITISH ARCHAEOLOGICAL AWARDS: The group wished to publicise the potential of field-names to a wider audience. Field-names provide extremely varied information about the landscape and so can be of use in many disciplines. The British Archaeological Awards provide a forum for attracting the attention of archaeologists, winners being published in

Current Archaeology. In 1994 The Herefordshire Field-Name Survey was entered for the Awards and won the prestigious Graham Webster Laurels, part of The Pitt-Rivers Award, presented for educating the general public in archaeology. On behalf of the group, Ruth Richardson was delighted to receive a beautiful plate, on display in Hereford Record Office, and a cheque from The Robert Kiln Trust which will be used primarily to encourage aerial photography in the area. The ceremony took place in York and was followed by a Civic Reception at The Mayor's Parlour in Hereford. This was covered by *The Hereford Times* and *The Hereford Journal.* Subsequently, articles appeared in *Current Archaeology* (Nov. 1995) No. 145 and in *Local History Magazine* (Nov-Dec 1995) No. 52.

ANALYSIS: The group decided to carry out an analysis of chosen field-names to demonstrate their potential. The following papers show clearly the variety of information that can be elucidated from them. They include field-walking to examine the instance of a particular name, examination of a name / names in an area, and examination of a group of names over the whole county. Approaches vary according to the nature of the field-name(s) and the individual method chosen. Similar analyses could be carried out to examine, for example, natural features and agricultural practices. As field-names are diverse, so is the information that can be obtained from them. The Woolhope Group hopes these papers will encourage others to utilise this invaluable resource that has been bequeathed directly to us from the past.

The Relevance of Field-Names to Bell Archaeology

By JOHN C. EISEL

INTRODUCTION

The study of church bells encompasses many aspects: there are the bells themselves, there are associated artefacts such as fittings and frames, and there are the founders. One of the most interesting periods is the 17th century. The English art of change ringing had its origins somewhere about the beginning of the century, and its spread stimulated a demand for bells to be recast and for rings of bells to be augmented in number. Thus the first part of the century, up to the start of the Civil Wars, was a golden age in English bell-founding, and it is true that there were more bell-founders working during that period than either before or since.

Bells are heavy objects, and, with the poor state of the roads at that period, were difficult to move long distances. That being so and given the relatively simple technology used, it was easier in many cases for the bell-founder to cast the bells near to where they were required, particularly in a rural area. In some cases the casting actually took place in the body of the church or in the base of the church tower,[1] in others the churchyard was used,[2] while sometimes in a rural area a nearby field was the site.[3]

The object of the present study is to investigate the significance of field-names that incorporate the name 'bell' or have related names, to see if the use of such a name indicates possible sites where bell-founding took place. The basic material was taken from a search of the Herefordshire Field-Name Survey, although other material has also been used, and the names that have been identified are given in Appendix A.

DISCUSSION OF FINDINGS

It is, of course, possible for the name 'bell' to be applied to a field for reasons other than bell-founding. Thus the name *Bell Rope Acre* is comparatively common, given to a piece of ground that has been charged with supplying ropes for the parish church. An example of this is at Eardisley, where such a piece of land was situated in a field called the *Channels,* charged with providing three new bell ropes annually for the parish church.[4] Another possibility is that the name refers to an endowment to pay for a bell to be rung at certain times. Formerly the tenant of *Bell Acre* in Aymestrey parish paid 16s. (80p.) to the sexton of Aymestrey for tolling the night bell at 5 a.m. and 8 p.m. from the feast of All Saints until the Purification of the Virgin.[5] Such a charge on a field as those quoted above may be the explanation of some of the outlying bell-related field-names, such as those at Bishop's Frome, Bosbury, Burghill, Dorstone, Kimbolton, Leysters, and Mathon. On the other hand, it is possible that the field may be named after a previous owner, and it would not be too surprising to find an example where it had been owned by a Mr. Bell! And certainly this is the most likely explanation of the name Brazier, occurring in Ledbury parish,

but away from the town itself. There is also a *Brazier's Orchard* in Tedstone Delamere parish, in this case near to the church.

A field in Eardisland parish with the name *Tin Meadow* is about one and a half miles W. of the church, and it seems unlikely to be connected with bell-founding. Another example of this name is discussed in more detail below.

A field called *Clappers* in Hentland parish would seem to be getting closer to some bell connection, but more probably this is a reference to the custom of employing children to scare away birds from arable land by clapping their hands: the same name occurs in Wormbridge.[6] In the parish of St. Weonard's is a Furnace House, and *Furnace Hill,* but the furnace in this case was for iron founding.[7] Similarly, Furnace Farm in Walford and *Furnace Meadow* in Welsh Bicknor are much more likely to be related to iron founding than bell-founding.

Two other names that were discovered do not relate directly to the current investigation, but call for comment. In Marstow parish was a field with the name *A-la-Belling,* for which I can offer no explanation. At Almeley was an area designated *Six Bells,* including the Six Bells public house. It is not uncommon to find a public house named after the number of bells in a nearby church: occasionally when the number of bells in the church was increased, the name of the public house was not altered. Near to Cheltenham parish church is a public house called the Eight Bells, a reference to the fact that there has been a ring of eight bells in that church since 1697. This ring was recast in 1823, augmented to ten in 1833, and finally to twelve in 1911. Thus the public house received its name before 1833. A slightly more local example of such a happening is at Llangatwg, near Abergavenny, where the ring of bells was augmented from six to eight in 1886, but a private house in the village is still named 'The Old Six Bells.' What makes the Almeley name surprising, is that at the time there was a ring of five bells only, cast by Thomas Rudhall in 1773, and a sixth bell was not added until 1930.

Having disposed of most of the examples found, there are two which merit further attention.

MARDEN

The first of these is at Marden, where on the S. side of the churchyard was an area called *Bill Fields.* This name is a corruption, as an estate map of *c.*1720[8] shows the field was formerly divided into two parts, named *The Bell Field* and *Bell-Field Meadow,* both of which formed part of the demesne. In view of the known fact that a bell was sent from Holmer to Marden to be recast in 1621,[9] and that three of the Marden bells were themselves recast in 1622, it seems most likely that the field-name indicates the site of the temporary foundry: the field is rather large for an endowment for ropes or for ringing a bell.

With this in view, the field was walked to see if there is still any evidence visible. Marden parish church occupies a low-lying site on the E. bank of river Lugg, surrounded by a graveyard which rises to the E. of the church. The field that was formerly called *The Bell Field* lies to the S. and E. of the churchyard. The W. side of the field is low-lying, and is part of the flood plain of the river Lugg: along the river bank is a modern levee,

extending N. through the churchyard and acting as a flood barrier. There is a bank partly parallel to the levee, rising from the flood plain to the W. part of the field which is at a higher level. This bank is a continuation of the rise in level in the churchyard and gradually slopes down to the S. About fifty yards S. of the churchyard fence there is a substantial disturbance just below the crest of the bank with disturbed soil spilling down the bank. Subsoil is visible on the surface and so the disturbance is of some depth: there was no sign of ashes or other burnt material.

At first consideration it would appear that the flood plain of the river, being slightly closer to the church, would have been the most likely place to have a temporary foundry, but this is not so. The furnace was no doubt constructed at ground level, and to enable the molten metal to flow into the moulds by gravity in the usual manner, the moulds were made in a pit and then earth was rammed round just before the bells were cast. Now on the flood plain the water-table is about two ft. below the surface, as can be seen from a well in the churchyard, and so if the bells had been cast in a pit on the flood plain this would have filled with water, with disastrous consequences.[10] Thus the disturbance at the top of the bank is a far more likely place, being above the water-table, and the furnace could have been at the top of the bank with the moulds buried just below the crest.

PEMBRIDGE

The second site is at Pembridge, where there is a *Bell Orchard* about a third of a mile N. of the church, just over the river Arrow. The distance from the church seems to be rather great for this to be a bell-founding site, but it was part of *Tin Meadow,* which suggests a connection with bell-founding. Interestingly, it has already been suggested that bells had at one period been cast in Pembridge. The present church clock was installed in 1889, and when excavations were made for an extension to the clock weight pit, what were thought to be remains of a furnace were found at a depth of about three ft.[11] This was not apparently properly excavated, and it does seem remarkable that a furnace was constructed within such a vulnerable wooden structure. One possibility is that the furnace predated the present 13th-century structure. On the other hand, in 1658 John Martin of Worcester cast at least three bells for Pembridge, and there is at least the possibility that he cast them in Pembridge, either in the tower or in what is now *Bell Orchard.*

Accordingly, the area that was formerly known as *Bell Orchard* was walked. However, it was difficult to find exactly where this was, as the hedges had been pushed out and several fields made into one. At the time that it was walked a crop of maize had been silaged, and the bare soil was exposed. However, ploughing had eliminated any sign of earthworks - if there ever had been any - and there was no sign of discolouration in the soil from ashes. And so any connection with bell-founding must remain purely conjectural.

TAILPIECE

It is appropriate to close this discussion with a disappointment. It is known that in 1631 there was a foundry in Orleton parish: the churchwardens' accounts of Clunbury,

Shropshire, are quite clear that a bell was sent to be recast at Orleton in that year, and it is known that the itinerant founder Richard Oldfield was in the area at the time (he cast a bell for Munslow in the following year) so it seems that he was the founder of the Clunbury bell. Regretfully no field-name suggestive of bell-founding was found in the apportionment for Orleton parish. The inference is that Oldfield perhaps took over premises in Orleton itself to do his founding. It seems unlikely that the foundry at Orleton was very long-lived, and it is known that Oldfield was casting bells in Ludlow in 1639/40.[12]

NOTES AND REFERENCES

[1] A documented case occurred at Kirkby Malzeard, Yorkshire. The churchwardens' accounts show quite clearly that in 1591 a bell was cast inside the church. (Ellacombe, *Bells of the Church* (1872), 479).
Excavations at Wharram Percy, Yorkshire, uncovered a bell pit in the middle of the nave, conjectured to date from 1617. (*Current Archaeology,* 49 (1975) 44-5).
A late example occurred at Llantrisant, Glamorgan, where Evan Evans of Chepstow cast a ring of six bells in 1718. When excavations took place in the base of the tower in 1894, a temporary furnace and remains of the moulds of the bells were found. Part of one of the cores found was measured and correspond to one of the bells in the tower. (*Archaeol Cambrensis* (1894) 323).

[2] There is some evidence to suggest that the bells of Clun, Shropshire, were cast in the churchyard at some period, possibly when John Martin of Worcester cast a ring of five bells for the church in 1668. (Mead, *A Short History of Clun Church Bells* (1916), 10, Eisel, *The Ringing World,* (1994) 278).
There has been a recent discovery (October 1993) of a bell-casting site inside the existing tower at Sevenoaks, Kent, but outside the former wall of the church. (*Inf. ex* Miss D. Colgate, Sevenoaks).

[3] The ring of six bells at Martley, Worcestershire, cast by Keene of Woodstock in 1673, are traditionally said to have been cast in a field adjacent to the church. (Walters, *Church Bells of Worcestershire* (1932), 172). I was unable to see any evidence of this on a recent visit and the nearest field is rather low-lying.

[4] Hereford County Record Office (HCRO) Ref. E29/28. The tithe map shows that the river ran through this field, hence the name. While the date of endowment is not known, the number of ropes indicates it was almost certainly before 1708 as in that year Abraham Rudhall I cast a ring of five bells for Eardisley.
A similar situation pertained in Thruxton, where an acre of land, called *Bell-Acre* and situated in a field called Windmills, was given towards the buying of bell ropes. This was subsequently enclosed with the glebe land. (HCRO Ref. AR4/75)

[5] In 1864 this money was given to anyone who would ring the church bell at 8 a.m. and 6 p.m. between 5 November and 25 March. Since it was not possible to get anyone to ring for such a small amount, it was suggested that the income be used to support the parochial school in the parish of Aymestrey: a letter in 1906 stated that it had never been used to support the school but applied to church expenses in the chapelry of Leinthall Earles. (HCRO Ref. F71/121)

[6] A reference to this custom is found in Flora Thompson's delightful book, *Larkrise to Candleford.*

[7] *Transactions Woolhope Naturalist's Field Club,* XLIII (1980), 89.

[8] HCRO Ref. J94/1 Sheet 18.

[9] Known only from an article in Holmer Parish Magazine, October 1922, quoted by Sharpe, *The Church Bells of Herefordshire,* 232. The information was apparently taken from Holmer churchwardens' accounts: these early ones have not been deposited in Hereford County Record Office, and may now not be in existence.

[10] An inadequately dried mould was the cause of a disaster in 1716. The bell-founder Matthew Bagley and his son, also Matthew, were casting brass ordnance at the Royal Foundry in Moorfields, London, in May 1716, when a mould exploded, the molten metal causing such severe injuries that both of the founders subsequently died, as did several other spectators. The accident was reported in the issue of *Flying Post,* 12 May 1716 and the burials are recorded in the registers of St. Giles', Cripplegate.

[11] Langston, *The Story of Pembridge and its Church p. 16.*

[12] Oldfield's work in Shropshire is discussed in Walters, *Church Bells of Shropshire* (1915), 436-7.

APPENDIX

PARISH	FIELD NO.	FIELD-NAME
ALMELEY		*Six Bells*
	470	*Six Bells Public House and Garden*

AYMESTREY (under LEINTHALL EARLES)	*204*	*Bell Acre*
	205	*Bell Acre*
	206	*Bell Acre*
BISHOP'S FROME	*825*	*Bell Field*
	823	*Bell Croft*
	823a	*Part of Bell Croft*
BOSBURY	*539*	*West Bell Moor*
	540	*West Bell Coppice*
	541	*West Bell Meadow*
BURGHILL	*503*	*Bell Orchard*
DORSTONE	*633*	*Upper Bell Meadow*
EARDISLAND	*833*	*Tin Meadow*
HENTLAND	*363*	*Clappers*
KIMBOLTON	*367*	*Bell Green*
LEYSTERS	*73*	*Bell Acre*
LEDBURY	*169*	*Braziers Orchard*
	597	*Braziers Croft*
MADLEY	*1525*	*Bells Acre Orchard*
	1527	*Bells Acre Orchard*
MARDEN	*663a*	*Bill Fields*
MARSTOW	*15*	*A-la-belling*
PEMBRIDGE	*279*	*Bell Orchard*
	280	*Tin Meadow*
ST. WEONARD'S	*725*	*Little Furnace Hill*
	727	*Furnace Hill*
	750	*Furnace House and Garden*
TEDSTONE DELAMERE	*134*	*Braziers Orchard*
WALFORD	*1491*	*Furnace Farm*
WELSH BICKNOR	*14*	*Furnace Meadow*
WHITBOURNE		*Bell House Farm (on 'Brinksty' Common)*
WORMBRIDGE	*79*	*Upper Clappers*
	80	*Lower Clappers*

Field-Name Survey in Relation to Lime-Kilns in the Golden Valley

By BERYL HARDING

Local researchers seeking lime-kiln locations have not always been able to rely on the Sites and Monuments Record (S.M.R.) but the Field-Name Survey has been a useful tool in rectifying this. For example, in Llanwarne the S.M.R. show none recorded whereas three were found in the Survey, similarly none were recorded in Much Dewchurch but eight were found, and in Peterchurch of the seven recorded two were inaccurate and fifteen more were found. The S.M.R. has now been updated.

Indication of lime production can be gleaned from an assortment of names such as *lime field; lime kiln field, wood* or *orchard; lime kiln piece* or *pleck; kiln wood* or *field.* However, the origin of such names can be varied. *Lime field* could be associated with the small leaved lime and indicate the remains of ancient woodland. More usually, *lime field* can be associated with very old boundaries, e.g. the Wormelow Tump boundaries of pre-Saxon Archenfield - as seen in fields *624* and *652* in Much Dewchurch parish. Or, from Roman estates, or from the edge of parish boundaries. Such names are derived from the Latin 'limes' or boundary. *Kiln fields* could be equally related to pottery making.

However, when lime and kiln are found named together there is little doubt as to its origin. Sometimes more than one field in close proximity has a similar name. This is often because the first kiln was near the quarry but when the stone source ran out the kiln has to be built nearer to routeways. The older field is often called *lime kiln piece* or *pleck.* Such changes occur more frequently in areas of cornstones where limestones of higher quality were later brought in from other areas.

Although Herefordshire is predominantly a county of Old Red Sandstone limestones also occur. Carboniferous limestone is found at the northern edges of the Forest of Dean and around Walford and Howle Hill. Silurian limestone occurs in the Woolhope Dome, also W. of the Malverns and in the Wigmore Dome. All of these were made from the decay and compression of lime-bearing organisms but the sandstone also has calcareous marls with bands and nodules of cornstones not formed in the usual manner but inorganically by the leaching of lime from upper rock layers. Their name 'cornstones' arose because their presence improved the fertility of the rather acid sandstone soils and because lime could be derived from them. Their lime content, however, is lower than in other limestones. Where marl was extracted for liming fields the name *marl pit field* can be found.

The Golden Valley is flanked by ridges containing bands of intermittent cornstone so seven parishes within that area were selected for this study, i.e. Abbey Dore, Bacton, Peterchurch, Dorstone, St. Margarets, Turnastone and Vowchurch.

Traditional kilns declined at the end of the 19th century once chemical fertilisers became available consequently remains are often scant and usually covered with vegetation. The arches are often the only visible remains. Some kilns have been robbed out by

the landowner and others have been bulldozed as they posed a hazard to livestock. A few are cared for today, some preserved and that at Fine Street, Peterchurch, proposed for scheduling. Thus location on the ground can be difficult. Sometimes relics of the old routes can be found as footpaths, or sunken green lanes.

Apart from the obvious uses of limestone for building and flux in iron-making, the extracted lime was used for whitewash and mortar (a great improvement on the clay mortar previously used), improving soils, reducing infections in hop and turnip crops, as well as in tanning. Another use has been discovered in the Monnow Street excavations in Monmouth which revealed a medieval double layered cooking pot with traces of lime between the layers. When water was added the heat generated helped to cook the food - perhaps this use was more widespread than hitherto realised.

The uses of lime were therefore diverse and sufficiently important that leases to tenants on the Chandos estates, *c.*1680-1730, frequently obliged them to buy lime or limestone from Howle Hill, also part of the estate, involving haulage up to twenty-five miles away. For example, to the 'lime burner William Lewis of Fowkewood of Monnington in the Straddle of Vowchurch' dated 1 June 1720. It is interesting to see that lime burning was still taking place some distance from the quarry. Other tenancy agreements show part payment of rent 'in half a load or tun of lime from Howle Hill yearly to the landlord, one Embry of Monnington' dated 3 February 1737-8.

LIME-KILN SITES IN THE GOLDEN VALLEY

PARISH	GRID. REF.	FIELD NO.	FIELD-NAME	SITE EVIDENCE
ABBEY DORE	SO 377353)	*38*	*Limekiln field*	Some remains
	)	*39*	*Limekiln rough*	near footpath
	SO 387332	*189*	*Old kiln field*	
	SO 393332	*249*	*Upper kiln piece*	
	SO 408352	*315*	*Limekiln field*	By footpath
	SO 398318	*515*	*Kiln field*	
	SO 397316	*843*	*Lime kiln field & quarry*	
	SO 397320	*561*	*Kiln field*	
	SO 378312	*658*	*Old kiln & quarry*	
	SO 378309	*659*	*Old land & lime kiln*	
	SO 370314	*677*	*Kiln piece*	
	SO 367309	*705*	*Kiln field*	
BACTON	SO 369335	*39*	*Limekiln field*	
DORSTONE	SO 335431	*761*	*Kiln piece*	
	SO 287416)	*318*	*Kiln piece*	
	)	*319*	*Kiln pleck*	
	SO 306411	*500*	*Kiln field*	
	SO 304411	*502*	*Quarry field*	
	SO 295414	*250*	*Kiln field*	
	SO 288424	*267*	*Kiln piece*	
	SO 319429	*717*	*Kiln piece*	
PETERCHURCH	SO 356395)	*79*	*Kiln piece*	
	)	*80*	*Kiln piece*	
	SO 333395	*374*	*Lime kiln piece*	Nr. Fine Street
	SO 351382)	*1088*	*Kiln field*	
	)	*188*	*In limekiln field*	Nr. Wilmaston
	)	*188a*	*In limekiln field*	& disused pit,

	SO 344397)	*194*	*In limekiln field*	narrow fields
	)	*183*	*In limekiln bank*	
	)	*190*	*In limekiln bank*	
	SO 354409	*37a*	*Limekiln piece*	By footpath
	SO 327376	*1169*	*Kiln piece*	
	SO 325399	*439*	*Kiln piece*	
	SO 330396	*365*	*Wood by limekiln*	Next to 367
	SO 344397	*184*	*Limekiln piece*	Nr. Wilmaston
	SO 342398)	*192*	*In limekiln field*	
	)	*191*	*In limekiln field*	
	SO 349388	*1016*	*Kiln piece*	By footpath
	SO 326377	*1169a*	*Lime kiln etc.*	Rd. Urishay Castle
	SO 331397	*367*	*Limekiln ground*	
	SO 326387	*739*	*Kilnfield*	
ST. MARGARETS	SO 338356	*152*	*Kiln field*	
	SO 353346	*537*	*Kiln field*	
		410	*Lime tree field*	By parish boundary
	SO 355319	*726*	*Kiln field*	
	SO 331367	*58*	*Quarry field*	
VOWCHURCH & TURNASTONE	SO 373373	*211*	*Limekiln pleck*	
	SO 367368	*311*	*Limekiln pleck*	
	SO 336365	*10*	*Kiln piece & limekiln*	
	SO 374378	*139*	*Kiln wood field*	
	SO 363370	*106*	*Lower kiln field*	
	SO 364373	*108*	*Upper kiln field*	

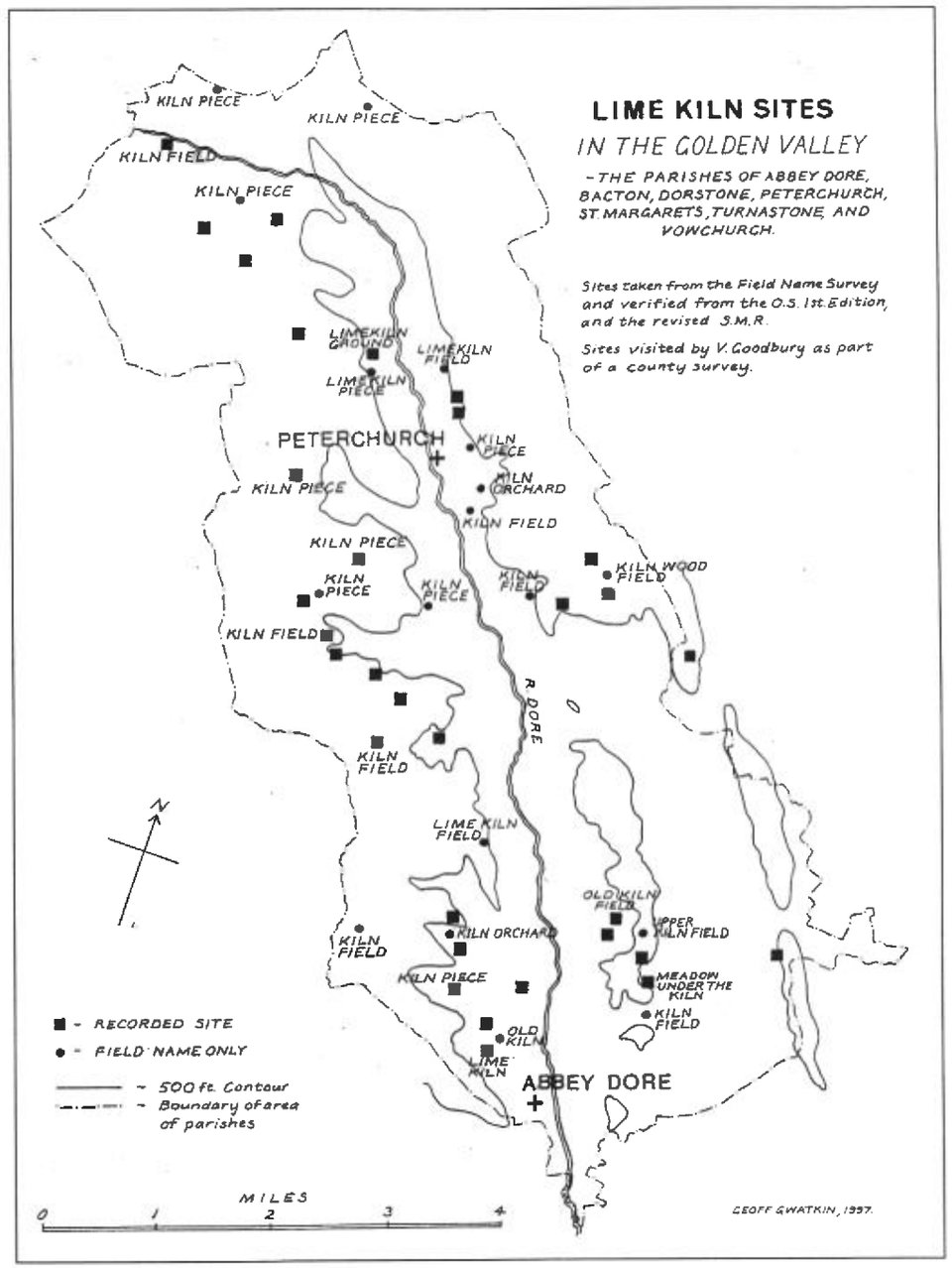


FIG.
Lime Kiln Sites in the Golden Valley.

Two Field-Names In The Royal Manor of Marden

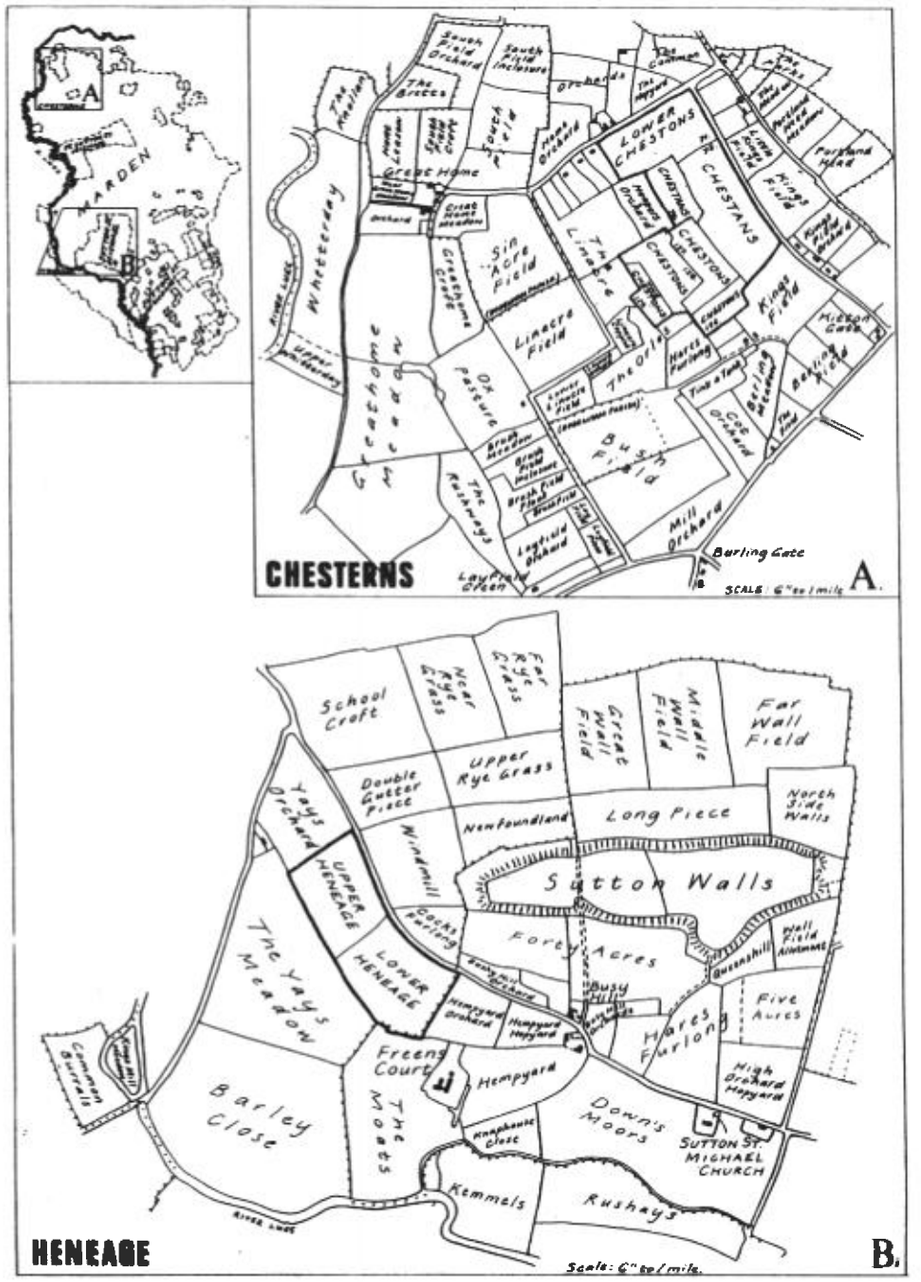
By JEAN O'DONNELL

The names *Heneage* and *Chesterns* appear in earlier sources than the Marden tithe map and indicate much earlier settlement. That of *Heneage* (SO 520460) is derived from *hen* (W) old and *geheag* (OE) enclosure, a compound name typical of the Welsh Marches. An earlier form *Hendre Aghes* 1247 is from *hendre* (OW) old homestead and *aghes* haga (OE) hedge or enclosure.[1] The later form is used on an estate map of 1720,[2] and in a terrier of 1617 where it is used for the road adjacent to the field, Heneage Lane.

Although the field-name is now in Marden parish the royal manor once extended over a much greater area which also encompassed the parish of Sutton St. Michael, with Sutton Walls hillfort and the sloping fields on either side, together with the medieval estate of Freen's Court, a deserted village site and St. Michael's Church which is of Norman foundation. The royal estate, which was ancient demesne in 1086, was divided by William I and small estates were allotted to his supporters. That of Sutton St. Michael with its two hides of land was given to Hugh D'Asne.[3] Later association with the Freens attached their name to the manor.

The hillfort of 12 hectares lies on a low gravel-capped hill. It was partially excavated by Dr. Kathleen Kenyon in 1941 and 1948, when pottery found was dated 25-200 A.D.[4] The site was the focal point of a chieftaincy which extended over the later hundred of Thornlaw. To the W., a recently discovered Roman villa on the W. side of the river Lugg in Wellington parish suggests that this territory was well-settled and farmed from the Iron Age onwards and when the hillfort was ploughed the villa(s) were built. The lands became a royal estate at the time of the Mercian advance; perhaps belonging to the ruler of the sub-tribe of the Magonsaete.

The homestead and old enclosure indicated by the field-name *Heneage* would describe a site recently identified from aerial photographs and supported by a detailed geophysical survey. It has been described as a magnate's residence. The survey showed buried walls of a substantial building oriented N.E./S.W. 25m by 8m. A second large building has been identified orientated N.W./S.E. and measures 30m by 10m. The post-holes and plan suggest a Saxon period hall together with a seven-roomed structure and an annex. The plan is similar to that of the palace complex at Yeavering in Northumberland which was excavated in the 1950s. In 1991 both medieval and post-medieval metalwork was found in the vicinity of the first building.[5] To the N. and E. of the residence lie the remains of Freen's Court, a medieval moated manor-house replaced by a 16th-century house. Around the site of the moat and fishponds, which were connected to the river Lugg, was a ditch and bank which formed a five-sided enclosure around the building and grounds.[6]



MAP A *Chesterns* a group of names in a square enclosure
B *Heneage* occupied a greater area closer to Freen's Court in 1720.
(Drawn by G. Gwatkin)

The field-name evidence was thought by Dr. June Sheppard to indicate the site of a royal palace from the Saxon period and taken with the recent archaeological evidence this appears even more probable. The importance of the site from an early period may provide the answer to the location of the murder of King Ethelbert by King Offa in 792 A.D. Tradition asserts that it took place at the King's palace at Sutton, thought to be the hillfort of Sutton Walls. The body was taken to a place near the river Lugg where a well gushed forth. The well exists within the church of Marden which is said to have been built by Offa over the site, endowed with lands and then given to Hereford cathedral. Extricating fact from fiction is not easy but the well is likely to have pre-dated this murder and may have been a sacred site from the Iron Age. A Celtic handbell was found in a pond near the church in 1848, evidence that a christian site existed before Offa's church.[7] The importance of the legend attached to Sutton does indicate that this royal murder did take place here and that Offa was in residence at his palace below the hillfort. The site was remembered as *Hendre Aghes* then *Heneage;* an example of a field-name supported by archaeology and folk-lore as an important Saxon complex.

The second name which appears on the Marden tithe map is that of *Chesterns* (SO 520500). It is also shown on the estate map of the Manor of Marden of 1720 near The Vern. It was part of an open-field system which contained *The Great King's Field, Senacre and Bush Field.* In 1720 the whole area was one of strip cultivation with a limited amount of amalgamation. *The Chesterns* is unusual at this time because it shows the remnant of a square boundary on three sides although fragmented within into smaller strips and enclosures.

On the tithe map the smaller fields have become *Chestans* or *Chestons*. The name Chester *ceaster, cæster* is held to indicate Roman fortifications or remains but none have been found. In the case of Woodchester the site is that of a Roman villa.

The name does merit more field-work and local people have a tradition that a Roman road passed by close to Kingsfield. The square boundary of *Chestans* makes it an intriguing enclosure.

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[6] Aerial photograph by Hartley 7.1990/90.35.15 & J. Pickering *The Times* Aug. 24 1991.
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Alternative Agriculture

By F. W. PEXTON

INTRODUCTION

Thirsk[1] has recently discussed the recurrence, over the past six and a half centuries, of periods of English agriculture which, in her view, had an 'alternative' element. Mainstream agriculture (the production of cereals and meat) was in decline during these periods, due largely to lower demand and lower prices for cereal crops. Thirsk has identified one such period as approximately 1650-1750, a time when writers on agriculture were encouraging landowners and farmers to introduce, or to increase production of, certain crops as alternatives to cereals; these crops being more likely to be in demand and to command higher prices. There is considerable evidence of a diverse response to this encouragement in many counties, including adjacent Gloucestershire and Worcestershire, but the present evidence for a significant response in Herefordshire appears to relate essentially to hops and to apples and their use in cider-making. Thirsk also believes that a further aspect of the 'alternative' element of agriculture during this same period was the establishment of deer parks, rabbit warrens and pigeon houses which became possible for a much wider section of society than hitherto. These provided alternative sources of meat for more people at a time when the price of grain was low and its loss, for example, to pigeons from their houses and from lofts inserted in other buildings (perhaps by the less affluent), was more acceptable. Many pigeon houses were built in Herefordshire during the approximate period 1650-1750 and a considerable number of them still remain.

In addition to new fodder crops many suggested alternative crops were for industrial use, for example flax, hemp, dye plants (such as woad and madder), tobacco and rape seed. Other crops suitable for human consumption included saffron, hops, vines and newer varieties of fruit and vegetables. In his *Herefordshire Orchards* (1657) John Beale, together with others, sought to improve the varieties of apple used in cider-making. Hops were probably introduced into Herefordshire in about 1550 and by the end of the 17th century were an important crop. Both apples and hops are important crops today (when, Thirsk believes, we are in another period of alternative agriculture) but both have survived periodic decline and resurgence. Jones,[2] in surveying Herefordshire agriculture from 1660 to 1815, has observed that 'Herefordshire agriculturalists were not ... dilatory in adopting new practices and new crops where these were suitable for the locality.' However, apart from references to the flax and hemp grown at the time of bounty payments (see later) and to rape seed 'as a widespread crop in the lowlands' shown by the 1801 Agricultural Returns, he does not refer to any of the other alternative crops previously mentioned.

The tithe apportionments for Herefordshire parishes of about 1840 refer to many fields as *Old Hopyard,* which could reflect some earlier, and perhaps recent, decline in hop-growing. They also provide evidence of hop-growing in 207 out of a total of about 250 parishes.[3] The reason for the prolonged survival in certain field-names of a name indicative of an earlier-grown crop, for example as in the old field-name *linacre* (which

presumably refers to the much earlier growth or use of flax in that field), is at present unclear. The continued association of a field, through its field-name, with a *structure* such as a pigeon house (though derelict or even destroyed) is more understandable. But, bearing in mind the relative isolation of Herefordshire until the early 19th century, it seemed possible that some unusual alternative crops could have been grown commercially in the period under review and even well beyond 1750, and that the field-names of the later apportionments of about 1840 could provide clues to the location of this growth. In fact, little field-name evidence has been found in the apportionments of the commercial growth of unusual crops. On the other hand, the field-names of the apportionments have revealed the approximate site of many previously unrecorded pigeon houses. The findings are now summarised.

FLAX AND HEMP

The cultivation and processing of flax and hemp on a relatively small scale for domestic purposes, for example in producing coarse linen, sacking and rope, is clear from a study of documents such as inventories. These documents often refer to the raw materials kept about a house and to spinning wheels, some of which were specifically intended for use with flax. Looms are rarely mentioned, perhaps because they were located elsewhere or were removed before an inventory was taken. *Owen's Book of Fairs* (1756) refers to the sale of 'coarse linnen cloth' at Weobley fair which might imply some local manufacture. Parliamentary legislation encouraged the larger-scale English-production of flax and hemp from the mid-17th century but only in the approximate period 1782-1797 was there any financial incentive. Bounty payments were then made through the Quarter Sessions for flax and hemp 'grown, broke and properly prepared for the market' and the payments for Herefordshire were advertised in the *Hereford Journal.* From these advertisements can be calculated the amount of processed flax and hemp which was produced and claimed in each parish. (The total amount of flax and hemp claimed for in Herefordshire in this period was about 335 tons, there being only a small amount of hemp. For further discussion of Herefordshire flax cultivation and processing see Reference[4]). Out of a total of 218 parishes for which the tithe apportionments were examined, flax-indicating field-names (e.g. *flax ground, flax orchard, flax close, flax meadow, flax ridge*) were present in thirty-one parishes and hemp-indicating field-names (e.g. *hemp ridge, old hemp yard, hemp orchard*) were present in fifteen parishes. In addition nine parishes had a field-name containing the prefix *lin* - as in *linacre,* suggesting a reference to flax (Old English: *lin* = flax, spun or woven). There is little correlation between the claimed amount of flax produced in a parish in the bounty period and the occurrence of a flax-indicating field-name in the apportionments of that parish fifty years later. For example, of the twenty-nine parishes where more than 500 stone was claimed (maximum 2286 stone for Kington) only four parishes (not including Kington) have a flax-indicating field-name. Conversely, of the thirty-one parishes having a flax-indicating field-name, in only seven of these parishes was bounty claimed for more than 300 stone. However, evidence of the continuity of a flax-indicating field-name is illustrated at Monnington where the same field is named *Flax ground* (SO 364448) in both a 1771 estate map and in the apportionments sixty-six years later. As to the processing of flax there is little evidence of the initial wet-stage of retting which was best performed in running water but more often was performed in pits in order to avoid pollution. At Kingstone is *Flaxmore orchard* (SO 417346; *Flaxmear* in 1587) and at Middleton-on-the-Hill is *Gig orchard* (SO 570637) which may have been the site of the subsequent drying process. Clearly the field-name evidence is of little help in estimating the extent of commercial flax and hemp cultivation in Herefordshire in the period under review against the background of cultivation for domestic use.

SAFFRON

Duncumb[5] stated in 1805 that 'considerable quantities of saffron were formerly produced in this county and in the gardens situated in the suburbs of Hereford... . Its culture however has long been discontinued here..... but the purple crocus (*colchicum autumnale*)...blossoms in the meadows by the Wye.. .' There is a reference of 1582 to a saffron garden in the Vicars' Choral at Hereford[6] and saffron appears to have been grown here commercially until the early 17th century. The saffron of commerce, for use as a flavour, herbal medicine and colourant, consists of the dried stigma of the *crocus sativus.* Its production is very labour-intensive and it is most likely to have been grown near to relatively large communities. There are saffron-indicating field-names in eight parishes of the tithe apportionments. Abbey Dore, Clifford, Little Birch, Much Birch and Weobley each have a *Saffron meadow;* Blakemere and Ross each have a *Saffron close;* and Pencombe has *Saffern coppice* and *Saffron.* Except for the Ross example, all of these fields border a stream or a lake and are some distance from a village centre. In the absence of other evidence it therefore seems more likely (with the possible exception of the Ross example), that these field-names reflect the wild occurrence of *colchicum autumnale* rather than the earlier commercial cultivation of *crocus sativus* for producing saffron.

OTHER INDUSTRIAL CROPS

There is surprisingly little field-name evidence of the growth of other industrial crops. At Burghill, *Dyers leasow* (SO 460460) may indicate a dye crop, dyeing activity or a personal name. At Peterchurch *Gaudy Moors meadow* (SO 350390) may indicate the growth of the dye crop dyers' greenweed. At Bridstow, *Tobacco meadow* (SO 575335) adjacent to the river Wye may indicate the growth of tobacco. Although the growth of rape seed in the county in the later 18th century has been recorded, the only possible field-name reference is *Oil field* (SO 320420) at Dorstone.

VINEYARDS

Homes[7] has listed thirty-five possible sites of vineyards in Herefordshire based primarily on a study of the field-names of the tithe apportionments, and he refers to them as 'possible medieval vineyards.' It must be a possibility, however, that some were of later date in view of the known cultivation of vines by George Skyppe at Ledbury at the end of the 17th century.[8]

PIGEON HOUSES

Although the stone pigeon house at Garway, dated 1326, and the pigeon-holes in the 13th-century tower of Sarnesfield Church, are amongst the earliest examples of their respective type in England, the majority of the Herefordshire pigeon houses standing today were built of brick or with a timber frame in the late 17th century and the 18th century. A 1979 Survey by Stainburn[9] describes most of those that are still standing and a number which are known to have disappeared. The field-names of the tithe apportionments provide a source of many pigeon-house sites which are otherwise unrecorded. The discovery of the foundations of a circular stone pigeon house in *Pigeon House meadow* at Instone was reported in these *Transactions* in 1894.[10] An investigation of all Herefordshire parishes is in progress[11] but two parishes are exemplified here. Burghill has four recorded pigeon houses, two surviving and two destroyed. A further pigeon house previously existed near to Burlton Court as indicated by field-names *Pigeon House field/corner* (SO 487443). Yazor has one surviving pigeon house at Foxley. Two further pigeon houses previously existed, (1) at Yarsop House as indicated by the field-name *Pigeon House close* (SO 410473) and (2) at Yazor Court as indicated by the field-name *Pigeon House bank* (SO 404464).

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Field-Names with possible Roman Connections

By RUTH E. RICHARDSON

There is a reason for every field-name so all are worth investigation. The majority of the 125,367 field-names, in 260 parishes/townships, known from the tithe maps recorded between 1838 and 1846, are descriptive names indicating quality of land, vegetation, agricultural practice, shape and topography. A proportion preserves something of the history or archaeology of the site. The more recent the designation the more easily is it checked. Nevertheless, field-names indicating very early use may still exist.

Field-names preserve something important about a piece of land which allowed an individual field to be identified. A farmer could leave word of where he could be found if needed. He could easily note which fields had been worked according to agricultural requirements. However, an important result of such practices was the recording of the state of the field. Field-names provided a mechanism for information to be passed to future generations - a *stony field* could break the plough! As this was not an esoteric exercise but a practical farming guide developed over time, most field-names concentrate on any factors which would affect yields or choice of crops. This is especially true of the earliest field-names, the relatively few preserving historical associations being mediaeval or later.

Two notes of caution need to be mentioned. Firstly, it is likely some fields have become sub-divided. If a name was given to a particular field it is always possible that it was perpetuated attached to only a portion of the original. If the name refers to a condition like soil, or a survival like a Roman road, or indeed anything peculiar to what was once a part of a field, then it is a possibility that the name survived attached to the 'wrong' portion. This is why it is always useful to examine an area around a field-name and not just one modern field. Secondly, it is possible that a field-name may have more than one derivation and, therefore, the origin may not always be the same as other similar names. The most likely alternative meaning is as a personal name. The earliest reference needs to be found if possible.

> The reason for a particular field-name must always predate its first use for that particular field. Therefore, the age of the field-name is crucial.

However, in the absence of secure documentary evidence, the statistical probability of a meaning based on the examination of a number of field-names with the same name can be suggested - though caution needs to be exercised for an individual field-name which may have been given for a unique reason.

HEREFORDSHIRE FIELD-NAMES INCLUDE:

Group I - *wall* 81 instances; *stone* 101; *black* + *another name* 75;

Group II - *street* 42; *chester* 8; *blacklands* 9; *eccles* 7;

Group III - *cinder* 10; *coldharbour* 5, with the possibly associated *harbour* 11; *portlporch* 18; *-wardine* 8; *camp* 97; *castlefield* 17.[1]

GROUP I: Examining these for a possible pre-mediaeval origin is difficult for *wall, stone* and *black + another name* as the meanings[2] can be diverse.

WALL, 81, from Old English *wall / weall,* meaning wall, 'mostly referring to ancient forts, especially Roman forts or walls;'

or O.E. *wael,* a deep pool/whirlpool; or O.E. *wald, weald,* forest, woodland;

or from a personal name: or even O.E. *walh, wealh,* Briton/serf.

STONE, 101, O.E. *stan/stanas,* meaning stone or stones. 'The exact meaning is generally obscure.'

BLACK + ANOTHER NAME, 75, often descriptive of a marsh/peaty pool/wood/etc.

Without other evidence, there is no way of deciding which meaning is applicable for an individual field-name. These are also names which could be given at almost any time so they are not period specific. However, a cluster of significant field-names does indicate that a particular area is worth further investigation. With regard to early field-names, any of this group could mask a Roman site. Nevertheless, there is no certainty - a *wall field*[3] near a known Roman road could still arise from other meanings and a *stone field* could be a natural feature or have arisen from stones accumulated in a much later period. One must beware of circularity of argument - of claiming one field-name must provide authenticity for another field-name - and one must be aware of sites being reused, or built over, in other periods.

GROUP II: These field-names are rare. *Street, chester* and *eccles* are words that were not in common currency when they first appear to have been used. It is suggested that *blacklands* should also be included here. If field-names were not readily understood beyond a particular period then their continued use becomes traditional. Some fields, and places, will change names but no other fields are likely to have been given these names in later periods.

STREET, 42, from O.E. *straet/stret,* meaning street/Roman road:

This name - sometimes *Stretton* or *Stratton* etc. - is virtually unequivocal in meaning a Roman road, sited either in, or next to, the field so designated. Ekwall does give one additional possibility of a derivation from Welsh *ystrad,* valley, or Old Cornish *stret,* a stream - but neither of these actually precludes a road as roads are found in valleys and a firm bed can allow a stream to form. The most likely explanation by far is of a paved/metalled road that could be seen. Of course this could refer to any period but the age of the name shows that it was usually given in the Anglian/Saxon/Mercian period - and the only paved/metalled roads at that time were Roman. Such metalled roads did not re-appear on the universal distribution necessary for this designation until the 19th century. Therefore, this is one of the safest field-names from which to deduce a meaning and it rises to absolute certainty if the field is bordered by a straight parish boundary, Roman roads being convenient markers when boundaries of parishes were laid out in about the 8th/9th centuries.

The conjunction of other names is also of interest here - the village of Stretton Sugwas, bisected by a known Roman road, used to be called Stoney Stretton.[4]

There is one other consideration that needs addressing. Given that a field almost certainly masks a Roman road there is no indication at all which way that road runs! It is also worth noting that when a road continued to be used it would not pass through fields - therefore, a *street field* tends to presuppose a road that was a side road or went out of use. The four *Stretton Fields*[5] in Stretton Sugwas parish could denote a large field belonging to the village or a side road S. of the known Roman road - there is no *street field,* indeed nothing similar, along the road itself as the Roman road continued in use.

Possibilities can be deduced by using large scale maps but direction cannot be assumed without further investigation. Another local example is given by three parishes:

Weston Beggard: two *Street Crofts* / Stoke Edith: *Street Fold* / Yarkhill: two *Street Orchards.*

Place these tithe maps together and a road line seems to appear. However, while the northern Yarkhill field probably does denote the Roman road, which could be slightly S. of its designated route through Stoke Edith and Yarkhill, the southern Yarkhill field does not seem to be related. It could either be a name arising from the first or, perhaps more likely, a side road. This illustration shows that field-names, and indeed place-names, can provide invaluable information for a general pattern but that a particular field-name may demonstrate more complexity. Nevertheless, the evidence suggests that a Roman road will exist in the vicinity of a *street field.*

CHESTER, 8, from O.D. *ceaster/caester,* from Latin *castra,* a city or walled town, 'originally one that had been a Roman station:'

This name too is unequivocal in describing a Roman site. It is so specific that features must have been visible when the name was given and the evidence from known sites suggests a defined shape. Tracks/roads may preserve all, or part, of the ditch. Building remains may also have been visible, or at least the rubble posed difficulties for cultivation, hence the need for the field-name. Indeed, it is possible that those sites where only earth, and unshaped stone, ramparts could be seen were perhaps the ones designated *camp.* This may mean that walls using cut stone, from more permanent structures, had to be visible when the name *chester* was first used.

Woolaston parish, Gloucestershire, has a Roman villa at *The Chesters.* However, the southern part of this site has a very well defined wall round three sides.[6] This in itself would have formed an enclosure in the same way as the boundary of a fort. Therefore, it is likely that where courtyard villas can be expected, as in Gloucestershire, *chester* could mark a Roman villa or a fort. In areas where villas tended to be simpler structures, as in Herefordshire, a *chester* name is most likely to suggest a military origin.

The name *chester* is very rare in Herefordshire and occurs in only eight parishes, though in fact suggesting the presence of seven Roman sites of some permanence. Some of the following has been published before, particularly in relation to roads. This author is attempting to synthesise and augment previous evidence:

KENCHESTER: SO 438428

The Roman town of *Magnis,* the name being derived from the British word for rock or stone,[7] became Kenchester and, so far, has proved to be the only Roman settlement in Herefordshire to have been walled. It is possible this was because the annona - taxation often in corn to victual the army - was collected here. Indeed 1996 aerial photographs, taken by Chris Musson and Robert Chappell, show, for the first time, the outline of what appears to be a very large building in its own compound within the town - an administration centre perhaps? The tithe map of 1842/43 shows one of the two fields then covering the town was called *The Walls.*[8]

DILWYN: SO 405539. Bordered by a modern road on two sides - the W. tithe track is now a footpath. The area is in Stretford Hundred.

335 Lower Chesterns Way *469c In Chesterns Way* *469i In Cheston's Wayfield*
336 Little Ditto *469h Ditto* *469d Ditto*
469a In Chestern's Wayfield

Field *469* is subdivided into nine strips - five are named as shown and three have no name so it is reasonable to deduce that this was once one field called *chestern/cheston.*

Nearby are *Lower Haven, 472 Haven Croft, 331 Lower Black Lands* and *346 Upper Black Sands (Lands).*

Field evidence: Surface fieldwalking in 1997 showed a large bank between the former boundary of *334* and *335,* and large stones, some cut, with a distinct ditch in the corner of *336.*

LEOMINSTER: SO 526583. At a crossroads with a road on two sides, the E. being the Roman road through the adjacent Roman site of Blackwardine. The area is Stretford and the farm name *Stretfordbury.*

1447 Stone Chester Orchard

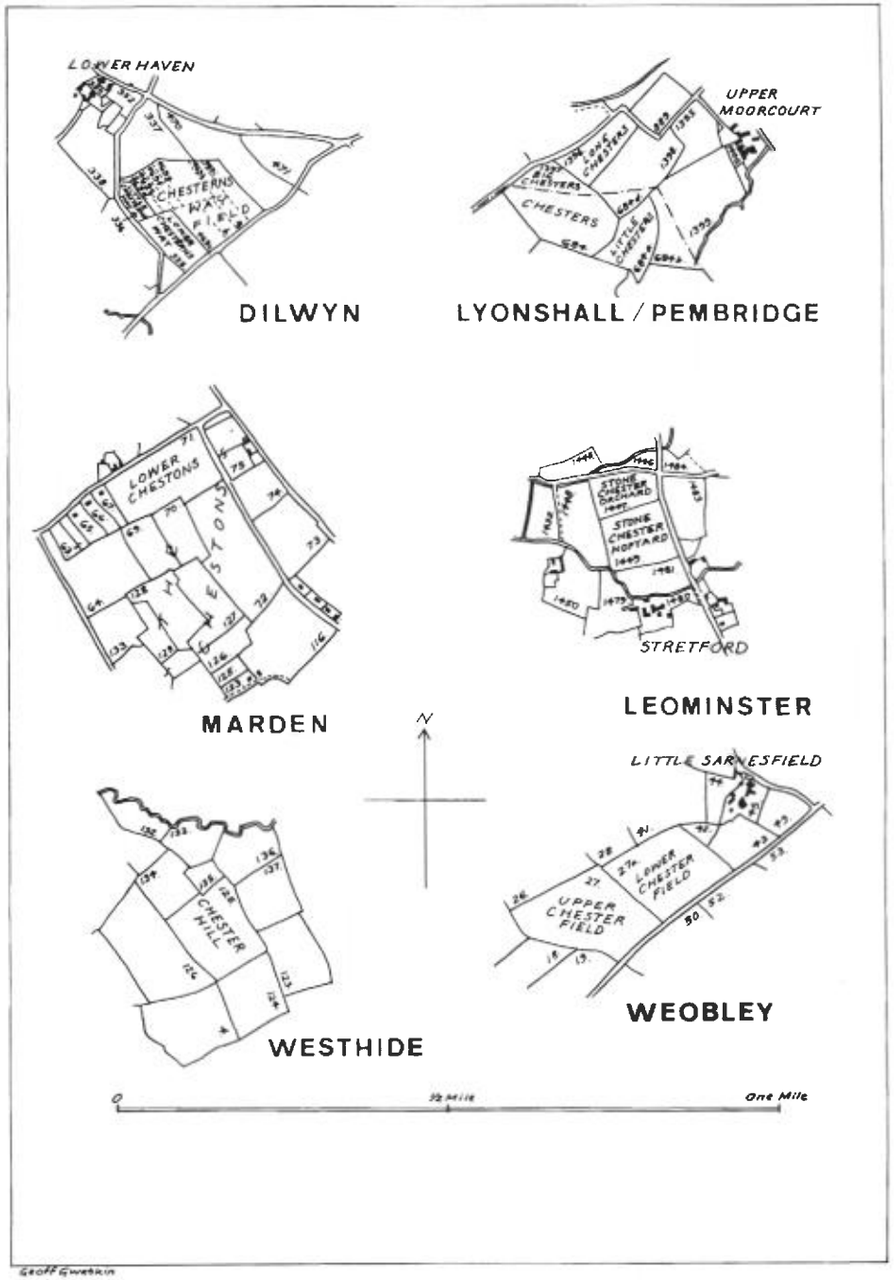
1449 Do Do Hopyard

Field evidence: Excavated in 1983 by Mr. N. Attwell, who believed this was a fort. His archive was re-examined by Duncan Brown in 1988.[9] There is no doubt that this was a Roman site.

LYONSHALL/PEMBRIDGE: SO 353555. Road on two sides, one possibly preserving a corner of the site. In Stretford Hundred.

Lyonshall: *684 Chesters part of* *684a Little Chesters*
Pembridge: *1396 Long Chesters* *1397 Big Chesters*

Nearby are L. *699 Wall Hill,* several *cold* (though not *Coldharbour*) names and L. *290 New Street Orchard.* If this proves to be a Roman fort then it would be of great interest as the parish boundary cuts through it, following no discernable line. This would seem to indi-



MAP
Chester-derived Field-Names in Herefordshire
(Drawn by G. Gwatkin)

cate that the structural evidence which caused the names to be given was no longer visible when the parish boundary was decided. Therefore, it appears that the field-names predate the parish boundary.

MARDEN: SO 519504. Road on two sides/on tithe map, on three sides.

70 Chestans *71 Lower Chestons* *126 Chestons*
127 do *72 Chestans* *128 Chestons* *129 The Chestons*

Interestingly, all the fields, which are now one field, apart from *70* and *127,* were on different farms on the tithe apportionment, showing the names being preserved by different occupiers. The position, in a bend of the river, is very similar to that of Clifford Roman fort. If this is a Roman military site, and if the dimensions are reflected by the roads, then it appears to be the size of a legionary fortress.

The site has been described by Jean O'Donnell who pointed out the use of *chesterns* on the 1720 Coningsby Estate map. The stone foundations of the Roman villa across the river Lugg, discovered through quarrying, were not seen on any aerial photographs due to soil build-up of more than one metre, an accumulation which could account for lack of finds in the valley. Other evidence of Roman activity in the area was the Romano-British farm, used into the 4th century, inside Sutton Walls Iron Age hillfort.

WEOBLEY: SO 384519. Road on one side. In Stretford Hundred.

27 Upper Chester field
27a Lower Ditto

Nearby are *451 Big Harbour Leys* and *454 Little Harbour Leys.* The area is Little Sarnesfield which name, according to Ekwall, means '*feld* by the road' - Welsh *sarn,* road, causeway, a paved way. This is the same name as Sarn Helen, the name given to the main Roman road in W. Wales. Ekwall gives the earliest use of Sarnesfield as 1127, which strongly suggests a Roman road possibly from Clifford, through Kinnersley where there are three *street fields,* and Dilwyn. This could postulate a crossroads with the known Roman road W. of Bainstree Cross.

WESTHIDE: SO 579445. No road bordering the site but this is on the highest point in an otherwise flat area.

125 Chester Hill

Nearby is the Roman road to Stretton Grandison, see example under *Street* above.

Field evidence: In 1926 Roman pottery, including samian, in a dark deposit was found in a trench dug for a sewer, which indicated a Roman building at SO 5780 4430.[10]

Of the six possible sites above, two, Leominster and Westhide, have Roman artefacts and stone structures. Therefore, the other sites, with the same field-names, warrant close examination. Four of the sites are associated with Stretford and all are on flat areas, with five possibly preserving boundaries.

It is of interest that none of the known Roman forts in Herefordshire has a *chester* name and this includes the Blackbush/Abbey Dore fort, which is known to be before 80 A.D. from samian sherds[11] and the 57 acres/23 ha. 1st century marching camp, with a southern tutulus, at Brampton Bryan.[12] Indeed, Brampton Bryan has field *312 Part of Black Meadow,* immediately N. of the fortress, which clearly argues that more of it was once named *Black Meadow,* and *307 Marstones Meadow,* where the bank is still the most visible, may derive from the O.E. for boundary stones. Both are known 1st century military sites.

Therefore, it is possible that the use of the field-name *chester* implies a stone structure and a later site, which in Herefordshire, where present evidence suggests no large late villas, is more likely to be military than civilian.

BLACKLANDS, 9, from O.E. *blaec*/Middle E. *blak,* black land referring no doubt to dark soil ...

O.E./O.Norse - *land* usually means portion of a village or estate: 'the first element refers to the nature of the soil':

The table shows that Herefordshire has eighty-four fields with a *black* name, nine being *blacklands.* It is possible that a proportion of those called *black field, black meadow, black acre, black ground,* or *black hill,* etc., originates in the same way as *blacklands.* Blackbush, site of any early fort, is mentioned above. *Blackwardine* is examined below. All these field-names indicate sites worth further examination. However, most of the *black* names denote a natural feature, such as a pool which is dark due to its depth or to the peat in it. Where the name arises due to soil colour this can be because of charcoal, or - in the Weald of Sussex, Kent and Surrey - iron working, which although probably of a more modern origin does not in itself date original use.

Margaret Gelling defines *blacklands* as 'black newly-cultivated land.'[13] This would appear to be the key to the meaning of this name - it was given by the first farmer to cultivate the field who noticed the colour. Continued ploughing would cause the colour differentiation to become less visible until it could disappear entirely. Therefore, it is not a name that would be given after regular ploughing and in a later period. It is the early date of the name, reflected in its form, that is so important.

At present the earliest documented *blacklands* field-name in Herefordshire is from a will of Walter Harper of the parish of LETTON, dated 28 May 1621. 'I give and bequeath to my son John Harper one little Close called *Knight Close* ... I leave to my wife Ales the lease of the *blacke lands* ... .'[14] Unfortunately, Letton is one of the minority of parishes without a full complement of known tithe field-names and, while it is always possible Walter Harper's field was in another parish, it is more likely this is one of the so far unnamed Letton fields. The other fields called *blacklands* are in:

ASHPERTON: SO 637429. *47 Black lands Orchard* *58 Black lands Orchard*
49 Black lands Homestead

Although in an area called *Blacklands* on the tithe/modern O.S. map, forming one block of land, these were on two different tithe farms, *47/49* and *58,* showing perpetuation of the

names despite different occupation. Adjacent is a Roman road and the Roman settlement at Stretton Grandison/Canon Frome - possibly Roman *Eposessa.* The whole site is only known from finds and an aerial photograph of what is considered an early fort. The evidence suggests that the site is very much larger than has been thought.

DILWYN: SO 401538. *331 Lower Black Lands* *346 Upper Black Sands/Lands*

These are on the same tithe farm as *335 Lower Chesterns way,* from which they are separated by one field. Dilwyn has a range of indicator field-names and should be surveyed in detail.

HOPE-UNDER-DINMORE: SO 474528. *448 In Blackland field* *449 In Blackland field*
451 do *450 In Blackland field*
454 do

As this is an area of strips on the tithe map, nine others being called *The Field,* it is probable that this was originally a large field called *Blacklands.* Nearby is a Roman road.

KINGS PYON: centred on SO 428494.

253 Black Lands *289 Black Lands Meadow* *327 Little Black Lands*
254 Ditto *288 Ditto field* *290 Black Lands*
255 Ditto Wood *256 Ditto*
257 Ditto
287 Black Lands Orchard

Although these fields are on three different tithe farms, as shown by the columns, they form one block of land covering an area of *c.* half a mile W. to E. Nearby is the Roman road mentioned above.

LEOMINSTER: SO 490558. *1097 Blacklands*

This is a single rectangular field mid-way between two Roman roads. Nearby is *1105 Cold Harbour* and the unexcavated Ivington Iron Age hillfort, which may have later occupation.

LUGWARDINE: SO 560407. *400 Black Lands*

Lugwardine has a known Roman settlement, SO 562400, with 2nd-century finds. A photograph of this slightly sloping field, taken 1996, by Jean O'Donnell, shows cropmarks.

MANSELL LACY: SO 423460. *22 Black Lands* *24 Black Lands*

Although adjacent, forming one block of land, these were on two different tithe farms. Nearby is a Roman road and the Roman town of *Magnis.*

UPTON BISHOP: SO 642269. *525 In Blacklands* *524 Blacklands*
549 In Blacklands meadow *550 Blacklands meadow*

Again, these are on two different tithe farms but form one block of land bisected by a road. The southern boundary of *550* and *549* is now preserved by a path. Nearby is the Roman town of *Ariconium.*

[It is possible that ABBEYDORE, field *262 Blackhouse Lands,* SO 396336, should join this group. Nearby are Roman roads by *Blackmoor Farm* and *Blackbush Farm* (the site of the early fort), *street fields,* and *The Camp* whose period is unknown. *Blackhouse Lands* could have been derived from a building, though Roman activity is evident in the area.]

It is likely that these fields originally formed single blocks of land in each parish, the field-names surviving despite four blocks being held by different tithe farms. Therefore, Herefordshire has at least nine sites, with Letton, with the specific name of *blacklands.* None of these sites is a peat area. The best explanation is that the first person to farm each site noted that the plough brought a black soil to the surface.

Geographical position on its own does not denote a Roman site but it is of interest that the eight located sites are on excellent farmland with access to a major Roman road. Four sites, are significantly near, or on, Roman settlements. Herefordshire has four, possibly six, Roman civilian small towns/villages - and about eight villa sites are known. Therefore, 44% of *blacklands* sites, if Letton is included, are on, or near, 67% of known Roman towns/villages. It is this correlation that shows the field-name indicates an area well worth examination.

However, the reason for the field-name *blacklands* is still a problem. Only Herefordshire and part of Oxfordshire have been systematically checked. The Oxfordshire Survey identified eleven examples - of the six that produced finds, three were substantial Romano-British settlements. A further one had undated cropmarks.[15] Thanks to the stalwart work of George Foxall, field-names are available for Shropshire but they have not yet been examined for particular names countywide. Elsewhere, field-names tend to be noted after a site has been found by other means so their statistical relevance cannot be determined. Nevertheless, given the rarity of *blacklands* in Herefordshire it seems likely that it is equally rare elsewhere and, if this is the case, then the correlation with Roman sites is startling.

Part of the Roman settlement at Alcester, Warwickshire SP 0858, is on *blacklands.* Near Old Radnor, Powys, two groups of *black lands* fields are sited immediately N. and S. of five Roman forts, and there is also the very rare *black hedge.* Another *black hedge* was identified in Risborough, Buckinghamshire, the oldest parts of which are 7th or 8th century, with documentary evidence for it being a boundary in a charter of 903 A.D.[16]

Field-name evidence is finally appearing in some archaeological reports. The Woolhope Group's survey has contributed enormously to an increased awareness of their considerable value and, to obtain further information for this analysis, a letter was placed in *Current Archaeology* No. 130, August 1992 and in *British Archaeological News,* C.B.A., November 1992. These resulted in numerous and enthusiastic replies which provided examples additional to those already collected.

It was noted that 'on Chapel Farm in Netherton parish in the Vale of Evesham, Worcestershire, a *blacklands* field-name coincided with a set of complex cropmarks which poured out Roman pottery when the field was ploughed.'[17] In 1992 an archaeological evaluation of a small Roman town in Yeovil, Somerset, found it sited on tithe fields called *Blacklands Upper* and *Blacklands Lower.*[18] The excavation of a Belgic, Romano-British and Saxon cemetery site at Nazeingbury in Essex was located in a field called *blacklands,* with documentary evidence for the name back to 1674.[19] Norfolk has a *blackland* reference south of Creake where there was a Roman settlement. Indeed, according to Dr. Mary Hesse, '*blackland* is almost the only mediaeval field-name [in South Creake] that survives into the tithe record, 1839, and it first appears in the records in about 1250 in the *Cartulary of Creake Abbey.*'[20] Other instances of *black* and/or *blacklands* have been mentioned to me in Cheshire, Gloucestershire, Leicestershire, Northumberland,[21] Shropshire and Warwickshire.

Indeed, *blackdyke* to describe ancient linear features is found in the N. of England, Scotland[22] and in Monmouth, Wales. The village of Heddon on the Wall, which is on Hadrian's Wall in Northumberland, was called *Nigra Heddon*/'Black Heddon' in 1242.[23] The Roman town of Cunetio, on *Black Field,* at Mildenhall, Wiltshire, SU 2169, had walls enclosing 15 acres. *Blackland,* centred on SU 0168, dated to before 1194, is adjacent to a Roman road and near Roman Verlucio, modern Sandy Lane, Calne, Wiltshire, ST 9667. *Blacklands,* at Kings Sutton, Northamptonshire, SP 4937, is a minor Roman settlement.

Blacklands is found in the Weald and 'several prominent iron sites are located near them.' Indeed, members of the Wealdon Iron Research Group recognise *black* as 'a good indicator of the possible presence of ironworking remains...Many of these sites, though by no means all of them, are of the Roman period... Some are early post-Mediaeval.'[24] It would be interesting to know the proportions of *black* and *blacklands* linked to Roman sites in this area. The group found that iron-working produces large quantities of black earth and cinder, from the charcoal fuel and the waste slag/cinder - giving *cinder* field and place names - but that charcoal staining without cinder can also be found probably due to charcoal-burning.

Interestingly, John Percival noted a correlation between Roman sites and *terre noir* in northern France.[25] Colin Baddeley pointed out that Schwarzenacker - translated as *black acres* - in Germany covers a partially excavated Roman town.[26] An examination of Welsh *dulddu* could be of interest.

The evidence certainly suggests that if a *black* name is not due to a natural feature, or even to peat, but to the fact that the colour of the soil is, or was, different to the surrounding soil then the area requires archaeological examination. If an early form such as *blacklands,* or *black street,* is involved then there is a possibility that the site is Roman. The reasons may not always be the same. In the Weald the name may be due to iron working, though again if it is early then this industrial activity could be Roman. Jim Pickering suggests that the sites could be the drainage sumps and pits of Roman settlements sited nearby on higher ground,[27] a view possibly supported by the *black* name at Brampton Bryan Roman marching camp mentioned earlier. Indeed, a comment from Elizabeth Taylor was that the blackest soil she had ever seen was in old cottage gardens where privy

buckets had been emptied for more than a hundred years. It is certainly possible that some of the *blacklands fields* could have had such an origin. However, it is also possible that some, especially where roads and buildings have been discovered, could be due to *dark earth.*

Esmonde Cleary[28] described *dark earth* from London as 'poorly-sorted, circum-neutral, clayey earth, with plentiful inclusions of pottery and other artefacts, bone, shell and flecks of charcoal, which last gave it its characteristic colour. Analysis of pollen from the deposit showed a suite of plants characteristic of waste ground. The internal structure of some *dark earth* suggests it may have been dumped; more often it appears to have accumulated gradually.' There is no worm activity in the *dark earth* strata. *Dark earth* has been found above Roman sites in, for example, Canterbury, Cirencester, Exeter, Gloucester, Lincoln, Monmouth, Winchester, Worcester, York, London and Southwark. In London, Horsman, Milne and Milne found that it started forming in the late 2nd century on some sites: 'These dark grey silt deposits ... which contain pottery and other artefacts, were the product of both dumping and accumulation, and depths of between 0.5 and 1m. have been recorded on some sites [in London]. Such a horizon does not therefore represent a turf line which developed over an abandoned site, or one uniform action over a wide area. By contrast, it must be interpreted as the product of varied and persistent activity over a dismantled settlement. On some sites in the City [of London] ... the formation of the deposits began in the late 2nd. to early 3rd. century, while on some waterfront sites it occurred in the late 4th or early 5th century ... Nevertheless, the discovery of Saxon pottery within the horizon shows that the dark grey silts were still being disturbed and added to several centuries later.'[29]

Dark earth appears to form above roads and ruined buildings that were no longer maintained. Hence the debris of walls and plaster accumulated, mixed in with abandoned rubbish. Where Saxon buildings could be present then *dark earth* could be over structures of this period but in areas like the Herefordshire countryside abandoned early stone buildings and roads are far more likely to be Roman. Only later did soil and humus form over this grey, anaerobic strata. The first farmers to plough the area after soil formation would bring the dark grey debris to the surface and it is suggested that they would name the field *blacklands,* not just to be descriptive, but as a method of passing on the information about the farming difficulties of the site to future generations.

Therefore, while the reasons for using *blacklands* are probably varied, present evidence suggests a Roman connection. The name is undoubtedly worth further investigation through systematic research over a much wider area.

ECCLES/ECKLEY, 7 including one *egle* - and two *eckley* from O.Welsh *eccluys,* probably Brit. *ecles,* a church, from Latin *ecclesia* or from a personal name.

ALMELEY: SO 34752. On the tithe three fields, *381, 382, 390* are called *Eccles Alley.*

KENCHESTER: SO 4344. *7 Eckley's Orchard,* adjacent to the Roman town of *Magnis,* the later church and on the site of the deserted mediaeval village[30] at Kenchester Court.

LINTON/WESTON-UNDER-PENYARD: SO 649241 to SO 652230.

Linton: *Eccleswall Court* covers 29 fields; *Little Eccleswall farm* has 18 fields.

Weston-under-Penyard: *Eccleswall Farm* has 7 fields; *Eccleswall Court Estate* has 4 fields.

These fields are either side of the road adjacent to the Roman town of *Ariconium.*

STRETTON GRANDISON AND EGLETON: SO 642451 to SO 643456. The Roman road runs through the township of *Egleton,* adjacent to the Roman settlement of Stretton Grandison /Canon Frome.

NORTON CANON: SO 377490. *60 Eckleys Green Homestead* *43 Eckleys Field*
Nearby is *Pig Street.*

WESTON BEGGARD: SO 586418. *230 Eccles Elm* Nearby is a Roman road.

Any of these sites could be named from a later personal name. However, four of these are adjacent to known Roman settlements and the other three are in the vicinity of a Roman road. The field-name is very rare and, therefore, worth investigation.

GROUP III: The following field-names are words that are perhaps less period specific than has been suggested for the previous category.

CINDER, 10, from O.E. *sinder,* meaning cinder/dross, 'exact meaning unclear.' Examined by Elizabeth Taylor.

COLDHARBOUR, 5, from '*cold harbour* was formerly a common name for a place of shelter from the weather for wayfarers, constructed by the wayside.'

It is possible this name is partly preserved in

harbour, 11, from Middle E. *hereberwe*/O.N. *herbergi,* harbour, shelter or lodging.

haven, 5, *Haven Street* (Isle of Wight) means 'road built by heathens.' Milford Haven is a harbour.

cold, 38, from O.E. *col,* coal/charcoal, or could be cool perhaps a stream, or from a personal name.

Of these *cold* is the most difficult to evaluate due to number and probable variety of meaning. The other field-names are rare. Common features could suggest the possibility of a common origin.

Coldharbour is found in five separate blocks in the four parishes of Kentchurch, Kington, Leominster, and Walford. All are next to a road/track. Walford's is on a parish boundary and Leominster's is on a boundary with Ivington township.

The fields called *Harbour,* twelve sites in eleven parishes, are all next to, or are, bisected by, a road-track. In Laysters the field is on a parish boundary, adjacent to *cinders.* In Leintwardine the two fields are adjacent to the main entrance track to Brandon Iron Age Hillfort, reused by the Roman army. *Haven,* which may/may not be related to *harbour,* is also found naming fields next to roads.

Given the rarity of these names this relationship to roads/tracks is of interest. If the field-names could be shown to be early then the roads could also be early.

PORT/PORCH. 18, from O.E. *port,* harbour/town, from Latin *portus;* or gate, from Latin *porta.*

This field-name too is found adjacent to roads/tracks, though individual fields are usually next to a junction. The evidence suggests that where *portway* is used this actually applied to the road. It was thought that the position of *porch/poarch/poach* might be different to *port* but the evidence suggests they are the same.

Of the eighteen parishes only Abbeydore's two fields, called *Pwrch,* are not on a known track. The name may be derived from the Welsh for a defended site but these fields are on the floor of the valley. Alternatively, it may be a form of *port* and a search for a track could be indicated.

Leominster has a group of seven fields called *Portney Warding,* with one *Portna Warding,* which are centred on SO 480585 at Baron's Cross. This field-name is unique in Herefordshire and warrants investigation.

-WARDINE, 8, from O.E. *worpign,* a variant of *worp/worpig,* enclosure, yard around a house, open place in a village, *worpign* found in W. Midlands, first el. usually a natural feature.

- *dine,* 3,

warden, 4, from O.E. *weard-dun,* watch hill.

warding, 1, interestingly this is *Portney Warding,* see *port* above.

Bredwardine, Leintwardine and Lugwardine preserve *-wardine* in the parish name. A large group of *blackwardine* field-names forms part of Blackwardine Roman settlement. Bredwardine also has a *Blackwardine* field-name; the two parishes are not near, though a common ownership is always possible. Lugwardine has *Lugwardine croft* and Hampton Bishop has a *Lugwardine* field, but these parishes are reasonably close and a connection is more likely here.

The other *-wardine* names are diverse. Bodenham has *Carwardine,* Bullingham has *Ledwardine,* Brampton Bryan had *Pedwardine,* Kings Pyon has *Barrowdine,* Ledbury has *Halladine,* and Whitbourne has *Starrowdine.*

It is possible that *warden* could be connected and this field-name can be found in Dilwyn, Madley, Stretton Grandison, and Whitbourne. Leominster has the unique *Portney/Portna Warding.*

A common factor is that most of these fields are a short distance from a named stream or river. The topographical position is on the edge of the flood-plain and the fields are on slightly higher land. All are next to tracks or footpaths.

CAMP, 97, from Latin *campus,* field, enclosed piece of land, 'though meaning not clear'

number of known, identified, Iron Age hillforts in Herefordshire = 38[31]

total number of *camp* field-names in Herefordshire = 97

This is probably the most unexpectedly significant of the field-names examined in this paper.

Of these 97 *camp* field-names 56 are associated with 19 of the 38 Iron Age hillforts. The number of hillforts with this field-name is about half in each large, medium and small category: 6 from 15 [over 15 acres enclosed]; 11 from 19 [3-15 acres enclosed]; 2 from 4 [under 3 acres enclosed].

Therefore, 50% of the Iron Age hillforts have the field-name *camp*

and 57% of *camp* field-names indicate known hillforts.

It has been suggested that one of these hillforts, Great Howle, Walford SO 611201, could have been re-used by the Romans, due to its shape. Finds here have included a late Iron Age amber bead with blue and white cables, dated 1st century A.D., and evidence of iron working, dated c.50-75 A.D.[3]

Only four hillforts have *wall* names - two having *camp* names as well - and Roman finds have been found in the two which have been investigated. Only one, Brandon SO 401724, has a *harbour* name; this hillfort was re-used by the Romans who built a substantial granary inside it.[32]

Camp is the most common of the field-names attached to known hillforts. In addition, eight hillforts are known only by their names, such as Midsummer Hill, or are simply *plantation/wood.* Six hillforts, three of which also have *camp* names, have *-bury* from O.E. *burg* meaning fort, and Gaer Cop has *camp* in Welsh; two have *din* in their names which may also originate from Welsh.

Therefore, the field-name *camp* is significant as an archaeological indicator. The evidence suggests that it was derived from visible banks and so marked a site that could be considered defensive and/or strategic. If ramparts were involved then it is possible that they were not cut stone walls, these being named *chester* or similar at an early period.

As appearance was crucial then it is probable that the field-name is still attached to the original area so designated, despite any later subdivision of the fields. The fact that the meaning of the name remains clear in all periods would also help here. Although 57% of *camp* names indicate known hillforts, it appears that the name was not solely given in an early period. Indeed, a number of hillforts were re-used in the mediaeval period, three having pillow mounds.

Therefore, although statistically the Iron Age is likely, the site could have been re-used at, or even date from, or the name acquired at, a later period. If a site is not attached to a known hillfort and is in an area with, for example Roman names and finds, this does not mean it was a Roman camp. However, a Roman origin is not precluded and can be considered together with a later origin or re-use. This field-name was certainly given when earthworks were visible. This is illustrated by two sites, both now locally known as *'The Camp'*,[33] which on the tithe maps have other field-names. The designation *camp* is very recent in these two cases:

Earthworks at Ashton, SO 517643, probably a mediaeval motte-and-bailey - field *198 Upper Orchard*

Earthworks at Much Dewchurch, SO 486313, a mediaeval motte-and-bailey - field *592 Moat Meadow*

In addition, while all the *camp* field-names at Much Marcle SO 632326, appear to refer to Oldbury Hillfort, an aerial photograph, taken by Howard Dudley, shows cropmarks in *413 Camp Field,* immediately N. of the rampart. These may be connected to the original, Iron Age, use of the hillfort or, more plausibly because of the cropmarks, may be Roman or later.

If banks are now not visible, the key to the original designation is the geographical and topographical position. Iron Age hillforts are always above the surrounding area. Roman forts can be in valleys sited to guard a river crossing or road. Civil War camps would also be in strategic positions.

Of the 97 *camp* field-names in Herefordshire, 41 are not associated with hillforts that are already known and these probably represent 25 different sites. An analysis shows that 9 of these 25 sites, are found on parish perimeters and another 6 are very near. It is possible that the field-name survived due to this marginal position. Iron Age hillforts could be present at Edvin Loach, Foy and possibly Wigmore though this has a regular shape. Acton Beachamp's site is on a large linear bank that is not a hillfort but is probably pre-Saxon. Other field-names and positions suggest a Roman influence could be considered at Abbey Dore, Eaton Bishop, Garway, Little Birch and Stoke Bliss. At Upper Sapey the name is applied to the N.W. corner of the Roman fort excavated in 1960.[34] Turnastone's site is a mound surrounded by a dry ditch which it has been suggested was a barrow perhaps reused as a mediaeval motte-and-bailey. The Vowchurch site could have been a squatters' camp.

Camp, being readily understood, could be applied to a site in all periods. The earliest use is crucial as the reason for the name predates its first use as a field-name. Confirmation is needed from finds and/or aerial photographs. Nevertheless, the evidence clearly demonstrates that this field-name originated from visible remains and so is a remarkable archaeological indicator.

CASTLEFIELD, 17, from O.E. *ceastel, cestel,* a heap, or can be a castle, or can be from *ceaster/caester,* from Latin *castra,* a city or walled town 'originally one that had been a Roman station.'

O.E. *feld,* field, land free from wood, open space.

It has usually been stated that this field-name must be associated with a mediaeval castle site. Castles, or motte-and-baileys, are often given specific field- and place-names. These can include *toots, tumps, castle pasture, castle ground, castle orchard, castle meadow,* or simply *castle* with, or without, a name particular to the site. Such names may also apply to land used by the castle. However, it is possible that *castlefield* may have a longer history.

The specific field-name *castlefield* occurs 36 times, in 16 parishes, in Herefordshire. However, as all the fields are close, with only one parish, Peterchurch, having two different instances, it is likely that only 17 different sites are designated. The name is perpetuated even when the fields are in different ownership/occupation.

As none of the fields contains a motte, the evidence suggests that the name designates an enclosure made visible by a boundary bank. Nine of the sites, which is 53%, are associated with mediaeval motte-and-baileys or castles. Bredwardine and Madley, have -*wardine* names nearby and Avenbury, Garway and Little Birch each have a group of *camp* names.

However, it can be totally misleading to assign sites to one period. It is known, for instance, that the Normans did re-use sites, a local example being British Camp Iron Age hillfort which became a motte-and-bailey. It has been suggested that Goodrich Castle was placed inside an Iron Age hillfort, and a similar idea has been suggested for Snodhill Castle. However, the degree of disturbance caused by the mediaeval building makes it difficult to verify such ideas. The Kentchurch Roman fort[35] is on *Castlefield(s) Farm,* which appears to be the only farm with this exact name in Herefordshire. In Manchester the *Castlefields* area covers the Roman fort.

It would have been strategically useful for the Normans to re-use any available fortifications, especially if the local people were hostile. It is certainly possible that a field with available banks could be utilised as a bailey. Ewyas Harold, Kings Caple or Madley could provide future information. Therefore, while a *castlefield* name is statistically likely to be mediaeval, the evidence does suggest the possibility that sites with this particular field-name should be carefully investigated for re-use from earlier periods possibly even from the Roman period.

CONCLUSION:

The field-names examined here are not common and the evidence suggests that their use could be particular. Indeed, it is likely that all are significant archaeological indicators. Their survival is amazing, reflecting their usefulness in a society where continuity was important. They are worth further investigation using additional information from aerial photography, geophysical surveying and perhaps selective excavation. Dilwyn is of particular interest, while the recent building in the Baron's Cross area of Leominster suggests early investigation here would be advisable. These field-names are archaeological tools and should be considered in all historical and archaeological reports.

REFERENCES

I am most grateful to all those, many of whom are mentioned below, who have kindly provided me with information.

[1] The full lists and O.S. references will be published in the *Newsletter* of the Archaeological Research Section of the *Woolhope Natur. Fld. Club* in due course.

[2] Eilert Ekwall, *The Concise Oxford Dictionary of English Place-Names,* (fourth edition 1960). The meanings have all been checked against other authorities.

[3] Ruth E. Richardson, 'Iron Age and Romano-British Farmland in the Herefordshire area,' *Trans. Woolhope Natur. Fld. Club,* XLVII (1992) 147-50, Presidential Address. Fuller detail appears in R. E. Richardson, *'The Potential Farmland of the Iron Age and Romano-British Periods in the Herefordshire Area.'* (unpub. M.Phil. thesis 1989), University of Wales, Cardiff, copy in Hereford Record Office.

[4] I am grateful to Sue Hubbard, Archivist Hereford Record Office, for this information.

[5] All field-names can be found on the relevant parish tithe map and apportionment, dated between 1837 and 1850, published by *The Herefordshire Field-Name Survey,* with originals in Hereford Record office.

[6] Alan McWhirr, *Roman Gloucestershire* (1986), 98.

[7] A. L. F. Rivet and C. Smith, *The Place-Names of Roman Britain* (1981). Other references in R. E. Richardson, (1989), 107 following, 156.

[8] *Loc. cit.* in note 3.

[9] N. Attwell *Herefordshire Archaeological News* No. 41, (1983). Re-evaluated in subsequent editions by Duncan Brown, *The Romano-British Settlement at Blackwardine* (1988) Hereford and Worcester S.M.R.

[10] Reported by G. H. Jack in *Trans. Woolhope Natur. Fld. Club* (1926), 196.

[11] Paul G. Richardson, *Investigation of the Remains of Blackbush Roman Fort and its Surrounding Area,* (unpublished project 1997, copy in Hereford Record Office). Recorded in the County Sites and Monuments Record.

[12] Humphrey Welfare and Vivien Swan, *Roman Camps in England* (1996) R.C.H.M.

[13] Margaret Gelling, *Place-Names in the Landscape* (1984), 263.

[14] I am indebted to Jim Tonkin for this.

[15] James Bond, 'Oxfordshire Field-Names: A progress Report on the County Survey,' *Oxfordshire Local History,* vol. 1 no. 4, Spring 1982. I am most grateful to Mr. Bond for this information. 'Of eleven examples in Oxfordshire whose locations have so far been pinpointed, one in Sandford St. Martin has produced prehistoric flint tools and waste; one in Somerton contains cropmarks of ditches, trackways and enclosures of unknown date; one in Abingdon contains the complex of prehistoric and Romano-British settlements excavated by the Oxfordshire Archaeological Unit in the 1970s on the present Ashville Trading Estate; two examples at Swalcliffe Lea and Pusey also contain substantial Romano-British settlements; and an Anglo-Saxon shield boss has been found in Blacklands at Sydenham. This still leaves five examples which have not yet produced any archaeological evidence, and these again require further examination.'

[16] Kate Tiller, *English Local History,* (1992), 46-8. Also my thanks to Roger Pye and Dr. C. S. Briggs of R.C.H.M. Wales regarding finds at Old Radnor.

[17] Letter to author from James Bond November 1992.

[18] Letter to author from Maureen Bennell November 1992.

[19] Letter and information from Peter Huggins, Nov. 1992. See 'Excavation of Belgic and Romano-British farm with Middle Saxon Cemetery and Churches at Nazeingbury, Essex, 1975-6,' *Essex Archaeology and History,* no. 10, (1978) 29-117.

[20] Letter to author September 1992.

[21] Stan Beckensall, *Northumberland Field Names,* 1977, where a *Black Chesters high field* could be of interest.

[22] Peter Strong, 'Pit alignment and earthworks between Marygold Plantation and Drakemire, Berwickshire,' in *Proc. Soc. Antiq. Scot,* no. 118, (1988) 11-129, and a letter to author of Dec. 1992 mentions *Black Dyke* which Peter Strong suggests means 'a substantial linear earthwork originating in antiquity.'

[23] *Loc. cit.* in note 2, 231.

[24] Letter to author from J. S. Hodgkinson November 1992. The Field Group Secretary, Mrs. D. M. Meades, also wrote on 18 March 1993. They kindly recommended Ernest Straker, *Wealden Iron* (1931) which describes the connection with place-names.

[25] John Percival, *The Roman Villa* (1981 edition), 31.

[26] Letter to author Nov. 1992.

[27] Letters to author Nov. and Dec. 1992.

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[29] V. Horsman, C. Milne and G. Milne, *Aspects of Saxo-Norman London: 1 Building and Street Development,* (1988) special paper of the London Middlesex Archaeological Society.

[30] County Council, *Herefordshire Register of Countryside Treasures* (1981), 25 and S.M.R.

[31] *Loc. cit.* in note 3 where details of the 38 identified hillforts in Herefordshire are given.

[32] Excavations at Brandon: Full account in S. S. Frere 'Brandon Camp, Herefordshire,' *Britannia,* XVIII (1987). Summary in Richardson, 1989.

[33] County Council, *Herefordshire Register of Countryside Treasures* (1981), 11, 65.

[34] County Council, *Worcestershire Countryside Treasures* (1973), 33 and County S.M.R.

[35] Discovered 1986, trial excavation by Stephen Clarke and the Monmouth Archaeological Society under director Graham Webster. See C.B.A. Group 8 Report 1987. Aerial photograph by Chris Musson in *Archaeology in Wales,* C.B.A. Group 2, (1989) 56.

Field-Names as a Guide to the Sites of Deserted Medieval Settlements

By ROSAMUND E. SKELTON

The objective of this analysis is to establish whether *town* field-names can be used as a guide to the location of deserted medieval settlement sites. The first table shows the proximity of *town* names to existing settlements and any known deserted or partially deserted medieval sites. The second table lists the names of fields which contain the earthworks of known deserted medieval sites.

The majority of the *town* field-names appear in close proximity to existing villages but not directly on any earthwork sites. This is clearly illustrated at Castle Frome - a settlement with only two surviving houses in a parish where 63 people paid the Poll Tax in 1377. In the 1960s earthworks consisting of house platforms and croft boundaries were visible in two fields called *Orchard Behind the House* and *Barley Barn Orchard* N. of the road leading up to the church. Since then waste material from the foundations of the large new barns on the S. side of the road has been spread over the earthworks and the fields ploughed. Fields called *Little, Great* and *Hither Townfield* lie N. of and adjacent to these two fields.

Fourteen different groups of *town* fields lie adjacent to existing or former settlements, another seven lie close to farms but distant from the main village, while six lie on the edge of the parish or township areas. The fact that 14 out of 27 different groups of *Town* field-names lie near to existing or former village sites suggests that it may be worth studying field and documentary evidence for former hamlets in the case of the 7 which now lie adjacent to isolated farms. An example is Upper and Lower Town farms in the parish of Middleton-on-the-Hill where the fields are contiguous and near to the two farms about one mile from the church with its own adjacent dwellings.

The 7 settlements listed in the second table are selected from known deserted sites in the County.[1] These show the type of names which occur in fields containing earthworks. Four sites include the name *orchard* and two have names associated with rabbit warrens i.e. *coninger* and *burrows.* Both these indicate uses for land containing ruins which could not easily be cultivated. Another two incorporate *hide* as part of the name, possibly an allusion to the name of the original settlement.

Field-names have also been useful in identifying sites which were only known from documents.[2] Two examples occur in Much Dewchurch parish, one as a reference to someone 'of Richardson' identified by two fields called *Little* and *Great Richardson* (SO 468300) W. of 'The Mynde' house. *Little Richardson* is described by a local person as 'very stoney.' The approximate location of Rowlstone was indicated by the field-names of *Rowlstone Meadow* (SO 480304) and *Upper Rowlstone Meadow* W. of the Home Farm, Bryngwyn.

REFERENCES

[1] This is a random selection of sites drawn from the aerial photographs held by the Medieval Settlement Research Group, c/o S. Coleman, Heritage and Environment Group, D.E.E.D., County Hall, Cauldwell Street, Bedford MK42 9AP. The Kilpeck site is a Scheduled Ancient Monument.

[2] I am grateful to Mr. Geoffrey Gwatkin of Ross-on-Wye for supplying this information from his researches.

TOWN FIELD-NAMES ANALYSIS

PARISH	GRID REF.	FIELD NO.	FIELD NAME	COMMENTS
Field-names near to dwellings				
BRAMPTON BRYAN	SO 366707	*224*	*Upper Town*	Earthworks at Pedwardine
BRIDSTOW	SO 587245	*48*	*Town Field*	By holloway near Wilton
BRINSOP	SO 442463	*34*	*Old Town* and *Staples Meadow*	Near to Brinsop Court
BODENHAM	SO 565503	*1407*	*In Town Field*	Near Maund Bryan
CASTLE FROME	SO 665462	*44*	*Little Townend*	) lie adjacent to
	SO 666461	*45*	*Great Townend*	) site of
	SO 666460	*54*	*Hither Townend Fields*	) earthworks
DILWYN	SO 391556	*96*	*Towny*	Luntley
	SO 428557	*1017,*	*Towny*	Sollers Dilwyn
		18, 21	"	
		23, 25	"	
		26	"	
		1013	*In Towny Croft*	
		1022	" " "	" "
	SO 428557	*1027)*	*Town Croft*	" "
		1029)	*Orchard*	
EYE	SO 501644	*37*	*Townsend*	Near Moreton
	SO 512648	*78*	*Townsend*	Near Ashton
GARWAY	SO 453219	*371*	*Upper Town*	Near to houses
	SO 454219	*372*	*Town Orchard*	" " "
	SO 456221	*544*	*Upper Town*	" " "
KINGS PYON	SO 441508	*131*	*Townsend*	By village
KINGTON	SO 310587	*1142*	*Hundred Town*	Rushock
LEINTWARDINE	SO 396758	*895*	*Top of the Town*	By village
MADLEY	SO 399385	*954)*	*Towns Croft*	Near Cublington
		955)		
MANSELL LACY	SO 419453	*134*	*Town Top*	High land near to village
MATHON	SO 741455	*410*	*Town Field*	By village
	SO 737456	*420*	*Town Orchard*	
MIDDLETON-ON-THE-HILL	SO 536636		*Upper Town*	Farm Name
	SO 535635	*742*	*Lower Town*	Farm Name
	SO 530631	*752*	*Far Town Field*	) a sequence
	SO 531633	*753*	*Middletown Field*	) of fields
	SO 532634	*754*	*Middle Town Field*	) next to each
	SO 532634	*755*	*First Town Field*	) other near the farm
PEMBRIDGE	SO 395582	*255*	*Town Meadow*	Near Pembridge
	SO 369594	*532*	*Town Meadow*	Near Noke Farm
	SO 365581	*744*	*Townsend*	Marston Court
	SO 365578	*783*	*Townsend*	" "

RODD, NASH AND LITTLE BRAMPTON	SO 302613 SO 300612	*1219* *1223*	*Towns Meadow* *Upper Townsend*	) By Little) Brampton
Field-names distant from any dwellings				
ALMELEY	SO 340527 SO 339528	*292* *297*	*Town Moor* *Town Moor Wood*	
KINGS PYON	SO 435495	*259*	*Welsh Town*	
LEINTWARDINE	SO 396758	*54*	*Town Meadow*	Edge of parish
LLANDINABO	SO 514288	*46*	*Town Pitts*	Old quarry
MADLEY	SO 414365	*1179*	*Townsend Field*	Part of Webton
WEOBLEY	SO 380526 SO 382524 SO 383527	*31* *32* *33*	*Townsfield* " "	) In Little) Sarnsfield) Township

DESERTED MEDIEVAL SETTLEMENT SITES WITH EARTHWORKS

PARISH	GRID REF.	FIELD NO.	NAME OF FIELD WITH EARTHWORKS	SETTLEMENT NAME
CASTLE FROME	SO 666459 SO 665459	*53* *55*	*Orchard behind House* *Barley Barn Orchard*	Castle Frome
KILPECK	SO 446306 SO 447306	*329* *325*	*Burrows Orchard* *Davids Orchard*	Kilpeck
MORETON JEFFRIES	SO 604482	*68*	*Conninger Close*	Moreton Jeffries
MUCH DEWCHURCH	SO 487311	*592*	*Moat Meadow*	Wormeton
PETERCHURCH	SO 320389 SO 319388	*665* *666*	*Cae Hyde* *Old Orchard*	not known
PRESTON WYNNE	SO 558467 SO 558465	*129* *130*	*Upper Chapel Orchard* *Lower Chapel Orchard*	Preston Wynne
WOOLHOPE	SO 637353 SO 635352	*1019* *987*	*Hide's Meadow* *Barn Meadow*	Old Hyde

Field-Names as Archaeological Indicators of Defensive Sites

By GRAHAM SPRACKLING AND IVOR LESSER

The chosen study area is mainly confined to the territory in S.-W. Herefordshire on the Welsh side of the river Wye. It incorporates much of the ancient Welsh districts of Ewyas and Archenfield, which later formed the historic hundreds of Ewyas Lacy, Webtree and Wormelow.

A total of seventy-two parishes are covered in the survey, which has been limited in scope for practical reasons.

The main source of information has been the published field-name lists from the parish tithe maps, produced by the Herefordshire Field-name Survey, for the Archaeological Research Section of the Woolhope Naturalists' Field Club.

The object of this study is to illustrate the value of field-names as indicators of the presence of archaeological sites of a defensive nature with particular reference to castles. The method used will also single out misleading names valuable only in an indirect way.

To this end, a list of all such sites within the county of Herefordshire has been obtained from the Sites and Monuments Department of Hereford and Worcester County Council (HWCM).

For the purpose of this analysis 'defensive site' field-names have been categorized as those containing reference to castle, moat and ring. Those field-names which contain an indication of the defensive nature of a site are called positive field-names, e.g. *Castle Orchard, Moat Meadow.* Those field-names which contain no indication of the defensive nature of the site concerned are called negative field-names, e.g. *Hill Orchard, Little Meadow,* each containing a castle site.

The researcher must be careful not to be led astray by a small number of 'Castle' names which are of a humourous or fanciful nature and actually refer to a particularly poor or humble dwelling. Where such sites are in a weak strategic position and there is no supporting evidence for a castle site, they can usually be discounted. For some reason, possibly of a local copycat nature, a small cluster of such names occurs near the Much Dewchurch, Orcop, Kentchurch parish boundaries, namely: *Charity Castle, Crabs Castle, Condie Castle, The Castle* and as a local unwritten name only, *Bobs Castle.*

Sometimes a 'Castle' field-name may be found a distance away from the nearest known castle site, in which case it can be a transferred name, meaning it was near or belonged to the castle. *Far Castle Meadow* (TM No. 1388) a river-meadow in Longtown some distance from the castle is an example. *Castle Meadow* (TM No. 127) another river-side meadow, subject to flooding is in Sellack parish beneath the hillfort called Caradoc (Caer Cradock) a defensive site to which it probably refers.

The word 'Tump' occurs frequently throughout Herefordshire and is used in field-names to describe small rounded hills. Although it appears as descriptive of castle mounds i.e. '*Castle Tump*,' it is also used to describe a field containing small hills or even ant or mole tumps, as in 'Tumpy Field.' Often it is difficult to ascertain if larger hills are man made or the result of glacial action. Situated as they sometimes are at the head of, or on the side of valleys, they are often in ideal lookout positions and may have been utilized as such. For the above reasons it has not been used as a defensive site indicator. Only where they occur at a known location on the Sites and Monuments Record, have 'Tump' names been included, usually in association with castles, as in *Chapel Tump Piece* (TM No. 580) in the S. of the parish of Hentland. Tump names are however, always worth investigating.

There have been no problems with corrupted Welsh names as the Norman influence is so strong around castles.

Another problem which arises from having to place a name in a particular defensive category, is that while in the majority of cases the field-name will reveal the exact nature of the site, exceptions will be found. The name 'Castle' will sometimes be applied to a much more ancient site such as an Iron Age or Roman fort or camp, such as the recently discovered Roman fort at Castlefield Farm in the parish of Kentchurch. In a small number of cases a field called '*Camps*' may refer to a castle as in '*Camps*' in the parish of Michaelchurch Escley.

There are of course examples of later castles being built within a hillfort or camp as at 'Campswood' also in the parish of Michaelchurch Escley.

It is not always safe to assume that 'Moat' names always refer to castle sites, as a moated farm or manor site may be indicated. They can however always safely be categorized as defensive, although status and fashion as well as practical use as a fishery may also be involved.

'Ring' names are more problematical. While in the majority of cases they may refer to a ringed, round or defensive bank or ring of water such as a moat or pond, occasionally some other meaning may be indicated such as a ring of stones or trees.

The method used has been to extract all the field-names indicating defensive sites in the stated categories from the parish field-name lists. Grid references have been worked for all those fields or groups of fields. These fields have then been checked against known archaeological defensive sites on the Sites and Monuments Record. Lists have been prepared under parish headings of all sites with significant/positive field-names, and all those with non-significant/negative field-names. These lists, too lengthy and space consuming to be included here have been retained by the authors. Sites which could not be found on the Sites and Monuments Record are therefore new and previously unrecorded and unexplored sites, to be investigated on the ground, through documentary sources, and by the use of aerial photography. The distribution of all sites in the stated categories has been transposed onto a map showing the outlines of the parishes covered.

RESULTS OF THE SURVEY IN THE 72 PARISHES COVERED

CASTLE SITES

Total number of significant/positive field-names	=	37
Total number of non-significant/negative field names	=	14
Of the positive names, those located to known sites on SMR	=	23
By subtracting the 3rd total from the 1st *New Sites*	=	14

MOAT SITES

Total number of significant/positive field-names	=	10
Total number of non-significant/negative field-names	=	0
Of the positive names, those located to known sites on SMR	=	7
By subtracting the 3rd total from the 1st *New Sites*	=	3

RING

Total number of significant/positive field-names	=	4
Total number of non-significant/negative field-names	=	0
Of the positive names, those located to known sites on SMR	=	3
By subtracting the 3rd total from the 1st *New Sites*	=	1

Field-names from the published lists from the parish tithe maps indicating possible castle sites not recorded on the Sites and Monuments Record (HWCM)

PARISH	GRID REF.	FIELD NO.	FIELD NAME	HWCM	SITE EVIDENCE
BIRCH, LITTLE	SO 505321	*16, 78*	*Castle Field*		Place-name
		60	*Castle Ground*		Documentary
		61	*Castle Orchard*		
		52	*Castle Grounds*		(Castle Nibole)
BREDWARDINE ****	SO 336440	*479*	*Castle Field*		Earthworks
		480	*Castle Orchard*		Foundations
		487	*Castle Coppice*		Coins (Edward I)
BRIDSTOW	SO 574253	*416*	*Buckcastle Hill*		Place-name
		417	*Part of Buckcastle Common*		Boundary lane
DEWCHURCH, MUCH	SO 455298	*957*	*Charity Castle*		Place-name
	SO 465283	*845*	*Condie Castle*		(Not visited)
	SO 455282	*934*	*The Castle*		Place-name
KENTCHURCH	SO 439273	*172*	*Crabs Castle*		Place-name
KINGSTONE	SO 423344	*63*	*Castle Meadow*		Mound almost vanished
MADLEY	SO 408409	*84, 90*	*In Castle Field*		Place-name
		89	*In Castle Field Croft*		Carwardine
MICHAELCHURCH ESCLEY	SO 286396	*46*	*Castel*		Farm name
NEWTON	SO 328334	*39*	*Castle Farm*		Place-name
ST. MARGARETS	SO 328355	*217*	*Castlehibo*		Place-name Earthworks
SELLACK	SO 563279	*127*	*Castle Meadow*		Near Caradoc
		128	*Castle Wood*		Caer Cradock Fort

**** This is actually a known site which is not listed on SMR.

Defensive features from the Sites and Monuments Record for which Ring or Round field-names have been found in the published lists from the tithe-maps.

PARISH	GRID REF.	FIELD NO.	FIELD NAME	HWCM	SITE EVIDENCE
HAREWOOD END Estate Map No. 5	SO 528284		*Ring Grove*	05776	Near Elvastone Farm Mound
ST. DEVEREUX	SO 463333	*313*	*Upper Rings* *Lower Rings*	05124	Depressions in fields
VOWCHURCH	SO 359376	*69*	*The Rounds*	01516	Earthworks Iron Age & Roman camp site (Poston Lodge)

Field-names with a ring or Round element found in the published field-name lists from the parish tithe-maps, indicating sites not recorded on the Sites and Monuments Record

DORSTONE	SO 305435	*49*	*The Rings*	(not visited)

Field-names from the published lists from the parish tithe maps indicating moats, not recorded on the Sites and Monuments Record (HWCM).

BRIDSTOW	SO 578237	*165* *166*	*Lower Moat* *The Moat*	Not visited On bend of river Wye opp. Weir end
DEWCHURCH, MUCH	SO 484306	*638, 639* *640, 641*	*Moat Meadow*	Not visited
WALTERSTONE	SO 342244		*Moats*	Deep curved stony ditch Hilltop site Inconclusive

SPECIAL CASE STUDY

CASTLE NIBOLE - Grid Ref. SO 505321 in the parish of Little Birch.

The survey brought to our notice a group of six fields with 'Castle' names near a farm called Castle Nibole. As this was connected with no known castle site, and there was no local knowledge of a castle in the parish, it was decided to investigate.

Examination of the local post codes directory and a walk around the area revealed six dwellings with names related to castle, Castle Cottage, Castle Glen, Castle Inn, Castle Nibole Farm, Castlenook and Castle Pool. The steep hill just past the inn is now called Pendant Pitch, but in some old directories once had a dwelling called Castle Hill.

Directories

Cassey 1885

Thomas Layton - Castle Inn

Charles Matthews - Little Castle Inn

William Jones - Castle Hill

Jakeman & Carver 1890
Castle Nibole Farm

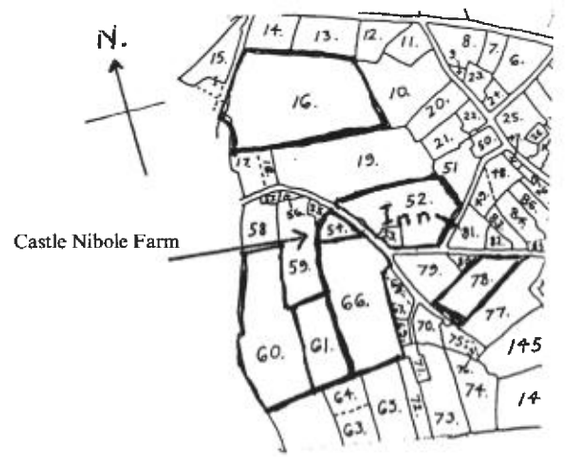
Mrs. Gould - Castle Pits

Joseph Mason - Castle Inn

Hereford Journal 1912

Mrs. Annie Dent - Castle Inn

Harry W. Southey, J.P. - Castle Nibol



Tithe-map nos.	*Field-name*
16, 78, 66	*Castle Field*
60	*Castle Ground*
61	*Castle Orchard*
52	*Castle Grounds*
54	*Part of Castle Field*

An examination of an overgrown quarry area in field no. 52 opposite Castle Inn proved inconclusive. A suspicion that it might be a moated site could not be verified and defensively did not look convincing. Castle Nibole Farm itself occupies the highest vantage point in the vicinity and it was considered that it may have been built on the original castle site. Further evidence is needed.
A visit to Hereford Record Office yielded the following references.
Index - Deed HRO G87/23/8 - 11
Castle-in-ball 1670 - 1702
Indenture (1696) 8th Year of William III
Thomas Hennond, Johan his wife
House called Castle niball (Roger Hennond his father), with all outhouses, barnes, buildings & stables. One garden. 20 acres of land being meered and bounded by a hill called Aconbury Hill.

CONCLUDING REMARKS

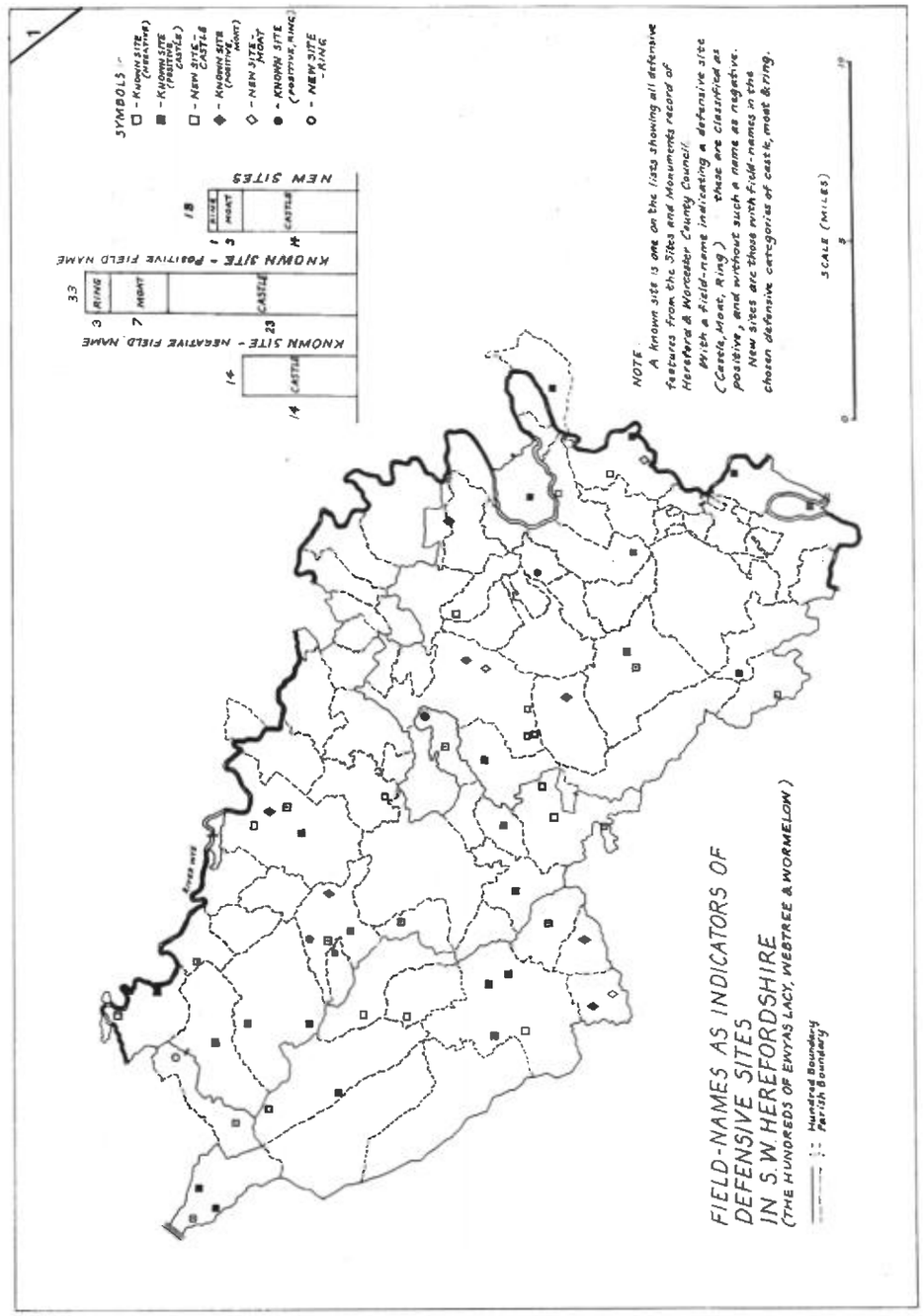
This survey was only made possible through the bringing together of two vital sources of information; The Herefordshire Field-name Survey, and The Sites and Monuments Record of Hereford and Worcester County Council.

It must be stressed that not all of the new sites thus revealed may be of high archaeological significance. Only close inspection on the ground, from the air, and through documentary sources, will reveal their true importance. Even negative results prove something.

This study has covered roughly a third of the county of Herefordshire. The fact is that these new areas of interest would have remained unknown to us and therefore probably lost forever without the use of field-names as archaeological indicators to reveal their presence.

ADDITIONAL REFERENCES

County Council, *Herefordshire Register of Countryside Treasures* (1981).
R. Shoesmith, *Castles and Moated Sites of Herefordshire* (1996).
R. Stirling-Brown, *Herefordshire Castles: A list of classified sites* (1989).
The full lists will eventually be published in the *Herefordshire Archaeological News* of the Archaeological Research Section, Woolhope Naturalists' Field Club.



(Drawn by G. Gwatkin)

MAP
Field-Names as indicators of defensive sites in S.W. Herefordshire

An Investigation of the Byefield, Bylet, Cinder, Forge & Furnace, Cae, Tref and Cover Names for the County of Herefordshire

By the late ELIZABETH TAYLOR

AN INVESTIGATION OF BYEFIELD NAMES IN HEREFORDSHIRE

With two exceptions all the Byefields are next to rivers. They appear to be connected with structures utilizing the rivers such as weirs and crossings and can be useful in locating sites known from documentary evidence. Nos. 19 and 20 are geographically isolated and conform more to the Bylet type.

	PARISH	GRID REF.	FIELD NO.	FIELD NAME	RIVER
1	BREDWARDINE	SO 330457	*24*	*Byefield*	Wye
2	MONNINGTON ON WYE	SO 374430	*82*	*Byefields*	Wye
3	PRESTON ON WYE	SO 376430	*61*	*Court Byefield*	Wye
4	BYFORD	SO 403424	*142*	*Byefields*	Wye
5	MANSELL LACY	SO 433417	*323*	*Byefields*	Wye
6	EATON BISHOP	SO 443413	*498*	*Byefields*	Wye
7	CLEHONGER	SO 470395	*280*	*Bye fields*	Wye
8	DINEDOR	SO 538388	*10*	*Byefields*	Wye
9	HOLME LACY	SO 568352	*330*	*Byefield Meadow*	Wye
10	FOWNHOPE	SO 573343	*755*	*Byefields*	Wye
11	BRIDSTOW	SO 579235	*373*	*Byefield*	Wye
12	ROSS	SO 576234	*356*	*By Field & Withy Bed*	Wye
13	GOODRICH	SO 568172	*591*	*Old Wear & Byfields*	Wye
14	PETERCHURCH	SO 331407	*312*	*Byfield*	Dore
15	MORDIFORD	SO 567382	*80*	*Pt. of Lower Byefields*	Lugg
16	HAMPTON BISHOP	SO 567381	*324*	*Byefield*	Lugg
17	SUTTON ST. MICHAEL	SO 517480	*39*	*Byfields*	Lugg
18	BODENHAM	SO 528507		*The Two Byfields*	Lugg
19	CRADLEY	SO 745487	*1439*	*Byefield Meadow*	brook
20	BROMYARD-NORTON	SO 658572	*236-7*	*Lit. & Grt. Byefield*	brook

1. Part of this field had been turned into an oxbow by having a new channel for the river cut across it.

2 & 3. An agreement exists, dated between 1135-58, between the Dean and Chapter of Hereford cathedral who owned Preston on Wye, and Herveus de Muchgros, the lord of Monnington. Each agreed to allow the other to attach a weir for his mill on the other's land. Herveus was to build his weir across the river from Monnington to Preston - and the Dean built his weir from Preston to Monnington a little downstream from Herveus' mill. Because the two parishes only face each other for a short distance where both parishes

have a Byefield with an island between, we can be reasonably certain that the Byefield name refers to these 12th-century weirs. [Hfd. Cath. Cal. 1088, p. 4]

4. Either the ancient ford, or perhaps the weir referred to as 'piece of Ground at Bridgewear' given in 1746 for a charity and noted on the Donations Board in Byford Church.

5. At the Canon Bridge river crossing.

6. Next to Roman road crossing from Kenchester shown in air photographs.

7. Site of a ferry and the head of a weir serving a mill at Breinton.

8. Two fields upstream of an island. Perhaps the field had been divided leaving the name attached to the wrong field?

9. The only field in the parish of Holme Lacy on the Fownhope side of the river. It locates a medieval mill weir across the Wye. The field was given by Roger de Chandoys in the 13th century to the Prior and Convent of Craswall 'That they may cause the pond of their mill of Hamme [Holme Lacy] to be affixed to my land of Hope' [Fownhope]. [AS58/2/32-32A] The weir was also to be used for the projected 17th-century iron forge site on the Holme Lacy side. (*Trans. Woolhope Natur. Fld. Club,* XLV (1986), 464] The foundations and layout of the unfinished forge were still visible in 1987.

10. Next to a ferry. Perhaps the site of a ford? Investigation needed.

11. Just above Weirend; the fishery weir of the Lordship of Wilton.

12. Before division of the field this would have included the land opposite to the weir in no. 11.

13. The recorded history strongly suggests that the weir and the leat were originally Roman. (Dressed stones still lie in the river-bed.) When the leat was cut it created an island and this is still visible. Called *Old Ware Meadow* in the tithe apportionment; Old Weare and Byfields in a map and survey of Courtfield Lands, 1830. [Private Collection].

14. By a weir.

15 & 16. This field is bisected by the parish boundary. S. of the river the remains of a leat or earlier course of the river are shown on the larger scale O.S. maps.

17. River crossing? Nothing known.

18. This field now has a footbridge over the Lugg leading to the church. The pitched stone remains of two fords a little downstream can be seen here. {HRO AS52 (Longleat 1342)].

19. This is a farm name giving names to several fields. There is only a small brook here.

20. These fields are near but not next to a brook with a weir.

AN INVESTIGATION OF BYLET NAMES IN HEREFORDSHIRE

All the Bylet fields are near brooks or rivers and are associated with mills, weirs or leats. The name is a good indication of the present or former site of a water mill.

Of the 15 fields known with this name, 11 are in the N.W. of the county, chiefly clustered near the Shropshire border. The rest are also in the northern part of the county; no Bylet names have been found S. of Stoke Lacy.

	PARISH	GRID REF.	FIELD NO.	FIELD NAME	RIVER/BROOK
1	BRAMPTON BRYAN	SO 375730	*313*	*Muscotts Bylet*	Teme
2	BRAMPTON BRYAN	SO 343700	*125*	*The Bylet*	Limebrook
3	BRAMPTON BRYAN	SO 338698	*53*	*The Bylet*	Limebrook
4	BUCKTON	SO 375730	*575*	*Bylet*	Clun
5	BURRINGTON	SO 451749	*167*	*Bylet*	Clun
6	LEINTWARDINE	SO 410734	*607*	*Bylet*	Clun
7	LUCTON	SO 425637	*208*	*Bylets*	Lugg
8	LUCTON	SO 425638	*206*	*Back Bylets*	Lugg
9	PEMBRIDGE	SO 383583		*Byletts Farm*	Arrow
10	STAUNTON ON ARROW	SO 370598	*491*	*Bylet*	Arrow
11	SHOBDON	SO 410617	*158*	*Bylets meadow*	brook
12	STOKE LACY	SO 615501	*239*	*Byletts orchard*	Lodon
13	LEOMINSTER OUT	SO 508579		*Bylet*	Lugg
14	BODENHAM	SO 547511		*Bylet*	brook
15	HOPE U DINMORE	SO 515525		*le Bylet*	Lugg

No. 13 Island in river formed by leat. Name documented from 16th century [HRO A63/Box 47, Eaton Hall survey *c.*1610]
No. 14 Probable site of the medieval mill of the Township and manor of Moor.
No. 15 By weir and mill at Hampton Court. Names le Bylett in the Court Rolls of 1423.

AN INVESTIGATION OF THE CINDER NAMES IN HEREFORDSHIRE

	PARISH	GRID REF.	FIELD NO.	FIELD NAME	SITE EVIDENCE
1	ELTON	SO 462705	*71, 72*	*Upr. & Lwr. Cinderline*	Charcoal
2	RICHARDS CASTLE	SO 488688	*620*	*Sinder Meadow*	?
3	LITTLE HEREFORD	SO 550669	*607*	*The Cinders*	Charcoal
4	LEYSTERS	SO 585647		*Cinders Farm, Wood etc.*	Charcoal
5	KINGSLAND	SO 464603	{*318*	*Cinders Orchard*	{Bisected by
5	KINGSLAND	SO 462600	{*300-1 305-6, 308*	*Cinders*	{former railway
6	CANON PYON	SO 465507	*303*	*Cinders*	? Grass orchard
7	MUCH MARCLE	SO 653339	*624*	*Cinderbury*	? nothing found
8	PIXLEY	SO 653401		*Synderfeild*	? nothing known
9	WESTON U PENYARD	SO 643237	*231*	*Cinder Hill*	Slag, RB pottery
10	BRIDSTOW	SO 557223	*534-5*	*Cinder Piece*	Slag, RB pottery
11	PETERSTOW	SO 562242	*239*	*Cinder Grove*	Slag, RB pottery
12	HENTLAND	SO 554231	*651*	*Cinder Field*	Slag, RB pottery
13	GOODRICH	SO 569184}	*527*	*Cinder Pumps*	Slag present, no
14	GOODRICH	SO 570196}	*249*	*Cinder Piece*	field walking
15	WALFORD	SO 594210	*243*	*Cinder Pit Meadow*	? (under grass)

The CINDER field-names include two distinct groups. Those in the N. of the county appear to be associated with charcoal burning. All except one of those in the S. where field walking has been possible have large quantities of bloomery iron slag which is accompanied by Romano-British pottery.

Nos. 1-4 in the far N. of the county: The farmers did not recognise samples of iron slag and were confident there was none on their land. Three knew of black patches in the fields probably caused by charcoal burning and *Cinders Farm* also has two 'Pit Fields'. The fields are all in wooded areas.

Nos. 5-8 are inconclusive. No. 6 is an orchard under permanent grass about which nothing is known. No. 7 was walked but nothing was found to account for either the Cinder or the Bury elements of the name. [This name was taken from the 1797 Inclosure Map published by the Field-Name Survey. The same field was called Farleys in the 1839 tithe apportionment.]

No. 8 The grid reference is for Cinders Farm. *Synderfeild* must have lain just to the S. of the farm and next to the Roman road. Deeds of 1618 and 1637 describe 'four ridges containing half an acre' in the Furlongs 'extending in length from a field called Synderfeild on the south part to a certain watercourse...sometime belonging to a myll fleame on the north part.'[1] No black patches or slag have been noticed by the farmer.

No. 9-12. No. 9 *Cinder Hill* is one of the main iron-making areas of the Roman settlement of *Ariconium.* Iron making was dispersed over a large area mainly to the W. of *Ariconium* and the field-names numbered 10-12 have led to the discovery of previously unknown Roman period iron-making sites. All the sites have bloomery slag in quantity and 9-11 have furnace clay in addition to pottery.

10 *Cinder Piece,* Blacknorle Farm (SO 557223) had just been ploughed when visited in April 1994. Two distinct concentrations of bloomery slag were visible about 30 m. apart. Pottery and furnace clay was present in both areas. Amongst the RB pottery recovered was a rim sherd identified as Severn Valley Ware, Tankard in light orange (late 2nd-3rd century) no. 43. [cf. Webster P.V., 'Severn Valley Ware: a preliminary study'; *Trans. Bristol & Glos. Arch. Soc.*, 94 (1976) 18-46.][2]

REFERENCES

[1] [HRO K11/3279 & 3279(ii)] Information given by John King.
[2] Identified by A. L. Sockett, Mon. Arch. Soc.

AN INVESTIGATION OF FORGE and FURNACE NAMES IN HEREFORDSHIRE

This investigation did not include Blacksmith's forges.

Caution has to be used with these names as five out of the 16 fields seem to have been named simply because they were near - or looked across a river or valley at a furnace or forge. This is understandable considering the noise made by the water-powered, quarter-ton hammers and the glare at night from the furnaces. Forges and furnaces would have been very dominant features in the landscape.

	PARISH	GRID REF.	FIELD NO.	FIELD NAME	SITE EVIDENCE
1	BURRINGTON	SO 563308		*Bringewood Forge*	18-19th c. Visible remains
2	WHITCHURCH	SO 559156	*369*	*Site of Ironworks*	New Weir Forge. 16-19th c. Visible remains
3	WHITCHURCH	SO 560185	*721*	*Old Forge Piece*}	16-17th c. iron forge
4	GOODRICH	SO 560185	*545*	*Old Forge Orchard*}	on parish boundary
5	LLANCILLO	SO 377252	*201* *234* *173* *209* *174*	*Forge Meadow*} *Piece at Ruins*} *Pt. Forge Stream*} *Forge Close*} *At Old Forge*}	17-18th c. The names provide explanations for some of the remaining earthworks
6	WALFORD	SO 602182	*1508* *1501* *1484, 1491* *1507, 1511*	*Forge Meadow*} *Founders Orchard*} *Furnace Farm*} *Furnace Pond*}	Bishopswood Furnace 16-19th c. The names help to pinpoint the locations
7	KENTCHURCH	SO 400262	*352*	*Old Forge*	Pontrilas Forge 17th c.
8	BALLINGHAM	SO 563308	*90*	*Forge Meadow*	Faces 17th c. Cary ironforge across river Wye
9	WELSH BICKNOR	SO 587180	*14*	*Furnace Meadow*	Faces the Walford furnace across river Wye
10	ST. WEONARDS	SO 492233	*750*	*Furnace House*	17th c. site
11	ST. WEONARDS	SO 481237	*727, 725*	*Furnace Hill*	Name refers to farm not to furnace
12	LINTON	SO 668234	*609, 611* *612*	*Furnace Hill*	Overlooking but not close to 17th c. furnace
13	LINTON	SO 649258	*204*	*Furnace Field*	Two 17th c. sites are recorded in Linton but this field is not near water power
14	DINEDOR	SO 526347	*340*	*Forge Wood*	Nothing known. No source of water power
15	LIT. DEWCHURCH	SO 560320		*Kilforge*	Corruption of the earlier name 'Kilfodes'
16	DILWYN	SO 437544	*1234*	*Forge Leasow*	Slag present in brook

Nos. 1-6 are well recorded sites but the field-names are useful in elucidating the purpose of some of the remaining earthworks.

No. 7 *Pontrilas Forge* is at some distance from Pontrilas. Masses of slag, furnace clay and blackened areas in the field beside the river Dore identify it. It was the name of a now vanished farm located in an adjacent field.

Nos. 8, 9, 11-13 are all transferred names relating to a site in their vicinity. No. 12 *Furnace Hill* overlooks Burton Mill where the presence of quantities of iron slag points to it being the site of a furnace; the tithe map name Cast Meadow[1] close by, suggests that the furnace at Burton Mill may be the one making iron castings in 1629. *[Trans. Woolhope Natur. Fld. Club,* XLV (1986), 459]

No. 16 is beside the Stretford Brook with iron slag present. This may be a previously unknown water-powered forge. Further investigation is needed.

REFERENCES

[1] The publication of the Linton field-names from the tithe map gives No. 148 as *East Meadow*. This was a regrettable error for Cast Meadow.

THE DISTRIBUTION OF CAE, TREF and COVER NAMES IN HEREFORDSHIRE

The Welsh field-name elements Cae and Tref were collected from the tithe apportionments of the whole county and mapped by Geoff Gwatkin. The Welsh field-name Cover (cyfar) is also found only in S. Herefordshire and appears to be linked with areas where the Tref names predominate.

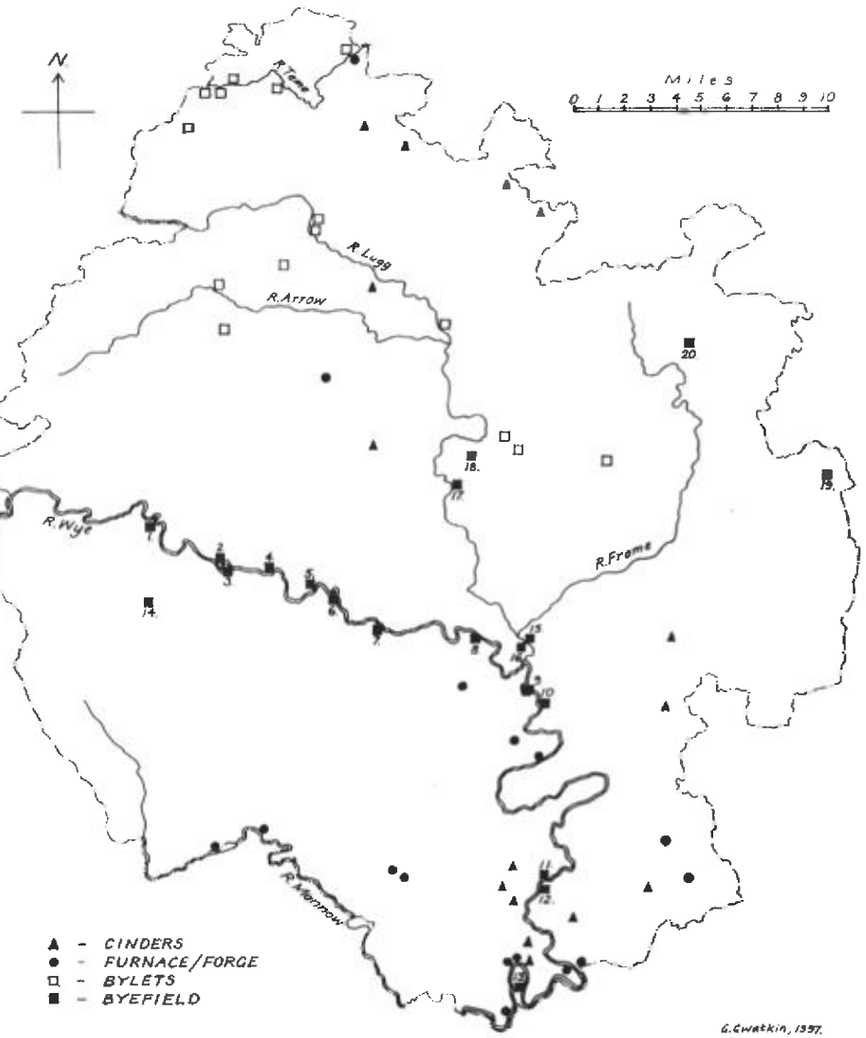
CAE is an arable field and always has another word with it such as Cae Mawr - Big Field. In Herefordshire, Cae is softly stressed and pronounced car or c' and sometimes written Ca. The Cae fields are almost confined to the Huntington-Clifford area, the Golden Valley and Ewyas where they are thickly clustered in Walterstone, Llancillo, Rowlstone and Dulas. There are very few in Archenfield.

A TREF is a small settlement; often now a single farm. It is also used with another word; sometimes a name as in Treowen. Trefs are almost absent from the Golden Valley; there are some in Ewyas and the Huntington area, but they are very numerous in Archenfield. Of particular interest are the two E. of the river Wye in Brampton Abbotts and Walford. The Tref names on the map were all in use when the tithe maps were made around 1840. Older deeds show that formerly there were many more Trefs in Archenfield which suggest that settlement was even more scattered than when the tithe maps were made. Fields with a Tref name may indicate the site of a former farmstead but this has not been investigated.

COVER is the anglicised spelling of the Welsh cyfar. Originally a cyfar was the term used for land which was worked jointly with others in cooperation. Each man contributed his part to the plough team; an ox, or the plough irons, or leading the oxen and so on, with the same plough team cultivating each contributor's land. Hence it was a term for fields which were cultivated in strips or parcels by different farmers, each owning his own strips. It was the amount of land ploughed by a team in one day's yoking.

Cover field-names were normally used with numbers, e.g. the Twelve Covers. In the 18th century the 'Cover' was still in vernacular use as an arable land measure for some farms in Archenfield. In Sellack 39½ covers of land in Baysham (around SO 571277) were bought by the Guy's Hospital estate in 1745. The covers were reckoned by the surveyors to be two thirds of a statute acre.[1] The table shows the statute acreages given in the tithe apportionments of around 1840. It includes two fields in Rowlstone.

In Ewyas Lacy the covers were nearly all confined to an area of Craswall and Llanveynoe. This was known as Forest Heen in the late-17th and early-18th-century leases of the Manor of Ewyas Lacy.[2] Out of the leases of 30 farm holdings in Craswall: 22 express the arable land in Covers, and 14 out of 21 in Llanveynoe. There were also two in Newton and one in Michaelchurch Escley. An 1839 lease of Tyr Blackhill with 45 statute acres in



MAP 1
Cinders, Furnace/Forge, Bylets, Byefield.

(Drawn by G. Gwatkin)

the township of Craswall, was said in an earlier description to be: 'a messuage, barn and 18 acres customary Welsh Measure which said lands consist of an orchard containing ½ a cover, 6 pieces of arable containing together about 20 covers, 3 pieces of meadow containing together 7 statute acres, 4 pieces of pasture land containing together about 19 covers and about 6 covers of Wood...'[2] Meadow land was not expressed in covers.

There is an important scatter of surviving Cover names E. of the Wye in Greytree Hundred: in How Caple, Weston-under-Penyard, Aston Ingham and two in Woolhope. Covers are also found in field-names in N. Monmouthshire. Remembering that the names are Welsh and that Trefs and Covers indicate a Welsh system of land use, the striking distribution of these field-names should provide valuable material for further studies.

REFERENCES

[1] HRO AW28/31/23.
[2] HRO J91/1 p. 459 and 140.

PARISH	GRID REF.	TITHE NO.	NAME	ACREAGE	NOTES
BRIDSTOW	SO 574249	223	*Two Covers*	1-2-15	
	}	*225*	*Five Covers*	3-1-2	
	centred	*226*	*Middle Five Covers*}	3-1-12	
	}	*215*	*Two Covers*	1-2-36	
	} SO 578251	*216*	*The Pool Cover*	1-0-20	
	}	*128*	*Thirteen Covers*	8-0-27	
	SO 563231	*516*	*Ten Covers*	7-0-26	
	}	*121*	*Ten Covers*	6-2-0	
	SO 584244	*122*	*Seven Covers*}	4-1-18	
	}	*123*	*Two Covers*	1-2-6	
	SO 581250	*124*	*Three Covers*	2-2-20	
	}	*126*	*Eight Covers*	5-1-24	
	SO 574254	*133*	*Three Covers*	2-1-12	
		547	*Twelve Covers*}	7-3-0	Skakes
	SO 549226	*549*	*Eight Covers*	6-0-16	
	}	*524*	*Six Covers*	5-1-31	Blacknorle
	SO 556225	*526*	*Five Covers*	4-0-30	
	}	*528*	*Near Five Covers*	3-2-15	
	SO 587246	*148*	*Six Covers*	5-0-36	
		152	*Ten Covers*}	5-3-30	
	SO 583246	*153*	*Six Covers*}	4-0-22	
		155	*The Covers*}	6-2-25	
	SO 580245	*156*	*Seven Covers*	4-3-5	
DIXTON	}	*24*	*Twelve Covers*	8-1-10	Llangunvill
	SO 497165	*43*	*The Twenty Covers*}	14-1-5	"
	SO 491158	*6*	*The Twelve Covers*	8-0-13	Tump Farm
	SO 517159	*133*	*Nineteen Covers*	11-3-23}	{Buckholt
	SO 514161	*135*	*Twelve Covers*	3-3-34	{Farm
LLANROTHAL	SO 493187	*87*	*The Twenty Covers*	13-0-30	
LLANGARREN		*1305*	*Upper Twenty Covers*	7-2-37	
	SO 490209	*1305*	*Lower Twenty Covers*	6-1-12	
	SO 512214	*1305*	*The Ten Covers*	7-0-17	
	SO 502206	*1305*	*The Twelve Covers*	8-2-10	
	SO 500204	*1305*	*The Seven Covers*	6-0-2	
	SO 495206	*1305*	*The Four Covers*	2-2-10	

ROWLSTONE	SO 362280	*312*	*10 Covers*	4-3-8	Wigga
	SO 362279	*313*	*9 Covers*	5-1-19	
ST. WEONARDS	}	*47*	*Six Covers*	4-0-13	Pendigott
		52	*Five Covers*}	3-2-38	Extends on
	SO 481257	*53*	*Ten Covers*	6-1-3	both
	to 485259	*54*	*Three Covers*}	2-1-21	sides
		60	*Three Covers*}	2-1-12	of
		71	*Seven Covers*}	4-3-38	a
		72	*Nine Covers*}	6-0-20	road
	SO 482230	*874*	*Two Covers*	0-3-32	
	}	*799*	*Four Covers*	2-2-7	
	}	*800*	*Nine Covers*	6-2-14	
	centred on	*801*	*Seven Covers*}	5-2-0	
	SO 487225	*802*	*Three Covers*}	3-1-17	
		828	*Eight Covers*}	5-3-30	
WELSH NEWTON	SO 491195	*P15*	*Nine Covers*	7-0-0	
		PH5	*Five Covers*}	3-2-29	
	SO 490200	*PH16*	*Nine Covers*}	5-3-10	
WESTON-UNDER PENYARD	SO 643221	*480*	*Four Covers*	3-1-23	
	SO 629242	*111*	*Cover Meadow*		
MARSTOW	}	*145*	*The Govers*		
	} SO 561209	*157*	*Govers*		
GOODRICH		*109*	*Pt. of the Govers*}		
LIT. DEWCHURCH	SO 532322	*15*	*Cover Acre*		
ASTON INGHAM	SO 682235	*494*	*Cover Croft*		
WOOLHOPE	SO 638352	*997*	*Coverer*		
	SO 601333	*696*	*Cover Hills*		
KINGS CAPLE	SO 552284	*226*	*Stick of Vestry*	Coversty	(1684)
HOW CAPLE	Glebe Terrier		*The Cover Close*	early 17th	cent

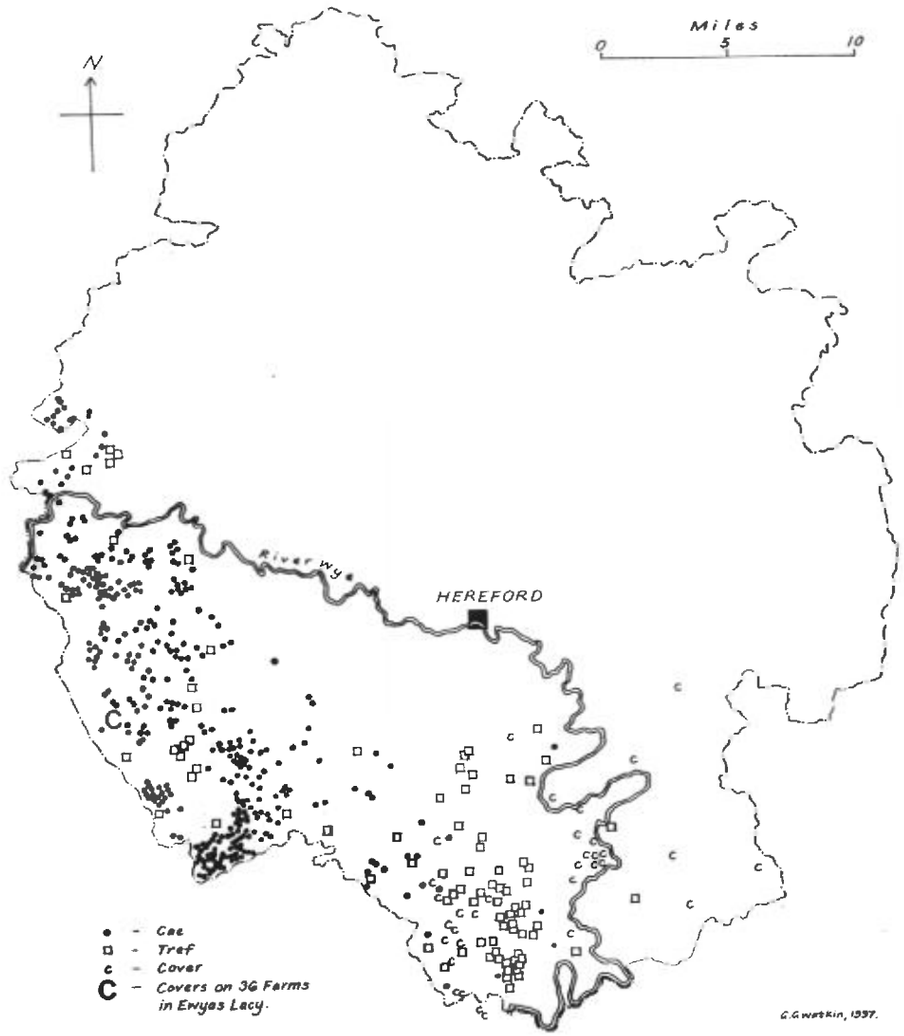
'Covers' which may have been game coverts have not been included.

CASTLE TUMP FIELD. SO 652280.

Nothing of interest was known about this field in Upton Bishop prior to an investigation prompted solely by its name. Although much ploughed down, the bank of a roughly circular enclosure, 35 m. wide with a mound on its N.E. perimeter could be seen. The mound rises about 3.5 m. above the ditch on its outer side and appears to be a motte. Some 11/12th-century pottery was found and subsequent field walking recovered an assemblage examined and dated by Steve Clarke of Monmouth Archaeological Society from the late-11th to early-15th century.

The enclosure is not sited in a position which has any obvious natural advantages for a defensive site. A considerable spread of iron bloomery slag is present from halfway up the field almost to the enclosure bank. Its presence in a district scattered with Romano-British iron-making sites raises the possibility that the site was chosen because an enclosure defended by a ditch and bank was already in existence before the Norman conquest. The name *Blackwall* for the adjoining field may have some significance.

(Report and Pottery Report in *Trans. Woolhope Natur. Fld. Club,* XLVII (1991), 24-7.)



MAP 2
Cae, Tref, Cover

(Drawn by G. Gwatkin)

A Survey of Herefordshire Ponds and their value for Wildlife 1987-1991

By ANTHEA BRIAN AND BERYL HARDING

1. INTRODUCTION

In recent years the push for agricultural intensification combined with the ever increasing power of modern dredgers has led to the draining of nearly all the wetlands and marshes in the county. As the water-table has gone down so the haunts of the curlew, snipe and plover have disappeared under the plough.

The natural pools formerly found in marshy areas were the home not only of water birds but of frogs, newts, toads and large numbers of aquatic insect species together with a great variety of attractive water plants.

As these natural pools were lost man-made ponds at first provided a refuge for many of the plants and animals. But these ponds too have been disappearing; - drained, filled in, built over or converted to agricultural use. Over the country as a whole 75% of ponds have been lost since 1880.[1]

At last however the importance of ponds is beginning to be appreciated. On many farms new ponds are being made and old ones that had become filled in are being brought to life again. On a smaller scale more and more gardeners are finding the attraction of having a pond in their garden and as a result aquatic garden centres are booming.

This new interest in ponds is, naturally enough, leading to the deliberate introduction of plants and animals to speed up the colonisation process. This is something that happened only rarely in the past. A showy plant like the white water-lily might occasionally have been introduced into a farm pond but most of the plants and animals would have found their own way there.

So this survey of ponds has been carried out to form a record of the physical characteristics and wild life of Herefordshire's ponds as they have been in the past. It is hoped that the information gained can be used, partly to provide a yardstick by which to assess the value to wild life of different ponds and ensure that as many as possible are preserved, and partly as a guide to ensure that local plant species, native to the county, are used when new ponds are being stocked.

The survey has been extensive rather than intensive, the aim having been to obtain a general overview of the present condition of Herefordshire's ponds.

In addition to the field survey of physical characters and wild life a desk study has been made comparing the numbers of ponds in the county in the 1920s and the 1980s.

2. METHODS OF SURVEY

A *Selection of Ponds*

Since the object of the survey was to assess the condition and wild life value of Herefordshire ponds in general the ponds chosen for survey should perhaps have been selected

entirely at random. But two other factors were also considered to be of importance and influenced the final choice.

Firstly, since the county as a whole has a varied topography and geology it was thought important that this variety should be represented in the survey by including ponds from both uplands and lowlands and from all the major geological formations represented in the county.

Secondly, because the distribution and density of ponds over the county is very uneven, an attempt was made to relate the number of ponds sampled in an area to the density of ponds in that area. To do this 1-5% of the ponds were sampled in each 10 km. square. Over the county as a whole 2.7% of the total number of ponds were surveyed.

Although the above two factors influenced the initial selection of ponds for survey from the map, in the field other factors came into play. As a result the final choice of ponds for survey was also influenced by such matters as ease of access and ownership.

100 ponds were surveyed during the period 1987-91. FIG. 1 gives their distribution and shows a reasonable coverage of the county. A few of the ponds were dry when first visited but if they clearly held water at some time of the year they were included in the survey and visited a second time. Repeat visits to all ponds at different times of year would have been desirable but was not practicable in the time available.

Every pond was given a reference number within each 10 km. square. The framework thus set up can be infilled by more detailed work in the future and can also be used to compare Herefordshire ponds with those in other parts of Britain.

B *Recording*

Three recording forms were used for each pond. The first two concerned the plants and animals.

For the plants only aquatic and marshland flowering plants were recorded and these were identified to species level.

Identification of the animals was not so detailed. Vertebrates were identified to species level but in general invertebrates were identified to family level only, a few being taken to species level. Identification of all invertebrates to species level would have been desirable but very time consuming and was not carried out since the study aimed to be extensive rather than intensive. Consequently the Tables show numbers of plant *species* but animal *types*.

Sampling for invertebrates was carried out in a variety of ways:-

(i) inspection for surface dwellers.
(ii) net sweeps at 15-20 cms. and 40-50 cms. depth in both clear water and around the pond vegetation.
(iii) sampling with a strong-framed net at pond base level if the pond was not too deep or silty.
(iv) where the pond base consisted of hard stones these were turned to record the animals hiding beneath.

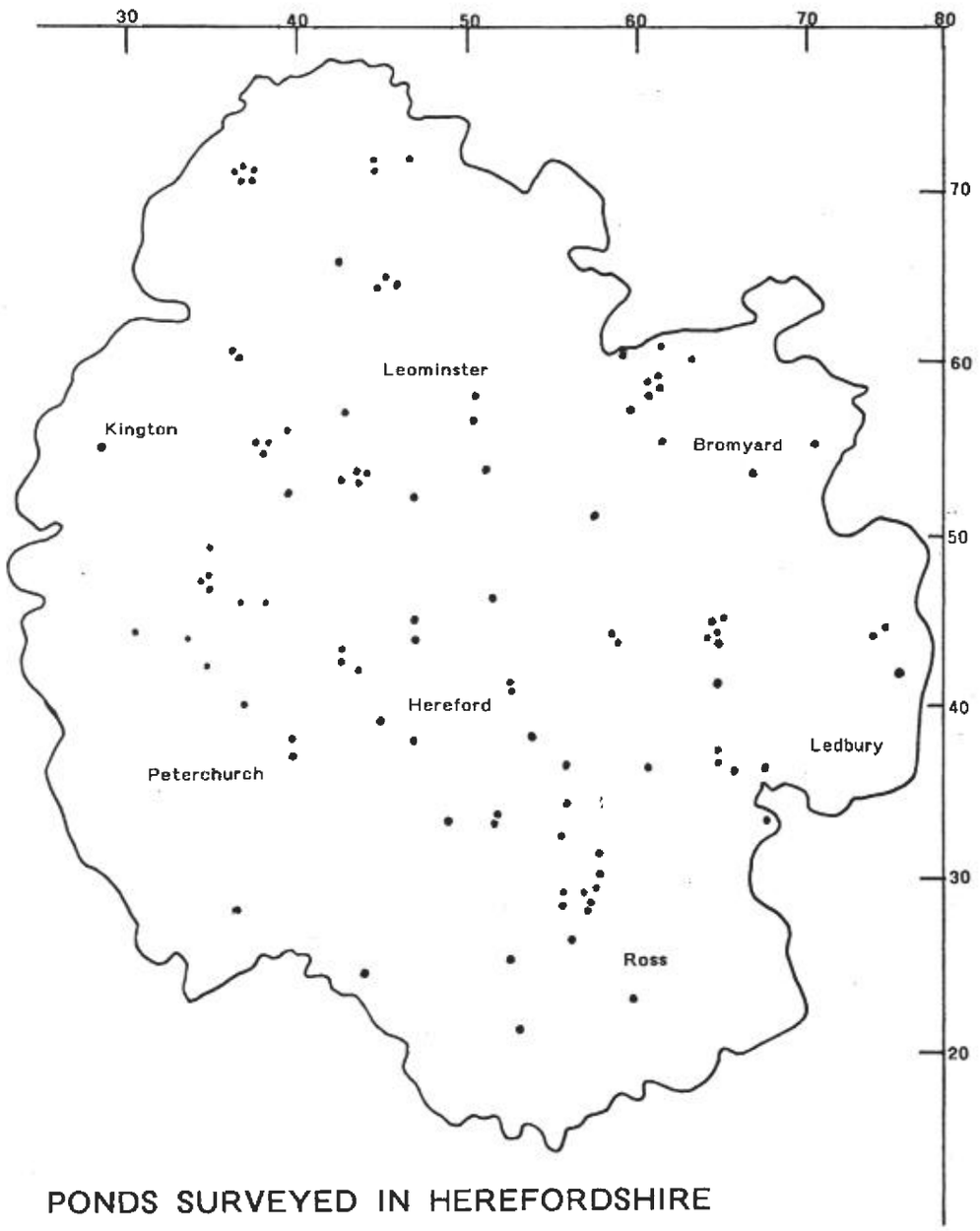


FIG. 1
Distribution of the ponds surveyed in Herefordshire.

(v) in most cases samples of vegetation were taken home for further investigation for animals.
(vi) mud samples were taken if the pond had almost dried up and placed in rain water to see what hatched out from dormant spores.

The third form was used to record six physical characteristics of the ponds; - their size, degree of shading, amount of open water, water flow, fencing and pH.

A sketch map of each pond was made together with notes about the surrounding land use, the probable origin of the pond and its present usage. Chemical analysis of the water was not undertaken but results of a biological assessment based on plant species is given below. Water depth was not measured.

3. RESULTS

A *The pond plants*

(a) Plant species and their distribution

Only plants associated with water or marsh habitats were recorded. These are listed in Table 1. A total of 103 species were found but even the most often recorded species, common duckweed, was found in fewer than half the ponds and 21 species in only a single pond. Thus although ponds appear to offer a fairly uniform habitat the plants that grow in any one pond are far from uniform and each pond has a unique flora.

This variation is characteristic of ponds in other parts of the country as well and is one reason why it is important to preserve as many ponds as possible since only thus can the present range of plant species be maintained.

(b) Different types of water plant

Pond plants can be roughly classified according to the part of the pond in which they grow, the bank, the marshy edge or the open water. Of the 103 species recorded 7% were free floating, 11% under water, so-called oxygenating plants, 10% bank species and over 60% 'emergent plants' growing in the mud around the edge.

The ponds varied a great deal in the amount of each type of vegetation present. This probably depended on factors such as pond depth, grazing of the banks and length of time since last cleaning out but varied with the geology as well.

In general not only were there rather few species of under water plants involved but those that were present were in only rather a few ponds, about 7% in all. These species are of particular importance for the animal life of the pond, by maintaining oxygen levels and providing food and shelter, their absence is a matter for concern.

B *The pond animals*

The animal types found in the survey are listed in Table 2. Had identification been carried to species level the number would undoubtedly have been very much higher.

Nevertheless the list shows a similar trend to that of the plants - i.e. that certain types were common, though none present in much over 60% of the ponds, and that many more types were rare and only occurred in a few ponds.

The presence of certain invertebrate species is much used by the National Rivers Authority for testing the quality of the water in rivers and the fact that a fifth of the ponds had fewer than five animal types indicates the poor quality of a fair number of the ponds.

C *Relationship between the numbers of plant species and animal types*

Ponds with high numbers of plant species tend to also have high numbers of animal types. In the Herefordshire ponds this association was statistically highly significant, not very surprising in view of the close dependence of the animals on the plants.

Ponds varied widely in the numbers of plant species and animal types found in them; FIG. 2 gives the frequency of occurrence.

It is clear that the majority of ponds support a rather limited number of different plants or animals, 68 had fewer than 10 plant species and 32 fewer than 10 animal types.

Conversely very few ponds supported large numbers; only two ponds had over 40 plant species and four over 40 animal types.

A similar situation is found in other habitats with other species involved.[2]

This type of frequency probably results from the fact that a pond can be made unsuitable for plants and animals in a great many different ways; i.e. it is too small, too polluted, too shaded or too isolated to be colonised. Being unsuitable in just one of these ways restricts the number of species. In contrast to support a large number of plant and animal species a pond has to be suitable in every way.

D *The physical characteristics of the ponds and the relationship of these with the plants and animals*

For each of the pond characteristics listed below chi-squared tests were carried out to determine whether there was a statistically significant association between the pond characteristic and the numbers of plant species and animal types. Only those tests that gave a highly significant result are recorded below.

(a) Type of land use around ponds

Surrounding land use	*Number of ponds*
Fields	78
Farm-yards	14
Woodland	22
Roadside	28
Common land	11

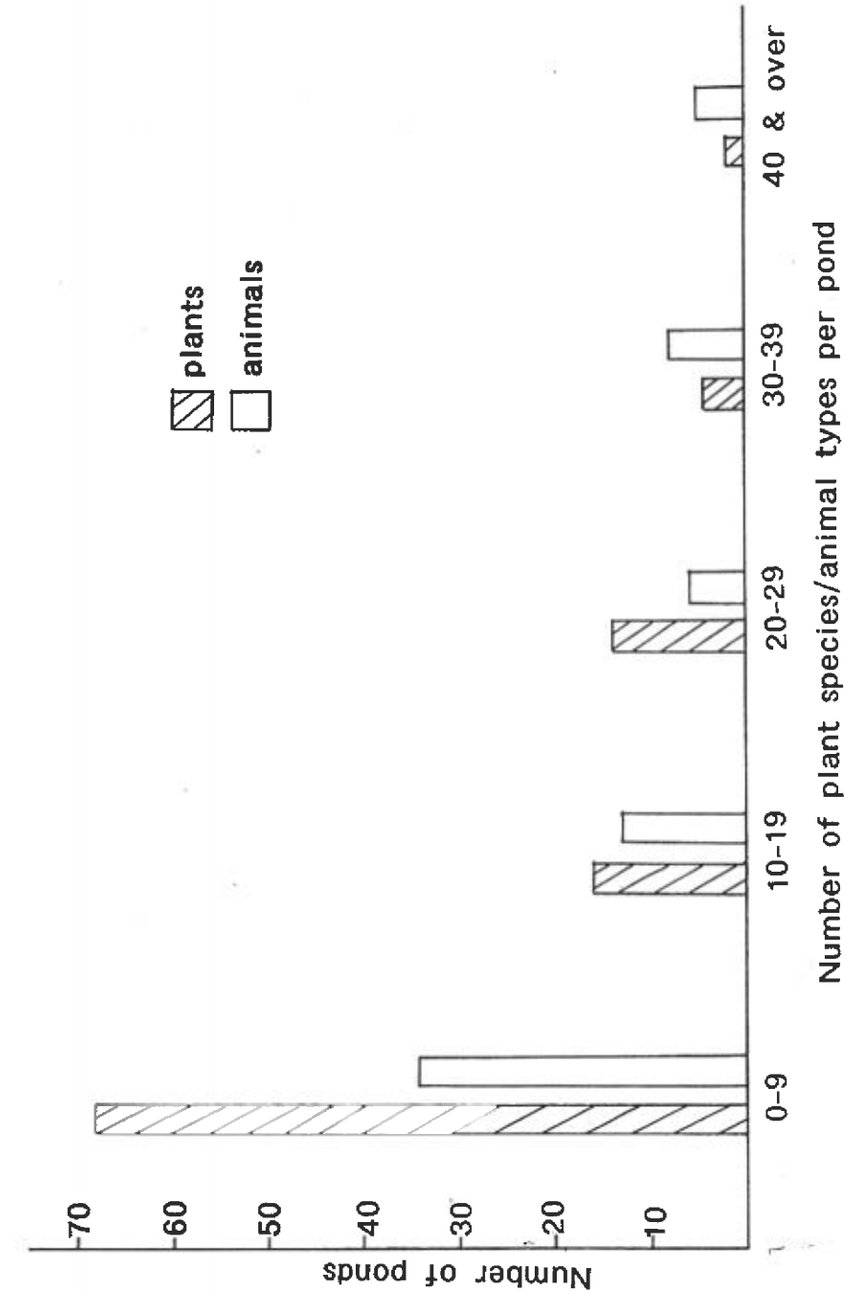


FIG. 2
The number of plant species and animal types per pond.

The surrounding land use was recorded because it might be expected to influence the type and variety of plants and animals living in a pond. For example ponds in arable fields where cultivation is taken right to the pond's margin may be contaminated by drift from herbicide spraying or run-off from the application of artificial fertilisers. In addition ponds having no uncultivated marginal strip provide no shelter for emerging pond animals. Ponds in pastures may have their edges excessively grazed and trampled by stock, something that favours a few species but damages others, and if cattle use a pond for drinking their excreta may enrich the pond causing the growth of algal blooms. Ponds associated with woodland suffer from excessive shading and become filled with leaf litter. Ponds by the roadside may be polluted by roadside run-off and dumping.

Ponds situated on common land might be expected to be the richest in wild life since their surroundings are the most natural and undisturbed. However despite the considerations listed above no clear cut differences were found in the effect of surrounding land use on the flora or fauna of the ponds.

This is probably because at least half the ponds surveyed were bounded by two or more different types of land use, for example pasture on one side and a road on the other.

(b) Fencing around the pond

State of fence	*Number of ponds*
Complete	32
Partial	20
Absent	48

No connection was found between presence or absence of a fence with the number of species. This was not surprising because a fence around a pond is only of importance in pasture fields where it protects the edge of the pond from stock damage and over-grazing. In many cases however it was only arable land that was fenced off.

c Pond Size

Size of pond	*Number of ponds*
Small ponds (less than 500 sq. metres)	24
Medium ponds (500-1,000 sq. metres)	34
Large ponds (over 1,000 sq. metres)	42

Large ponds had a highly significant, positive association with high numbers of both plant species and animal types. This association between large area and biodiversity is well established for many habitats and has been shown for ponds in Cheshire[3] and elsewhere.

The effect of size probably depends on two main factors. First that larger ponds provide a greater number of different habitat niches than smaller ones and secondly that conditions in small ponds tend to be more extreme than in large ones. For example small ponds can freeze solid in winter or, conversely, become over-heated and thus deoxygenated in summer as the water level falls and the pond perhaps finally dries out. These conditions put stress on the plants and animals so that they must seed, disperse or go into

resistant spores or eggs to survive until times are favourable again. Some species are adapted to survive in such conditions but some are not.

(d) Shading

Degree of shading	*Number of ponds*
Unshaded (0-9%)	38
Partial (10-90%)	53
Complete (91-100%)	9

Most of the ponds surveyed fell into the intermediate, partially shaded category and very few were completely shaded.

Unshaded ponds had a greater number of plant species than shaded ones the difference being highly significant. This difference is to be expected because water plants require sunlight for photosynthesis and their consequent growth. There was an indication that the unshaded ponds also had more types of animals than the shaded ones. Although this difference was not statistically significant it too is to be expected since a greater variety of plants would increase the number of animals feeding on them and provide a greater number of mini-habitats. However unshaded ponds that are shallow, can, as with small ponds, become very warm in summer resulting in a lowered oxygen content. Only certain animals are adapted to such conditions. Very shaded ponds that are silted up with fallen leaves may also be short of oxygen though a few animal species are specially adapted to these conditions.

(e) Amount of Open Water

Percentage of open water	*Number of ponds*
0-9%	17
10-90%	53
91-100%	30

Most of the ponds surveyed fell into the intermediate category with regard to the amount of open water. In lowland Herefordshire, with its fertile soils, ponds with a high percentage of open water and few or no fringing water plants are those that have been newly constructed or recently re-excavated. As a pond ages a succession takes place in which the water plants encroach on the open water until in the end they completely fill it and cover the water surface. At this stage the pond needs digging out again if it is to survive.

Ponds at the mid-point in this cycle with a medium amount of open water were found to have a higher number of plants species than ponds with very low or very high amounts of open water. This association was highly significant.

Similar results have been found in other studies too.[3] The difference arises because newly-made ponds, if left to themselves and not planted, have not had time to acquire many species by natural dispersal. While in old ponds some of the species that grow sub-

merged or that need open water for their floating leaves will have been squeezed out by vegetation encroaching from the edge.

In contrast to the plants it was found that the number of animal types was as great in ponds with high amounts of open water as in those with medium amounts. This difference, which was statistically highly significant, may be accounted for by the greater mobility of animals, some species certainly can find a new pond within days of it being filled with water.

(f) Water Movement

Water regime	*Number of ponds*
Still ponds	28
Ponds with running water	62
Regime uncertain	10

Most of the ponds with running water had both an inflow and an outflow but ten had an outflow only and these were presumed to be spring-fed.

No difference was found between plants or animals of still ponds and those with running water, probably because the flow was very slight in any case. Spring-fed ponds and those with water running through are less likely to freeze in winter or dry out in summer but they will silt up more quickly than still ponds and are likely to suffer greater eutrophication from fertiliser run-off.

(g) The pH of the water

pH	*Number of ponds*
Under pH 6.5	4
pH 6.5 - 7.5	85
Over 7.5	1
Not recorded	10

Because Old Red Sandstone soils predominate in the county little variance was found in the pH readings, and the great majority of the ponds were in the neutral to slightly alkaline range. Consequently no relationship between varying pH and the plant and animal life was found.

(h) General condition of the Ponds Surveyed

Condition	*Number of ponds*
poor - badly silted up	19
poor - polluted or damaged by dumping	7
moderate to good	74

Rather few of the ponds surveyed were found to be damaged by visible chemical pollution or by dumping. A more serious threat was excessive silting found in 19 of the ponds. Although silting is a natural process in these cases it was excessive and probably

resulted from intensive farming of the surrounding fields leading to eutrophication and the run off of silt. This was sometimes combined with excessive grazing and trampling of the edges by large herds of cattle. Although a few plants thrive in these conditions they are not suitable for the majority. Although 74% of the ponds appeared to be in good or moderate condition many of these supported rather low number of plants species or animal types and poor water quality, eutrophication or low oxygen content, factors not measured in the survey, were probably responsible for this.[1]

The age of the ponds was not ascertained but could be an important factor in determining which species are present.

(i) Origins of the ponds

Origin	*Number of ponds*
(i) Natural origins	
Kettle-hole ponds	2
Oxbow lakes	1
(ii) Man-made origins	
Holes dug for various purposes that later filled with water:-	
marl or brick clay pits	13
quarries	2
moats	3
ponds formed by damming a stream	30
(iii) Origin uncertain	49

Ponds of natural origin form due to drainage or seepage when a depression lies below the ground water-table, or among morainic material deposited irregularly after the Ice Age when the ice withdrew. Kettle holes, left by the later melting of blocks of stagnant ice among morainic material have given rise to ponds around Shobdon and Shenmore. In a few places cut off river meanders (oxbow lakes) have formed deep ponds adjacent to a river.

Man-made ponds are either made deliberately, such as those dug for watering stock, for fishponds, duck decoys, moats, or reservoirs or else they result from other activities such as marl or brick earth digging or from quarrying. Irrigation ponds are on the increase with to-day's regulations regarding abstraction of water from rivers for this purpose. Other man-made ponds are related to a spring source or are constructed by damming up a small stream and thus have an inflow and outflow. The latter are perhaps the ponds most under threat since they depend on adequate maintenance of the dam and the regular removal of silt from behind the dam.

(j) Trophic status of the ponds as indicated by the plant species

Standing waters were classified in A Nature Conservation Review[4] according to their trophic (nutrient) status ranging from dystrophic - very low in nutrients - to eutrophic - very high.

The Joint Nature Conservation Committee (JNCC) has more recently published a method for using surveys of macrophyte vegetation to assess water quality of standing waters.[5]

Since the methods used in this Herefordshire study to survey the pond vegetation were very similar to those used in the JNCC studies an attempt has been made here to use the same classification to assess the water quality of the Herefordshire ponds.

Based on the analysis of extensive survey data the JNCC paper gives lists showing the trophic ranking score (TRS) of 114 aquatic plants. These scores range from 0-10 and examples are given where the trophic ranking score for a site is worked out from the species list for that site.

Forty-seven of the 114 JNCC species were found in the Herefordshire ponds. (This may seem rather a small number but the JNCC surveys covered the whole of the British Isles and indeed were rather heavily weighted towards the Scottish highlands and islands.) The average TRS for the Herefordshire ponds based on these 47 species is 8.03. The JNCC paper suggests that more accurate results are given by using the floating and submerged plants only but if this is done for the Herefordshire ponds the TRS score is the same - 8.03. This score indicates a mesotrophic to eutrophic status for the ponds.

A key is given in the JNCC paper based on the presence or absence of certain aquatic plants and when this is used for the Herefordshire ponds taken all together they fall into Types 8, 9 or 10, all of which are described as eutrophic.

This is of course the result one would expect from the fact that most of the ponds were situated in agricultural land with rich soils supplemented extensively with artificial fertilisers but it is nevertheless interesting to have the view confirmed by subjective methods particularly since chemical analysis of the pond water was not included in the survey.

4. THE LOSS OF PONDS AND SPRINGS IN THE LAST SIXTY YEARS

A *Ponds*

It is known that the number of ponds has declined sharply in various parts of the country in recent years so a study was undertaken to determine the situation in Herefordshire.

A detailed comparison of the 1st series 1:25,000 O.S. maps of the 1920s with the second series of the 1980s was made and the results are shown in FIGS. 3 and 4. Over the 60-year period there was an overall loss of 30% of ponds in the county. The number was down from 5231 ponds in the 1920s to 3681 in the 1980s.

FIG. 3 shows that the distribution of ponds over the county in the 1920s was by no means even, there being more in the lowland centre and in the E. of the county and it is these areas that the loss of ponds has been the greatest.

The loss of total pond area was even greater than the figures for numbers suggest because in several places what was a large pond in the 1920s had become smaller and broken up into two or three much smaller ponds by the 1980s.

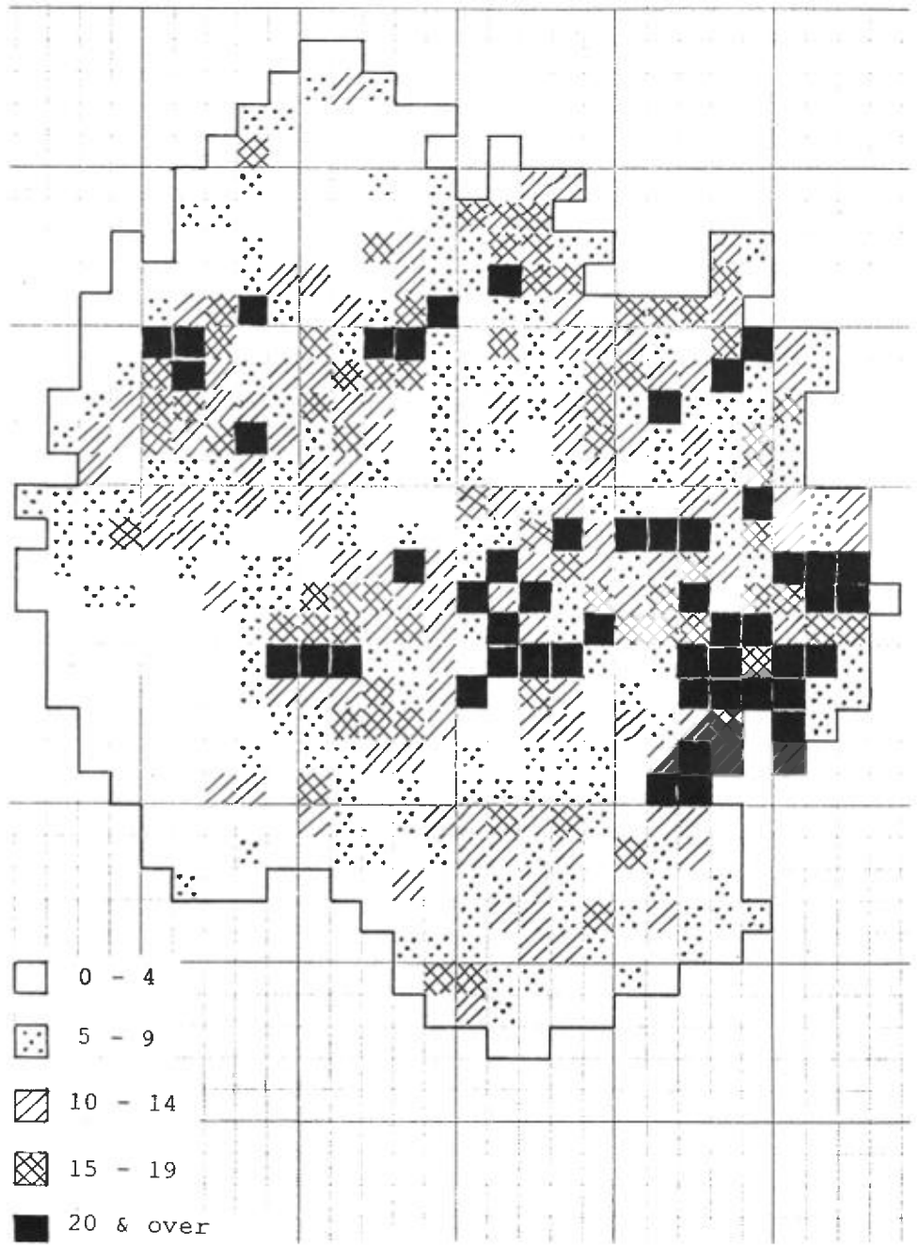


FIG. 3
Number of ponds in Herefordshire per tetrad 1920s.

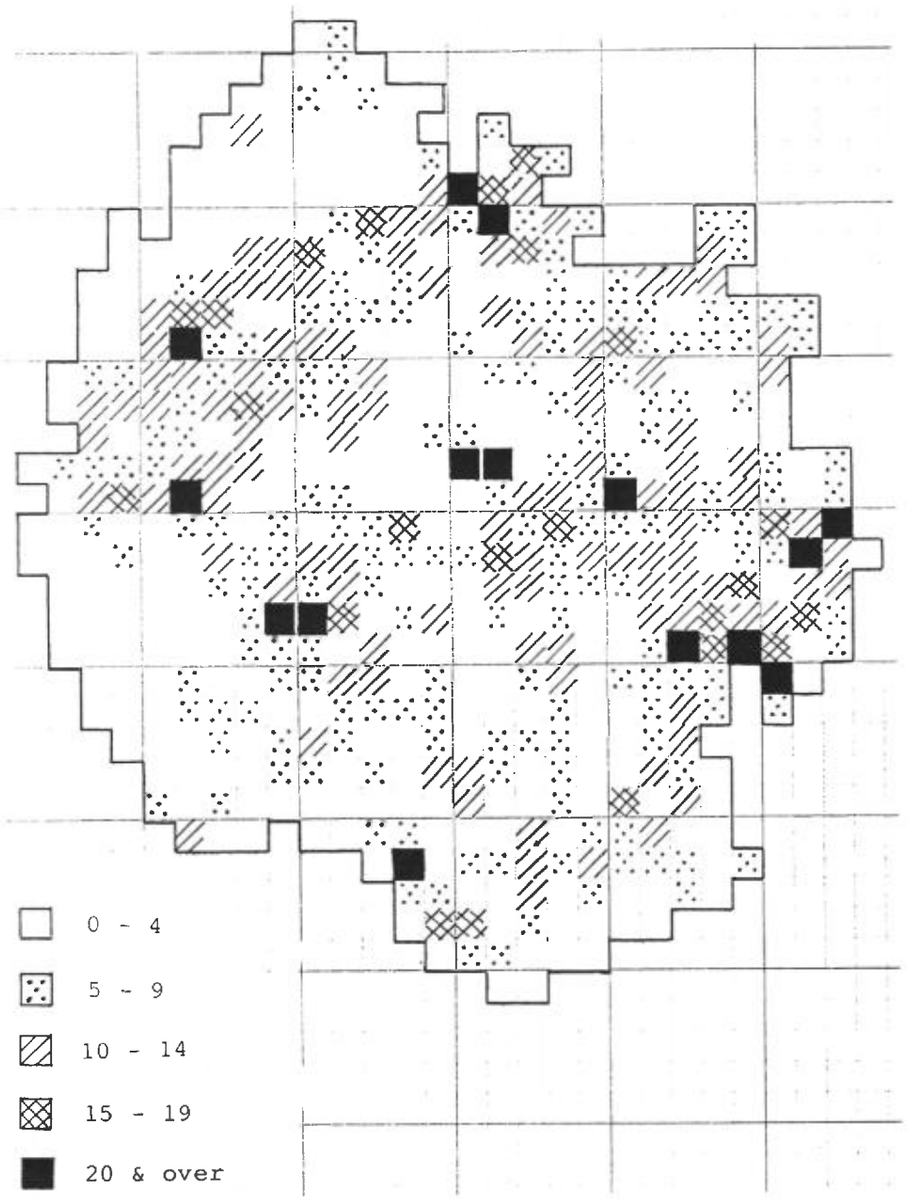


FIG. 4
Number of ponds in Herefordshire per tetrad 1980s.

The figures for pond loss quoted above do not take into consideration the fact that during the same period new ponds were formed. Detailed comparison of the maps of the two periods revealed that the actual loss of ponds present in the 1920s was 46%, 2383 ponds disappeared between the 1920s and the 1980s but over the same period 833 new ponds appeared.

Some of the ways in which ponds were lost can be guessed at. Ponds situated actually within farm yards were particularly vulnerable losing 51% of their number probably as the result of the introduction of a piped water-supply. Certain areas lost all their ponds and these probably represent single farms where wholesale drainage had been undertaken. Most of the 'mill ponds' of the 1920s had gone by the 1980s presumably because the mills had gone out of use - indeed many of the mills themselves were described as 'disused' in the 1920s. In many cases where a 'weir' was marked as holding in a pond in the 1920s by the later date there was no sign of either weir or pond. In several cases what had been a pond in 1920 had become a 'spring' in 1980 which suggests that the pond had been spring-fed and at the later date the spring was either not producing so much water (see below) or the water was being piped elsewhere. Inevitably numbers of ponds were lost to development, with housing estates or car parks being built on their sites. For example the Wilton Bridge car park was built on the site of two ponds. One small one still remains and large numbers of newts still congregate here in spring although later on in most years this pond dries up completely.

New ponds were formed in various ways over the period, some were clearly made to provide water for irrigation or as ornamental lakes. Some were oxbow lakes formed beside a river or stream either naturally or where a stream had been artificially straightened and some have formed in remains of canals, railway cuttings, or quarries.

The overall picture of pond numbers is that there has been a serious decline in the last 60 years the numbers lost being compensated for only in part by the formation of new ponds. Because plant and animal species vary in their mobility and power to colonise new ponds so it is likely that the less mobile species have become considerably rarer over the period.

A loss of 30% over a 60-year period is rather lower than the loss in some other parts of the country. But Herefordshire was rather low in numbers of ponds in the first place with 6.2 per square mile in the 1920s and 4.4 in the 1980s. Some counties have over 16 per square mile[6] so the Herefordshire loss is serious.

B *Springs*

The springs marked on the 1920s and 1980s O.S. maps were counted and compared in the same way as the ponds. Their distribution is shown in FIG. 5 and it is clear that springs are more frequent in the S.W. of the county, on the Welsh border than elsewhere. This distribution contrasts with that of the ponds.

Over the 60-year period the number of springs has declined from 1095 in the 1920s to 926 in the 1980s, a loss of 15%. This loss is not as great as the loss of ponds which is perhaps to be expected since springs are naturally occurring features unlike most ponds

that are man-made. However careful comparison of the positions of springs marked on the two sets of maps shows that in the 1980s many of the springs were emerging lower in their valleys than in the 1920s. As a result the upper parts of many valleys that formerly had small streams running down them had, by the later date, become dry. An early example of the same thing comes from Whatborough, Leicestershire where an old map of 1586 clearly marks the heads of two streams. A survey of the same area in 1947 found the stream beds dry.[7] This curtailing of the headwaters of streams is an additional loss of aquatic habitat in the county.

The loss of springs and reduction in their outflow is disturbing because it is much harder to remedy than the loss of a pond. It presumably relates to a general lowering of the water-table. In some regions of the country ground water contours have been recorded at intervals over a long period and these show a serious lowering of the water-table. Unfortunately such records appear not to have been kept for the Wye catchment (NRA, personal communication) but it is more than likely that had they been kept they would show a similar lowering of the water-table in Herefordshire.

The loss of springs is not just a British problem, in a township in the central Himalayas where before 1950 there were 250 natural springs there are now only thirty left as a result of various forms of development.[8]

5. CONCLUSIONS

The map-based survey has shown a serious long-term loss of ponds in Herefordshire and the ground survey has shown that many of the still existing ponds are in need of management to enable them to support a wider range of aquatic wild life.

A few pond plants and animals are widely distributed over the county and occur in quantity in a large number of ponds. But the majority of species are very localised (FIG. 2), for example over half the plants species found occur in four or fewer ponds. The same trend can be seen with the animals and no doubt if all had been identified to species level would have been even more marked.

The common species are clearly mobile and have adaptations enabling them to colonise new ponds speedily. The uncommon species probably lack this facility and are dependant on continuity of their environment. This implies that, though new ponds are valuable, it is vital to preserve old, long-established ponds. This is not an attribute of ponds only but has been shown to apply to hedges, woods and many other habitats. The pace of change in the countryside in recent years has been altogether too fast for many species to respond. The inability of so many species to adapt to rapid man-made changes in time to survive these changes has led to innumerable extinctions on a local, regional and national scale. This loss is well documented for certain, well-recorded groups such as the flowering plants and butterflies but is certainly also happening to the groups that have not attracted so much attention from naturalists in the past.

Loss of Biodiversity is now, since the Rio Summit, acknowledged by the Government[9] to be a matter of global importance. In Herefordshire this survey has shown that the ponds with the highest biodiversity are those that are unshaded and have a medium

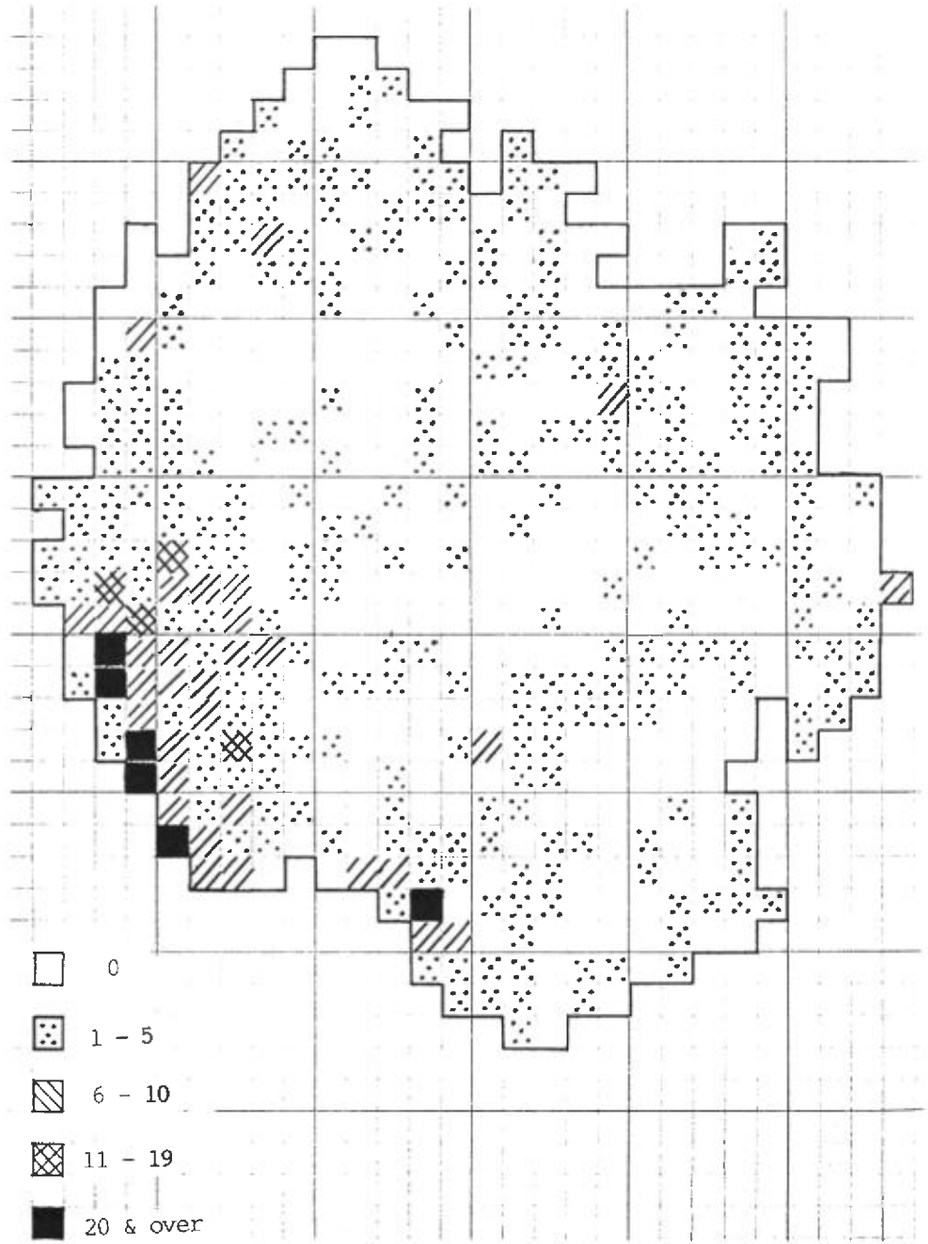


FIG. 5
Number of springs in Herefordshire per tetrad 1980s.

amount of open water. With such wide variation between ponds there is clearly an opportunity to improve the conservation status of many of the ponds and bring them nearer to that of the best.

In Herefordshire as far as ponds and freshwater plants and animals are concerned the priority should be to preserve all existing ponds, resuscitating carefully the many that have become too overgrown or silted up and in addition to this to make new ponds to restore the total numbers nearer to the 1920s level at least. Raising the water-table again would be a great help in this endeavour.

Table 1 The number of ponds in which different species of pond plants were found

Plants		*number of ponds*
Achillea ptarmica	Sneezewort	1
Acorus calamus	Sweet-flag	2
Alisma plantago-aquatica	Water-plantain	34
Alnus glutinosa	Alder	27
Alopecurus geniculatus	Marsh foxtail	4
Angelica sylvestris	Wild angelica	27
Apium inundatum	Lesser marshwort	2
A. nodiflorum	Fool's water-cress	13
Berula erecta	Lesser water-parsnip	2
Bidens cernua	Nodding bur-marigold	3
B. tripartita	Trifid bur-marigold	2
Butomus umbellatus	Flowering-rush	1
Callitriche sp.	Water-starwort	23
Caltha palustris	Marsh-marigold	7
Cardamine flexuosa	Wavy bitter-cress	6
C. pratensis	Cuckooflower	8
Carex nigra	Common sedge	1
C. ovalis	Oval sedge	1
C. pseudocyperus	Cyperus sedge	2
C. remota	Remote sedge	3
Carex sp.	Sedge	11
Ceratophyllum demersum	Rigid hornwort	7
Chara sp.	Stonewort	3
Crassula helmsii	Water stonecrop	5
Eleocharis palustris	Common spike-rush	13
Elodea canadensis	Canadian waterweed	10
Epilobium hirsutum	Great willowherb	43
Equisetum palustre	Marsh horsetail	14
Filipendula ulmaria	Meadowsweet	17
Galium palustre	Common marsh-bedstraw	23
Glyceria declinata	Small sweet-grass	2
G. fluitans	Floating sweet-grass	12
G. maxima	Reed sweet-grass	6
Hydrocotyle vulgaris	Marsh pennywort	3
Impatiens glandulifera	Indian balsam	2
Iris pseudacorus	Yellow iris	18
Juncus acutiflorus	Sharp-flowered rush	8
J. articulatus	Jointed rush	5
J. effusus	Soft rush	40
J. inflexus	Hard rush	36
Juncus sp.	Rush	4
Lemna gibba	Fat duckweed	1
L. minor	Common duckweed	49
L. polyrhiza	Greater duckweed	2

L. trisulca	Ivy-leaved duckweed	11
Lotus uliginosus	Gt. bird's-foot-trefoil	5
Lychnis flos-cuculi	Ragged-robin	1
Lycopus europaeus	Gipsywort	16
Lysimachia nummularia	Creeping-jenny	2
L. vulgaris	Yellow loosestrife	1
Lythrum salicaria	Purple loosestrife	5
Mentha aquatica	Water mint	30
Menyanthes trifoliata	Bogbean	2
Mimulus guttatus	Monkeyflower	3
Myosotis scorpioides	Water forget-me-not	28
Myriophyllum sp.	Water-milfoil	6
Nitella sp.	Stonewort	1
Nuphar lutea	Yellow water-lily	3
Nymphaea alba	White water-lily	9
Oenanthe aquatica	Fine-lvd. water-dropwort	3
O. crocata	Hemlock water-dropwort	1
O. fistulosa	Tubular water-dropwort	3
Phalaris arundinacea	Reed canary-grass	1
Phragmites australis	Common reed	1
Polygonum amphibium	Amphibious bistort	8
P. bistorta	Common bistort	2
P. hydropiper	Water-pepper	2
Potamageton acutifolius?	Sharp-lvd. pondweed	1
P. berchtoldii	Small pondweed	9
P. crispus	Curled pondweed	4
P. natans	Broad-lvd. pondweed	15
P. pectinatus	Fennel pondweed	4
Pulicaria dysenterica	Common fleabane	4
Ranunculus aquatilis	Common water-crowfoot	21
R. flammula	Lesser spearwort	10
R. lingua	Greater spearwort	2
R. sceleratus	Celery-lvd. buttercup	14
Riccia fluitans	an aquatic liverwort	1
Rorippa sylvestris	Creeping yellow-cress	1
R. nasturtium-aquaticum	Water-cress	11
Rumex hydrolapathum	Water dock	3
Sagittaria sagittifolia	Arrowhead	1
Salix alba	White willow	5
S. caprea	Goat willow	26
S. fragilis	Crack willow	28
S. viminalis	Osier	9
Scirpus sp.	Club-rush	3
Scrophularia auriculata	Water figwort	11
Scutellaria galericulata	Skullcap	4
Senecio aquaticus	Marsh ragwort	1
Solanum dulcamara	Bittersweet	38
Sparganium emersum	Unbranched bur-reed	8
S. erectum	Branched bur-reed	24
Stachys palustris	Marsh woundwort	1
Stellaria alsine	Bog stitchwort	2
Stratiotes aloides	Water-soldier	1
Triglochin palustris	Marsh arrowgrass	1
Typha angustifolia	Lesser bulrush	3
T. latifolia	Bulrush	20
Utricularia vulgaris	Greater bladderwort	2
Veronica beccabunga	Brooklime	27
V. catenata	Pink water-speedwell	5
V. scutellata	Marsh speedwell	1

Table 2 The number of ponds in which different types of pond animals were found

Phylum	Class	Name	number of ponds
Coelenterata		*Hydra*	5
Platyhelminthes		Flatworms	18
Aschelminthes		Hairworms	1
Annelida		*Tubifex*	10
		other Annelid worms	11
		Leeches	32
Arthropoda	Crustacea	Water louse	13
		Freshwater shrimp	29
		Water flea Cladocera	61
		" Copepoda	48
		" Ostracoda	36
	Insecta	Water springtail	4
		Mayfly	36
		Dragonfly (adult)	25
		" (nymph)	11
		Damselfly (adult)	34
		" (nymph)	15
		Water measurer	2
		Water cricket	3
		Pond skater	24
		Water scorpion	4
		Saucer bug	2
		Water-boatman	31
		Lesser water-boatman	48
		Alder fly	8
		Water beetle, *Dytiscus* (adult)	8
		" " (larva)	10
		" Whirligigs	9
		" other species (adult)	43
		" " " (larva)	15
		Caddis-fly	25
		China mark moth	1
		Flies..Dixidae	9
		" Chironomidae	32
		" Chaoboridae	18
		" Ceratopogonidae	7
		" Culicidae	24
		" Anophelidae	10
		" Tipulidae	1
Mollusca	Gastropoda	freshwater limpet	3
		ram's-horn snail	19
		pond snails	35
"	Bivalvia	orb-shell cockles	9
Chordata (vertebrates) living in or associated with water			
		Fish minnow	1
		stickleback, 3 spined	6
		stone loach	1
		carp	1
		tench	1
		unidentified	16
		Amphibians frog	17
		toad	5
		newt, smooth	22
		newt, palmate	1
		newt, crested	6
		Birds coot	6
		curlew	1
		duck, domestic	3
		geese, canada & domestic	7
		heron	3
		kingfisher	2
		mallard	57
		moorhen	37
		snipe	1
		swan	2
		wagtail, pied	2
		Mammals water vole	2

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The Roman Small Town at Leintwardine: Excavations and other Fieldwork 1971-1989

By D. L. BROWN

SUMMARY

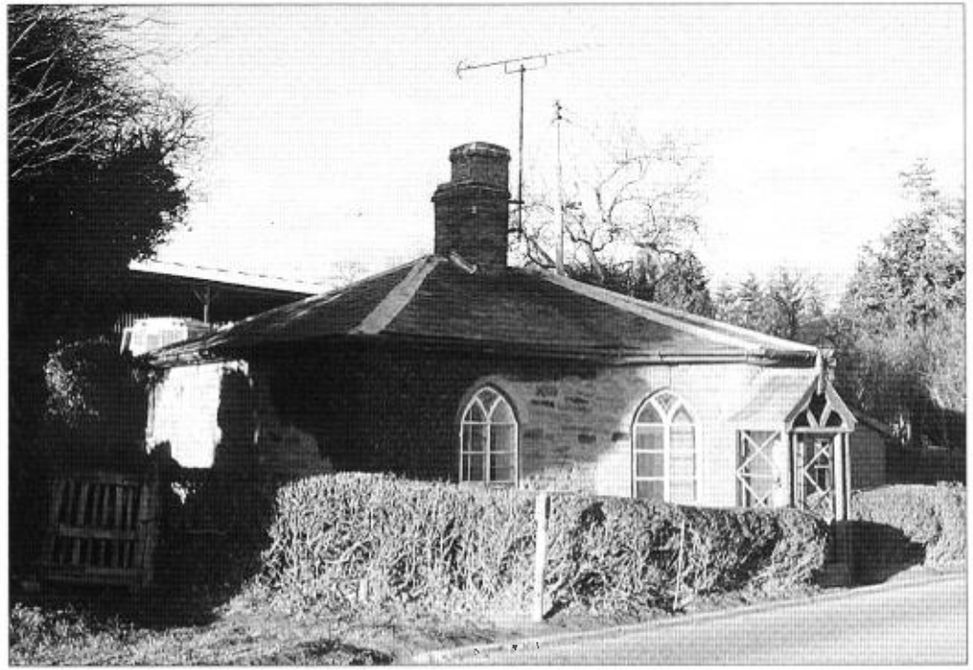
Two excavations are reported here, the first undertaken in 1971 at Sawpit Bank, conducted by J. G. P. Erskine, the second in 1980 at 22 High Street by J. Sawle. In addition archaeological evaluations and salvage recording between 1978 and 1989 are summarised. The results of these have contributed to the continuing debate on the civilian or military associations of Roman Leintwardine. Here it is suggested that Leintwardine was a defended Roman small town, with ramparts constructed in the A.D. 190s. This hypothesis would have considerable consequences for the military history of the Welsh Marches, as there would be no significant military presence in the vicinity of Leintwardine after the withdrawal from Buckton fort in the A.D. 130s.

PART I. INTRODUCTION

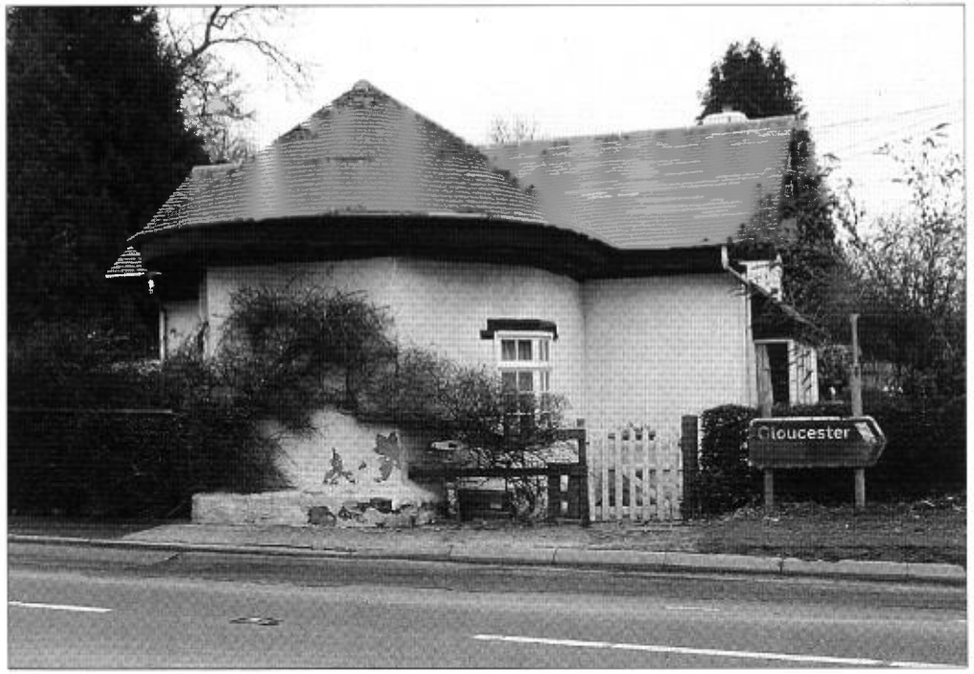
This part of the report incorporates comments on the geology and topography of the Leintwardine area, and introduces Roman Leintwardine, and archaeological work there up to 1989. More recent archaeological work is expected to be published in a further article. Part II is a report of the 1971 excavations at Sawpit Bank undertaken by J. G. P. Erskine. Part III is a report of the 1980 excavations at 22 High Street undertaken by J. Sawle. Part IV is a summary of archaeological observations on smaller sites, largely undertaken by the Archaeology Section of Hereford and Worcester County Council between 1978 and 1989. Part V is a discussion of the evidence for Roman Leintwardine, including an assessment of the evidence for a fort, and a new hypothesis for the development of the settlement into a minor Roman small town. Part VI, the final part summarises this and adds a discussion of future directions for archaeological research for Leintwardine, concluding with a comment on the potential for and preservation of archaeological remains within the scheduled area. Appendix 1 represents a guide to the archives for excavations reported here, held by Hereford and Worcester County Council's Archaeology Section.

GEOLOGY AND TOPOGRAPHY

Leintwardine is in the central Welsh Marches close to the northern boundary of the county of Hereford and Worcester (SO 4074). The village lies on the N. bank of the river Teme just below its confluence with the river Clun, where there is a river crossing of long standing. The ground rises gently to the N.W. to where the Roman fort at Jay Lane was positioned (FIG. 1), leaving Leintwardine sited on a S.E. facing slope looking down the Teme Valley. To the E. lies a range of hills, beyond which lies Ludlow. North of Leintwardine there are a series of ridges respecting the alignment of Wenlock Edge, while to the S.



XLIV — Mortimer's Cross, Aymestrey.



XLV — Saffron's Cross, Bodenham.

XLVI — Petty Bridge, Bromyard.

XLVII — Hope-under-Dinmore.

XLVIII — Ryelands (Sandpits), Leominster.

XLIX — Cinders, Pixley.

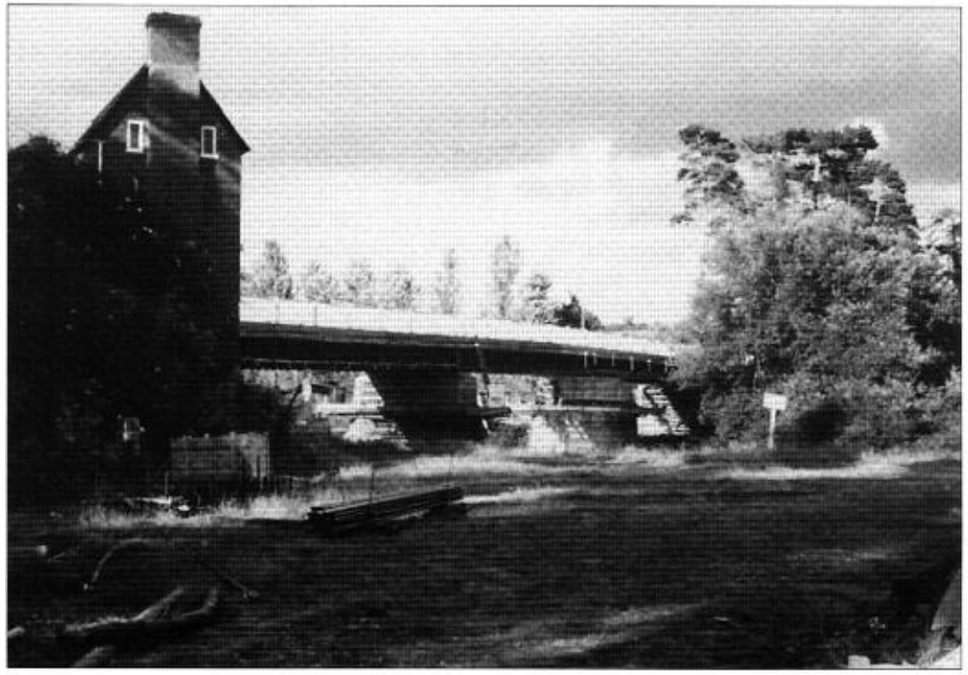
L — Richards Castle.

LI — Brockhall, Stretton Sugwas.

LII — The ditch at SO 471706 looking S.

LIII — The hedge beyond Trench Lane Gate above the Goggin SO 470703.

LIV — The ditch at SO 480731 in Sunny Dingle Wood.



LV — The Rebuilding of Hoarwithy Bridge in 1990.

lies the basin of the glacial lake known as Lake Wigmore, beyond which access can be gained to Leominster and the central Herefordshire plain.

Leintwardine lies in an area of Silurian bedrock, notably Wenlock Limestone and the Ludlow Series, the uppermost of which are Whitcliffe Beds above Upper and Lower Leintwardine Beds. Lower Leintwardine Beds are mainly olive-grey calcareous flaggy and shaly siltstones with layers of thin shelly limestone. Upper Leintwardine Beds include more thickly bedded flaggy siltstones forming a transition to the Whitcliffe Beds which are thickly and irregularly bedded grey calcareous coarse to medium grained siltstones (Earp and Hains 1971). The bedrock is overlain by a glacial fine clayey till and coarse silty and stony terrace and outwash deposits. These give rise to the brown earth soils of the Rowton-Hamperley complex which occur around Leintwardine (Hodgson, 1972, 82-6).

ROMAN LEINTWARDINE

Leintwardine's geographical position was of great military importance in the early years of the Roman occupation of the area. A supply base reusing the Iron Age hillfort at Brandon Camp was excavated by Frere and St. Joseph (Frere, 1987; Fig. 1), and the fort at Jay Lane (Stanford, 1968, 230-7) not far from the site, are both Neronian in origin, the former early Neronian, the latter apparently later. A military presence was maintained close to the river crossing until *c.* A.D. 130 when the second fort at Buckton was dismantled (Stanford, 1968, 253-4; Fig. 1). Watling Street West, which passes through Leintwardine, seems to have been the main axial route for the advance into Wales, since it joins legionary bases at Caerleon and Chester, and links earlier forts at Gloucester and Usk in the S. with Wroxeter (Davies, 1980). It remained the main N.-S. route along the Welsh border into the 4th century.

The position of the site midway between Wroxeter (*Viroconium*) and Kenchester (*Magnis*), on this important route, led to its inclusion in the Antonine Itinerary on *Iter XII* as the road-station of *Bravonio.* However the etymology of this name has been questioned, since the Ravenna Cosmographer and Ptolemy indicate the form *Branogenium* (Rivet and Smith, 1979, 275), the latter calling it a *polis* or the Ordovices. This form probably originates in a personal name *Brannogenos,* perhaps deriving from the Celtic word for a crow or raven *Bran*, also a Celtic personal name. It may have survived in the locality as the name of the nearby hillfort, Brandon Camp, and in Brampton Bryan, which appears as *Bruntune* in *Domesday Book* (Thorn and Thorn, 1984). *Braviniol Bravonio* may have appeared due to a copyist misunderstanding an abbreviation of *Branogenium.* The attribution of Leintwardine to the territory of the Ordovices may be a mistake on Ptolemy's part; such mistakes are not unknown (Rivet and Smith, 1979, 117-23 and 275). However the political geography of this border area in pre-Roman and Roman times is not certain, so this affiliation may be worth re-examination.

Most previous fieldwork in Leintwardine has been undertaken and reported by Stanford (1958, 1968, 1972 and 1975). His work indicated a *vicus* settlement containing a *mansio* and bath-house, associated with the adjacent cavalry forts at Jay Lane and Buckton, occupied successively between *c.* A.D. 70 and *c.* A.D. 130. The latter was finally replaced by a fort with timber-laced rampart of military form at Leintwardine itself some

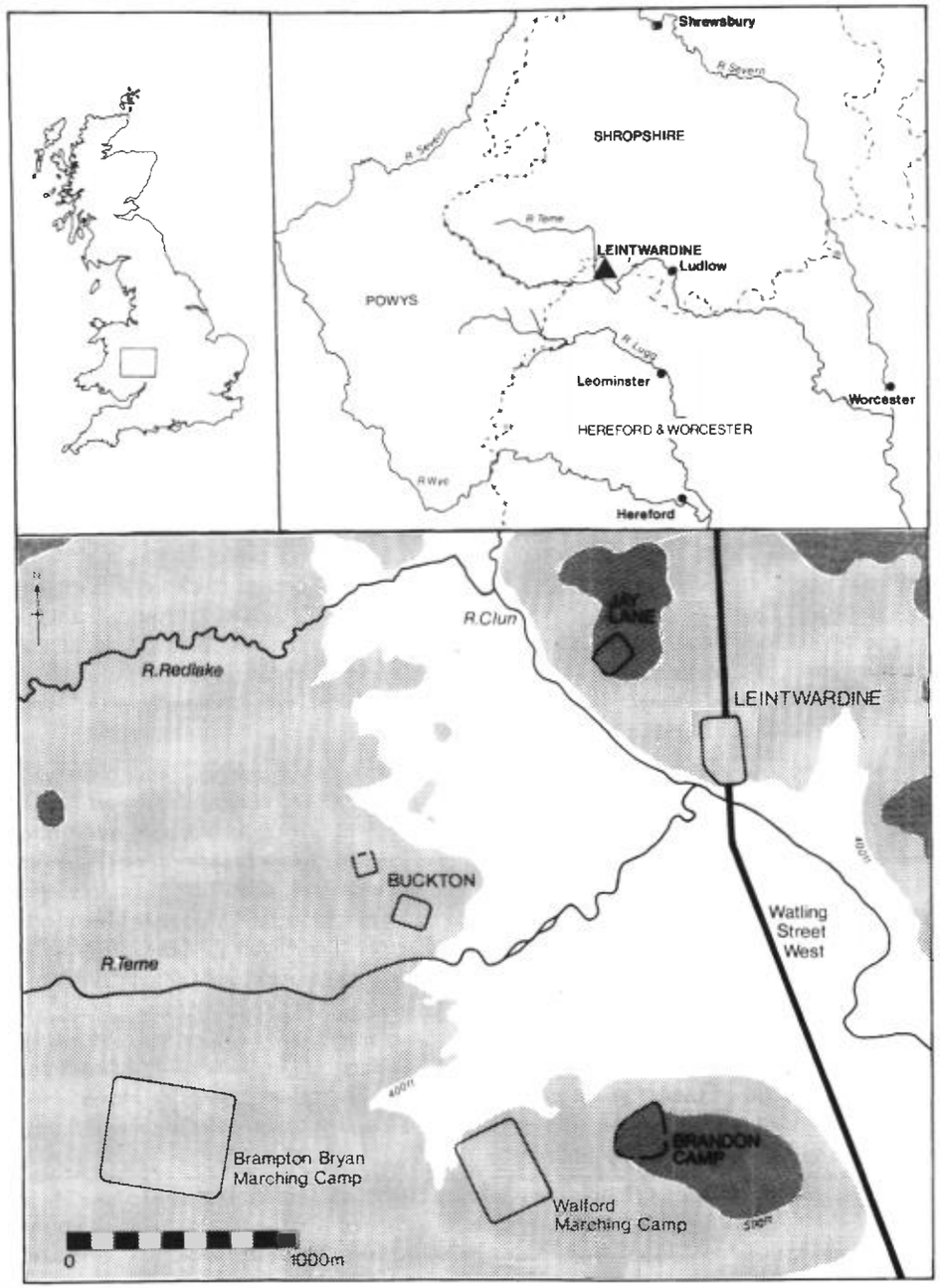


FIG. 1
Roman Leintwardine. The location of Leintwardine.

time after *c.* A.D. 160. At around this time the bath-house was enlarged and defended by an annexe rampart of a similar timber-laced construction. Little evidence for military structural remains appeared in the interior of the fort, although a road and an unusual stone structure had been traced in appropriate positions for the *via principalis* and the *principia* building respectively. Further investigations in 1972 pointed to the E. gate at approximately the right place to confirm the line of the *via principalis* (Stanford, 1972). Stanford was of the opinion that the fort continued to be utilised intermittently into the 4th century, with at least one refurbishment of the defences.

There is, however, a lack of the regularly laid out structures which might be expected for a late-2nd-century fort. Salway (1981, 255-6) considered that Leintwardine may have been a cavalry base, Frere (Stanford, 1981, 26) suggested that it may have represented a supply base, Webster (1975b, 53) suggested that its status was not clear, but may have reverted to civilian use, while Rivet (1970, 150) and Crickmore (1984b, 119) mention it as a small roadside town or market and service centre. Amongst the principal perceived problems with the hypothesis that Leintwardine was refounded as a fort, is the fate of the pre-existing civilian settlement which would necessarily have been displaced by its construction.

Leintwardine's national importance was first recognised in 1930 when parts of the western and north-western ramparts of Leintwardine were first scheduled as an ancient monument as part of the Roman station of *Bravinium.* The continued significance of Leintwardine was reflected in the enlargement of the scheduled area in 1975 and its inclusion on the schedule of ancient monuments under the Ancient Monuments and Archaeological Areas Act 1979.

Between 1968 and 1989 only two major excavations have taken place, together with a series of smaller observations (FIG. 2). Sawpit Bank (Hereford and Worcester County Sites and Monuments Record number HWCM 1055) was excavated in 1971 by J. G. P. Erskine, under the auspices of the then Ministry of Public Buildings and Works and the Woolhope Club, while the site at 22 High Street (HWCM 1061) was excavated for the Department of the Environment in 1980 by J. Sawle of Hereford and Worcester County Council's Archaeology Section. Both of these are reported here. The results of smaller archaeological observations add some significant details. These were largely conducted by the Archaeology Section at a number of sites in response to small scale developments. In 1978 Stanford directed recording at Griffiths' Garage, High Street (HWCM 1931), while in 1982 further recording here was carried out by Sawle. In 1985 work at Griffiths' Garage, on the site of the bath-house (HWCM 1021), was conducted by J. Wills. S. Woodiwiss, has subsequently conducted a series of watching briefs: at the Old Barn (HWCM 1062, Woodiwiss, 1987), behind 4 Watling Street (HWCM 7550, Clarke and Woodiwiss, 1988) at Bank House (HWCM 4162) and at The Coopers (HWCM 1058) Further work has been conducted by J. Dinn behind 22 High Street (HWCM 1061, Dinn, 1988), and by J. Darlington in the grounds of Millfield House (HWCM 7556, Darlington, 1989).

For the two main excavations reported here, much of the initial post-excavation work had already been completed. Preliminary analysis and an outline report for Sawpit

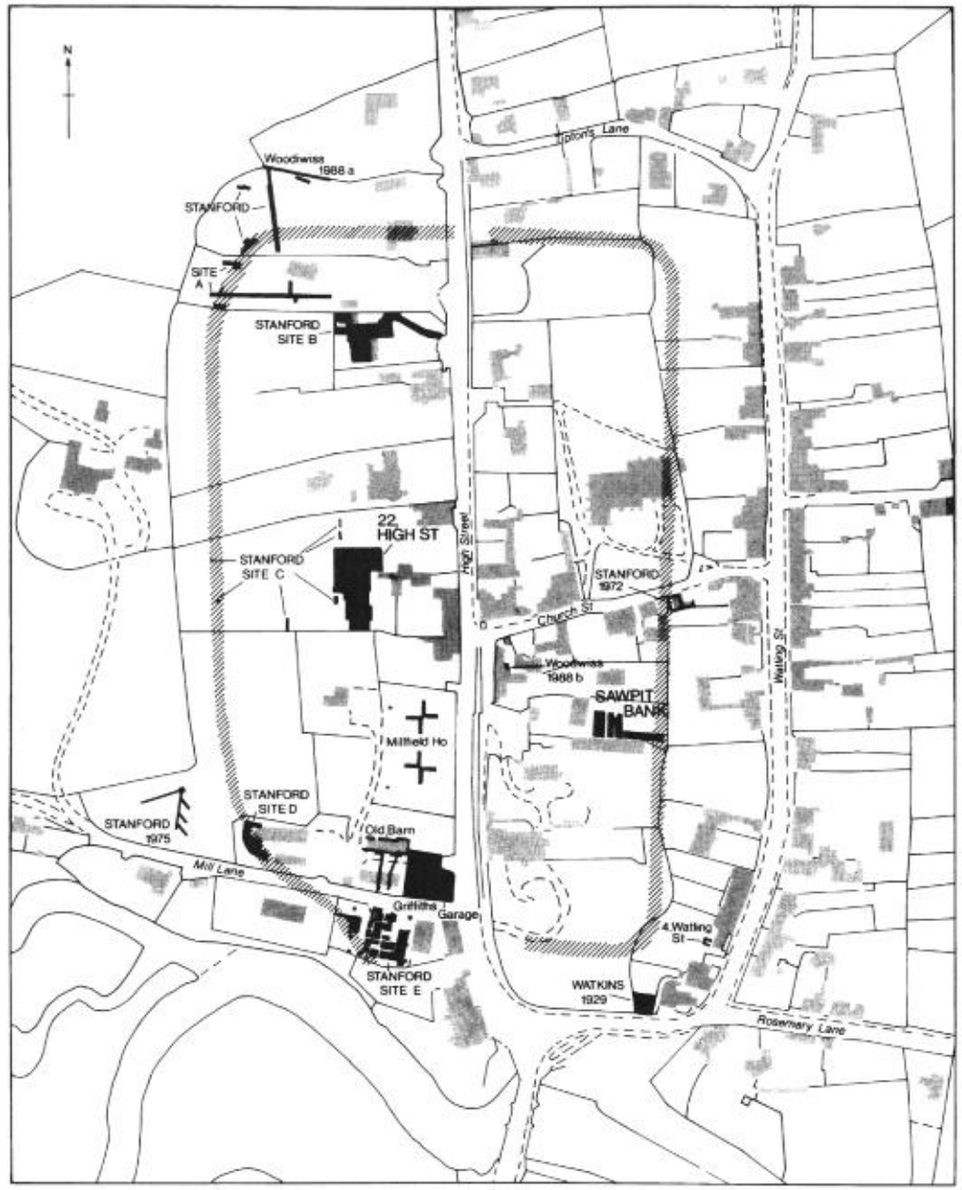


FIG. 2
Roman Leintwardine. The location of fieldwork up to 1989, including Sawpit Bank and 22 High Street.

Bank has been prepared by J. G. P. Erskine, was revised by L. T. Gilmour and edited by P. V. Irving. This formed the basis around which the present report has been prepared. Much of the post-excavation work for the site at 22 High Street had been completed by H. Rees (who also completed a detailed pottery report) and J. Sawle, prior to the publication of an interim report (Sawle, 1981). Most of the conclusions drawn therein still stand.

PART II. EXCAVATIONS AT SAWPIT BANK (HWCM 1055; SO 40467499)

INTRODUCTION

The excavation of 140 m.² at Sawpit Bank was initiated by the then Ministry of Public Buildings and Works in response to a threat to the scheduled ancient monument from the construction of a house in the former kitchen garden of Leintwardine House. The site excavated was in what is now the back garden of 'the Quantocks.' During the course of his excavation, the director, J. G. P. Erskine, noted that the foundations of the house did not disturb Roman deposits. Due to the limitations of funding, and constraints imposed by the landowner as conditions of consent to excavate, excavation was limited to just three weeks in March and April of 1971.

This was the first occasion on which a site had been archaeologically excavated to the E. of the High Street (although some observations had been made: Watkins, 1929), and was therefore of considerable interest. Intersecting the rampart S. of the presumed line of the *via Principalis,* and running some 20 m. into the interior of the *praetentura,* this site was considered likely to reveal important details of the interior layout of the fort, particularly since, as Stanford's excavations at the N.W. angle had indicated (1968, fig. 22, section 3), some of the best preserved features were likely to be protected by detritus from the tail of the bank.

Four trenches were located in an attempt to maximise information about interior features of the fort and determine their relationship with the rampart. The rampart had already been examined in detail elsewhere by Stanford (1958; 1968, 260-8), so due to the short time available was cursorily treated. The overall depth of archaeological deposits at Sawpit Bank proved to be relatively high, at 2-3 m. in trench A. The bottommost layers appeared to have been protected from much of the post-medieval erosion which had taken place on other sites (Roman Rise: Stanford, 1968, 268-76; 22 High Street, below). The short time available for excavation meant that it was necessary to remove a considerable depth of soil by mechanical excavator, while certain areas were not excavated to undisturbed natural deposits, leaving some early deposits untouched. Recording consisted of two outline plans, and elevations of most baulks; no levels were taken. Brief descriptions of most layers and features were made in the site notebook.

Initial stages of post-excavation work were undertaken by J. G. P. Erskine. Coins and metal finds were sent for conservation by the Ancient Monuments Laboratory, then of the Department of the Environment, now English Heritage. Materials submitted for specialist identification and analysis included the coins (A. S. Robertson), samian (B. R. Hartley and H. Pengelly), mortaria (K. F. Hartley), a selection of the coarse pottery (G. Webster and S. C. Stanford), and a soil sample (C. A. Keepax). Extracts from these

reports appear below, the remainder appearing in archive. Further post-excavation analysis has subsequently been undertaken by L. T. Gilmour, who produced an interim document, and P. V. Irving of the Backlog Division of English Heritage. Final analysis and editorial work has been undertaken by the present author. The finds have been in part retained, in part dispersed by the landowner. They are referred to below by their catalogue numbers, which are also used for reference to the figures.

SUMMARY OF THE SAWPIT BANK EXCAVATION

Several phases of activity are represented on the site, which the excavator loosely linked to Stanford's phases I-IV (1968). Although these phases have been retained, the nature of the surviving records has led to some difficulty correlating them stratigraphically, and in some cases finds analysis has not been sufficient to clarify the situation. Early features include a boundary ditch, pits and gullies, possibly of industrial character dated to the Flavian period. These deposits were sealed by a homogeneous layer in all four trenches including finds derived from the same source as the Flavian features as well as late Antonine finds, including samian sherds dated to *c.* A.D. 170-200. The rampart (phase 2), identified elsewhere, was constructed on top of this layer in much the same way as described by Stanford (1958 and 1968), with a trackway in an appropriate position to act as the *via sagularis* or intervallum road. Inside the rampart (phase 3), a clay-floored, and possibly cob-walled structure was identified, datable from the late 2nd to the mid-3rd century. After this, a series of structures and features overlay, or cut through the features of this building (phase 4). Some of these were interpreted as being similar to the military bread ovens identified in excavations behind the N.W. corner of the rampart (Stanford, 1968), one proved to date to the medieval period. A fine series of finds were recovered from this site, which is among the most deeply stratified to have been excavated in Leintwardine. The phases represented are indicated below.

Phase 1: Roman occupation prior to the timber-laced rampart

a Fluvio-glacial deposits; some disturbed deposits produced intrusive Roman finds

b Domestic occupation including possible industrial activity: Flavian (*c.* A.D. 70-95; see FIG. 3a)

c Probable cultivation horizon: 2nd century (*c.* A.D. 90-170 or later: FIG. 4, section: A18, B4, C17)

Phase 2: the layout and construction of the eastern defences

Rampart construction: late 2nd century (*c.* A. D. 170-200 or later; FIGS. 3b and 4, section: F33, road)

Phase 3: occupation within the defences

Clay-floored building: late 2nd or early 3rd century (*c.* A.D. 180-240; FIG. 3b: F42, F27, C5)

Phase 4: later features

Rampart refurbishment and other features later than phase 3: mid-3rd century onwards (FIG. 4b)

Phase 1: Roman occupation prior to the timber-laced rampart (FIG. 3a)

Phase 1a

A yellowish clay and gravel till underlay archaeological deposits in all four trenches and sloped gently downward towards the S. A number of Roman finds were recorded from some of these 'natural' deposits. The reasons for this contamination are uncertain, but may include intrusion caused by root disturbance or the rapidity of excavation and recording at the deepest level reached due to the constraints of available time at the end of this project.

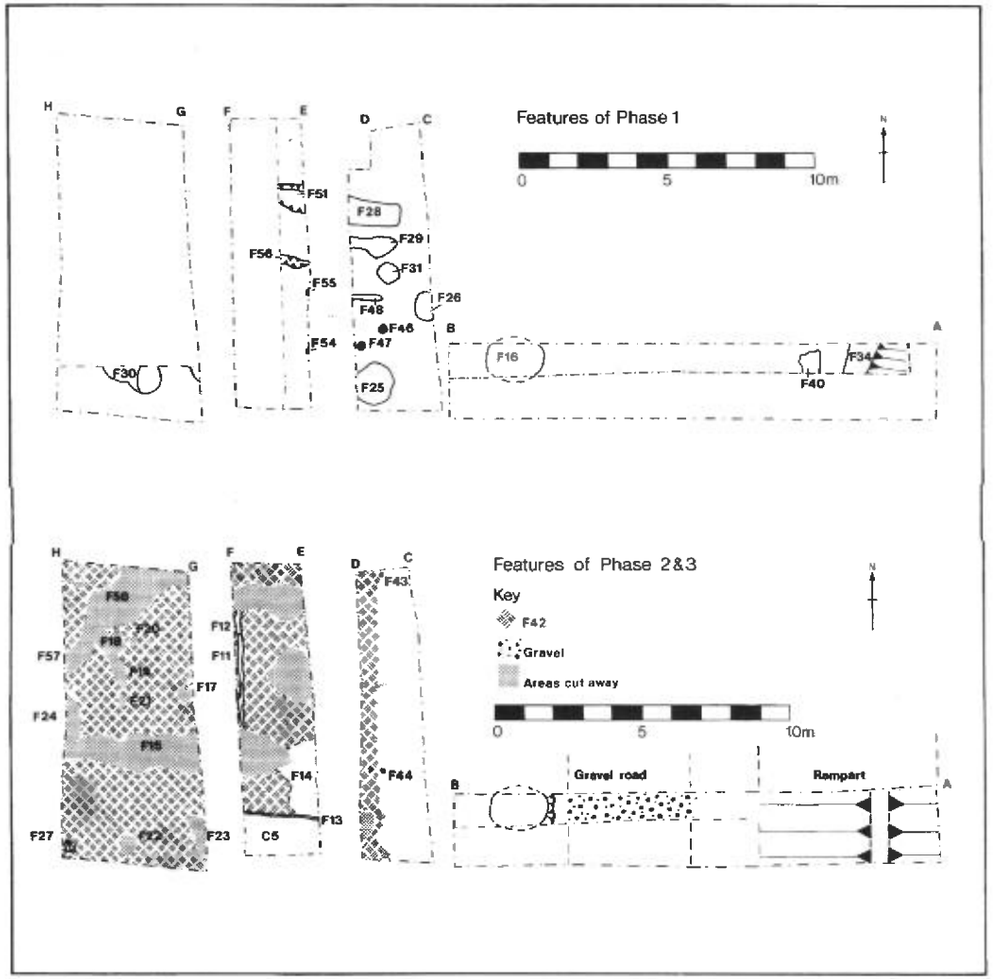


FIG. 3
Roman Leintwardine. Excavations at Sawpit Bank - plans of Phase 1 and Phases 2-3.

Phase 1b

Cutting this till were a number of features, the easternmost of which was a ditch of shallow profile (F34). This lay partly underneath the eastern baulk, so it was difficult to suggest an absolute width. However, the excavator considered that it could have been about 3.5 m. across and 0.3 m. deep, running N.-N.-E. to S.-S.-W., at an angle to the trench. On its western lip was a gully 0.25 m. deep and similarly aligned (F40), presumably associated with the ditch.

About 10 m. to the W. of the ditch was a deep pit of about 2 m. diameter, probably a well (F16; FIG. 3) which may have been cut from this level. However it was not excavated to any depth and some confusion has resulted from voiding and collapse of its upper fills, creating a conical appearance in section, which is clearly visible on site photographs. Due to the consequent complexity of stratigraphy in this area, this feature may alternatively be interpreted as post-medieval. Two metres further W. lay the first of a series of subcircular pits (*c.* 0.65-1.1 m. diameter), and varying in depth up to a maximum of *c.* 0.5 m. The irregularity of their alignment, sizes and profiles suggests that they need not be considered as a structural group or a single event, especially since the two pits in trench D intersect. Some of these may be structural elements, while others may be rubbish or storage pits.

A series of sealed parallel gullies and longitudinal pits (F28, F29, F31, F48, F51 and F56) lay in trenches B and C and passed beneath the baulk between them. It was not clear if these gullies were continuous or not, so no estimate of length could be made, although a maximum of 0.9 m. was recorded in trench B. They ranged from *c.* 0.2 m. to 1.1 m. in width, and were of a variety of profiles and depths up to *c.* 0.45 m., so might have served different functions within a single process or structure.

Dating of these features is based on forty-nine sherds of samian, including decorated fragments (FIG. 5:4-6), as well as stamped vessels (17 and 18), all of late Neronian and Flavian date, but most centred on *c.* A.D. 65-85. Significant quantities of coarse ware were also present (seventy-four sherds from trench B), including Lyons ware datable before *c.* A.D. 75 (Greene, 1978), as well as Severn Valley ware (FIG. 6:1 and 19), grey ware (FIG. 6:2-6 and 10) white ware (FIG. 6:7-8) and a fragment of amphora, all in forms datable from the 1st century. Other finds include vessel glass (FIG. 9:1-2), and a glass counter (FIG. 9:5). A total of 230 fragments of animal bone were recovered from these features in trench B, which represented 90% of the bone recorded from the trench as a whole.

Such an arrangement of features may have been either domestic or for industrial purposes, requiring the deposition of rubbish, hence the quantities of debris filling these features. The quantity of bone is remarkable considering the preservation of bone on other sites in Leintwardine where it decomposes quite rapidly. Local ground conditions, perhaps produced by the dense concentration of bone may have enhanced its preservation. The gully associated with the ditch running to the E. of this area may have contained a revetment to retain the upcast as a low bank. Such a combination of features might reflect a property boundary.

Phase 1c

Sealing these features was a layer running right across the site, described as a dirty dark brown earth, containing gravel, tile and clay (A18, B4, C17 and D24). Finds included samian, some sherds of which were derived from fragmentary vessels mostly stratified in the sealed Flavian features. In a few cases these appeared in this layer in different trenches to the features in which the bulk of their vessels were deposited. Of twenty-five sherds of samian, twenty-one were of 1st-century date and four were Antonine, the latest being central Gaulish Form 45, dated to *c.* A.D. 170-200 (see archive section I/6, sherd 153). Coarse pottery included 1st-century mortaria (FIG. 7:26-7), Severn Valley ware, gray ware (FIG. 7:13) and amphora fragments, much of it datable to the 1st century, as well as the first appearance of black-burnished ware (FIG. 7:14-5). Many small finds derived from this layer, including three coins, two of Vespasian and one of Domitian (2-4), as well as finds of metalwork (FIG. 8:2, 9-10 and 12), vessel glass (FIG. 9:3) and two more glass counters (FIG. 9:6-7).

Part of this layer was originally thought to represent a dump to level the ground surface in trench A for the rampart, and in the other trenches for the later building. However, the interpretation of this layer has changed due to a number of factors. Many of the features sealed by this layer showed evidence of truncation, while the quantity of 1st-century material (especially the samian ware sherds) shared by the layer and the features beneath it suggests that the earlier Roman ground surface was reworked rather than removed. The homogeneity of a significant depth of deposits and the lack of a buried soil preserved by the dumping tends to confirm this analysis. The much smaller quantities of later material suggest that deposition of finds in this layer after the 1st century was not a result of intensive domestic occupation. Consequently this layer is now interpreted as a horizon of reworked soil, perhaps due to cultivation across the whole site.

Features and layers of phase 1b correspond to those found by Stanford and attributed by him to the occupation of a pre-rampart *vicus* (Stanford, 1968, 268 and 314). He concluded that this occupation began about A.D. 70, and continued until the fort was laid out and built, soon after *c.* A.D. 160. The Sawpit Bank evidence suggests that intensive activity in this particular eastern area only took place in the first, Flavian, part of this period. At this time the settlement may have been bounded by the ditch to the E. This was similar in profile to that found by Stanford (Ditch 4) also running at an oblique, N.-N.-E. to S.-S.-W. alignment under the rampart at the N.W. corner of the defences (Stanford, 1968, 261). The less intense, possibly horticultural, use of this area, represented by phase 1c, may be derived from the shift of the military garrison from Jay Lane, 0.6 km. to the N.W., to Buckton, 1.5 km. W., across the river Clun, where an annexe is known from aerial photographic evidence (Stanford, 1968, 227). It is only after the period of the withdrawal from Buckton that there is clear evidence of further deposition of finds in this area.

Phase 2: the layout and construction of the eastern defences (FIG. 3b, FIG. 4a)

The rampart (F33) was recorded principally in section due to the constraints of time; the discussion that follows is based on the detailed framework of interpretation of the defences established by Stanford (1968, 263, fig. 22). This feature lay exactly where pre-

dicted by Stanford (1968, 259, fig. 20), with its E. face lying approximately beneath the present property boundary. A layer of earthy clay beneath the rampart may represent a turf-line. Only *c.* 0.8 m. in height of the original clay and timber rampart remained, and only two layers of timber were recorded, but it otherwise closely resembled Stanford's descriptions of the construction (1958, 90-2; 1968, 262). The back edge of the rampart had not survived very well, although a long tail of clay trailed back to the edge of the contemporary gravel track, and probably represents washdown and slumping from the original construction of the rampart. The grey clay appears to have a level upper surface, perhaps prepared as a platform for a walkway, or the next stage of construction.

A layer of earthy clay along the back edge of the rampart appears to have a dual function as both a turf ramp (Stanford, 1958, 90 and 92-3) and a revetment for the capping layer of orange clay (Stanford, 1958, fig. 2, layer 3). As far as they survived, these layers raised the height of the rampart to a maximum of 1.2 m. However the crest has been truncated by later features and erosion, so the actual height of the rampart at this point cannot be accurately determined. Much of the earthy material of the ramp seems to have washed over the slumped grey clay tail of the earlier phase. A large deposit of mixed yellow-brown clay and sandy loam (A7) covered the back of the rampart, and similar material was excavated amongst the upper fills of the possible well (F16).

The track identified as the 'intervallum road' or *via sagularis* by Stanford (1958, 93), here consisted of a single layer of close-packed gravel, up to 0.1 m. thick and 3.75 m. wide, with a slight camber, running N. to S. This seems to have been laid directly over the layer of cultivation, and no finds are reported to have been associated with it. It was not found where originally predicted by Stanford, but lay between 1.5 m. and 2 m. from the back of the rampart. This leaves no 'intervallum space' within the eastern rampart equivalent to that first suggested on the W. (Stanford, 1968, 259, fig. 20), although Stanford has subsequently re-evaluated his earlier records and has indicated that such a large intervallum space need not exist (Stanford, 1991, 89, fig. 35; Stanford pers comm.).

Finds from the rampart at Sawpit Bank include four sherds of samian, all of Flavian date, a mortarium made in Gaul dated to the 1st century, and another from the west midlands dated *c.* A.D. 110-160, as well as Severn Valley and grey ware datable to the 1st and 2nd centuries, and black-burnished ware datable after *c.* A.D. 130. Accurate dating evidence is therefore sparse, since much of the material was evidently derived from earlier occupation levels. However the late Antonine samian vessel discussed above, from the layer below the earthwork (although in another trench) could be considered to date the rampart to *c.* A.D. 170 or later.

Phase 3: occupation within the defences (FIG. 3b)

Stanford (1968, 260) had suggested two phases of reconstruction may have followed two phases of neglect of the defences. At Sawpit Bank it seemed apparent that some time after the initial construction an episode of slumping from the rampart had occurred, perhaps as a result of the compaction of material in the ditch beneath. A refurbishment appears to have involved the levelling of the crest of the remaining rampart before superimposition of a ramp and orange clay capping feature. This was followed by the deposition of another substantial layer of clay soil (A7), which may be interpreted as another stage of refurbishment. Although the *via sagularis* remained in existence following the first stage of refurbishment, it was engulfed by the second. The dating material from both these deposits at Sawpit Bank is tentative, based entirely on residual material of 1st and 2nd-century date.

Twelve and a half metres behind the rampart a thin layer of clay (F42) was encountered. This covered most of the area of the excavation further W. Less than 0.01 m. thick where identified in parts of trench B, it became thicker further W., reaching up to *c.* 0.15 m. near the western edge of excavation in trench D. In trench B, this layer had been excavated away with pick and shovel while removing material eroded from the rampart (B2). The E. edge of the clay was not recorded in plan, but was interpolated from the N. and S. sections. It only appeared sporadically in the sections of trench B, so it may have been difficult to recognize in this trench. Although encountered elsewhere in trench C, the clay layer did not appear at the S. end, this area instead being covered by an area of gravel and rubble (C5).

In trench C, a shallow gully (F13), 0.08 m. wide, marked the boundary between the clay layer (F42) and the gravel (C5). Another gully (F11) cutting the clay, ran at right angles to the first. However, the junction of the two gullies remained outside the trench, while the N. end of the latter (F11) was cut away by later disturbance. There was no evidence to indicate whether either the former gully (F13) or the gravel and rubble area extended eastwards into trench B. Three features which may have been associated with the clay layer were two post-holes (F43 and F44) in trench B, both *c.* 0.2 m. in diameter and *c.* 0.4m. deep, aligned with the presumed edge of the clay floor, and a shallow pit (F27) in trench D, 0.78 m. in diameter, with a flagstone base, and flagstones set at steep angles around the inside, which was interpreted as a hearth due to the reddening of the surrounding clay. A pit (F14) appears to be intersected by one of the gullies (F13), suggesting a possible pre-existing relationship with the clay layer.

Finds from these features were very sparse, making dating very difficult. The pit (F14) was the only feature from this phase to have produced closely datable finds. Fragments of a Nene Valley ware beaker, dated to *c.* A.D. 170-200 (Gillam, 1970: 92), an Oxfordshire mortarium dated to *c.* A.D. 180-240 (Young, 1977: M10/11) and a sherd of late Antonine samian (form 33, grooved for a rivet), indicate a date probably after *c.* A.D. 180, probably in the early 3rd century. The whole complex is later in date than *c.* A.D. 170+ since it overlies the cultivation layer of phase 1c, which also runs beneath the rampart. It could only have been dated significantly later than the rampart itself by its stratigraphic relationship to eroded material from the rampart in trench B. The excavator considered that eroded material both underlay and overlay the clay floor, but due to the rapid methods of excavation and recording in this trench this could not be verified.

This group of features appeared to represent elements of a building. Its clay floor remained, indicating the existence of a substantial, probably domestic, structure with dimensions of at least 10 m. N.-S. and E.-W., broadly aligned with the rampart. Only one possible external wall appears to be represented, the E. wall, recorded evidence for which consists of two widely spaced post-holes and the estimated location of the edge of its clay

floor. It is possible that a wooden wall, consisting of post-holes and gullies may have been eroded away, although the depth of survival of the two surviving post-holes suggests otherwise. Another suggestion is that this was a building of cob-construction, with a clay-block wall, and widely spaced timber uprights to aid stability and act as roof supports. Such a technique of construction is well represented on Roman sites elsewhere (Perring, 1987, 149), and would be difficult to detect during rapid excavation. The area of gravel (C5) represents an anomaly within this building, although its true size and nature were not retrievable due to the limits of trench C, and later disturbance of the south end of Trench B.

Phase 4: later features (FIG. 4)

Features of a later date occur (see FIG. 4), some apparently cut from a higher level than the surface of the clay floor. Many of these are likely to be of the Roman period. A gully in trench D (F15), *c.* 0.9 m. wide and *c.* 0.3 m. deep produced significant quantities of datable material of all periods of Roman occupation. Notable here are items of copper alloy (as, 1, 7-8), possibly of 1st-century military origin, a 3rd-century coin (6), and late

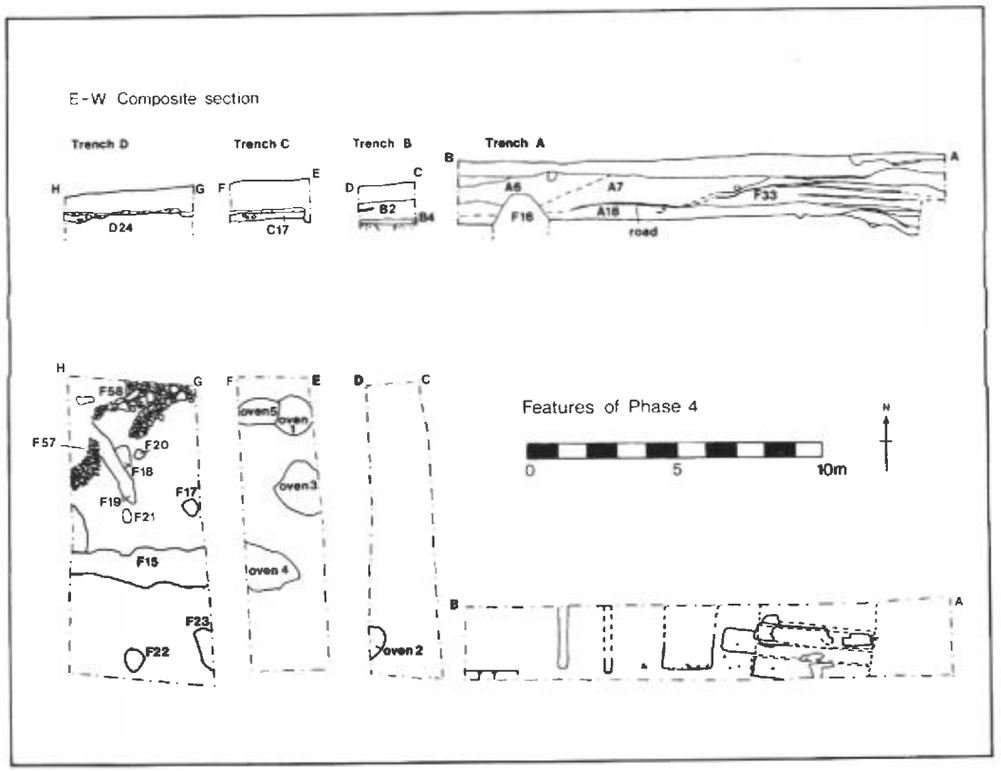


FIG. 4
Roman Leintwardine. Excavations at Sawpit Bank - plan of Phase 4 and composite section.

3rd or 4th-century pottery (Gillam, 1970: 228, *c.* A.D. 290-370). It is possible that this represented the foundation trench of a later Roman structure, since it is aligned with the preceding building. However, no corresponding structural features were recorded within the area of excavation. A single charcoally deposit overlying the clay floor (C6) may represent an accumulation of this later Roman period. Other features could not be identified with certainty as of 3rd-century or later Roman date.

A group of five shallow features were cut into the surface of the clay, which all had similar grey fills, as if discoloured by ash, and so were identified as a group of ovens by the excavator. It is not clear whether they were lined, or simply earth-cut, and the records give no indication of high temperatures having affected the soil around them. In contrast, the stone-lined fire pit of phase 3 (F27) had clearly been the source of heat since colour photographs showed a reddening of the clay around it. These features seem to have varied in size and shape; lengths ranged from 1.1 m. to 2 m., and widths from 0.85 m. to 1.9 m. All were quite shallow, ranging from 0.15 m. to 0.35 m. deep. It is possible that ovens 1 and 5 were two elements of a single feature, as their stratigraphic relationship is not entirely clear. Most of the finds from these features appear to be 1st and 2nd century in date, although some vessel types in black-burnished ware indicate a later 3rd or 4th-century date. However, sherds of medieval cooking pot (25) were recovered from the sealed lowest fill in oven 4. All these features are clearly later than the primary use of the clay-floored building since they cut the clay floor, and therefore supersede its function. However, these features need not represent even a broadly contemporary group.

None of these features resembled the oval 'keyhole' shape typical of clay-built ovens at Colchester (Crummy, 1984, 25-6), although ovens 1 and 5 together may represent a similar function. None was sealed by a recognisable layer beneath topsoil, so all could have been cut in the very late Roman, post-Roman or medieval periods, as is indicated by the recovery of medieval cooking pot sherds from oven 4. The excavator's interpretation of these features as bread ovens associated with military occupation within the rampart should be treated with caution. Ovens, or kilns used for relatively low temperatures are required in settlement sites for a variety of domestic and minor industrial purposes. Included here may be corn or fruit drying, leather curing, steaming wood for shaping, and smoking fish or meat, in addition to baking bread, all of which can be interpreted as civilian rather than military activities. The positioning of these fire pits is quite logical here, since they were sheltered from the wind by the rampart, and were far enough from wooden domestic buildings not to be dangerous.

Two areas of dry-stone foundation (F57 and F58) in trench D may represent late Roman or post-Roman structures. One (F58) overlay a forked gully, the function of which is not clear. With the limited records available for these features, it is difficult to assess their date or function.

A series of shallow linear gullies filled with a dark soil were cut into the top of the rampart, which were tentatively interpreted by the excavator as the planks of a late Roman boardwalk. However an analysis of the soil derived from one of these features (Keepax, 1976) indicated that no remains of wood were present. Coal and cinders had caused the discolouration of the soil, and there was a significant quantity of material of

medieval and post-medieval date in their fills, including quantities of clay pipe. This seemed remarkably similar to the group of parallel gullies recorded behind 22 High Street (HWCM 1061), which have been interpreted as cultivation trenches (see below). A shallow gully at right angles to these, and with a similar dark fill, may have had the same boundary function in relation to this group as the group of shallow pits in relation to the gullies at 22 High Street. The location of these features in the kitchen garden of Leintwardine House supports the hypothesis that these features are cultivation-trenches.

Layer A6 was a deposit of soil which has gathered beneath topsoil in the depression behind the rampart. It contained quantities of post-medieval finds, but may have started to accumulate at a much earlier date. It was not distinguished from topsoil except in trench A. More recent features, cutting topsoil, indicate the continued use of the line of the rampart as a boundary.

THE FINDS FROM SAWPIT BANK

Introduction

Sawpit Bank provided one of the largest collections of finds so far recovered from Leintwardine. Finds were returned to the landowner shortly after the excavation at his request, and have not subsequently been made available for further examination. Consequently identifications, and references to parallels, except for coins, samian and mortaria, are based on drawings, which are inadequate for precise identification. Due to the constraints of time, finds research concentrated on acquiring dating evidence. In consequence, some very interesting categories of material have received less attention than perhaps they deserved, notably the animal bone of phase 1 and other organic remains.

The coins identified by A. S. Robertson (Hunterian Museum, Glasgow)

(1) *As* of Vespasian (Lyons A.D. 71); RIC 502; B(2), phase 3.
(2) *As* of Vespasian (Lyons A.D. 71-3); cp RIC 494, 746; A(18), phase 1c.
(3) *As* of Vespasian (Lyons A.D. 72-3) as RIC 747; C(17), phase 1c.
(4) *As* of Domitian (Rome A.D. 86); RIC 335; B(4), phase 1c.
(5) *Denarius* of Caracalla (Rome A.D. 196-7); RIC 2; B(2) phase 3.
(6) *Denarius* of Severus Alexander (Rome A.D. 226); RIC 154; D2, F15, phase 4.
(7) *Antoninianus* of Tetricus I (Gaul A.D. 270-3); RIC 141; A9, F5, phase 4.
(8) *Antoninianus* of Tetricus I (Gaul A.D. 270-3); RIC 90; D1, topsoil.
(9) Radiate *Antonianianus* of Tetricus I or II (Gaul A.D. 270-3); D1, topsoil.
(10) Constantine I (Constantinopolis type A.D. 330-5, LRBC 66, Trier); D1, topsoil.
(11-16) Six other copper alloy coins were also present from D1 (two), D2, B2, B5 (F25), and B6 (F26), but these were not identifiable.

Samian ware by B. R. Hartley and H. Pengelly

A minimum of 190 sherds of samian were recovered at Leintwardine Sawpit Bank, many of them small and abraded. The stratified early Flavian assemblage, consisting of forty-nine sherds, is comparatively large in relation to other sites at Leintwardine. Only decorated and stamped sherds are published here.

DECORATED SAMIAN (FIG. 5)

1 Form 29. The upright plant in the lower zone is similar to one recorded on a bowl from London stamped OF.LABIONIS (Knorr, 1952, Taf 32B). South Gaulish, *c.* A.D. 50-65. B2, phase 3.

2 Form 29 with a leaf scroll in the upper zone. There is a bowl from Aislingen stamped ALBUS.FE with the same leaf-tips and beaded scroll binding as this piece (Knorr, 1919, Taf 54). South Gaulish, *c.* A.D. 55-70. B1, unstratified.

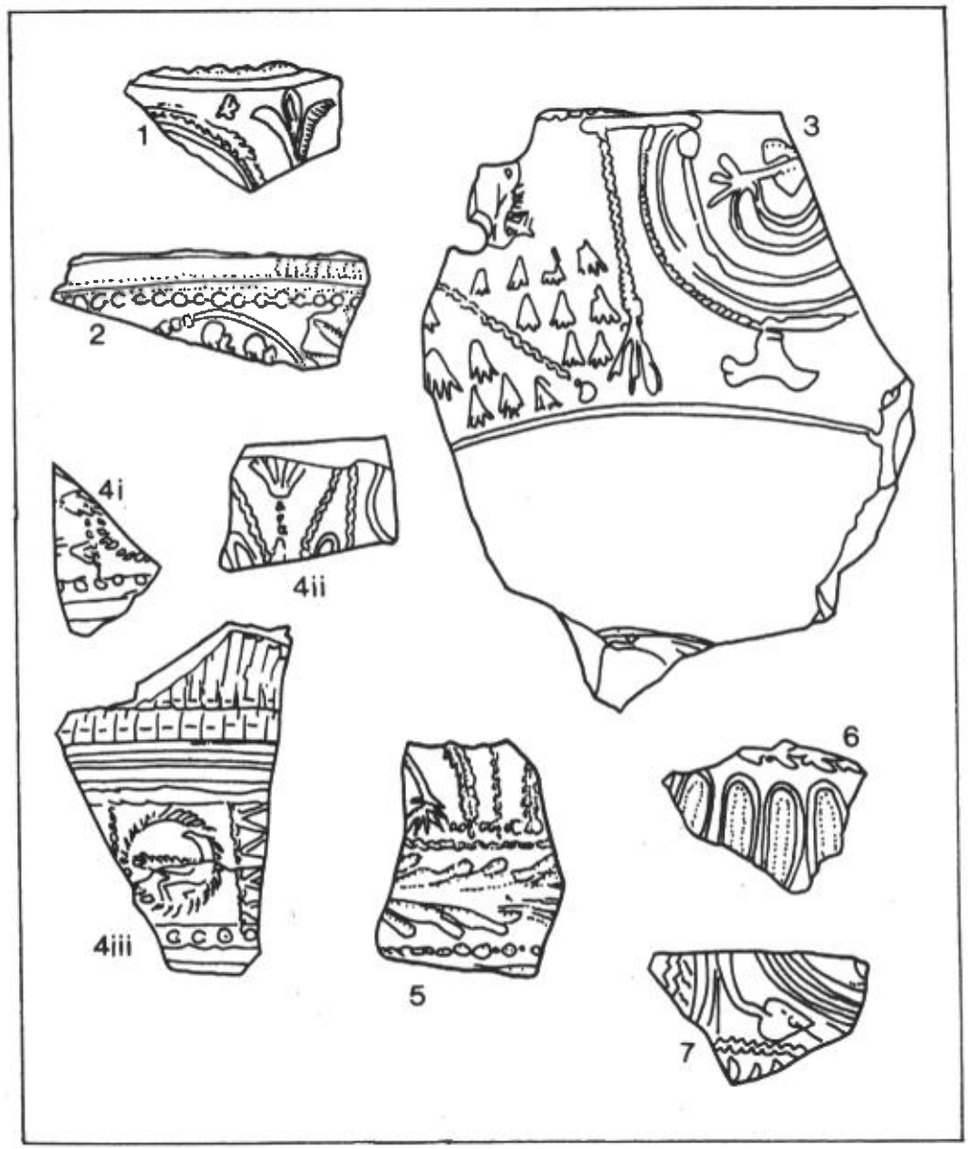


FIG. 5
Roman Leintwardine. Excavations at Sawpit Bank - decorated samian ware.

3 Form 37 with a large drilled hole for a lead rivet. The design is unusual. A triple-bordered festoon with the outer border corded encloses a spade leaf spurred and stipuled, hanging between two wavy line borders terminating at the base in triple leaves. Suspended from the festoon is a small acanthus. The left hand panel has at the bottom leaf-tips and a diagonal wavy line. Above is part of an obscure decorative detail or figure type. No exact parallel has been traced for this design (Knorr, 1952, Taf. 39D shows a similar triple festoon but without the corded border). South Gaulish, *c.* A.D. 75-95. D3, F15, phase 4.

4-5 Form 29. Four fragments of eighteen from a bowl occurring in B7 and B8 (F28) in phase 1, B4 (phase 1c) and in B2 and C4 (oven 4). In the upper zone (4) alternating panels give (i) two ornaments composed of two triple leaves bound by a small rosette with similar rosettes on the field; (ii) leaftips, (iii) small corded medallion enclosing a bird to right looking back (Oswald, 1936-7, type 2249). The lower zone has a pendant, ending in the same triple leaf as panel (i) of the upper zone, between four leafy festoons; two small rosettes in the field. in the lower zone (5), a straight wreath above two leafy festoons of which one encloses a small leaf spray. A similar design has been recorded on a Form 29 from Hofheim stamped OFPASSIEN (Knorr, 1919, Taf. 64G), so a connection with the workshop of Passienus seems likely. South Gaulish, *c.* A.D. 60-75.

6 Form 37. The general style occurs in the Pompeii hoard (Atkinson, 1914, Pl VII, no. 40). South Gaulish, *c.* A.D. 75-90. B7, phase 1.

7 Form 37. A panel with a corner tendril encloses a triple bordered medallion (as Atkinson, 1914 pl XII 60). South Gaulish, *c.* A.D. 75-90. C17, phase 1c.

Not illustrated

8 Form 30. Ovolo with four-pronged tongue, used by M Crestio, Crucuro and Frontinus, and the triple bordered medallion is typical of bowls of the period of the Pompeii hoard (Atkinson, 1914). South Gaulish, *c.* A.D. 75-90. C10 (F11), phase 3a.

9 Form 37 in the style of Casurius of Lezoux. For the bird (Dechelette, 1904, type 1037 = Oswald, 1936-7, 2239) and the acanthus leaf (Dechelette, 1904, type 1161) see Stanfield, 1935, 199, details 27 and 7A. Central Gaulish, *c.* A.D. 160. B2, phase 3.

10 Form 30. Upper zone showing a rod-like pendant between two festoons (comparable with Knorr, 1912, Taf. V, 16-17, but with slightly different pendants). South Gaulish, *c.* A.D. 65-90. B2, phase 3.

11 Form 37 showing a medallion with roped border like one used by Casurius (Stanfield and Simpson, 1958, plate 133, 14), although it lacks the plain inner ring. Within the medallion there are traces of what is almost certainly the Pan mask used by many potters including Casurius (Dechelette, 1904, 675 = Oswald, 1936-7, 1214). Central Gaulish, *c.* A.D. 160-180. D2 (F15), phase 4.

12 Form 37 with panel design. The feet probably belong to a Venus (Dechelette, 1904, 184) used by several potters including Cinnamus who also used a large medallion, small plain ring and flattened beads. Central Gaulish, Antonine. unstratified.

13 Two sherds of form 29 showing two panels in the upper zone. First two dogs (Oswald, 1936-7, 1931) chasing a small hare; second a grass tuft. South Gaulish, *c.* A.D. 65-80, B7, phase 1 and C17, phase 1c.

14 Form 29 showing two panels in the upper zone. The rim has no rouletting. The first panel has a filling of leaf tips similar to a bowl from Rottweil stamped MEOILLV. The second panel contains the foreparts of a hare, also on the Rottweil bowl. South Gaulish, *c.* A.D. 65-80. B7, phase 1.

Stamped samian (not illustrated)

15 Form 31R (burnt) stamped GENTORF by Genitor of Lezoux. *c.* A.D. 160-195. B2, phase 3.

16. Form 80, stamped C TI NIMN. This stamp is from Die la of Catianus of Lezoux. *c.* A.D. 165-195. B2, phase 3.

17 Form 15/17, base and footring survives in fragments and includes the potter's stamp OFCALVI of Calvus of La Graufesenque. *c.* A.D. 65-85. B7, phase 1.

18 Form 33a or 27. Stamped MON by Montanus of La Graufesenque. *c.* A.D. 60-80. D15 (F30), phase 1.

19 Form 45 stamped M F GEMIN.N upside down on the exterior of the collar. A stamp of Geminus of Lezoux. *c.* A.D. 170-200. B2, phase 3.

Coarse Pottery

Much of the pottery recovered in the Sawpit Bank excavations has not been examined in detail. However, preliminary identifications by G. Webster (GW), S. C. Stanford (SCS) and J. G. P. Erskine seem to be broadly valid, although no comments were offered for the remainder of the assemblage. No detailed quantification of pottery took place. Further work referring drawings to accepted published examples has taken place, but description of fabric consists of a terse comment on colour. Examples published here represent the bulk of vessels stratified in 1st or early-2nd-century contexts, as well as vessels which are inherently interesting, or were represented by a large proportion of their profiles. Fabric numbers refer to the Hereford and Worcester pottery fabric series derived from that for excavations in Droitwich (Hurst and Rees, 1992).

FIG. 6

1 Severn Valley ware (fabric 12) storage jar with heavy rolled under rim. B8 (F28) phase 1.

2 Dark grey ware (fabric 14) jar with sharply everted rim. B8 (F28), phase 1.

3 Bowl in light grey ware (fabric 14) with lid-seated rim. The body is decorated with deep vertical grooves or fluting, while the rest of the surface has been partly burnished. This is an unusual form presumably imitating a glass bowl with pillar moulded decoration. (GW) B10 (F29), phase 1.

4 Dark grey ware (fabric 14) jar. C20, phase 1.

5 A large oxidised cooking pot with upstanding rim and moderate rustication on the body (similar to Cirencester fabric TF15 - probably as fabric 14). D15 (F30), phase 1.

6 Small grey ware bowl (fabric 14), similar to 1st-century examples from Wroxeter (GW). D15 (F30), phase 1.

7 Small globular jar with a sharply everted rim in fine cream ware (fabric 41) with a well burnished surface and decoration in red paint. This is a mid-1st-century vessel exemplified at Camulodunum in form 218 (Hawkes and Hull, 1947; GW). B6 (F26), phase 1, and B2.

8 Small jar with sharply everted rim in fine cream ware (fabric 41) with a well burnished body. This is a development of a 1st-century type best exemplified by Camulodunum type 108 (Hawkes and Hull, 1947; GW). C20, phase 1.

9 Jar or beaker in Severn Valley ware (fabric 12). B7, phase 1.

10 Reeded rim bowl in a hard grey ware (fabric 14) with parallels at Wroxeter *c.* A.D. 75-120 (GW). Similar examples in B7 and D15 (F30), phase 1, A16 (F33) phase 2, and D2 (F15), phase 4.

11 Sherds of *amphorae* (fabric 42) came from B8 (F28), phase 1, B4, phase 1c, C13 (F14) and D14 (F42), phase 3, and C9, phase 4 (not illustrated).

12 Body sherds of a beaker of Lyons ware (fabric 26), *c.* A.D. 50-70 (Greene, 1978). B6 (F26), phase 1 and B2, phase 3 (not illustrated).

FIG. 7

13 A jar with a long upright rim in a fine hard grey ware with well burnished surface (fabric 14). C17, phase 1c.

14 Black-burnished ware jar (fabric 22). A18, phase 1c.

15 Black-burnished bowl (fabric 22). A18, phase 1c.

16 A cooking pot in a light grey ware with an area of rustication on the body, the shoulder is well burnished, everted rim (fabric 14, as Cirencester fabric 17). C1, topsoil.

17 Complete profile of a typical Severn Valley ware necked storage jar (fabric 12 - SCS). B2, phase 3 (Webster, 28, late 3rd to 4th century).

18 Complete profile of a Severn Valley ware tankard (fabric 12 - SCS). B2, phase 3 (Rawes, 150: late 2nd to 3rd century).

19 Black-burnished ware jar (fabric 22) with obtuse angled lattice (as Gillam, 1970: 146-8), *c.* A.D. 280-370. C8/13 (oven 4), phase 4.

20 A small indented beaker of Nene Valley ware *c.* A.D. 170-200 (fabric 28: as Gillam, 1970: 92) C13 (F14), phase 3 (not illustrated).

21 The base of a large beaker in Rhenish ware (fabric 44) dating to the late 2nd and first half of the 3rd centuries A.D. (Greene, 1978). C6 and D2 (F15), phase 4 (not illustrated).

22 Possibly a Severn Valley ware beaker, of a typical Roman fine ware form (perhaps fabric 12). A6, phase 4.

23 Body sherd of a beaker in Nene Valley ware (fabric 28: as Gillam, 1970, types 50 or 55: mid-3rd-early-4th century). A6, phase 4 (not illustrated).

24 Body sherd and base of a bowl in Oxfordshire red-brown colour coated ware (fabric 29), *c.* A.D. 240-400+. A6, phase 4, and D1, topsoil (not illustrated).

25 Two sherds of a cooking pot in a hard grey ware of typical medieval form, probably 12-13th century (*cf* Barker, 1970, fig 8, AD 66). C8 (oven 4), phase 4.

As might be expected for a settlement associated with the military in the 1st century, grey wares, possibly manufactured for military consumption, form a large proportion of the phase 1 assemblage. Oxidised coarse ware, probably mostly Severn Valley ware is widely represented, and black-burnished type jars, bowls and dishes probably from Dorset begin to appear during the 2nd century (phase 1c). Grey wares remain present, though in smaller quantities. Dating of the coarse wares is difficult due to the uncertainty of identifying fabrics, although

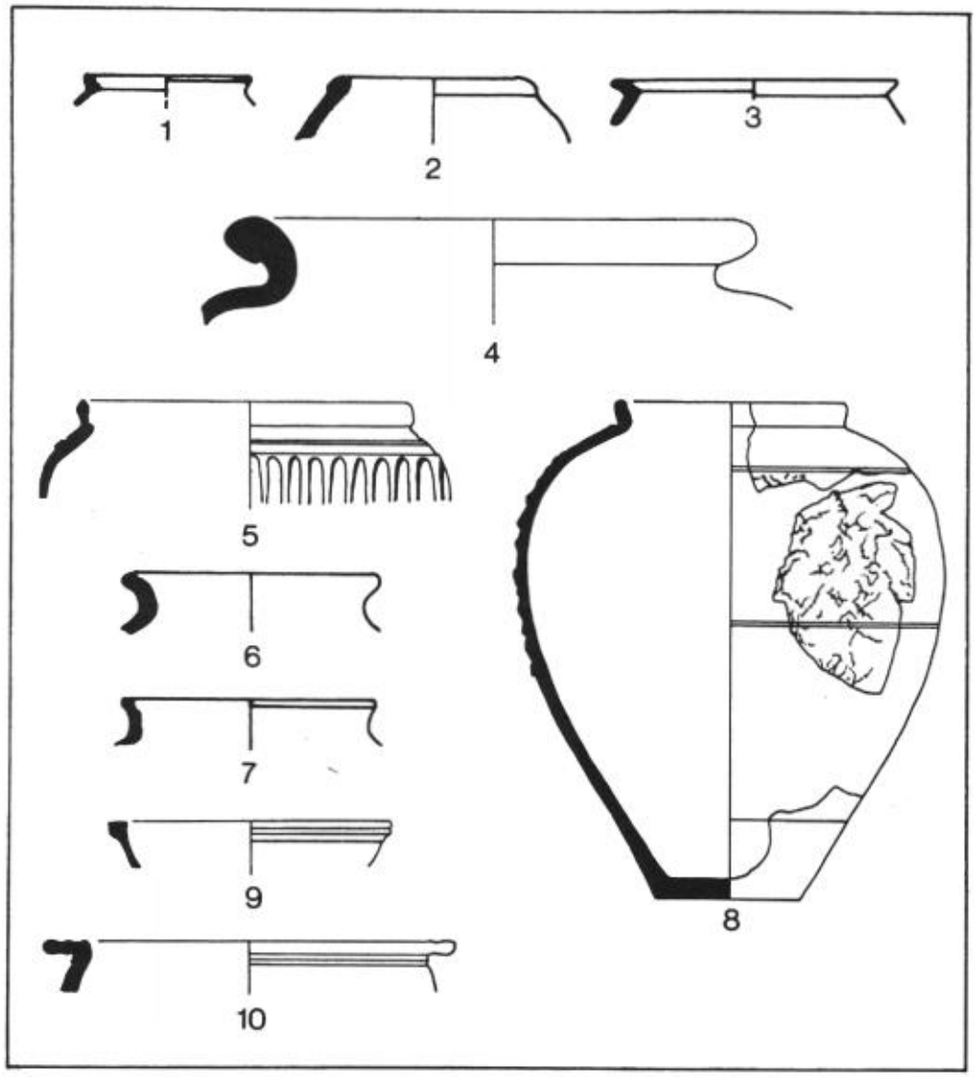


FIG. 6
Roman Leintwardine. Excavations at Sawpit Bank - coarse ware 1-12.

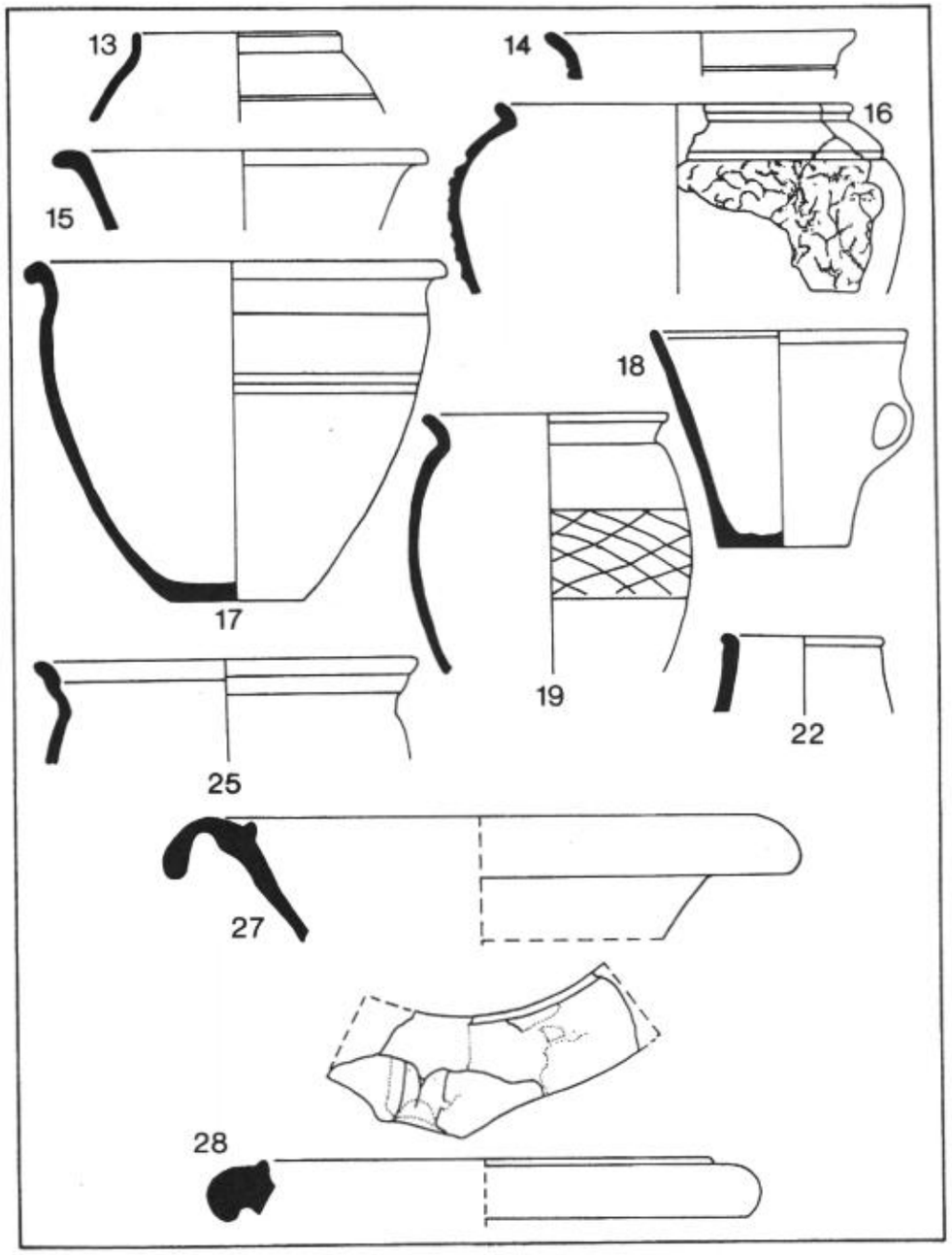


FIG. 7
Roman Leintwardine. Excavations at Sawpit Bank - coarse ware 13-25 and mortaria M1-M3

several vessels suggest continuity well into the 4th century. Fine wares supplementing samian include Lyons ware, Rhenish ware, Oxfordshire red colour-coated ware, and Nene Valley ware. Bodysherds of red and cream slipped oxidised wares from D15 (F30) suggest early locally made colour-coated wares may be present in phase 1. A sherd from D12 (F24) is described in site records as 'hard red ware with green glaze - medieval contamination?' Without further examination it is difficult to suggest what this sherd might represent.

MORTARIA identified by Mrs. K. F. Hartley (FIG. 7)

1 A flange from a mortarium with a deeply-hooked rim, in a rather granular greyish cream fabric with reddish surface and thick black core. The origin is uncertain but it is probably of 1st-century date. B(4), phase 1c (not illustrated).
2 A well-worn mortarium in granular brown fabric, quite heavily tempered with tiny quartz grit. Some quartz and flint trituration grit survives just below the bead. The clay added to form the spout was a weak point in many mortaria and it has become detached in this instance showing clearly the way in which the bead and flange have been treated. The rim-form can be paralleled in the Brockley Hill region, *c.* A.D. 70-100. The fabric, however, would be unusual for these potteries and manufacture in the S.W. is perhaps more likely. C(17), phase 1c.
3 A mortarium in pinkish brown fabric with a slightly greyish core. Probably mid-2nd century. Origin uncertain. A(6), phase 4.

The rampart produced mortaria fragments from Gaul dated to the Flavian period and from the Mancetter-Hartshill potteries, dated *c.* A.D. 110-160. Mancetter/Hartshill mortaria appeared dated from the 2nd century to the 4th including sherds probably from bowls manufactured in the same fabric. Mortaria were also present in other contexts from other potteries. Vessels of the Oxfordshire industry are represented by Young's forms M10/11, dated *c.* A.D. 180-240 and M22, dated *c.* A.D. 240-400+ (Young, 1977).

Other finds

This report is based on the initial examination of metal finds made at the Ancient Monuments Laboratory and identification of other objects by J. G. P. Erskine. These descriptions contained no discussion of parallels, so these are drawn solely from comparisons based on the illustrations (for references to South Shields see Allason-Jones and Miket 1984).

Roman Metalwork (FIG. 8)

1 Copper alloy stud (as South Shields 3.5). B6 (F26), phase 1; another from D2 (F15), phase 4.
2 Small copper alloy ring, some corrosion apparent on one edge (as South Shields 3.178 or 3.1228). B4, phase 1c.
3-4 Two small copper alloy nails or tacks (as South Shields 3.568). B2, phase 3 and C1, topsoil.
5 Part of a copper alloy spur. At the rear is a circular mount to take the 'spur'. Could have attached an object to a pole or a spur to the heel of a boot. No direct parallel for this has yet been found. B2, phase 3.
6 Cast copper alloy bead, C6, phase 4.
7 A copper alloy military harness fitting (Curle 1911, plate LXXII). D3 (F15), phase 4.
8 This copper alloy object, and another strip with only one perforation found in the same group as 7. They may represent an element of armour fittings (Webster, 1958, no. 162), or even fragments of scale armour (Crummy, 1983, 138 no. 4246), although the layout of perforations is unusual. D3 (F15), phase 4.
9 Large hammered iron bar with one end slightly burred. Possibly a blacksmith's punch (Manning, 1985, 9-11; BM A30-A32). C17, phase 1c.
10 Iron hook, generally oval in section (Manning, 1985, 129). C17, phase 1c.
11 Wrought iron chisel. Probably a carpenter's paring chisel (Manning, 1985, 21; BM type 1). B2, phase 3.
12 Sphere of corroded lead, possibly a sling shot although not of normal military type (Greep, 1987, 192). A18, phase 1c.

Roman Glass (FIG. 9)

1 Bottom of a phial. B7, phase 1.
2 Top of a phial. B10 (F29), phase 1.
3 Square base of a bottle. C17, phase 1c.
4 Fragments of a pillar-moulded bowl. C4 (oven 3), phase 4.
5 Blue gaming counter, D15 (F30), phase 1.
6 Blue gaming counter, A18, phase 1c.
7 White gaming counter, B4, phase 1c.
8 Blue gaming counter, B2, phase 3.

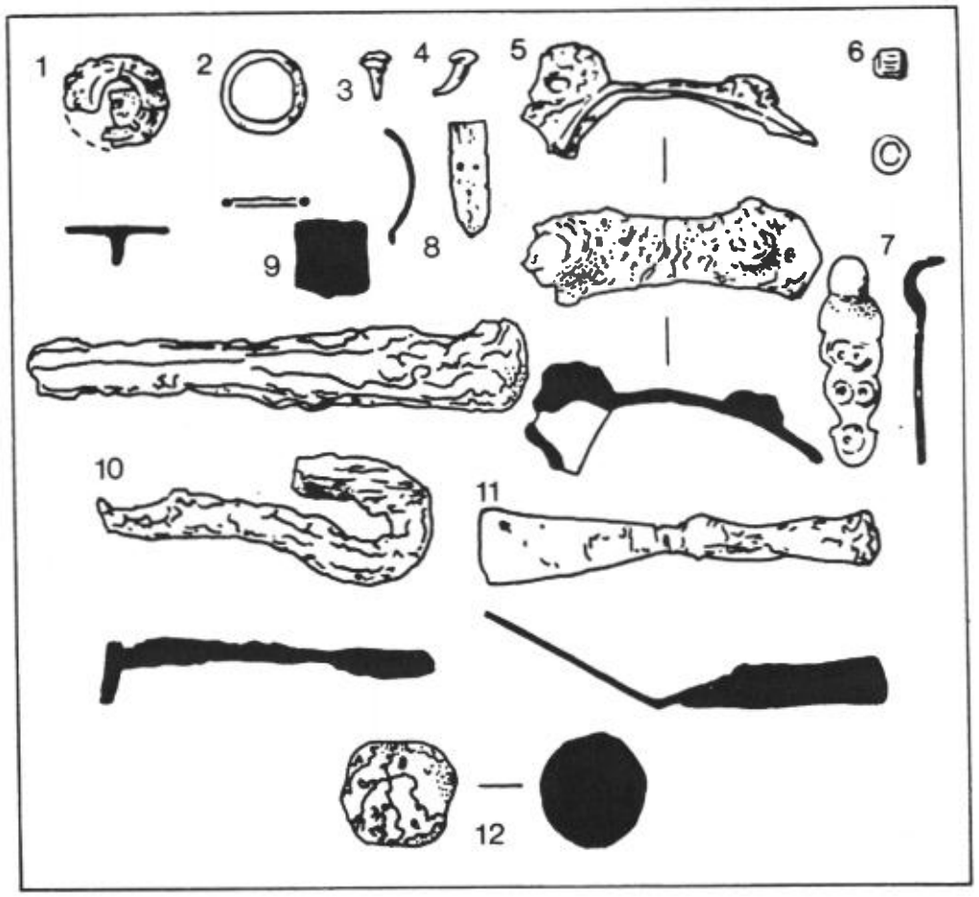


FIG. 8
Roman Leintwardine. Excavations at Sawpit Bank - metalwork.

Examples of similar counters have occurred at Colchester (Crummy, 1983, 92-3) and South Shields (4.21), while four (three white, one black) were found at Brandon Camp (Price, 1987, 71-6, and fig. 15, 4, 5). These are common on 1st-century military sites, but this is an unusually large number for a site of this size, suggesting deposition as a group.

Organic remains

Analysis of environmental evidence is lacking for this site. A number of very fragmentary animal bones were found, identified mainly as cattle, sheep, and horse. This reflects the poor preservation of bone in the soils of Leintwardine. Only in the sealed features of phase 1 did significant quantities of bone occur. Of 261 items of animal bone recovered in trench B, 230 originated from phase 1 features, most of which were not identified by species.

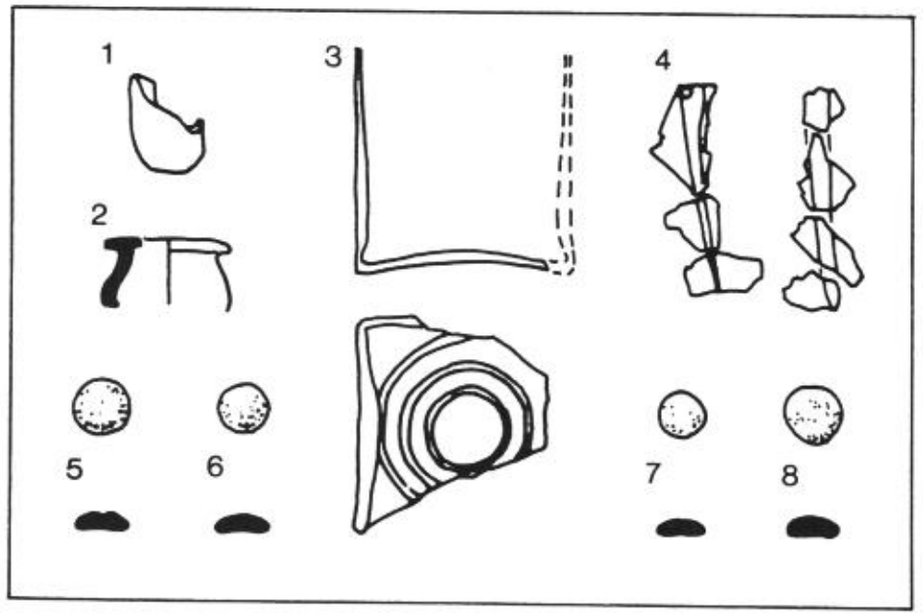


FIG. 9
Roman Leintwardine. Excavations at Sawpit Bank - glass.

Only one soil sample was taken at Sawpit Bank, from a 'plank-impression' of the supposed boardwalk (A8/F3, phase 4). The report of the analysis reads: 'the sample was found to contain coal and cinder-type material, but no wood or charcoal was recognised' (Keepax, 1976).

CONCLUSIONS

Phasing of the site has been difficult because stratigraphic sequences are sometimes unclear from the site records, and dating from a closer analysis of finds has been impossible. Further difficulties exist with the recording of the site. The gaps left by standing baulks and the limits of the excavation have meant that the size and function of the structures in phases 1 and 3 have not been readily retrievable. However further details have been added to our understanding of the range of structural forms and building materials used in Roman Leintwardine. The use of clay as a flooring, and probably a walling material is of particular note. A sealed group of 1st-century features is also quite unusual for Leintwardine since deep disturbance has removed stratigraphy from most sites.

The sequence of construction of the rampart identified by Stanford (1968, 260-8) has been largely confirmed. However, if the dating evidence of sherds from a samian vessel dated *c.* A.D. 170-200 recovered from a layer which ran beneath the rampart is accepted, the construction of the rampart cannot have occurred until after *c.* A.D. 170. Military structural forms in the interior of the fort have still not come to light, although finds of military origin have been identified. These are of 1st-2nd-century type, and therefore may relate to the settlement's links with the forts at Jay Lane and Buckton, rather than a direct

military occupation of Leintwardine in the late-2nd century. Objects of military type are commonly found in military *vici*, where manufacture, repair and waste disposal of military equipment is thought to have been commonplace (Mike Bishop pers. comms).

The relative quantity of finds from this site in comparison with others is quite significant. As an example, 190 sherds of samian were recovered from Sawpit Bank, in comparison with 116 from all of Stanford's sites, and 144 from 22 High Street. Sixteen Roman coins, of which ten were identifiable also compares favourably with fifteen from all Stanford's sites, and five from 22 High Street. However it is remarkable that certain categories of finds have not appeared here, notably brooches and glass beads, while glass counters appear here and nowhere else. Unfortunately an accurate quantification of pottery is not possible, although a remarkable range of vessel forms exist.

Despite the nature of the excavation technique, dictated by the lack of time, Erskine's excavation at Sawpit Bank has proved to be one of the most productive sites investigated at Leintwardine. The depth of stratigraphy, at up to 3 m., is quite rare in the village, where subsequent cultivation and domestic buildings have eroded the Roman levels, sometimes so that only deep negative features remain. The discovery of a probable clay floor of a Roman building is consequently important for our understanding of the preservation of Roman deposits, in addition to the contribution made by this evidence for the layout of the Roman settlement.

PART III. EXCAVATION AT 22 HIGH STREET (HWCM 1061, SO 40357406)

INTRODUCTION

The rebuilding and enlargement of an abattoir at the rear of 22 High Street involved encroachment onto part of the scheduled ancient monument (HWCM 1061; SO 40357406). The excavation was undertaken over a period of three months in the autumn of 1980 to excavate in advance of this development. A total of *c.* 430 m.² was fully excavated. Post-excavation work was carried out by J. Sawle and H. Rees, and an interim report was published (Sawle, 1981).

Excavation of a series of small trenches and a resistivity survey in the field behind the butcher's shop in 1959 and 1962 (Stanford, 1968, fig. 27) led to the conclusion that a gravel road, leading from the site of the W. gate, and therefore appropriately placed for the *via principalis,* ran E. to W. along its southern boundary. A number of shallow stone-filled gullies found running N. to S. to the N. of this line were also tentatively identified as the foundations of the *principia* itself (Stanford, 1968, 276-8). The alignment of the *via principalis* appeared to be confirmed when observations in 1972 revealed evidence to suggest the existence of an E. gate some 8.5 m. S. of Church Street (Stanford, 1972). It was therefore anticipated that the large area opened in 1980 would confirm the locations and functions of buildings within the central area of the fort.

After an initial stage of excavation of an area of 300 m.² in the N. area of the site it became apparent that some reassessment of this hypothesis would be necessary. Gullies resembling those recorded by Stanford in 1962 (1968, 278) had proved to be of post-medieval date, and Sawle had failed to locate significant Roman deposits in this area. It

was considered that more positive results might be obtained from an extended area of 130 m.² to the S., where the *via principalis* and any other surviving structures along its N. side could be examined. This area was eventually occupied by a slurry pit for the abattoir, the foundation trench of which was later recorded (Dinn, 1988).

A plan of the excavated area is shown in Fig. 10. The field slopes quite steeply, the N. end of the site being *c.* 2.3 m. higher than the S. end. Significant erosion of the subsoil had occurred at the N. end of the excavation, where the topsoil appeared *c.* 0.40 m. deep, compared to a depth of *c.* 1.0 m. against the southern field boundary. This suggests that at some date topsoil had accumulated downslope, perhaps as a result of cultivation (Dinn, 1988, 4). This might account for the truncation of features such as pit F287, which contained large unabraded sherds from three separate Roman pottery vessels and so is likely to be of Roman date, but was only 0.05 m. deep. The series of post-medieval gullies had also been truncated, since no evidence of their original cut appeared above the level of the subsoil. Shallow features cutting the subsoil could thus have totally vanished, while the original depth of surviving features is no longer ascertainable. No ground surfaces were identifiable anywhere on site, although the eroded remains of what is likely to have been a floor existed for structure 3.

There is a significant problem in phasing many of the features since most were sealed only by topsoil, and there seems also to have been some root disturbance of excavated features. The lack of stratigraphy inhibited association of features except by comparison of finds, fills and alignments. Relatively few finds were recovered from most features, the pottery often being undiagnostic and abraded, much of it small enough to have been introduced by root activity. In consequence many features have not been assigned to a specific phase, although many are likely to be Roman.

SUMMARY OF THE 22 HIGH STREET EXCAVATION

No evidence for either the *principia* building, or the *via principalis* was identified within the area of excavation. The supposed foundation trenches for the *principia* proved to contain post-medieval pottery, and are now interpreted as cultivation trenches (Stanford, 1981, 26). Also, a structure interpreted as a late-2nd-century aisled building was discovered lying across the line of the supposed *via principalis.* Significant further evidence for the early medieval occupation of Leintwardine has also been recovered from this site. Many of the Roman and later features over the northern part of the site proved to have been heavily truncated.

Phase 1: Natural deposits and prehistoric finds

Thin interleaved layers of clay and gravel were identified over many areas of the site, which contained no finds whatsoever. These were cut by the earliest Roman features, and were interpreted as natural till deposits. A re-investigation in 1980 of a ditch or archaeological trench located in Stanford's trench 14 (1968, 277-8, fig. 27) proved the feature to be a large and amorphous pit, with a homogeneous fill containing no artefacts or charcoal. This confirmed the fluvioglacial and periglacial nature of the subsoils, which are so readily misleading (Limbrey, 1975, 99-103, 283-6).

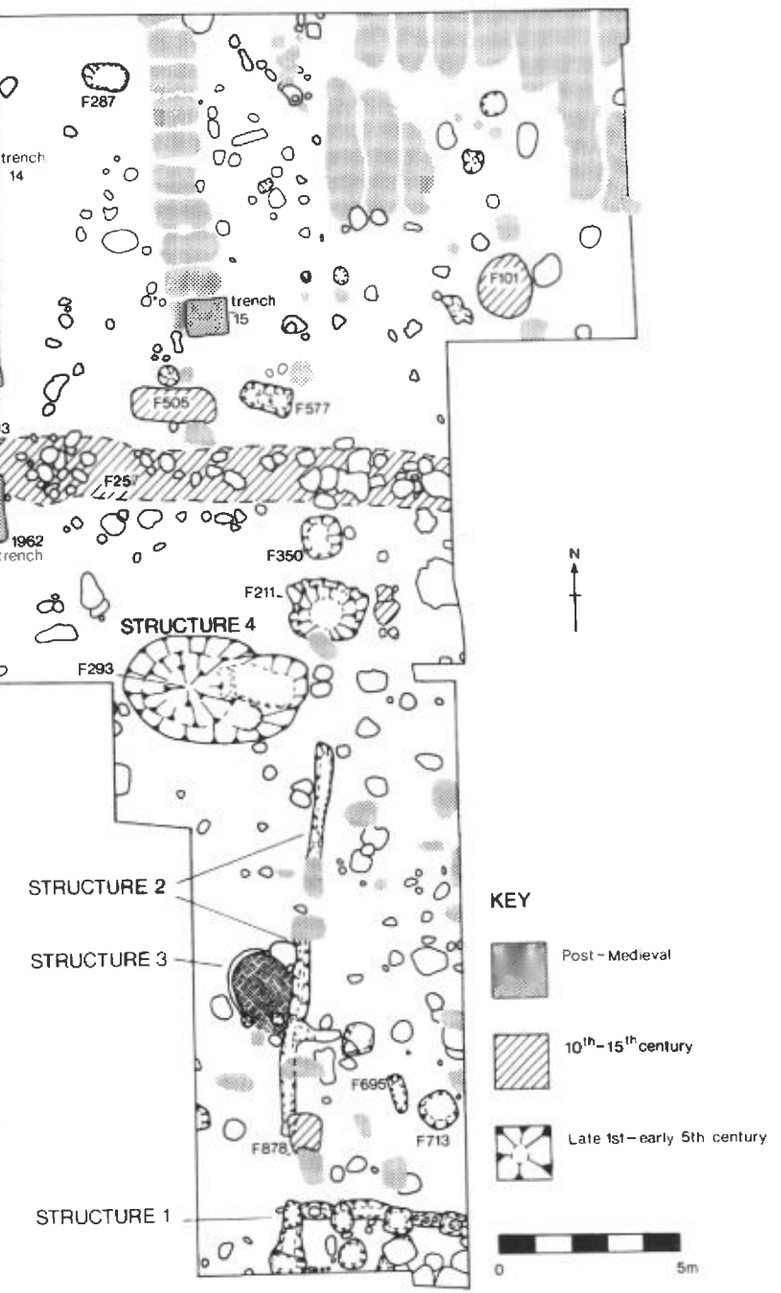


FIG. 10
Roman Leintwardine. Excavations at 22 High Street - plan of features.

Although no features were identifiable as of pre-Roman date, a sparse scatter of mesolithic and later flintwork was present in Roman and later deposits.

Phase 2: The Roman period

Roman features were identified following an analysis of associations between groups of features and the finds from them. Individual features were only considered to be of Roman date if significant quantities of finds datable solely to the Roman period were recovered from them. Consequently only a few of the larger independent features have been assigned to this phase. Four structures were identified, none of which resembled military buildings

Aisled building - structure 1

Structure 1 (FIG. 10) consisted of post-pits linked by gullies, at the southern edge of the site, suggesting the existence of a substantial building, at least 5.2 m. E.-W. by 2.1 m. N.-S., and continuing beyond the area of excavation both to the S. and E. The post-pits were up to 1 m. across, and on average over 0.5 m. deep. Some had post-impressions in the base, which were sufficiently substantial to suggest posts at least 0.3 m. square set at approximately 1.2 m. intervals, but post-pipes were not observed. These were linked by gullies, on average 0.4 m. wide and 0.2 m. deep, in the base of which were impressions of a total of four rounded stakes, on average 0.15 m. diameter, and up to 0.21 m. deep; a series of three of these were set between one pair of posts at 0.2 m. intervals.

The large earth-fast posts supporting the superstructure of this building were probably held jointed to cross-rails and joists between the posts for lateral strength. To these the stakes may have been attached. Methods of walling are uncertain, although both weather-boarding, and wattle-and-daub infill between uprights are possible techniques. No evidence for the demolition of these structures is present. There is no evidence for discolouration of surrounding soils, or significant quantities of burnt clay due to the structure burning down, nor is there evidence that the posts were removed from their post-holes. Small quantities of burnt clay appear in the earliest sealed backfill of structure 4 (406), which, judging from its pottery assemblage, derived from a late-1st-century source. This indicates the presence of burnt clay as residual material on the site from a comparatively early date.

Dating evidence from the construction pits and gullies suggests that the structure was erected in the late 2nd century. This is based principally on fifteen sherds of pottery, particularly three sherds of samian, one of them East Gaulish. The small floor area within the structure, which may have contained features diagnostic of its function, had mostly been removed by later activity, and the remainder had been eroded away. However the size and strength of the structure suggest a function either as a house, or as a substantial agricultural building. Two pits dated to the late 3rd or 4th century within the area enclosed by the foundation gullies might indicate a possible *terminus ante quem* for disuse of this building.

Aisled building - structure 2

Although Structure 2 need not be directly associated with structure 1, it was *c.* 1.7 m. north of it, and the W. sides of both were similarly aligned. It seems to have been significantly less substantial than structure 1. It was formed of two elements: the first, immediately N. of structure 1 (structure 2a) had a more deeply cut N. to S. gully, which was 0.4 m. wide, 0.15 m. deep, and 2.9 m. in length. This was divided from the other part of structure 2 (structure 2b), the northern element of this structure, by an E. to W. gully of similar depth and 1.6 m. long. Less evidence was available for structure 2b, with gullies of a similar width in places, but only up to 0.1 m. deep. These continue a further 8 m. in length with a gap of at least 0.5 m. in the middle, the actual size of which is disguised by two modern pits. Although the wall foundations appeared quite insubstantial, sufficient post-holes existed to have supported a roof, both from beneath, and with raking posts, while further support may have been provided by the N. wall of structure 1. The division of structure 2, partly represented by the E. to W. gully, may have been completed with widely spaced uprights; a single post-hole existed in an appropriate place, while others may have been cut away by later features.

Dating of structure 2 is less precise than for structure 1, being based on fourteen sherds of pottery. However, sherds of west midlands mortaria, grey ware (FIG. 12:9) and samian of the mid-to-late 2nd century, are sufficient to suggest it was broadly contemporary with structure 1. A number of post-holes could be associated with this structure, since dating evidence other than occasional abraded sherds of grey wares or Severn Valley ware was absent. However, due to the paucity of dating and stratigraphic evidence, none of the post-holes have been specifically associated with this structure.

The alignment of these buildings suggests that it is easiest to interpret them as different elements of one large structure, oriented N.-S. Structure 2 clearly represents a subsidiary element to structure 1, which could have performed any of a variety of functions, including agricultural or industrial outbuildings. The function of this complex of structural elements is uncertain since so little evidence for it remains. However, the plan resembles the aisled buildings common on Roman rural sites. Whether this represents an aisled barn (Morris, 1979, 55-65) or an aisled house (Collingwood and Richmond, 1969, 146-9) is not clear, however.

Other structures

Structure 3 was 1.85 m. long by 1.5 m. wide, aligned N.-S., adjacent to structure 2. It consisted of a clay layer ranging from little more than 0.01 m. thick to the N. to 0.2 m. where it sealed a shallow pit, a further 0.35 m. deep. The clay was bounded to the W. by a curving gully, up to 0.25 m. wide, but only 0.07 m. deep. Two post-holes marked the *termini* of the gully at the N. and S., each having a matching post-hole of a similar size, 0.43 m. to the E. The northern pair were *c.* 0.2 m. in diameter, but the southern pair were significantly larger at *c.* 0.36 m. The clay layer, interpreted as a floor seems to have been heavily eroded, particularly on its N. side, probably as a result of the later erosion affecting the whole site. This group of features was bounded to the E. by structure 2.

Although no stratigraphic relationships existed, evidence from six sherds of pottery, together with its alignment with structure 2, indicate that these structures may be contemporary.

The post-holes set in pairs on the N. and S. sides of the structure may represent roof supports, while the two larger ones to the S. probably also acted as an entrance. The curving gully may represent the line of a wattle W. wall, or a drip-gully to carry water away. Essentially a water-tight structure with a clay floor to prevent rising moisture, and a roof to keep out the rain, this could have been a lean-to store shed associated with structure 2.

Structure 4 was in the central area of the site and consisted principally of a substantial complex pit 3.1 m. E.-W. by 2.98 m. N.-S. and over 2 m. deep. It was made up of a number of components, with the deepest part to the W., with a step up to a shallower pit 1.2 m. deep to the E. A further shallow scoop was cut into the side of the shallowest pit, 0.78 m. long by 0.6 m. wide, and 0.15 m. deep. No primary silt was present anywhere in the feature, although there were signs that some of the edges had collapsed. The stratigraphic sequence suggested that both pits were filled with soil at approximately the same time, although different sources of backfill were used for E. and W. areas, as though deliberate in-filling took place from two directions at once. A series of shallow later layers overlay both these deposits towards the centre of the pit, filling the 'dishing' effect resultant from the gradual compaction of the loose Roman deposits.

The pottery suggested that the fill of the E. pit (context 406) derived from a late-1st-century source, since it contained early samian, an early mortarium (FIG. 12:17) and unusual sherds of grey ware (FIG. 12:10-1). However the bulk of the pottery in the deeper pit was mid-to-late 2nd century, indicating the date at which the feature went out of use. Other finds included an iron hammerhead (FIG. 14:39), small quantities of burnt clay and fragments of ceramic roof tiles (*imbrices*). Sherds of late Roman and medieval pottery showed that subsidence into the feature continued until at least the 13th century.

The form of this feature suggested that it acted as a cistern: ground-water and rainwater accumulated in the pit during the course of excavation. The lack of primary silt, and evidence of collapsed edges without slumped fills suggests that it was cleaned out shortly before it was backfilled. Although no evidence of lining was present, timber planking may have been used to retain the shape of this feature. Wooden steps may also have been used to aid access, with one earth-cut step still remaining to support the lower end, while post-holes were suitably placed to secure them to the E. An additional feature within the cistern complex was the hollow on the S. side, which could have represented the position of a counterweight hoist, allowing water to be drawn from the surface. It would appear that this feature went out of use at the time that structures 1 to 3 were constructed, since the latest pottery evidence indicates the bulk of the fill to be broadly contemporary with the finds from the construction of these.

Pits and post-holes

A large number of pits and post-holes were excavated, including many which may be Roman. Most of the post-holes are discussed in archive (section 2.6), unless they can be related to the above structures. A variety of pits of Roman date were also present, possibly rubbish pits associated with structures 1, 2 and 3, or with earlier or later Roman structures closer to the road. Of these, some are particularly interesting due to the quantity and quality of the finds.

One pit (F211) was 1.9 m. in length and 1.76 m. in width, with steep sides and a flat base. It contained two fills, amounting to a depth of 0.8 m. These contained a large collection of material including 135 pot sherds, of which samian (FIG. 11:3, 6 and 12), a Severn Valley mortarium (FIG. 12:19) and coarse wares (FIG. 12:12-3) suggested a date in the late-2nd century. However small sherds of Oxfordshire colour-coated ware suggest that the assemblage was not actually deposited until the mid-3rd century at the earliest. Other finds included a brooch (FIG. 13:37), a glass bead (FIG. 15:46), ceramic and stone roof tile fragments, small pieces of smithing slag, and seven iron nails. This mass of material probably indicates the use of this feature as a rubbish pit.

Two contrasting pits (F695 and F713) were notable by containing significant quantities of late Roman material. The first (F695) was 0.42 m. deep and rectangular (1.1 m. x 0.47 m.), the other (F713) subcircular, 0.55 m. deep and *c.* 1.0 m. in diameter. However finds of pottery indicated that the two were filled from the same source, since each contained elements of the same pottery assemblage (thirty-nine sherds, 1300g). Late Roman material deposited here included nine sherds of a Mancetter/Hartshill mortarium (FIG. 12:20), and nineteen sherds of an Oxfordshire red/brown colour-coated dish (C46: Young, 1977), both almost complete, and probably dating to the 4th century.

Another pit (F603) contained a particularly early group of finds, notably a grey ware beaker (FIG. 12:15), and a coin of Nero (29), and so may be the only feature firmly associated with the 1st-century settlement identified on this site. Considerable quantities of finds originating in the 1st century were recovered from later contexts notably a residual assemblage from structure 4 (406).

These Roman features indicated activity on or near the site throughout the Roman period. The structural evidence suggests that mid-late-2nd century buildings were constructed at the S. end of the site, in an area which was previously little used for domestic refuse disposal. The use of these buildings seems to have continued well into the 3rd century, with refuse disposal to the N. (pit F211). The demise of this building is not apparent in the archaeological record, although domestic refuse disposal seems to have occurred within structures 1 and 2 in the late-3rd or 4th century.

Phase 3: The medieval period

No evidence of sub-Roman or Anglo-Saxon settlement from the 5th to the 10th centuries was identified. However Leintwardine is thought, from documentary sources, to have been a substantial village during the early medieval period. *Domesday* (Thorn and Thorn, 1984) states that it was a pre-Conquest royal manor of Edward the Confessor and supported a church. The later medieval village is represented by the present church of St. Mary Magdalene. Deposits of this period are distinguished as early (13th century or earlier) or late medieval solely on the grounds of very limited pottery evidence.

The early medieval period is represented by post-holes, a well, and a gully aligned E.-W., (F257). The earth-cut well (F101) was up to 1.8 m. in diameter, and 2.9 m. deep. Its bottom layer had quite a high organic content, including charcoal and fragments of bone, probably representing natural silting, above which were layers of deliberate backfill. The well is ideally placed to have been in a tenement yard, supplying a house on the High Street frontage with water, much as the suggested cistern (structure 4) may have done in the early Roman period.

Gully F257 lay close to a break of slope in the subsoil, and was quite shallow and somewhat irregular. It overlay and probably truncated a high concentration of post-holes following a similar alignment. The post-holes were variable in size, and many were disturbed, but they seemed to be grouped in such a way as to suggest a linear feature, possibly upright posts supporting a wattle or railing fence, in which the uprights were often replaced, leading to regular groupings of post-holes (see FIG. 10). The alignment of this fence seems to have changed at least once, but continued to mark a single boundary based on a fixed point just to the E. of the excavated area. Interpretation of the gully is a little more difficult. It may represent a vestigial boundary ditch, the root disturbance of a hedge overlying an earlier boundary, or a dip where a plough working downslope bit into the subsoil at a break of slope before levelling out.

These features were datable by Stafford-type pottery of the 10th to 12th centuries (Cane, 1984), a single sherd of Stamford-type ware and a previously unrecognised early medieval fabric (fabric 47). The well produced 114 sherds of pottery, but only three sherds of a later date than the Roman period, demonstrating the difficulty of identifying features of medieval date without a large assemblage of finds. The gully contained several finds including a Roman coin (30) but only four sherds of pottery, two of which were of the unprovenanced fabric (fabric 47). A piece of window glass of medieval type seemed to confirm this date, while the post-holes contained no finds datable later than the Roman period. A remarkable find from the filling of the well was a considerable quantity of smithing slag, including three hearth bottoms, which may represent part of the refuse from regular smithing on this site. No attempt was made to recover hammerscale.

Gully F257 and its associated post-holes may mark the line of a long-standing property boundary. Inserted onto the 19th-century map of the village this might indicate a series of messuages within the ramparts. Significant Roman features also respected the same alignment, but were not stratigraphically related to it. Its origin, based upon available finds, is more likely to be related to the Anglo-Norman village attested in *Domesday Book*. A barn, datable by a plaque to 1869, lies across its line, giving a *terminus ante quem* for the use of this property boundary.

Some later medieval features were present, including post-holes, and rubbish or cesspits, notably a pit (F505) which was 2.4 m. long and 0.9 m. wide. The character of these features reinforced the identification of this area as a tenement yard throughout the medieval period. In the main the features were dated to the 14th or 15th centuries by pottery of Worcester and Malvernian types, but also included a more local fabric also recognised at Richards Castle and Leintwardine (fabric 60; Vince 1985, A4 type). This phase is broadly contemporary with the earliest surviving elements in the parish church.

The post-medieval period

No features of the 15th to 17th century could be positively identified, but pottery of this date, including a previously unrecognised fabric (fabric 66), appeared in later post-medieval features.

The post-medieval period was represented largely by a series of gullies and shallow pits in the northern part of the site. From the nature of their profiles and fills they were unlikely to be robber-trenches for walls: some stones that remained were quite large, but were not dressed and there was no sign of mortar or clay bonding. With the evidence of post-medieval pottery and other finds, the shallow gullies and pits were interpreted as cultivation trenches, perhaps part of a vegetable plot, and the shallow pits may represent a row of bush holes delimiting this activity. Many of these features produced scraps of bone, much of it burnt, and coal suggesting the undecayed residue of ash, and perhaps crushed burnt bone used as a fertiliser.

A ditch near the northern edge of the site, (F203; not shown on plan), at least 2.3 m. long, 0.75 m. wide and 0.75 m. deep, was cut by many of the series of cultivation gullies. It contained a large amount of burnt clay, some Roman pottery and fragments of at least three rotary quernstones, including a matching top and base of Roman type. However significant quantities of medieval and post-medieval pottery indicated that this could not be identified as anything other than a post-medieval feature, for which no satisfactory explanation has so far been offered.

Three of Stanford's 1962 trenches were located, the western side of his trench 14 fortuitously aligning with the western edge of the 1980 area excavation. Each of these were clearly identifiable, being excavated into the natural periglacial subsoil. In addition to these, some modern pits were readily recognizable by their dark fill containing plastic bags, and were identified as offal pits related to an outbreak of swine-fever during the 1960s. These were only excavated where necessary to define earlier features.

FINDS FROM 22 HIGH STREET

Introduction

Finds from this site represent an important comparative group to those recovered from earlier excavations, since it is the most recent and thoroughly examined group of finds from Leintwardine, and therefore adds valuable details to the general picture, which had previously not been noted. Particularly of interest here are the brooches, which represent the largest group found at Leintwardine. Only selected categories of finds have been published here; the remainder are discussed in archive.

Roman coins (not illustrated)

1 *As*, Nero (A.D. 64-68) as RIC 318; pit F603.
2 probably Gallienus (A.D. 253-268); early medieval gully F257.
3 Carausius (A.D. 286-293) as RIC 498; post-hole F520.
4 probably Carausius (A.D. 286-293); pit F310.
5 Theodora (A.D. 337-340) as RIC VIII Tr 56 p; post-hole F172.

The samian ware by Brenda Dickinson

One hundred and forty-two sherds of samian ware were recovered from 22 High Street, consisting for the most part of tiny sherds and flakes, more than half of which have no diagnostic features apart from their fabrics and glazes. The dating for these is necessarily imprecise. The more closely dated sherds consist mainly of Flavian

and Flavian-Trajanic South Gaulish ware and Antonine Central Gaulish ware. There is a little Trajanic material from Les Martres-de-Veyre, but no Lezoux ware which is certainly Hadrianic rather than Antonine. Most of the Antonine material cannot be more precisely dated, but some belongs to the last third of the 2nd century. There are four sherds of East Gaulish ware which are either late-2nd or early-3rd century. The full samian catalogue remains in archive (section I/5). The following sherds have been chosen for publication due to their intrinsic interest.

Decorated samian (FIG. 11)

1-2 South Gaulish samian of form 37, with a chevron scroll over a basal wreath of small trifid motifs and probably tiny hares between the two. The scroll is unusual in having a diagonal wavy line in one of the upper concavities, with a sinuous leaf-tendril to one side of it. *c.* A.D. 70-85. Topsoil.

3 Central Gaulish samian form 37. The figure with draperies is apparently not in Dechelette or Oswald. Probably Antonine. Roman pit, F211.

4 Central Gaulish samian form 37, with a trifid plant (Rogers, 1974: H109) used at Lezoux by Hadrianic and Antonine potters. The wavy line border from which it is suspended suggests Hadrianic or early Antonine date. Gully F880, structure 2a.

5 Form 30, South Gaulish with panels: 1. a Victory (Dechelette, 1904, 481), 2. a satyr (D.1904, 323 variant), 3. a Diana with hind (D.1904, 63). All the figure types were in common use at La Graufesenque in the Flavian and early Trajanic periods. *c.* A.D. 80-110. Topsoil (not illustrated).

6 Form 37, burnt, Central Gaulish. Panelled decoration, with an athlete (D.1904, 403). The figure type was used by several Lezoux potters, but only Cinnamus ii also used the particular type of beaded border. *c.* A.D. 150-180. F211, Roman pit (not illustrated).

7 Form 37, Central Gaulish, with one of the ring-tongued ovolos used at Lezoux by members of the Paternus v group. The decoration includes a leaf (too fragmentary for identification). The type of beaded border below the ovolo suggests the work of either Paternus himself, Lastuca or Laxtucissa. *c.* A.D. 160-200. F429, post-hole (not illustrated).

8 Form 37, Central Gaulish. One panel has a panther (D.1904, 805) used at Lezoux by Hadrianic and Antonine potters. Another panel may contain a caryatid. Antonine. F880, structure 2 (not illustrated).

Stamped samian

9 South Gaulish samian form 15/17 or 18 stamped [O]F.MVRRA with a broken die of Murranus of La Graufesenque (10a'). One of his later stamps since two examples from the original die (10a) are recorded from Nijmegen fortress. *c.* A.D. 60-70. Topsoil.

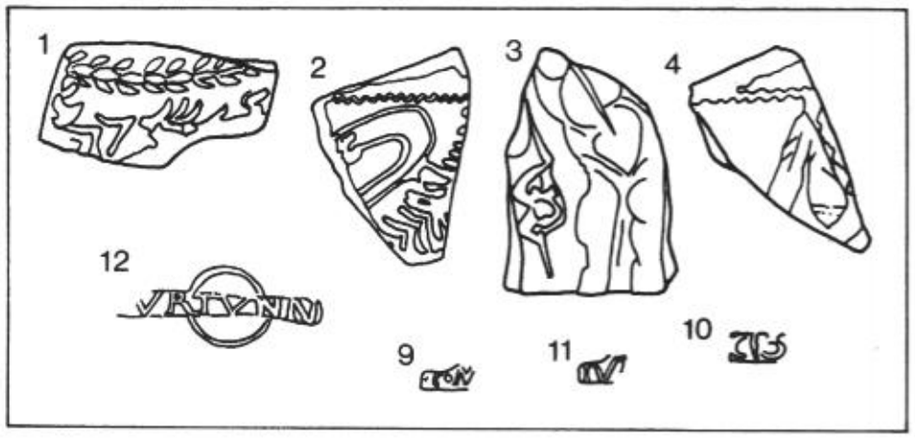


FIG. 11
Roman Leintwardine. Excavations at 22 High Street - decorated samian ware and samian stamps.

10 South Gaulish samian form 15/17 or 18 stamped [FELI]CIO[NS] with die 4a of Felicio i of La Graufesenque. All the recorded examples are on dishes, with one exception. His stamps have been noted from Chester and Hofheim. This particular one occurs at the Lunt and at one of the pre-Flavian cemeteries at Nijmegen. *c.* A.D. 65-85. Post-medieval cultivation trench F239.

11 Central Gaulish samian form 33 stamped IV[LLINI.OF] by Iullinus ii of Lezoux, where the die (1a) is known to have been used. A stamp which occurs at Catterick and on Hadrian's Wall (Chesters Museum). His decorated ware belongs to the mid- to late-Antonine period. *c.* A.D. 160-190. Post-medieval cultivation trench F161.

12 Central Gaulish samian form 33 stamped]VRTVNN. The other recorded examples from Colchester, Wroxeter and probably Lezoux are all incomplete at the beginning. The only similar known potter's name is that of Turtunnus of Heligenberg, but the fabric, the lettering and the occurrence of the stamp in Britain make origin at Lezoux almost certain. Mid to late Antonine. Pit F211.

The coarse pottery by Helen Rees

Of the 1,727 sherds of pottery recovered from this site, most were tiny and abraded, giving rise to problems in identifying fabric and form. However pottery evidence has provided the basis for the phasing of the site. Roman sherds numbered 1,446 and medieval sherds forty-six within this assemblage.

Roman coarse pottery form catalogue (FIG. 12)

1 Jar of grey ware; topsoil.
2 Jar of grey ware; topsoil.
3 Jar of grey ware; topsoil.
4 Flagon of Severn Valley ware; topsoil.
5 Beaker of Severn Valley ware; topsoil.
6 Jar of grog-tempered ware; topsoil.
7 Beaker of grey-ware; backfill of Stanford's trench 14.
8 Beaker of Severn Valley ware; post-hole F380.
9 Bowl of grey ware; gully F880, structure 2.
10 Beaker of grey ware; context 406, cistern (structure 4).
11 Beaker of grey ware; context 406, cistern (structure 4).
12 Beaker of black-burnished ware; pit F211.
13 Flagon of white ware; pit F211.
14 Beaker of Severn Valley ware; pit F485.
15 Beaker of grey ware; gully F603.
16 Dish of grey ware; pit F483.

Mortaria by K. F. Hartley

17 Continental mortarium related to Hartley group 1 (Hartley 1977), dated *c.* A.D. 50-80. Context 406, cistern (structure 4).
18 West midlands mortarium probably from the Wroxeter area, dated A.D. 100-160. Topsoil.
19 Mortarium in the Caerleon tradition, possibly a fairly early product of the Caerleon potteries, *c.* A.D. 115-160. Roman pit F211.
20 Mancetter/Hartshill mortarium of 4th century date. Pits F695 and F713.

The Roman pottery assemblage

Quantities of Roman pottery are summarised in Table 1. Of these Severn Valley ware (including FIG. 12: 4, 5 8 and 14) dominates the Roman coarse ware assemblage in a variety of forms. However fine grey ware (2, 3, 7, 9, 10, 11 and 15) formed a fairly large percentage in the early period, while cooking wares were of handmade Malvernian ware and increasingly black-burnished ware (12), later supplemented by a sandy grey ware (1 and 16) copying similar forms. Roman fine-ware is represented almost entirely by samian for the 1st century of occupation (see above), with the exception of a single sherd of Lyons ware. Later fine-wares include Rhenish ware from central Gaul, Oxfordshire wares and a little Nene Valley ware. Mortaria include an early imported example from the Continent (17). Later locally made varieties from the Wroxeter area (18), and Caerleon area (19), and the Mancetter-Hartshill workshops (20) appear. In the later 3rd and 4th centuries A.D. this last group of mortaria was supplemented by types manufactured in the Oxfordshire potteries.

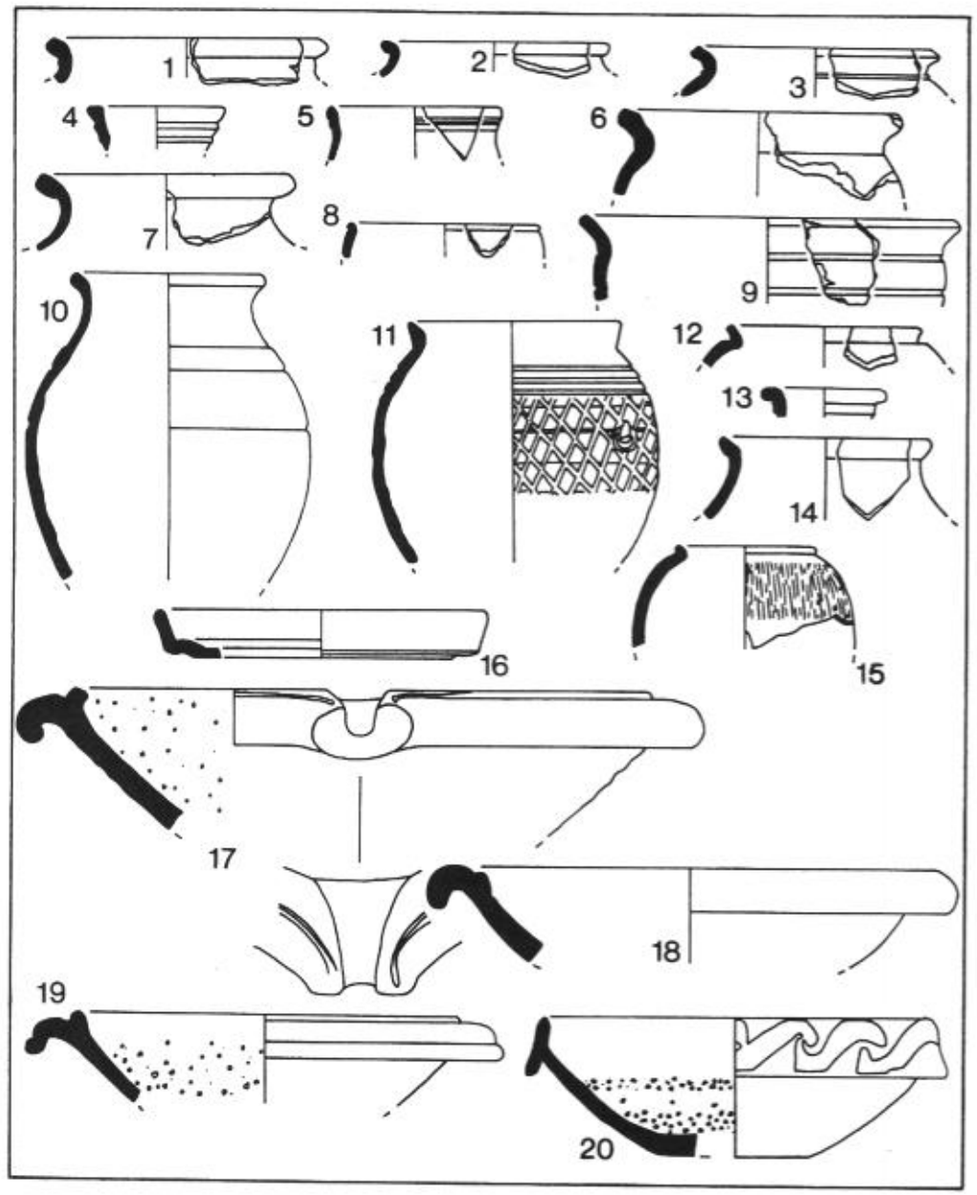


FIG. 12
Roman Leintwardine. Excavations at 22 High Street - coarse pottery and mortaria.

The medieval fabrics

Most fabrics present need no description here since they are well known from other sites. However, fabrics 47 and 66 have not been previously identified, so are fully described, while fabrics 46, 48 and 60 which are still relatively under-represented in the county, are also briefly discussed.

Stamford-type ware (fabric 46) dated from the 10th to the 13th centuries, identified in a single sherd of cooking pot, probably of 11th-12th-century date. It is therefore very rare, representing 1.3% of the medieval assemblage.

Medieval cooking pot fabric (fabric 47) is tentatively dated to the 10th-12th centuries A.D., perhaps contemporary with, or a variant of Stafford-type ware, which occurs in similar forms (Morris, 1980, TV138). It is quite rare, making up less than 0.3% of the assemblage (0.6% by weight), but this represents 7.8% of the sherds of medieval date.

A hard wheelfinished oxidised red-orange fabric (10YR 7/1) with discoloured surface (5YR 5/1); moderate to abundant rounded and subangular quartz grains, sparse iron ore lumps, and occasional other large inclusions, rather ill sorted and protruding from the surface.

Stafford-type ware (fabric 48) is becoming more frequently recognised on sites of 10th-12th century date in the west midlands (Morris, 1980; Cane, 1984), probably originating at Stafford, although Chester may be an alternative source. No specific forms were represented, but some rouletted decoration was present. It is quite rare, making up 0.6% of the assemblage (0.4% by weight), but represents 14% of the sherds of medieval date.

Medieval cooking pot fabric (fabric 60; Hereford type A4: Vince, 1985, 39-41), dated to the 13th-14th centuries by comparisons of form (Morris, 1980, TV150) to types manufactured at Worcester and in the Malverns. It is quite rare, making up less than 0.5% of the assemblage (by number and weight), but this represents 11.7% of the medieval assemblage.

Late-medieval/early-post-medieval glazed fabric (fabric 66) is probably of the 15th-16th century since a skillet is represented. An incised under-glaze leaf-shaped motif appears on a single sherd. Very rare, appearing as only 0.1% of the assemblage by weight, which represents 6.5% of the medieval assemblage.

Hard, wheelthrown oxidised red-orange fabric (5YR 7/6), occasionally with grey reduced core or reduction lenses (10YR 7/1) beneath one or both surfaces. Green-orange (2.5Y 6/4) or light brown to yellow glaze (7.5YR 6/8). No visible inclusions, but abundant flat voids up to *c.* 0.75mm long.

Other medieval fabric types represented include:
Worcester-type cooking pots (fabric 55: Morris, 1980, TF55: Vince, 1985, C1; 13% of medieval assemblage)
Worcester-type glazed ware (fabric 64: Morris, 1980, TF60: Vince, 1985, C2; 6.5% of medieval assemblage)
Malvernian cooking pot ware (fabric 56: Morris, 1980, TF56: Vince, 1985, B1; 5% of medieval assemblage)
Malvernian oxidised glazed ware (fabric 69: Morris, 1980, TF67/70: Vince, 1985, B4; 34% of medieval assemblage)

A total of 287 sherds of post-medieval pottery was recovered, weighing 2,368g, which are discussed further in archive.

Roman brooches by D. F. Mackreth (FIG. 13)

1. Colchester derivative (copper alloy); post-medieval bush-hole F112.

The axis bar of the, now missing, hinged pin is housed in circular-sectioned wings too corroded to tell whether or not they had been decorated. The bow is plain, has a central arris, flat sides and back. The catch-plate is missing as well as the lower part of the bow.

There are no characteristics which allow this brooch to be assigned to any particular variety within the general range of hinged Colchester derivative. A few have the same bow section, but none is well enough preserved for them to form a group. None of these examples offers any useful evidence and all that can be suggested here is that the present brooch may date from near the middle of the 1st century to perhaps the middle of the 2nd, with the balance of probability being that it dates after *c.* A.D. 70.

2. Unclassified (copper alloy); post-medieval cultivation gully, F161.

The surface of the brooch is very pitted and much of the detail obscure although the general form of the ornament can be made out. The hinged pin was mounted as in the last brooch. Each wing appears to have been plain with a rounded front. On the head is the stub of a small cast-on loop. The bow has a rounded top marked by two lenticular bosses lying across the bow. Below these is a boss with a hollowed out centre for a stud, now

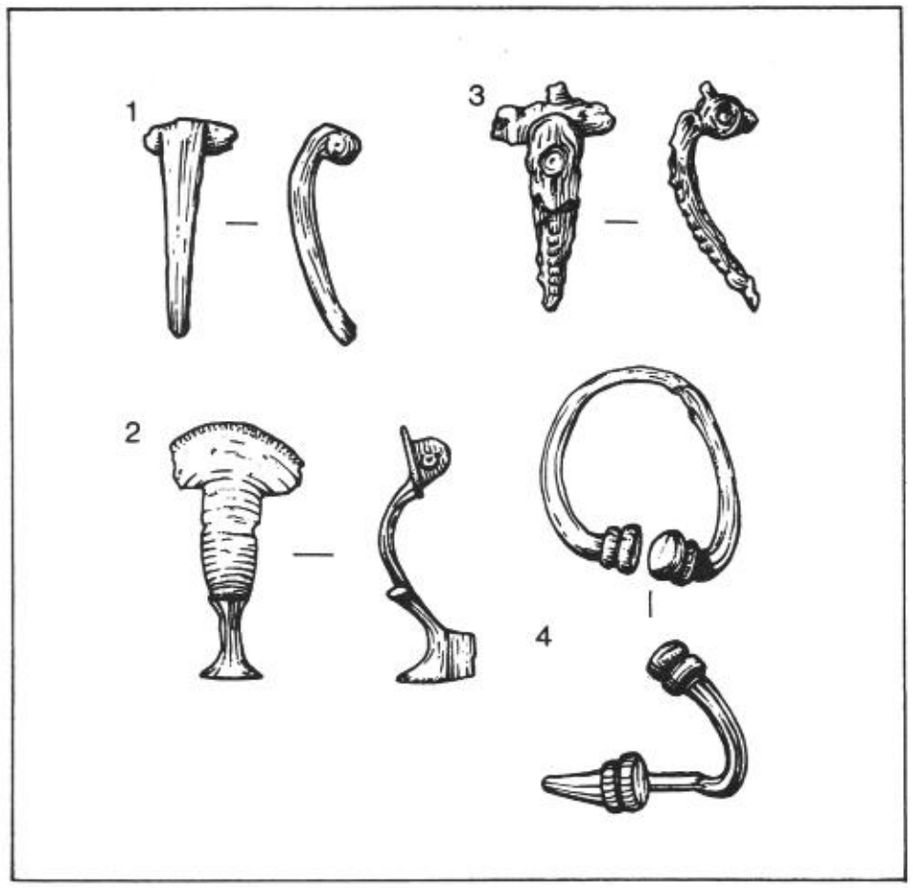


FIG. 13
Roman Leintwardine. Excavations at 22 High Street - brooches

missing. The outside edge of the boss is shaped to form a pair of half lenticular bosses on each side and, to top and bottom, the boss is elongated into ribs, both short, the lower one dying away into the bow. The rest of the front face of the bow has, down the centre, a line of reserved lozenges with infilling triangular recesses for enamel, now missing, on each side. The outer edge of the bow once had a groove or a step down it and from each side project lines of 'teeth'. The foot of the bow, now denuded, has enough surviving to suggest a forward-facing boss or stud.

This brooch was analysed by X-ray fluorescence spectrometry at the Ancient Monuments Laboratory for traces of enamel, but no traces were found (S. Rees pers. comm.).

The type is well established and there is nothing in the ornament here which is not to be found on others belonging to the type: bosses across the head - Gloucester (Heighway, 1983); moulded bosses on the crest and reserved lozenges with infilling triangular cells - Wall, Staffordshire (Gould, 1967, 15-7, fig. 7, 6). Virtually all specimens have the toothing down the sides and all have forward-facing foot-bosses. Other decoration occurs on wings and the top of the bow. Some have wings with settings for studs in them - Cheriton, Kent (Tester and Bing, 1949, 33, fig. 6, 2), while the boss on the bow may not have a hollow for a setting (Gould, 1967, 15, fig. 7). The principal variations are, firstly and more commonly, a crest (eg Bushe-Fox, 1949, 115, pl. XXVIII, 38), and secondly, a dog, fully moulded and usually fitted into a slot (eg Cocks 1921, 191, fig. 23). It may be doubted if

there is any chronological significance in the style of the boss or crest. Of the two fairly well preserved brooches from The Lunt (see below) one has an enamelled stud which is also repeated at the foot and on each wing; the other has a crest which in profile, has two curves, the upper of which is pierced. This reflects the profile of the dog as the animal's tail curls over to form a loop in the same position.

The distribution pattern of the type is not sharply defined lying as it does throughout midland England with outliers. The main part of the *floruit* is securely before *c.* A.D. 70-5 as four examples found in one pit at The Lunt, Baginton, Warwickshire show (Hobley, 1973, 65-6, fig. 19, 1, 4, 6 and one not illustrated). One was found with Neronian rubbish at Wall, Staffordshire (Gould, 1967, 15, fig. 7, 2). However as it is never easy to distinguish the date at which any brooch type becomes residual, it is difficult to assess the end date of the *floruit*: last quarter of the 1st century - Wroxeter (Atkinson, 1942, 203, fig. 36, H16); after 80 - Newstead (Curle, 1911, 323, pl. LXXXVI, 23); 105-15 A.D. - Verulamium (Frere, 1972. 116. fig. 30, 12).

3. Knee (copper alloy); Roman pit, F211.

The sprung pin, now missing, was mounted on a single pierced lug behind the head-plate by means of an axis bar through the oils of the spring. The head-plate is semicircular and has a line of beading around the top edge. The upper bow has a slight taper and is set off from the lower by a reverse step. The lower bow is concave in both front and profile views and ends in a rectangular plate in the same plane as the bottom of the catch-plate. The brooch was tinned or silvered.

The white metal coating on this object was analysed before the object was stabilised by X-ray fluorescence spectrometry at the Ancient Monuments Laboratory. The coating was analysed as a lead-tin alloy (S. Rees pers. comm.).

Precise parallels are rare. However, the diagnostic features which mark the general group of brooches to which the present specimen belongs are the manner of mounting the spring and the semicircular head-plate. One exhibiting these features comes from Camelon (Christison, 1901, 403, fig. 41) and should be dated between 140 - *c.* 165 (Hartley, 1972; Keppie, 1982, 109-10). Bohme dates the general type with these characteristics from the middle of the 2nd century to about 200 (Bohme, 1972, 20) and their apparent absence from Niederbieber may indicate that few survived to the end of the 2nd century (Gechter, 1980, 580).

4. Penannular (copper alloy); post-medieval pit, F232.

The ring has a circular cross-section, thin opposite the opening and gradually thickening towards the terminals. Each of these consists of two equal-sized mouldings separated by a narrow groove and each was ornamented by hand knurling. The ornament suggests that the brooch had a considerable amount of wear as it is only completely preserved on the inner side. The pin is missing.

Seams became visible after conservation which, as S. Rees points out, strongly suggests that the item had been made from rolled sheet metal, a technique well known in the S.W., for pennanulars in particular. On the outer edge of the object at the centre of the semi-circle, small traces of gilding were present, but it is considered unlikely that this object was gilded.

The brooch belongs to Fowler's type A2 and is dated by her from the 1st to the 4th centuries (Fowler, 1960, 152, 174). However, there is sufficient variety covered by the definition for there to be the suspicion that there are sub-divisions which may be chronologically significant (Dickinson, 1982: type G). The date-range given by Fowler almost certainly contains a high residual factor. The comments on dating made here concern only strict parallels for the present example. One from Newstead should date after A.D. 80, but may have been in use as late as possibly the early 3rd century (Curle, 1911, 326, pl. LXXXVIII, 15; Hartley, 1972), but the chances are that it dates to before 200. Another from Leicester is dated to the last one or two decades of the 1st century (Kenyon, 1948, 252, fig. 82,10).

Ironwork (FIGS. 14-15)

Ironwork from this site was analysed by X-ray fluorescence spectrometry at the Ancient Monuments Laboratory.

1 Loop-hinge of a recognized Roman type (Manning, 1985, 125, fig. 31, 2; 126), showing details of the joint. Roman pit, F287.

2 Fragmentary head of a smithing hammer (Manning, 1985, 5-6), sharper ended than BM examples, although tip is missing. F293, Roman cistern (structure 4).

3 (not illustrated) Fragmentary slightly tapering iron bar 70 x 20 x 10 mm., with hammered head; possibly a punch, similar to the one reported for Sawpit Bank (see above). Post-hole of structure 1, F909.

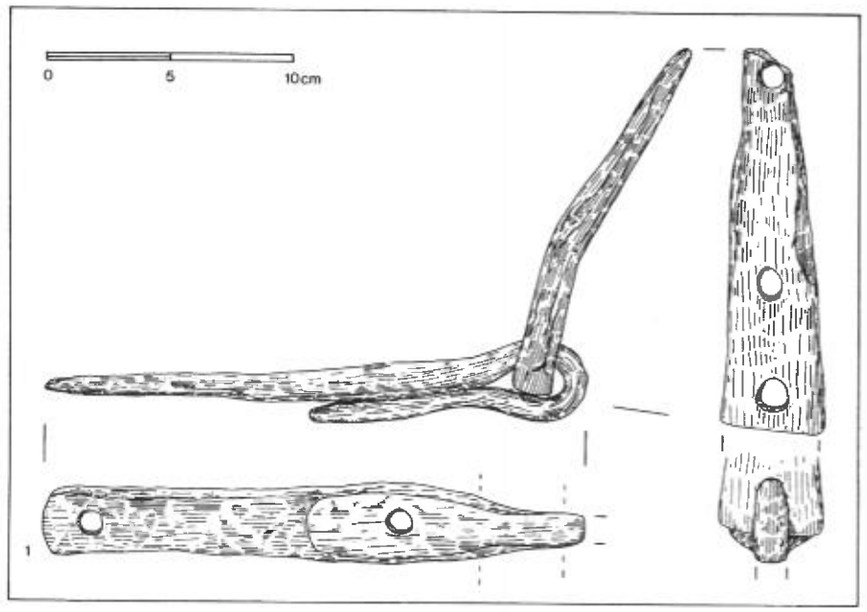


FIG. 14
Roman Leintwardine. Excavations at 22 High Street - ironwork 1: loop hinge.

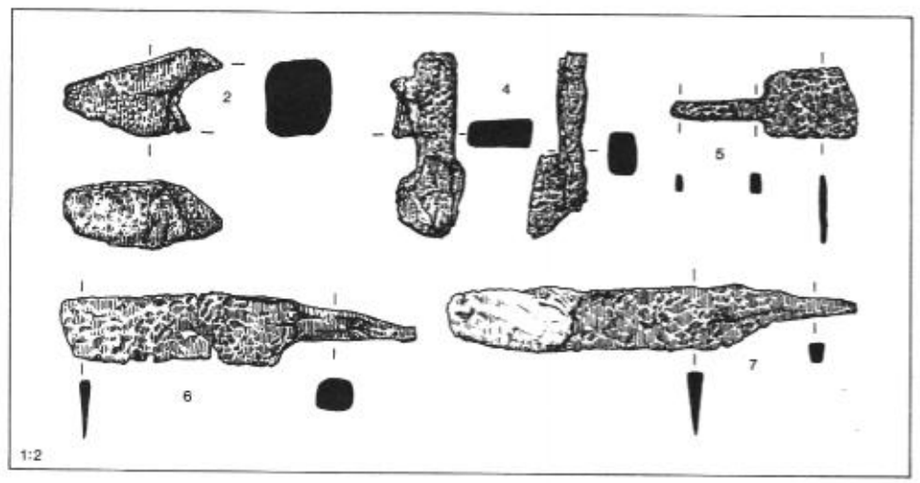


FIG. 15
Roman Leintwardine. Excavations at 22 High Street - ironwork 2-7.

4 Distorted fragment of a horseshoe, possibly Roman, but also typical of medieval forms. Roman pit, F542.
5 Fine bladed Roman knife; tang and part of blade remain. Blade steeled by sandwiching wrought iron together. Roman pit, F350.
6 Complete knife tang and neck, with blade coming to a point, which is broken; steel edge likely. Tang and neck typical of medieval types. Residual in post-medieval bush-hole, F161.
7 Wrought iron knife blade; no steeled edge, rounded end, probably post-medieval. Unphased surface, F513.

The glass by J. Henderson (FIG. 16)

Roman glass beads

1 Fragment of green glass melon bead similar to types manufactured at Castleford, West Yorkshire (Henderson, forthcoming), datable to the 1st and 2nd centuries, A.D. Similar examples have already been recovered at Leintwardine (Stanford, 1968, 296, fig. 32 21-5). Roman pit F211.
2 Green glass bead approximating to Guido form 11 (Guido, 1978); post-hole F794.
3 Cylindrical green glass bead of a type paralleled at Shakenoak farm (Brodribb *et al.*, 1971, 105, fig. 52, no. 246; 106, fig. 52. no. 252). 100, topsoil.

Roman vessel glass

4 Fragment of pale green cast bowl or jar with raised rib around outside; th. 1 mm. 100, topsoil.
5 Fragment of cast cobalt blue vessel with remnants of opaque white wash of decoration on outer side; th. 3 mm. 100, topsoil.
6 Fragment of weak green vessel, slightly roughened on both sides, possibly cast; th. 1.5 mm. Has part of an applied knob. Residual in post-medieval bush-hole F201.

Roman and medieval window glass

7 Roman pale green double glossy window fragment, expanded along one edge for the window frame: blown; th. 1.5 mm. F394, post-hole.
8 Fragment of Roman pale green window glass, partly devitrified, cast; th. 5.5 mm. F705, pit (not illustrated).

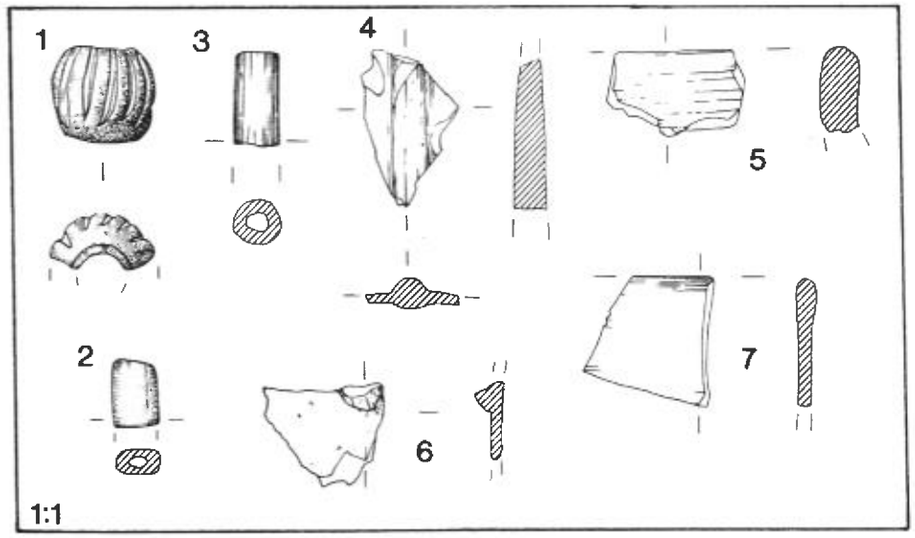


FIG. 16
Roman Leintwardine. Excavations at 22 High Street - glass.

9 Medieval olive green rhomboid pane with corner missing, light iridescent weathering, blown; th. 2 mm. Topsoil (not illustrated).
10 Fragment of a medieval pale green pane with iridescent golden weathering and some pitting; th. 1.2 mm. F257 early medieval gully (not illustrated).

Much larger quantities of post-medieval window and vessel glass were recovered and are reported in archive.

Organic remains

Very little bone was recovered on the site, most of which if not burnt, was in a poor state of preservation, even that in the offal pits, which had been buried no longer than twenty years. A few teeth and fragments of large bones remained from sealed contexts, mainly representing cattle and sheep.

Two soil samples, from the early medieval well (F101) and a post-medieval bush-hole were examined for plant remains. Both samples contained charred cereal and associated weed seeds. However, the samples were very small and contained large numbers of modern roots, suggesting a high degree of contamination (Clare de Rouffignac, pers. comm.).

Other finds (FIG. 17)

1 Fragment of a shale bracelet; comparable to one already recovered at Leintwardine (Stanford, 1968, 296, fig. 32, 27). Many examples of this type have been published for Silchester (Lawson, 1976); F336.
2 Ceramic spindle whorl made from a sherd of Severn Valley ware; 100, topsoil.
3 Fragments of three quernstones of Roman type; F203, post-medieval ditch (not illustrated).

Slag was present in a number of contexts. Although some pieces of smithing slag were recovered from structure 4, the Roman cistern (F293), most came from medieval contexts, including hearth bottoms from both the early medieval well (F101) and the later medieval pit (F505), the former also containing significant quantities of smithing slag. It is possible that this is all Roman in date, but since comparable quantities occur nowhere else on the site, it is more likely that most of this represents the debris from smithing hearths of earlier medieval (13th century or earlier) date.

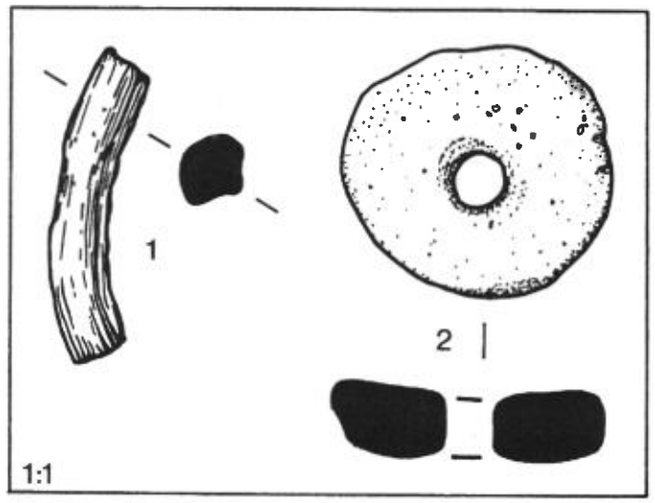


FIG. 17
Roman Leintwardine. Excavations at 22 High Street - Other finds.

Small quantities of Roman building materials were recovered from a few contexts, notably:

A fragment of *imbrex*, two *tegula* fragments and broken siltstone roof slabs from Roman pit F211.
A *tegula* fragment from Roman pit F713.
A fragment of brick, and an *imbrex* fragment; F880, structure 2.
Fragments of *imbrex* and other ceramic tile from the cistern backfill; 406, structure 4.

Other categories of material are reported in archive.

DISCUSSION

The value of the excavation of this site lies principally in the questions it raises about our understanding of Leintwardine, rather than the answers it provides. The evidence for the *principia* within the central area of the fort, which were originally identified by resistivity survey and small-scale excavation (Stanford, 1968, 276-8) have, on further investigation proved to be post-medieval cultivation trenches, packed with loose stone, presumably to aid drainage (Sawle, 1981 and Stanford, 1981).

There is also some reason to doubt the alignment of an E.-W. road running between the postulated W. gate (Stanford, 1968, 276-8) and E. gate (Stanford, 1972). No trace of laid gravel was seen anywhere within the 8 m. of the 1980 excavation. Gravel layers were seen in the open area excavation in 1980, which were localised and interspersed with layers of clay. These resembled, and were interpreted as, natural periglacial layers. However, the extent of erosion over much of this area may have resulted in the removal of some metalled surfaces, particularly those of the later Roman period. The location and dating of the postulated aisled building (structures 1 and 2), at a similar date to the construction of the rampart, and across the previously postulated line of the road to a gateway with which it is broadly contemporary adds further evidence to the case that the gravelled surfaces seen do not follow the line of this property boundary. The resistivity data suggesting a break in the rampart at the point where the property boundary meets it, must also be treated with caution (Stanford, 1968, fig. 27, RT6-8). This pioneering work with resistivity meters, undertaken in 1962, may have been affected by the boundary itself, where there is a drop in excess of 0.3 m. to the S., and where the ground falls away naturally to the W. On the balance of evidence, it now seems unlikely that the gravel surfaces seen in trench 5 were the *via principalis,* although interpretation as Roman metalled surfaces, particularly those of periods III and IV, should not be ruled out. Metalled yards and tracks of Roman date have also been identified in the Roman small town of Worcester (Dalwood *et al.* 1992, 123), and are to be expected in a variety of areas of Roman civil settlements. The identification of the W. gate must, however, be treated with greater caution.

This site had added to our understanding of the layout of the Roman settlement. The structure interpreted as an aisled building aligned N.-S., with the most substantially founded, and probably the highest status part to the S. is of significance to an understanding of Roman Leintwardine. If this hypothesis is accepted, buildings of a rural character occur up to *c.* 42 m. from the street frontage. A similar pattern may occur at Roman Rise (Stanford, 1968, 268-76, fig. 25), where the densest concentration of building remains occur at less than 40 m. from the street frontage, while a few less substantial wall lines occur at around 42 m. The surrounding area with rubbish-pits, a cistern and a lean-to shed, suggest that between these buildings and the line of the rampart were yards, commonly recognised on domestic Roman sites (e.g. Leech, 1982, 31).

Consequently we may now be able to construct a hypothetical model for the interior layout of the civilian settlement of Roman Leintwardine. Buildings may have fronted onto the road, perhaps as a ribbon development, which may have characterised the settlement in the late 1st and 2nd century. Subsequently, following the construction of the rampart, buildings appear not to survive so far from the High Street frontage, while rubbish pits, presumably to the rear of properties, were cut through the floors of buildings such as the postulated aisled building reported above and so may mark their demise.

Further evidence from this site has indicated that there is evidence for an Anglo-Norman occupation of the site, providing a context for the inhabitants of the manor indicated by the *Domesday Book* for Shropshire (Thorn and Thorn, 1984). Thirteenth century material also survives, contemporary with the earliest surviving elements of the church. On the evidence of the gully aligned E.-W. across the middle of the site (F257) many current property boundaries of Leintwardine may have derived from medieval land divisions with a frontage on the High Street.

PART IV. OBSERVATIONS ON SMALLER SITES

Most of the Roman settlement at Leintwardine is a scheduled ancient monument (County Monument number Here and Worc 28), so consent must be sought before disturbing below ground deposits. Since this area forms a substantial part of the village, applications are frequently made to carry out small-scale development, for which archaeological monitoring is required. Evaluations are sometimes undertaken to assess the potential of larger areas, whereas salvage recording is required in small areas during ground disturbance.

SITES OBSERVED

In 1988 salvage recording behind 22 High Street (HWCM 1061; Dinn, 1988), was required due to the enlargement of the abattoir slurry pit. This has already been mentioned in relation to the adjacent excavation (see above). Numerous features of probable Roman date could be identified, consisting mainly of post-holes, gullies and pits, but since these were only recorded in section their date and relationship with the postulated aisled building (structures 1 and 2) could not be definitely ascertained.

Further investigations of the adjacent plot (HWCM 1061) were reported in 1982 when service trenches excavated behind the village hall were examined by D. Lovibond. Although he identified no features of Roman date, an almost complete samian vessel was recovered from the spoil-tip (South Gaulish Form 18R, pre- or early Flavian; identified by the British Museum). Further investigations by staff of the Archaeology Section revealed medieval and post-medieval pottery, but no features.

South of Mill Lane, the construction of a new bus garage in 1985 involved cutting twelve small foundation pits into the bath-house (HWCM 1021; area E: Stanford, 1968, 279-94), some intersecting Stanford's excavated area as well as new areas (Wills, 1985). The size of the pits prevented any significant conclusions being drawn; however, two pits intersected the rampart, and confirmed its position as deducted by Stanford. Samples of

charcoal were taken from beneath the base of the rampart for radiocarbon dating which gave the following results:

Lab No.	C14 result	Error (1 s.d.)	Calibrated result (1 s.d.)
HAR-8677	1910 BP	70	cal AD 15 - 140
HAR-8678	2020 BP	70	110 cal BC - cal AD 60
combined date	1965 BP	61	40 cal BC - cal AD 90

The calibration method used is based on Stuiver and Pearson, 1986.

The wood was identified as ash (D. Haddon-Reece pers. comm.). The excavator considered that it came from a deposit sealed beneath the grey clay, and therefore predated the rampart, which is entirely consistent with these results.

Further work in 1988 was carried out behind 4 Watling Street, outside the south-eastern defences (HWCM 7550) where foundations were excavated for an extension (Clarke and Woodiwiss, 1988). This property is adjacent to that investigated by Watkins in 1929 which may represent the S.E. corner of the rampart (Watkins, 1929). Little new information was added by this investigation, since the surface disturbance only cut into some of the distinctive grey downwash from the rampart, leaving lower levels undisturbed.

Salvage recording at Griffiths' Garage, N. of Mill Lane (HWCM 1931), was undertaken by Stanford in 1978, and revealed 'no features or finds of archaeological interest.' This was confirmed in 1982 when levelling of the same area for a petrol station adjacent to the High Street produced a recordable section. Part of the profile of an undated shallow ditch was identified, of uncertain alignment (the rest being removed by wall footings). Apart from this all features on the site could be assigned to the post-medieval period through either artefactual or stratigraphic evidence.

The Old Barn, also N. of Mill Lane (HWCM 1062) was investigated in 1987, involving salvage recording of the foundation and service trenches excavated by the contractor during refurbishment (Woodiwiss, 1987). From Stanford's proposed layout for the fort (Stanford, 1968, 259) these trenches should have intersected the line of the S. rampart of the fort, dividing the fort proper from its annexe. However no trace of the diagnostic stiff grey clay of the rampart was present in nearly 1 m. of stratigraphy, which displayed several archaeological features, some interpreted as of Roman date. Although there was some evidence for erosion, it seems improbable that no trace of the Roman defences should survive in any of these areas. The lack of evidence for a rampart, defensive ditch, or *via sagularis* in this area brings into question the existence of such features on this alignment. However, at Brompton (Salop) the annexe is incorporated within the defended circuit of a late-1st-century fort.

Further N., at Millfield House (HWCM 7556), an evaluation carried out in March and April 1989, indicated that Roman features were identifiable here also (Darlington, 1989). Truncation had taken place, particularly in the N. and E. areas of the site, much as had occurred further N. at 22 High Street, which appeared to be attributable to cultivation. However the bottoms of Roman features, mainly pits cutting natural, were identified, and stratified deposits remained to the W. and S. Of 167 sherds of pottery recovered, eighty-eight were of Roman date. No medieval pottery was recovered, making features of

medieval date extremely difficult to identify. Three drystone wall footings were recognised, set into natural subsoils at approximately 10 m. intervals and perpendicular to the High Street. These were interpreted as being medieval or post-medieval in date, but their similarity to the pitched stone foundations of the *mansio* and bath-house (Stanford, 1968, pl VI A and VII), may indicate that these are also of Roman date.

Salvage recording in 1988 in a small area at Bank House (HWCM 4162), and of a service trench at The Coopers (HWCM 1058), did not encounter any features of archaeological significance.

DISCUSSION OF SMALLER SITES

Although these observations are not, in themselves, likely to produce outstanding archaeological results, the information available from a combination of their results adds up to a significant body of evidence. This introduces some negative evidence against the supposition that a rampart exists to the N. of Mill Lane (Stanford, 1968, fig. 20). However, a rampart of identical construction has been identified to the S. of Mill Lane, encompassing the bath-house, which may have crossed High Street and continued to the E. along the southern edge of Leintwardine House's gardens, since a S.E. corner may have been identified by Watkins in 1929. The rampart to the E. of High Street is clearly shown in this position on an antiquarian plan of Leintwardine dated 1883 based on the first 25 in. Ordnance Survey map of the village (Bull, 1882, illustration facing page 251). The pitched stone footings identified at Millfield House have indicated that several buildings with such foundations might exist in Leintwardine, in parallel with that at Roman Rise. No synthetic study of the artefactual evidence from these small observations has yet been attempted.

PART V. DISCUSSION OF THE EVIDENCE FOR ROMAN LEINTWARDINE

Leintwardine has now been investigated archaeologically over a considerable period of time, and significant new information has been added to the substantial framework provided by Stanford's fieldwork (1958, 1968, 1972 and 1975). However many aspects of Roman occupation are still inadequately understood, and arguments have been put forward above which cast doubt upon Stanford's hypotheses concerning the military nature of the settlement. In fact, doubt over the status of Leintwardine has long existed (Stanford, 1972, 318; 1981, 26). A reassessment of the evidence for the identification of the defended area at Leintwardine as a fort is therefore necessary.

CONSIDERATION OF THE EVIDENCE FOR A MILITARY FUNCTION

Stanford (1972, 318) cites three main considerations for his view that Leintwardine was a military establishment: the timber-lacing used in the construction of the rampart, the unusually faceted N.W. and S.W. angles of the rampart, and the succession of ovens in the '*intervallum*' space at the N.W. angle. A further argument which might also be proposed is the existence of a *via sagularis,* or '*intervallum*' road inside the ramparts. No further criteria for the identification of a fort at Leintwardine have been suggested, by

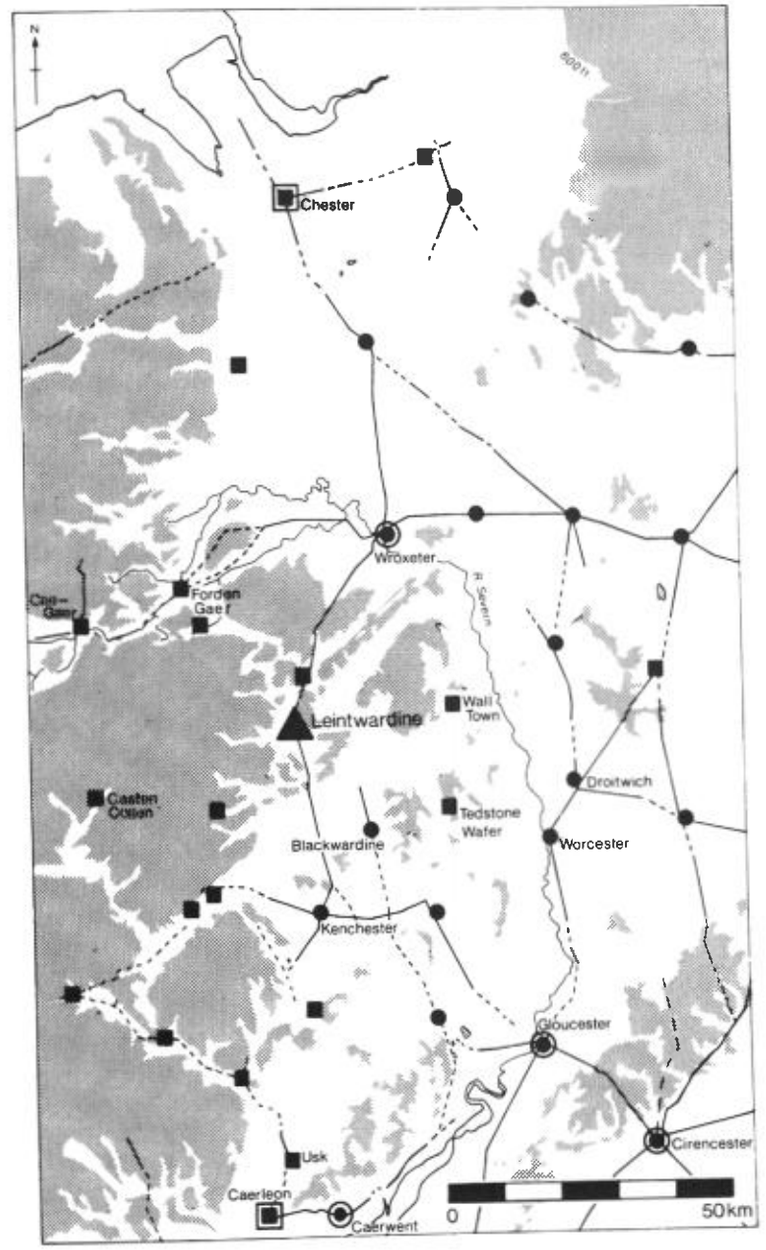


FIG. 18
Roman Leintwardine in relation to Roman forts and other settlement in the Welsh borderland.

excavation or otherwise. No military-style granaries have been identified, and barrack blocks would be hard to distinguish except in open area excavations due to the extent of subsoil truncation. The layout of streets and official buildings cannot now be cited, since no firm evidence for the existence or otherwise of these features exists. Military equipment has been recovered at Leintwardine, but since the postulated fort was preceded by a civilian settlement associated with two known forts, where equipment is likely to have been manufactured and repaired, this cannot be used as an argument for military occupation.

The topographical location of Leintwardine, on a site sloping down from N. to S. and W. to E. was not the ideal of earlier military commanders. The siting of the fort at Jay Lane, on a sloping site, but with excellent all round visibility was clearly rejected in favour of a level site at Buckton, with more limited, but substantial all-round visibility (Stanford, 1968, fig. 4). The extremely limited visibility to the N. from Leintwardine was clearly strategically disadvantageous (Stanford, 1968, 228). The only military advantage to be gained from this site over the others was direct control of the river crossing of Watling Street West, which appears to pass through the centre of the defended area. Direct control of access along a road network at salient points is most likely to have been required during times of civil unrest (Webster, 1975b), and appears not to have been a priority at military sites elsewhere (although situation close to a road for reasons of supply and speed of movement were).

The timber-laced ramparts are similar in style to several forts in the vicinity, including Wall Town (Shropshire), Caersws, Coelbren, Forden Gaer, (Stanford, 1968, 321-2), Gloucester (Hurst, 1986, 100-3), Abergavenny (Jones, 1975, 126) and further afield Strageath, Perthshire (Jones, 1975, 177). This is a remarkably simple technique of rampart construction widely used in earthwork enclosures of the 1st and early 2nd century in the W., although comparable later 2nd-century examples have not been found. Alternative methods of construction were available and in use at this time, such as timber 'box' framing (Hobley, 1982, 223-37) which required less timber, but a higher level of carpentry skills, which would certainly have been available to the army during the 2nd century. Similarly, with the widespread availability of local stone it is likely that a military garrison would have supplemented their earthen defences with a stone face, either during the construction of the fort or relatively rapidly thereafter, as had occurred within thirty or forty years of the foundation of the fort at Buckton. Only in unusual circumstances, perhaps where a relatively large unskilled labour force was available over a short period of time, is timber-lacing likely to have been preferred. Considerable slumping and collapse was also allowed to occur along the line of the rampart, which does not suggest the well-ordered occupation of a permanent military garrison. Elsewhere, the abandonment of forts was often accompanied by the slighting of defences, as may have occurred at both Jay Lane and Buckton. This clearly did not occur at Leintwardine, where the ramparts still survive (although an intention to re-occupy may be cited as a reason not to slight defences).

Numerous examples exist of complex earthwork, clay and turf, and gravel ramparts being constructed to enclose civilian sites (Crickmore, 1984a, 103-71; Frere, 1984). At Dorchester (Dorset) alternate layers of chalk and clay were used (Crickmore, 1984a, 149). Although many civilian earthwork defences were supplemented by a stone wall, notable

important small towns did not take this step, including Chelmsford and Kelvedon (Barry Burnham pers. comm.). A number of defended enclosures are broadly rectangular, enclosing part, or all of linear settlements which were aligned close to their principal roads (Burnham and Wacher, 1990, 23-31, figs. 6 and 8).

The unusual facets at the N.W. and S.W. corners of the rampart have similarly been cited 'as though dictated by military schemes' (Stanford, 1972, 318). Relatively little of the plan of these angles is proven by excavation, and no excavations have occurred to confirm the postulated line of the defences at the N.E. corner. The plan of the S.W. corner defences is further complicated by the southward divergence of the rampart to incorporate the bath-house, and the implications of the convergence of ditches (Stanford, 1975). The S.E. corner, perhaps identified by Watkins (1929) may be of a different layout. Whilst the use of a faceted corner is unusual in a civilian context, this need not imply military influence. Timber lacing would necessarily have to be placed perpendicular to the defences to ensure its dimensional stability, limiting the range of possibly designs of the corners of the rampart.

As has been suggested above, no indication of a rampart between 'fort' and 'annexe' has ever been found. With the 1st-century fort at Pentrehyling, Brompton, as an example, no such archaeologically detectable dividing line is necessary (John Allen pers. comm.).

Two of the three defensive ditches originally identified in one trench (Stanford, 1958) have been shown to converge in the S.W. corner (Stanford, 1975). It seems certain that these ditches are successive defensive features (Stanford, 1991, fig. 35). The identification of three ditches has never been taken to indicate defences of military type. Three ditches have also been identified on the north-eastern approaches to the small town of Great Casterton (Burnham and Wacher, 1990, 133), and similar reasons for their excavation might be expected. A massive requirement for earth for the rampart and its two principal stages of refurbishment may account for the excavation and recutting of successive ditches. The ditches have been traced by excavation for less than one percent of their total length, which does not provide us with a satisfactory understanding of their dating, position and alignment. Corroborative evidence from other parts of the circuit would be valuable.

The 'bread ovens' behind the rampart at the N.W. corner also should not be seen purely as an argument for the site being military. Fire pits, kilns or ovens have been identified at Sawpit Bank (HWCM 1055; see Part II, above), also sheltered behind the rampart. Hearths similar to all those identified at Leintwardine, but with a range of functions have been excavated at the Roman industrial settlement at Derby (Dool, 1985, 166-75), where a much wider range of functions for such features as these were considered than use simply as bread ovens.

The location of an 'intervallum' road inside the ramparts might also be seen as an indication that a military presence existed at Leintwardine. Such metalled surfaces as these were also found between the bath-house and the rampart (Stanford, 1968, 281-2), clearly outside any fort, although within the 'annexe'. A similar road inside the defences is indicated on aerial photographs at the Roman small town of Water Newton (Burnham and Wacher, 1990, fig. 18). These roads were very useful in moving defenders around the inte-

rior of a defensive enclosure protected by the ramparts, as their use in the 9th century *burhs* of Cricklade and Wareham attests (Haslam, 1985, 31-3). They may also have been used to aid in the transport of materials used in the construction of the rampart, or to provide access to backplots immediately adjacent to the rampart. There is also evidence to suggest a variety of other metalled surfaces at Leintwardine, including one pre-dating the rampart (Stanford, 1958, section 2).

In addition to proof that the postulated *principia* building foundations actually represented post-medieval features (Sawle, 1981), the other internal feature indicative of a military establishment, the *via principalis* was also shown not to be present at 22 High Street (Stanford, 1981). The discreet area of cobbling identified as part of the *via principalis* (Stanford, 1968, 276-8, fig. 27; 259, fig. 20) has not been shown to exist anywhere else within the rampart (despite Stanford, 1991, fig. 35). The presence of successive cobbled areas within the ramparts need not indicate the presence of a principal road, but may represent cobbling of a yard (Burnham, 1987).

It has already been noted that the defended area at Leintwardine, equal to that at Newstead, is twice the size of Jay Lane or Buckton, which are each thought to have housed an *ala* of cavalry (Stanford, 1968, 314-5). It is apparent that the bath-house was not of a size to meet the requirements of a more substantial garrison than either of these forts, and in any case pre-dated the rampart by some time. Its construction has been linked to the abandonment of the Roman fort at Buckton (Stanford, 1968, 283). Its construction could most satisfactorily be explained in relation to a *mansio* and a civilian settlement associated with it.

All the buildings of late 2nd century or later date which have been identified within the rampart, and for which the plan is reconstructable, are not of a distinctively military type (e.g. barrack blocks, stables, granaries, headquarters buildings, etc.). One such building, for which two wall lines were identified, was stone-founded, and was initially interpreted as a *mansio* (area B; Stanford, 1968, 268-76). The existence of a *mansio* is suggested by the appearance of *Bravonio* in the Antonine Itinerary *(Iter XII)*, and is likely to explain the existence of a bath-house between the abandonment of Buckton and the construction of the rampart. The *mansio* at Wall (Burnham and Wacher, 1990, 274-8) for example has been found near Watling Street, and in close association with a bath-house. The most recent building plan identified could be interpreted as an aisled building, a classic rural civilian structural form (Hingley, 1989, 39-45), although examples are well known in towns (Burnham, 1988, 44-5). No other building plans have been characterised, largely due to the small area covered by most excavations at Leintwardine. Civilian elements associated with a military complex are normally to be found outside the fort, perhaps in defended enclosures of their own (Webster, 1969, 220). The continued existence of civilian buildings within a fort are highly anomalous.

Excavated evidence has contributed significant quantities of information about the pre-rampart civilian settlement, including the identification of elements of structures, possible industrial processes, boundaries and metalled surfaces all prior to the construction of the rampart. From all of these contexts it is possible to suggest that occupation was at its height during the Flavian period, contemporary with the military occupation of Jay Lane,

0.6 km. away. From the evidence available, it might be inferred that civilian occupation formed a ribbon development along a road from the river crossing, perhaps as far as Jay Lane itself, aligned with the ditches identified running beneath the rampart both at the N.W. corner (Stanford, 1958, ditch 4) and at Sawpit Bank (see above). A relative decline in occupation evidence occurs after the late Flavian period, perhaps connected with the establishment of a separate *vicus* at Buckton. However, available dating evidence from the village of Leintwardine suggests a continued occupation and utilisation of the area of the earlier settlement up to and including the late Antonine period, before the construction of the rampart. Excavations elsewhere have not found clear instances where a fort is superimposed directly on an occupied civilian settlement. The political consequences of such an action in an apparently pacified area are extremely unlikely to have been countenanced. The lack of a clearly identified demolition horizon from the sites excavated (although see Stanford, 1968, 230) does not suggest a sudden end to this settlement, and 'there is no particular evidence illustrating the reason for the settlement's demolition and the substitution of a fort on the site' (Stanford, 1968, 314).

It has been suggested, initially by Frere, that Leintwardine actually represented a supply base, perhaps with a garrison of a cohort (Stanford, 1981, 26). The purpose of such a base in the late 2nd century is uncertain since there is no documented unrest in this area to justify a major campaign. Of the nearby forts, only at Forden does a significant garrison seem to be maintained in the later 2nd century (Davies, 1990, 69-70). At Caersws, the garrison of the fort was dramatically reduced by the early Antonine period; further military activity seems to have been on a very small scale, although an occupation sequence continues into the 4th century (Davies, 1991, 70-2). Buckton II, Trawscoed and Wall Town (Shropshire) were all abandoned by the mid-2nd century, leaving very few garrisons in the whole area (Davies, 1980). All these developments rather support a hypothesis of troop withdrawals from central Wales by the late Antonine period (Salway, 1981, 254-5). The surviving forts in Wales are likely to have been directly controlled and supplied from the Legionary bases at Caerleon and Chester, with which direct lines of communication could easily have been maintained. Supplies may also have been readily available through the civil authorities in the *civitas* capitals of the area at Caerwent and Wroxeter.

Roman military supply bases such as Brandon Camp (Neronian; Frere, 1987), Richborough (Claudian-Agricolan; Cunliffe, 1968) and South Shields (Severan; Dore and Gillam, 1979) all seem to have been constructed with a major campaign, or series of campaigns in mind. They were all identified as supply bases by the granaries they contained. The diagnostic identification of granaries, has not been made anywhere at Leintwardine. They also appear to have been garrisoned, but the identification of barracks at Leintwardine has not been made either.

Recently identified information has therefore indicated several points on which Leintwardine does not match normal military criteria. Although a late-2nd-century fort or supply base now seems less likely, at the time the hypothesis was developed it was an entirely reasonable supposition. The excavations in 1958 suggested military style defences, and together with the location of two further forts at Jay Lane and Buckton, seemed to form a more or less continuous military presence in the area from the 1st century to the

final abandonment of Leintwardine by the Romans. This, together with evidence from other ostensibly military sites in the area, was often taken to indicate that the Welsh borderland remained a military zone until much later in the Roman period than the mid-2nd century (Jarrett, 1969, 23-6). Subsequent fieldwork and analysis has eroded this impression (Davies, 1984 and 1991). The hypothesis failed to account for the development of substantial non-military settlements at strategic points from an early period (such as Wroxeter) and was also contradictory to military strategy elsewhere during the 2nd century (Luttwak, 1976, 55-80).

The lack of clear evidence for late-2nd-century military activity at Leintwardine has implications for other sites in the region. Forden Gaer, for example, had presented many parallels for Leintwardine (Stanford, 1991, 86-9). It had subrectangular defences of similar construction dated to the mid-to-late 2nd century, apparently superimposed on an earlier *vicus* settlement and was the site of the road-station of *Lavobrinta* in the Antonine Itinerary. However, as Crew (1980) has shown, it represents at least three imprecisely dated phases of military occupation on the same site, starting in the Flavian period, and continuing, apparently into the mid-3rd century, although the accompanying *vicus* does not outlast the 2nd century (Davies, 1991, 69-70). This involved the regular re-siting and reconstruction of the rampart. Due to problems of finds analysis, precise dating of the latest military phase still remains tentative. A further phase, dated to the 4th century, seems to have involved a rough patching up of the earthworks after a long period of neglect. The intervening period, with defences falling into disarray, does not suggest a military occupation. An array of surrounding civilian occupation identified by aerial photography and geophysical survey suggests Forden Gaer was the centre for a substantial population during the Roman period (Crew, 1980); comparable evidence has not yet been sought for Leintwardine.

CONSIDERATION OF THE EVIDENCE FOR A CIVILIAN SETTLEMENT

The commonly accepted date for the construction of the rampart at Leintwardine is after A.D. 160, possibly after A.D. 170, although these dates represent *termini post quem.* Towns and smaller settlements elsewhere were often enclosed by an earthen rampart of late-2nd-century date, often identified with the events of the A.D. 190s, when the governor of Britain, Clodius Albinus, made a bid for the Imperial throne (Frere, 1984). In the atmosphere of the 190s, when ramparts were being constructed at strategic settlements on the road network, it is quite possible that military detachments were despatched to ensure that the less populous strategic settlements established proper defences. Therefore some military participation in the construction of these defences may have taken place (Webster, 1975a). Dating of the rampart at Leintwardine is still relatively poorly defined. It has only been exposed for less than 55 m. out of a circuit in excess of 880 m. (about 6%). Given that careful excavation of the rampart and its underlying deposits has only taken place for less than half this distance (3% of the total), largely at the N.W. corner, insufficient datable finds have been recovered from either the body of the rampart, or securely stratified beneath it to provide precise dating. It is important that all future investigations of the rampart are carried out with this consideration in mind.

Many areas within the enclosure have produced some evidence of a 1st-century presence in the form of pits, probably for rubbish, and some have indicated industrial activity (see parts II and III). However no new buildings representing the 1st-century settlement at Leintwardine have been recognised. The lack of investigation of the street frontage may account for our lack of structural evidence for this period; additional evidence may have been destroyed by later Roman and more recent occupation of the village, which would also concentrate here, while other remains may be more ephemeral. A discontinuous series of roadside buildings, initially stretched out between the river and Jay Lane fort might be considered typical of a civilian settlement providing services to the garrisons at Jay Lane and subsequently Buckton. No investigation has taken place of the likely position of the Roman river-crossing, although such work is likely to prove highly significant. Nor has fieldwork been carried out between the defences and the fort at Jay Lane.

The rampart was oriented on the road which now forms the High Street at Leintwardine. This does not bisect the enclosure exactly, although there seems little reason to suspect it ever did. The rampart appears to include almost all the area of known Roman occupation, although some features (Stanford, 1968, 260; Sawpit Bank, phase 1b ditch, F34) extend beyond this area, including two boundary ditches, but little exploration of other parts of Leintwardine village has taken place. The hypothesis proposed above is that a series of buildings lined the High Street, and that buildings extended as far back as 40-45 m. from the road until the construction of the rampart, comparable with the layout of other small towns (Burnham, 1987, 176-7). In the 3rd century buildings may have become concentrated towards the street frontage, perhaps because the construction of the rampart severed access routes from building compounds to the surrounding countryside (Burnham, 1987, 183-5).

CONSTRUCTION AND FUNCTION OF ROMAN BUILDINGS

The bath-house at Leintwardine, situated close to the river crossing, and constructed *c.* A.D. 140, has been fully treated by Stanford (1968, 279-94). It represents the most completely excavated structure in Leintwardine, but its dating and probable origins suggest that it was civilian in origin (Stanford, 1968, 294).

The structure represented at 22 High Street has been interpreted as a timber-framed aisled building. The southern element of this utilised the earth-fast post and gully technique also used in the period III building at Roman Rise (Stanford, 1968, 272-5). The dimensions of the post-holes and the distance between posts are comparable between the two sites. However the layout of the structure at Roman Rise might resemble a large E.-W. building, possibly of composite construction, typical of Roman towns (Burnham, 1988). Its dimensions could indicate a construction *c.* 15 m. wide, extending up to *c.* 34 m. from the street frontage. Other features at Roman Rise parallel the northern part of the aisled building, consisting of discontinuous shallow gullies with few if any indications of what filled them. These perhaps represent sill-beam or post-in-trench wall foundations which appear to concentrate further from the road than more complex means of construction. Wattle infill may be indicated in the aisled building by stakeholes in the base of the gullies, but a variety of other means of walling the superstructure are possible, including

weather-boarding (planking) and clay block or drystone infill between substantial uprights.

The building at Sawpit Bank is difficult to interpret due to the limited extent of excavation. However the clay floor extends over more than 10 m. both N.-S. and E.-W. If this reflected a little less than the total extent of the structure, its size indicates that this could be a portion of a very substantial building. Cob walling, suggested for this structure (see section II above) has parallels at London and Colchester, particularly during the 2nd century (Perring, 1987, 149-50), but continuing into the 4th century. Timber roof supports would be necessary to retain a stone or ceramic tiled roof above such an earthen wall.

It has been shown elsewhere that *mansiones* are notoriously difficult to identify (Drury, 1982, 302-5). The identification of the building at Roman Rise as a courtyard building, and therefore potentially a *mansio* (Stanford, 1968, 271-5), can only be tentative in the light of both the extent of the excavation and the high level of erosion. Its size and stone footings might have suggested a relatively high status in comparison with other buildings identified at Leintwardine, but in comparison with the construction techniques of high status buildings elsewhere might be considered quite basic. The street frontage, where substantial buildings are often identified in towns, has not been adequately explored here. The appearance of a higher status may have been inferred due to a lack of comparable structures, which the evaluation at Millfield House (part IV) might now suggest existed. Stone footings were widely used as the basis for superstructures of other materials, and in areas where stone was readily available need not be considered unusual, or of any greater status than other methods of construction (Burnham, 1988). The identification of this structure as a courtyard building or a *mansio* should be treated with caution, but need not be rejected.

Few Roman building materials other than those from the bath-house have been identified *in situ*. Timber, wattling and cob walling have all been inferred from the techniques of construction suggested by negative remains. Some of the burnt clay from 22 High Street may represent daub, but no wattle-impressions have yet been positively identified. Roofing material probably included the use of thatch, plank, and wood, stone or ceramic tiles. Broken siltstone and sandstone roof tiles have been found at 22 High Street, both of local geological types. Fragments of ceramic roof tiles, both *imbrices* and *tegulae*, have been found widely at Leintwardine, including both Sawpit Bank and 22 High Street.

MATERIAL ASSEMBLAGES AND CHRONOLOGY

More finds definitely identifiable as of military origin have now been recovered from Sawpit Bank. As a 1st and early-2nd century settlement associated with three phases of military activity at Jay Lane and Buckton forts, the number of finds of military type are wholly explicable, but are still relatively rare. They are all likely to derive from elements of cavalry equipment, suggesting corroboration of the identification of Jay Lane or Buckton as of a size to have held a cavalry garrison (Stanford, 1968, 258). However the quantity of material is still minute and some is not readily available for further examination. Quantities of other material often found associated with the military of the 1st and early 2nd centuries have also been found, mainly deriving from early contexts.

Dating evidence available now from Leintwardine is becoming statistically stronger, although individual sites have produced relatively small quantities of information. Samian evidence is now sufficiently strong to indicate that this site was probably not intensively occupied before *c.* A.D. 65, since considerable quantities of samian seem to concentrate in the early Flavian period. Although little samian was supplied to this site in the early 2nd century, this is a period of poor supply generally (de la Bedoyere, 1988, 28-33). However, this may also reflect the establishment of a new fort at Buckton, at a greater distance from Leintwardine than the earlier garrison at Jay Lane, drawing wealth away from the surviving settlement.

Periods of abandonment and evacuation before the end of the 4th century had been suggested by Stanford (1968, 314-6) but this is not reflected by the datable evidence from the whole of the village to date. After the end of the importation of samian from Central Gaul in the late 2nd century there is, if anything, an increase in the quantities of other datable information, including coins, Rhenish ware, mortaria and various types of coarse pottery. The mid-3rd century onwards is strongly represented by the appearance of fine wares and mortaria from the Nene Valley, Oxfordshire and the Mancetter/Hartshill potteries, in addition to black-burnished and Severn Valley ware datable to this period. Young (1977, 160) indicates that one colour coated sherd of form C52 from the period III road on site A (Stanford, 1968, fig. 36, no. 23) may be dated to *c.* A.D. 350-400+. This late date is supported by the appearance of late Severn Valley ware forms and shell-tempered wares (Stanford, 1968, fig. 37, 42-3; fig. 39, 7), largely unstratified, which may be no earlier than A.D. 370 in this part of the country (Hassall and Rhodes, 1974). The coins so far recovered are an inadequate sample for numismatic analysis, so the lack of coins dated later than the A.D. 350s is no reason to suspect abandonment of Leintwardine before the end of the Roman period in Britain.

The paucity of environmental evidence from Leintwardine is a significant problem for the interpretation of the Roman remains. Deposits with a good potential for environmental preservation are demonstrably present (see for example the quantity of bone from 1st century sealed deposits at Sawpit Bank, reported above), while pollen and seed evidence might also be expected in significant quantities given an appropriate sampling strategy. In addition, there may be a potential for water-logged deposits adjacent to the river.

POST-ROMAN LEINTWARDINE

It has been suggested that the location of the church within the rampart at Leintwardine might represent evidence for continuity of some form beyond the end of the Roman period in Britain (Biddle, 1976, 67). This argument rests on parallels elsewhere of early medieval churches being founded near or directly on top of sites which were of religious or political significance during the Roman period. The location of Leintwardine House, presumed to be on the site of the medieval manor-house, also within the ramparts, suggests a recognition of the defences by medieval authority which need not relate to continuity from the Roman period. The defences are likely to have played an important role in the choice of Leintwardine as a Saxon royal manor (Thorn and Thorn, 1984). It is possible that the

origins of the royal manor lie much earlier than the 11th century. As a strategic defended site close to the Welsh border, Leintwardine may have been incorporated into the system of border control accompanying the construction of Offa's Dyke. The Roman defences may have been re-used and up-graded, although dating evidence to prove any such re-fortification is likely to be sparse and difficult to identify.

Archaeological evidence for 11th-century settlement at Leintwardine indicated by *Domesday* (Thorn and Thorn, 1984) has at last been found. Its significance is attested by the size and wealth of the manor in *c.* 1086, with a church, a priest, a mill, an eel fishery, thirty-nine householders, and land for sixteen ploughs. The meagre remains of occupation found at 22 High Street does not seem to reflect intense occupation within the rampart. This may reflect the nature of archaeological evidence of this date, or may indicate a wide spatial distribution of settlement. It is notable that evidence of iron-working has been recovered from these features. This may indicate that the rear areas of properties fronting onto the road are likely to have been the scene of such minor industrial processes. Similar evidence comes from later medieval features in the village, in the context of rubbish pits.

PART VI. CONCLUSIONS

Stanford's outline of the history of Roman Leintwardine has acted as a useful platform on which to base more recent archaeological fieldwork in the village. From all excavated evidence at Leintwardine, there is further support for Stanford's hypothesis that it started its existence as a Roman civilian settlement related to the fort at Jay Lane *c.* A.D. 65-75. Although small quantities of mesolithic and later flintwork have been recovered, and some of the handmade Malvernian pottery could be of pre-Conquest date, there is no conclusive evidence of pre-Roman settlement on the site, although the river crossing may have been a focus for early activity. There is no evidence at Leintwardine for occupation contemporary with the Roman supply base reusing Brandon Camp hillfort *c.* A.D. 55-60 (Frere, 1987, 69). With the movement of the garrison further away, from Jay Lane to Buckton, and eventually its withdrawal altogether, the settlement may have become more independent, depending more on road traffic for trade than services provided to the military (Davies, 1984), while subsisting by cultivation of the surrounding river terrace. This settlement is likely to have centred on a posting station (*mansio*) with a bath-house constructed *c.* A.D. 140 (Stanford, 1968, 279-94) and probably acted as a small market centre, based essentially around local agricultural produce and needs. As such, this represents one of the westernmost survivals of settlements originating alongside the military (Davies, 1991).

Fortification of this strategic civilian settlement after *c.* A.D. 170, perhaps in the 190s, may have altered its status and functions, although it retained its previous role. The scale and manner of the rampart construction, might indicate some involvement of the Roman army, perhaps quite likely in the context of a potential civil war, to ensure a secure road network. The location and alignment of the ramparts may have been partially dictated by existing property boundaries and is clearly aligned along the road. The rampart constricted occupation within the defences, and prevented ready access from domestic compounds to the surrounding fields except by way of the main gates. An inferred realignment of buildings closer to the street frontages in the 3rd century may have been a consequence of this. This small defended civilian settlement appears to have continued well into the late 4th century, although due to extensive truncation of many later deposits, this period is relatively poorly understood. No evidence exists for its abandonment or demise.

The phasing of the site proposed by Stanford may now be superseded through evidence presented above. Dating evidence (Young, 1977, 160) has now suggested adjustments of features between phases, and the earlier phases as a whole have now to be re-adjusted, including the rampart construction (Stanford's period II), after *c.* A.D. 170, which may be related to historical events of the 190s. The re-evaluation of the role of Leintwardine that has followed on from this indicates a gradual evolution of the settlement, making it difficult to phase individual features across the whole settlement. If this re-evaluation is accepted, the rampart refurbishments, representing Stanford's periods III and IV, need not be linked to phases within the interior of the settlement.

Many questions remain to be answered about Roman Leintwardine, other than the degree of influence of the military, principal among which are the further understanding of the layout of the settlement at all stages of the Roman period. No excavation has revealed details of the street frontage of Roman or later date, and therefore industrial activities and settlement morphology are poorly understood. Further evidence is similarly lacking, for instance an environmentally based analysis of occupation deposits, particularly those sealed within, or beneath the rampart, or water-logged deposits near the river-crossing, which could be of great significance. Pollen, seeds, water-logged or vitrified timber and animal bone might all provide important insights into the natural and cultivated environment of Leintwardine, and animal husbandry. It should also be noted that the timbers used in the construction of the rampart may be a useful source for local and regional woodland history, and may also indicate evidence for carpentry and the construction of the rampart.

The area outside the ramparts has hardly been explored, and may hold important information for our understanding of the settlement, and its extra-mural areas. It is particularly noticeable that no evidence for cemeteries has been found. Although bone survival in excavated deposits is poor, excavation of a cemetery could tell us a great deal about the people living in and around the Roman settlement. There is only one known Roman road passing through Leintwardine, although others might be suspected leading W. towards Buckton, N.W. towards Jay Lane, E. through the identified gateway (Stanford, 1972), and from S. of the river crossing, S.E. towards Wall Town, Tedstone Wafre and Blackwardine. A further priority may be to identify and survey evidence for the Roman bridgehead(s).

The relationship of Leintwardine to its surrounding rural settlements and other occupation sites has not been attempted. Nor has further discussion of the political geography of the region around Leintwardine been entered into in this paper. However, it is clear that the proximity of Leintwardine both to the centre of Cornovian territory at Wroxeter (Webster, 1975a) and the supposed north Dobunnic *pagus* at Kenchester (Burnham and Wacher, 1990, 75), together with Ptolemy's affiliation of Leintwardine and Whitchurch with the Ordovices (Rivet and Smith, 1979, 142), suggests a far more complex pattern of tribal territories in the Marches than has been generally recognised.

Evidence for the continued occupation or abandonment of the settlement at Leintwardine after the Roman period is of particular importance. The reasons for continued or resumed occupation have yet to be clarified, and could add much to our understanding of this 'Dark Age.' The medieval settlement at Leintwardine is also of interest, particularly the pre-Conquest royal manor, for which there is minimal evidence, and the church indicated in *Domesday,* the location and size of which is not known.

From surface observations and the analysis of excavated evidence it has been possible to suggest some of the areas of Leintwardine which are of the highest potential to produce significant archaeological deposits (Edwards, 1989). However all areas, including those of definite erosion or disturbance may contain significant evidence for the history, nature and morphology of the settlement. Even relatively small-scale developments with limited ground disturbance may have damaging consequences for an understanding of this extensive archaeological site. Consequently rigorous archaeological recording is essential for all significant ground disturbances, both within and close to the defended area of Roman Leintwardine.

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ABBREVIATIONS

HWCM 1055, HWCM 1061, etc. refer to Hereford and Worcester County Sites and Monuments Record primary record numbers.

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Appendix 1: Index to Archives for Sawpit Bank and 22 High Street

Sawpit Bank (HWCM 1055) Archive Report

by D. L. Brown, J. G. P. Erskine, L. T. Gilmour and P. V. Irving

Section I: Text
1 Introduction
2 Concordances
3 The phases
4 Discussion
5 Finds methodology
6 Pottery, including contributions by:
B. R. Hartley, H. Pengelly and K. F. Hartley
7 Other finds, including contributions by:
A. S. Robertson, J. C. Cross, J. G. P. Erskine, and C. A. Keepax
8 Indexing
Section II: plans and sections
Section III: site photographs
Section IV: site records
Section V: other material

22, High Street (HWCM 1061) Archive Report

by D. L. Brown, J. Sawle and H. Rees

Section I: Text
1 Introduction
2 Site analysis by J. Sawle and D. L. Brown
3 Discussion
4 Finds methodology
5 Pottery by H. Rees, including contributions from:
B. M. Dickinson, K. F. Hartley and D. F. Williams
6 Other finds, including contributions by:
M. Sekulla, D. F. Mackreth, J. Henderson, J. Darlington and C. de Rouffignac
7 Indexing
Section II: plans and sections
Section III: site photographs
Section IV: site records
Section V: other material
Section VI: finds

Roman pottery fabrics at 22 High Street (HWCM 1061) and other sites in Leintwardine

HWCC fabric no	common name	approximate date	no of sherds	Sawpit Bank	Stanford 1968	reference
	Coarse wares					
3	Handmade Malvernian ware	0-150+	11	-	*yes*	*Peacock 1967*
12	Severn Valley wares	40-400+	765	*yes*	*yes*	*Timby 1990*
14	Fine grey wares	45-400	175	*yes*	*yes*	
16	Grog-tempered ware		5	-	-	*Booth and Green 1989*
22	Black-burnished ware	130-400	200	*yes*	*yes*	*Williams 1977*
23	Calcite gritted ware	370-400+	-	-	*yes*	*Hassall and Rhodes 1975*
	Fine wares					
26	Lyons ware	40-70	1	*yes*	*?*	*Greene 1978*
28	Nene Valley ware	150-400+	2	*yes*	*yes*	*Howe et al 1981*
29	Oxfordshire red colour coat	240-400+	69	*yes*	*yes*	*Young 1977*
41	Miscellaneous white wares	40-400	22	*yes*	*yes*	
43.2	South Gaulish samian ware	40-140	60	*100*	*43*	*Johns 1971*
43.3	Central Gaulish samian ware	100-200	79	*85*	*79*	*Johns 1971*
43.4	East Gaulish samian ware	120-260	4	*5*	*4*	*Johns 1971*
44	Rhenish ware	150-250	1	*yes*	*yes*	*Greene 1978*
	Mortaria					
30	Oxfordshire white colour coat	240-400+	2	-	-	*Young 1977*
32	Mancetter/Hartshill whitewares	100-400	13	*6*	*yes*	*Hartley 1973*
33	Oxfordshire white	100-400+	3	*?*	*yes*	*Young 1977*
34	West Midlands	100-160	4	-	*yes*	
35	Brockley Hill/Verulamium	50-200	-	-	*yes*	
36	Kent/Continental	50-100	3	*1*	*yes*	*Hartley 1977*
37	Severn Valley/south-western	100-200	4	*1*	-	
110	Caerleon-type	110-160	2	-	-	*Boon 1966*
98	Unidentified mortaria		1	*1*	*yes*	
	Amphorae					
42	Dressel 20 Amphorae	40-200	9	*yes*	*yes*	*Peacock & Williams 1986*

For fabric types without references and full fabric descriptions, see Hurst and Rees 1992.

A 1577 Plan 'A platte of part of the Chase of Bringewood and of certayne groundes adjoining leased to Mr Walter of Ludlowe'. A re-evaluation of the landscape

By PATRICIA CROSS

Synopsis:-

Introduction. An account written in 1913 by Henry Weyman.

1. *A Map of 1662 for comparison.*
2. *Lands leased to Mr. Walter, namely Fennalls and Overies.*
3. *Position of the ditch and hedge and their alignment.*
4. *Position and land use of Fennalls and Overies.*
5. *The evolution of the Vallets Farm.*
6. *Identification of the Waste of Richards Castle.*
7. *Identification of the ring hedges and boundary fences.*
8. *Identification of the open fields and the Castle Park.*
9. *Importance of coppice woodland called 'The Vallet woodes of the Lordship of Richards Castell'.*
10. *Location of Hopkies the wood keeper's house and close.*
11. *Location of the four gates which lie on the ditch and hedge.*
12. *The ditch as it is today.*

Conclusion. The orientation of the Plan:- N. <--+---- approx. i.e. E. lies at the top of the Plan.

An article in the *Trans. Shropshire Archaeol. Soc.* of 1913, Vol. III Part II pp. 263-282 by Henry T. Weyman F.S.A. gives a comprehensive account of the historical background to the Plan. The mapmaker is unknown, but in the same year Saxton produced the earliest map of Shropshire.

It has been claimed that the orientation of the Plan was far from perfect. This assumption followed Weyman's comment that '"The Dytch and Hedge that devideth the Chase from the other groundes," seems, so far as can be judged, to have become the main road leading from Ludlow past Maryknoll to Aston and Wigmore.' And later, 'There is little to be said of the Overies alias Shuttes Vallets.' An attempt is made below to refute both statements.

More precise identification of the landscape features is made possible by comparing the Plan with a map of 1662, 'A Survey of Mocktree Forest and the Chase of Bringewood. The Inheritance of the Rt. Hon. William Lord Craven.'[1] (FIG. 1) How the Bringewood lands, including those leased by Edmund Walter, passed from the earl of March to the earl of Craven is set down in some detail by Weyman. This map is of surprising accuracy in its N.E. quadrant. When sections labelled A, B and C are traced on to the 6 in. O.S. map the resulting fit is remarkably good.

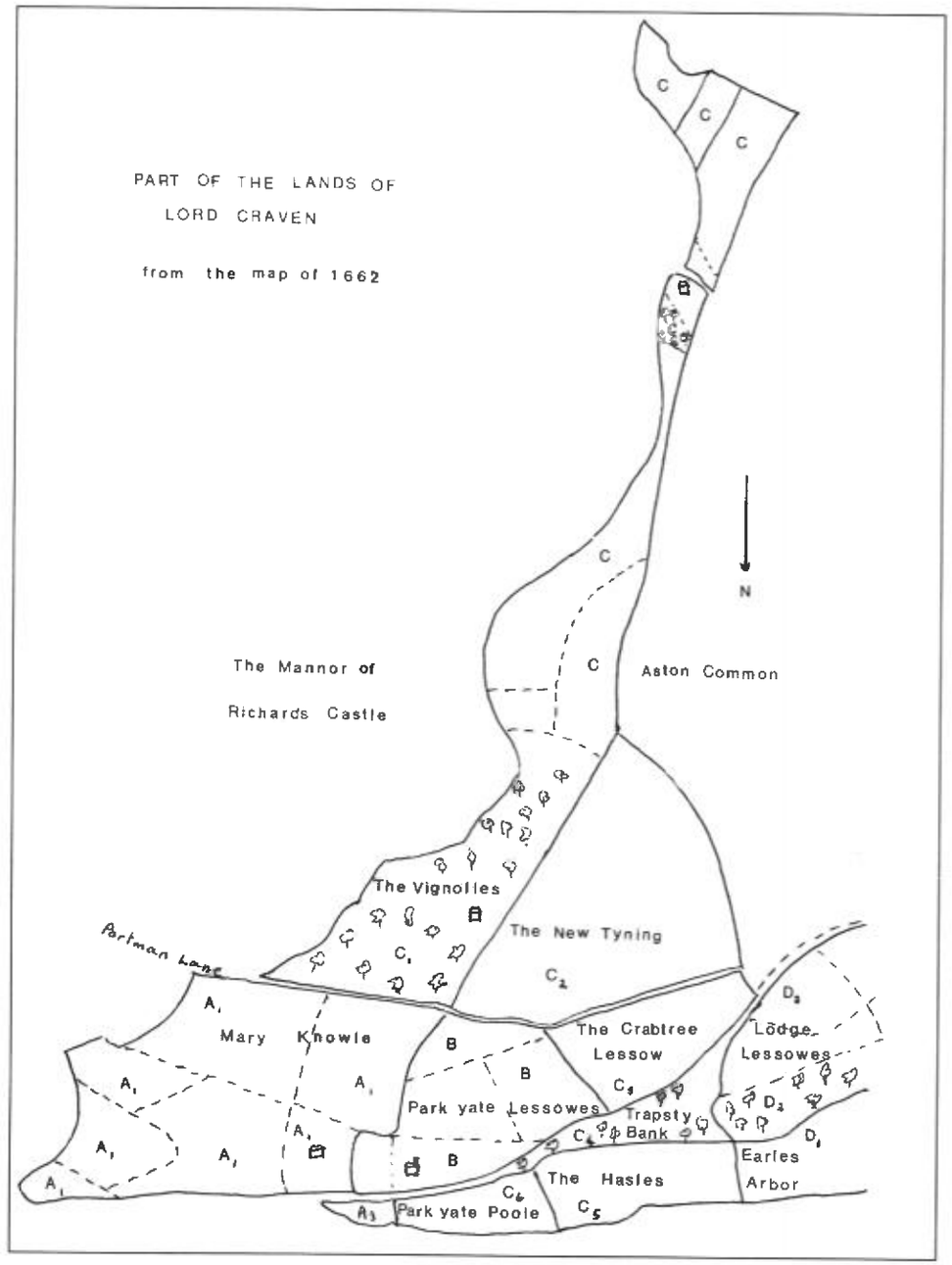

FIG. 1
Part of the lands of Lord Craven from the map of 1662.

It is accepted that the place name Fennalls became corrupted to Vinnalls (Vignolles in 1662). The Particulars which accompany the earlier Plan[2] refer to 'a pasture called Fennall in Boringwood, parcel of the forest of Boringwood, so demised to Edward Hopton,' as was 'a parcel of land called Shuttes alias Overies within the said forest.' 'Land' suggests arable as opposed to pasture or woodland.

The leases which refer to lands shown on the 1662 map enumerate 'parcels of land called Upper Eves al Overyes, the Fennols al Vignolles, New Tineing, Crabtree Leasow, Trapstey Bank, the Hassells, Parkgate and Poole Leasowe. 226 ac. 3r. 38p.'[3] The acreage is exactly the same as that given in the map's key to all the lands labelled 'C.' It would therefore appear that Overyes was the only parcel unnamed on the map, i.e. the southernmost. Eves merely suggests level land. The description Shuttes had not been used.

The ditch and hedge 'devideth the chase from the other groundes' seemingly because enclosures had been made with hedges or fences as shown pictorially on the Plan. This ditch and Mr. Walter's lands occupy a dominant and central position. (PL. LII) 'The Way from Ludlow to Bringwood' is shown indubitably at right angles to the ditch. There is no mention of a way to Aston and Wigmore across the centre of the Plan although such a way must surely have been in existence.

Does the line of the ditch appear on the 1662 map? The Key to the later map defines 'The Vignolles copse, lying from Portman Lane on the north along the top of the hill to Widow Willcox house south.' This bears a clear resemblance to the Fennalls on more than one count. A cottage is shown at the narrowest section on both maps. The opposite end has scattered trees on both, whilst the central part is treeless. This central part is the top of the hill now known as High Vinnalls. Part of the adjoining dip slope of the escarpment is included within the enclosure and the adjacent unmarked area on the 1577 Plan can therefore represent Climbing Jack Common. (FIG. 2) Jack is a small piece of waste land.[4] The ancient hedge on top of a boundary bank can still be seen on the W. of the Common. This follows the parish boundary which here was also the boundary between the lordships of Wigmore and Richards Castle.[5] To the E. of the common the park pale of Norbatch is shown. The Particulars of the Plan refer to pasture on the Fennalls, and the Plan itself shows stripes, suggesting some form of plough-up and reclamation. The Aston Tithe Map named the whole of this area, including the scarp face, 'The Vinnalls Sheep Walk.'

If these assumptions are correct, the alignment of the ditch is therefore N.N.E.-S.S.W.

The Overies lie beyond the Fennalls, i.e. to the S.S.W. Today this land belongs to the farm known as the Vallets (SO 475710). The place name Over can indicate a ridge.[6] Overies lies therefore above the rivers.[7] Diminutive streams they may be today, but nevertheless there are other reasons for equating Overies with the Vallets Farm. Not least is the inclusion of the term 'Vallets' in 'Overies alias Shuttes Vallets.' This was a very common term for woodland felled regularly, i.e. coppiced, and is used elsewhere on the Plan. Shuttes, which are shots or furlongs, are shown diagrammatically.

'Trees carried out of Overies' perhaps allowed reclamation to begin. It is of interest that in the inventory of Anne Cooke, Richards Castle, Shropshire, taken in 1690, arable land at the Vallets was recorded:- '8 ac. of oates and barley in the Vallets £3. 2 ac. of

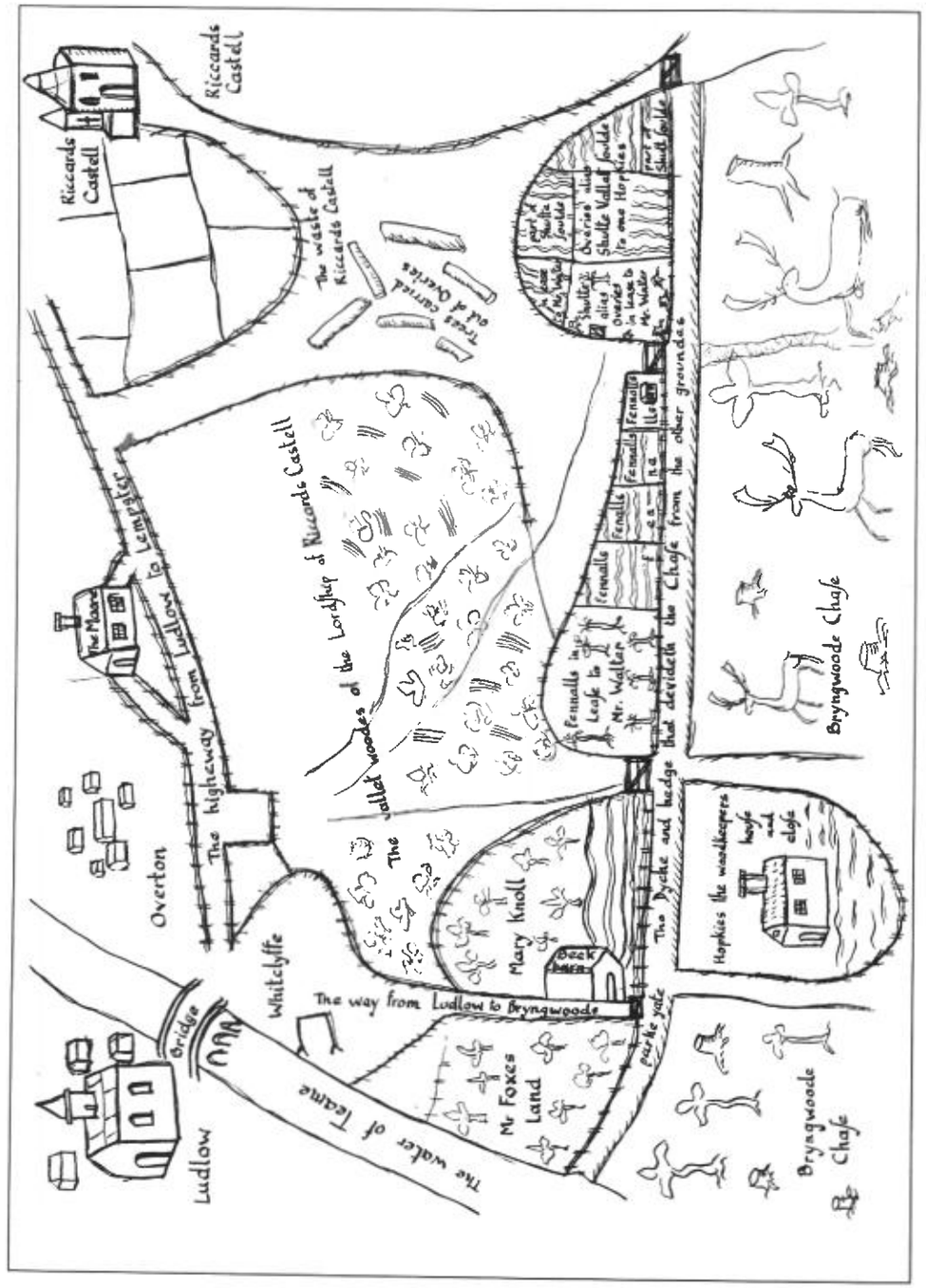

FIG. 2
Bringewood Chase based on a Plan of 1577.

turnips in the Vallets £1.'[8] This is an early record of turnip cultivation. Anne had crops elsewhere, in the Park and in the Mine field, both probably shown on the Plan beside the Castle.

The discrepancy in the shape of Overies on the two maps can be explained by the comment 'sould to Mr. Hopkies.' In 1662 Mr. Salwey leased the lands formerly in lease to Mr. Walter. Today the Vallets Farm includes Mr. Hopkies' part and also part of the Sheep Walk named on the Elton Tithe Map. Also included in the present farm are large fields which were Elton Common on the Tithe Map. Both these later additions, the Sheep Walk and the Common, (i.e. Tithe numbers 114, 115, 122, 124) lie to the W. of the ditch.

The 'trees carried out of Overies' were therefore not hauled up the scarp slope from beside the Wigmore road. They were carried downhill towards the 'Higheway from Ludlow to Lempster.' They appear to be taken across 'The waste of Riccards Castell' i.e. Hanway Common, and down Hope Bank to Batchcott.

The open fields between Hanway Common, the Castle and the Ludlow to Leominster road include Mine or Mynd Field where widow Cooke grew crops. The Castle is coloured brown on the Plan, bathed in a rosy glow from the W..Leland's comment thirty or more years before was 'The kepe, the waulls and towres of yt stond but goynge to ruyn. There is a poore house of tymber in the castle garth for a farmer.'[9] Between the Castle and the waste is shown a wide way, now known as Hanway Lane or Green Lane. It was wide in living memory. Encroachments have been made from the N.E., but the S.W. hedge atop a bank remains unchanged.

Ring hedges and boundary banks and fences were of more importance to this cartographer than contour lines. The Plan's colours are of little help; no red for the roads, just muted shades of olive brown for the background. To the right of the way the words 'Riccards Castell' lie on what was The Park of Richards Castle, sometimes referred to as the Castle Park. Leland stated 'there is a park empaled and well woodyed but no dere in it.' Its ring hedge on top of a bank can be followed on the S.W. side of Hanway Lane. The Cooke family leased a tenement in the Park, now Park Barn (478703), in the 17th century.

The words 'Riccards Castell' appear again beside the Castle and refer to the township of that name. The township of Overton is prominent beyond the old road to Ludlow, as is the Moore, the home of the Walters and their tenants the Littletons who were related by marriage. Blount, writing in 1671, called the Moore 'a gentile habitation, belonging to Wm. Littleton Esq., who, dying, without issue, it came to Dr. Littleton his brother but now belongs to John Salwey Esq.'[10] The trees carried out of Overies appear far too impressive to be used for charcoal, or firebote, or hedgebote. It seems probable that they were destined for construction work. To rebuild or refurbish the Moore? Or even Ludlow Castle? In 1578 Mr. Walter obtained a lease of the castle.[11]

Timber was by no means plentiful, even before the widespread destruction which took place to satisfy the demands of the Bringewood Ironworks at Downton on the river Teme. By 1611 Lord Eure, President of the Marches, was writing a plea on behalf of the Commoners of Deerfold. He wrote from Ludlow Castle to 'the Chancellor to the Prynce His Highness' that 'the Tenants and Inhabitants (are) nerlie destitute of that reliefe which for building and other necessaries they have formerlie been accostomed to receave.'[12]

Tree stumps were given a prominent place on that part of the Chase shown on the 1577 Plan. This was the scarp face of the Silurian escarpment. The dip slope between Ludlow and the waste of Richards Castle was clothed by coppice woodland. These 'Vallet woods of the Lordship of Riccards Castell' were cut regularly over a period of many centuries. It was therefore not surprising that when the earl of Bridgewater's three children became lost in these woods there were fears for their safety. To celebrate their return unharmed there was great rejoicing at Ludlow Castle. Milton wrote a Masque and dedicated it to his patron the earl. It was called *Comus*.

From 1672 Foley and Avenant, members of the Ironworks in Partnership, held leases of these coppice woods.[13] In 1703 Richard Knight, ironmaster, took over the lease and later attempted to bring some Richards Castle commoners to court for stealing his wood. In reply the latter took Knight and the lord of the Manor to a 'Tryal at Law'[14] and this resulted in more than one trial in Chancery. On the Plan the parallel lines scattered amongst these vallet woods are likely to represent bundles of cordwood.

So the woodland was a valuable source of income. The position of woodman was a most responsible one. A Thomas Hopkies was a witness at an Enquiry held at the Guildhall Ludlow in 1607. This dispute was between the Commoners of Bringewood and James Walter (son of Edmund, and named 'of the Moore' in a lease of 1622). Thomas was a keeper of the forest of Bringewood and lived at the Park gate.[15] 'Hopkies the wood keeper's house and close' are important features of the Plan. The house was probably not larger than the Moore, but just more important for the mapmaker's purposes. It is shown in detail coloured attractively in salmon pink. It lay on the side of the ditch opposite Mary Knoll and Becke Barne.

The key to the 1662 map describes area B as being 'The Park Yate leasowe now divided into five parcels.' It was held by widow Poulton and contained thirty-four acres. A house is shown on this land B. To the S. of B is Portman Lane linking Mary Knoll Valley, and presumably Overton, with Aston. Across this lane lay the New Tyning (meaning land newly enclosed). New Tyning features in many Richards Castle leases and today is part of Sunny Dingle Wood. Weyman quotes a lease of 1601 'And also that part or parcel in the said forest inclosed by one Thomas Hopkies extending from the lower corner of Fennals next adjoining the new Inclosure directly forward by a highway side leading towards Aston to a gate which the said Thomas Hopkies made at the utter end of the said enclosure containing about 30 acres.'[16] So it is likely that widow Poulton's house had been Hopkies' dwelling.

The accuracy of the 1662 map suggests that Hopkies' House became the present Mary Knoll House after rebuilding. And Becke's Barne is still there, albeit in more modern form. The re-alignment of the boundary had then added Becke's Barne to widow Poulton's Leasowe. The original mansion house, ruinous in 1638,[17] could well be the house shown on Mr. John Aston's Mary Knoll lands on this map.

The gates are prominent features of the Plan. Numbering the largest 1. to 4., from left to right, they appear to give openings in the ditch and hedge as follows:-

1) On the Ludlow to Aston road beside Mary Knoll House.

2) On the Portman Lane which linked Aston with Mary Knoll Valley.

3) On the crest of the escarpment, on an important col (477716). This in 1662 separated two parcels of Salwey land. The Elton Tithe Map named the field to the S. of the col 'Light Gate Piece.' There is today a wicket gate in this field hedge in the position shown on the Plan. The present name of this field is the Rough Field.

4) Overlooking the Goggin and Kill Horse Lane, at the S.W. end of what is today called Trench Lane. (PL. LIII). This name must be significant. All lanes became reduced to trenches. Perhaps this was so named because it led to a trench or ditch? It linked the commons of two parishes, Hanway Common and Elton Common. The lane once separated Salwey and Littleton lands and has been ploughed out only recently. Today the old hedge alongside, on the southern side, is on top of a bank.

Ancient hedges and banks proliferate in the area. The Plan does much to explain their significance. The ditch and hedge which separated the Chase from the other grounds was the most important feature of all on account of its function. For much of its length it can be followed today. As a man-made feature of the landscape its scale must have been dramatic, otherwise it would not have achieved its purpose. This was to exclude the deer from lands where their presence would have caused damage to crops, pasture or young woods which were all a source of profit to the landowners. How the deer were excluded from 'Overies alias Shuttes Vallets' is not made clear on the Plan. Topographical features suggest that the most likely direction for the ditch and hedge to follow beyond Trench Lane gate was above the steep slope of the Goggin Valley. This involved a curve towards the S.E. and remnants of a shallow ditch can still be seen beside the hedge. This boundary could then have linked up with the park pale of the park of Richards Castle.

The ditch can be followed in least discomfort from its southern end. From the S.W. end of Trench Lane an ancient hedge and barely discernible remains of a ditch are identifiable at intervals running N.E. towards High Vinnalls. From the summit a shallow ditch can be seen a few metres below, W. of the deer hide. The most impressive remains are to be found within the Forestry plantations, between the hide and the headwaters of Mary Knoll stream (e.g. at SO 480731 [PL. LIV] and SO 482733). Where it crosses the Ludlow to Wigmore road, marked by a gate on the Plan, is marked on modern maps by a Boundary Stone (SO 483738). This is the boundary between Shropshire and Herefordshire. To the N. a footpath begins the descent to the river Teme. Here, a few metres from the road, another section of ditch remains. Downhill it is likely that this path follows the line of the ditch. The line is continued along the footpath to Hill Halton Farm and thence towards Oakly Park. Rights of way frequently followed these boundaries.

All the evidence points, therefore, to an orientation of the Plan where E. lies at the top. That is, N. <-+--- approx.

A Survey of Mocktree Forest and the Chase of Bringewood

The Inheritance of the Rt. Hon. Wm. Lord Craven, Baron of Hamstead Marshall.
Date of map 1662.

A Particular of the Chase of Bringewood as it is now Enclosed.

		ac.	*r.*	*p.*
A.	*Mr. John Aston* houldeth for lives.			
1.	Mary Knowle now divided into 6 pieces.	75	0	36
2.	Kings Copse lying at the east end of Mary Knowle.	5	0	21
3.	A small parcel at the east end of Park yate Poole.	2	2	8
		82	3	25
B.	*The Widdow Poulton* houldeth			
	The Park yate lessow now divided into 5 parcels.	34	0	18
C.	*Mr. Richard Salwey* houldeth for lives.			
1.	The Vignolles copse, lying from Portman Lane on the north along the top of the hill to Wid. Willcox house south.	106	1	8
2.	The New Tyning.	58	3	9
3.	Crabtree Lessow.	18	3	7
4.	Trapsty Banke.	15	0	33
5.	The Hasles.	16	3	22
6.	Park yate Poole lessow.	10	3	39
		226	3	38
D.	*Mr. Francis Walker* houldeth			
1.	The Earles Arbor.	119	1	0
2.	The Dog Hanging.	91	1	3
3.	The Lodge Lessow.	56	0	29
4.	The Hullockes.	69	2	37
5.	The land below Vaughans Dike from the Hayes to the forge.	128	1	3
6.	The lower Radlettes.	53	3	27
		520	0	17
E.	*Mr. William Walker* houldeth			
	The Upper Radletts now divided into 10 parcels.	138	1	29
F.	*Mr. Edward Mathews* houldeth			
	The Fire Place divided into 4 parcels.	105	0	5
G.	*Mr. Richard Cole* houldeth			
1.	Coles lessow divided into 4 parcels.	107	3	36
2.	Monsty divided into 2 parcels.	55	2	30
		163	2	26
H.	*Mr. William Collier* houldeth			
	The east end of Bringewood Hayes in 7 parcels	102	2	21
I.	*Mr. Wright, Parson of Burrington* houldeth			
	The west part of Bringewood Hayes in 33 parcels	102	2	22

K.	*The Widdow Pit* houldeth A parcel of land called Even Hey adjoining to Gatley Park on the South west.	26	1	20
K.	*Davies* houldeth A cottage by 2 small parcels adjoining to Even Hey.	1or2?	0	3
M.	*Mr. Frazer Walker* houldeth The furnace, forge & land thereto belonging.	4	2	16
	The totall Contents of Bringewood.	1509	2	0

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Hereford Carriers in 1890

By E. D. PAUL

The city of Hereford in 1890 was, as it had been for centuries, the administrative centre of the county and the seat of the bishopric, in addition to being an important agricultural centre and market town. As such it was the focus of a network of local carriers' routes linking it with the surrounding countryside and indirectly with other market towns. It is the purpose of this article to discuss that network as it existed in 1890.

Local carriers' services probably developed towards the end of the 18th century, with numbers reaching a peak in the late 19th and early 20th century. But is is not possible to study them in any detail until the appearance of trade directories in the 19th century. The carriers originally had four functions. Firstly they were shopping agents and could be commissioned to buy goods on behalf of people who could not travel to town themselves. No purchase was too small and few too large. They might buy anything from pins to rolls of wallpaper, as well as food, garden plants and clothing. Secondly they would collect and deliver parcels and bulky goods from towns and railway stations, a service that was particularly useful for craftsmen and shopkeepers in the countryside. Thirdly they would carry passengers for a small fare, and fourthly they brought fresh produce into the towns: eggs, butter, cheese, poultry, game, rabbits, vegetables, preserves and honey.[1]

The carriers travelled all the year round and in all weathers, moving at a rate of about three to four miles an hour. In winter many of them left home before dawn and arrived back after dark. In fine weather and on days when there was not too much dust they could enjoy a leisurely journey through beautiful countryside. But in bad weather conditions could be grim. Francis Kilvert refers repeatedly to the bad state of the roads during the hard winter of 1878-9, the following entry being typical. '... 21 December. St. Thomas Day. Hard Frost. Roads icy, many accidents to man and horse from slipping and falling.' And in Bredwardine conditions were so bad that he describes people crawling across the village square because they were afraid to walk upright.[2]

The carriers who converged on Hereford in 1890 once or twice a week, on Wednesdays and Saturdays, are listed in Jakeman and Carver's *Directory* once under Hereford and again under the parishes where they called.[3] In each case the lists give the name of the carrier (including first names for the men), their stopping places, the days on which they travelled and the inn or stables where they stationed themselves in Hereford. The parish entries add the time of departure from Hereford and sometimes the parish where the carrier lived.

All told there were about eighty of them coming into the city from places which, with a few exceptions, lay within a radius of eleven miles (FIG. 1). Two of them, Thomas Payne and Henry Philpotts, came from Bosbury outside the main catchment area to the N.E. The other exceptions all came from the S.W.: Mrs. Jones and William Powell from Bredwardine, Mrs. Sarah Burton and Mrs. Parry from Letton, Mrs. Egginton from Winforton and Mrs. Jenkins and Mrs. Lewis from Michaelchurch Eskley. There were no

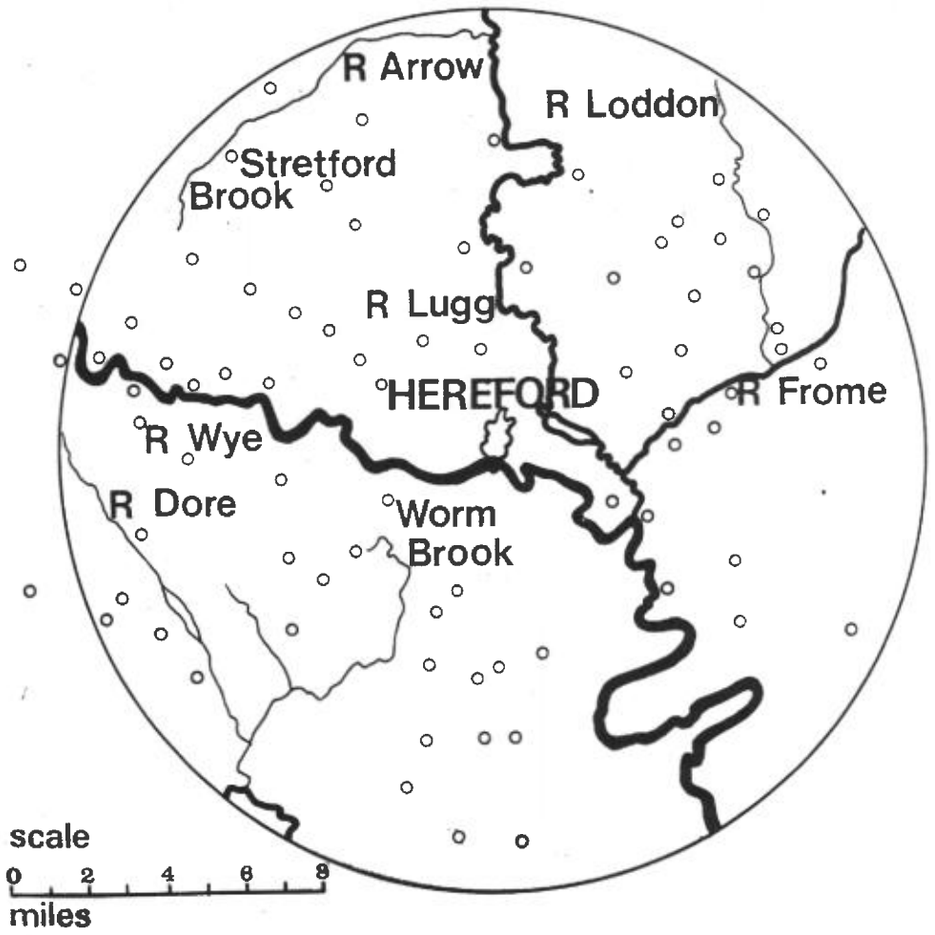

FIG. 1
Distribution of Carriers' Stops in 1890.

direct services between Hereford and any other town, but some of its carriers went to other towns on the days when they did not come to Hereford. Henry Cox of Woolhope and Edward Newman of Canon Frome went to Ledbury on Tuesday. On Thursday Henry Davies of Stoke Lacy went to Bromyard; Mrs. Egginton of Winforton and William Powell of Bredwardine went to Hay; and Charles Burleigh of Orcop and Henry Hall of St. Weonards went to Ross. Leominster, with a market day on Friday shared seven of the Hereford carriers: Mrs. Mary Edwards of Birley, John Evans of Weobley, Thomas Gravenor and John Prosser of Bodenham and Mrs. Charles Griffiths, Mrs. Poyner and Mrs. Shuker of Canon Pyon. The only Hereford carrier to go outside the county was Henry Philpotts of Bosbury, who travelled to Worcester instead of Hereford on a Saturday.

In Herefordshire, as in Shropshire at this time, a majority of the carriers were women, whereas in other counties in England and Wales men predominated. No one has been able to explain why these two counties should be different, but it is possible that some of the men and women worked in partnership as a family team. Mrs. Oakley, for example, came direct from Stoke Edith to Hereford; while Peter Oakley, who lived at Stoke Edith, served Dormington, Mordiford and Hampton Bishop. Both of them stationed their carts at the Booth Hall and both left Hereford at 2.30. Similarly Mrs. Woodhouse, one of the Withington carriers, lived at Yarkhill, as did Lewis Woodhouse who served Yarkhill and Eggleton. Both parked at the Kerry Arms and both left Hereford at 3.30.

Most of the carriers were too humble to feature in the commercial listings for their parishes. Of the twenty-three included ten are described simply as carriers, one as a carrier and haulier and eight, including three women, as farmers. Two were grocers, Leonard Fencott of Tillington being listed as 'grocer, provision dealer, cornfactor and carrier.' Charles Jones of Orcop was a shopkeeper and wheelwright and Charles Burleigh, also of Orcop, was a shopkeeper and sub-postmaster. As the latter spent three days a week on the road, the shop and post office must, for much of the time have been in someone else's hands, unless the carrier's work was shared.

The provision of a carrier's service seems to have been a matter for personal decision, although market forces may have played some part. Broadly speaking a parish needed a population of about 450 to sustain a maximum of four or five carriers travelling to Hereford twice a week. But there is no clear cut correlation between the size of a parish or its population and the number of carriers it might support. The more populous parishes that enjoyed the highest number of services included Abbey Dore, Canon Pyon, Clehonger, Fownhope, Madley, Mordiford and Withington. But there were equally populous places, like Much Cowarne and Weobley, that had only one carrier and the same was true of Burghill and Dilwyn with exceptionally large populations of over 1,000. At the bottom end of the scale Willersley, with one household and a population of 9, had a carrier because it was on the direct route from Winforton to Hereford.[4] Individual decisions about routes certainly exerted an influence. Only one of the five carriers coming from or through Canon Pyon stopped at Burghill and only one of the eight coming in along the Brecon road from the W. halted at Bridge Solers.

Within the radius of eleven miles the majority of parishes had at least one carrier, but places within three miles are conspicuous by their absence, almost certainly because most people were able to walk that distance to shop or to carry produce into town. Juniper Hill in Oxfordshire, where Flora Thompson lived as a child, was just three miles from the nearest market town on a carrier's route. As she explains 'It was thought quite dashing to ride with Old Jimmy, but frightfully extravagant, for the fare was sixpence.' Sixpence (2½p.) is a pitifully small sum now, but in the 1880s it would buy enough scraps from the butcher to make a meat pudding for family dinner on Sunday or even a small joint as a Saturday night bargain.[4]

The routes followed by the carriers cannot always be worked out. Sometimes there is only one obvious route on the map, but often it is impossible to decide which of a network of lanes a carrier took, even after weighing up relevant factors such as distances and gradients. But there are clear indications that they avoided roads known to be difficult in bad weather. Both Mrs. Jones and William Powell from Bredwardine crossed the Wye to Brobury and then returned to the S. bank. Mrs. Jones called at Tyberton and Madley, while William Powell stopped at Moccas and Bridge Solers, having presumably re-crossed the river by the private bridge between Moccas and Monnington. Neither took the direct route from Brobury to the main road on the N. bank of the Wye and the clue is provided by Kilvert. In his entries for February 1879 he singles out Tin Hill, between Brobury and the main road, as being particularly difficult. The horses from Morehampton Station could hardly pull the carriage up it in the snow.[5] A different problem faced the two Bodenham carriers, Thomas Gravenor and John Prosser. Both of them went to Hereford via Hope-under-Dinmore, avoiding the low-lying area on the E. bank of the Lugg where they were more likely to encounter floods. Some carriers followed rather indirect routes. Henry Hall of St. Weonards travelled E. to Tretire, N. to Llanwarne, Llandinabo and Much Dewchurch and then W. again to Dewsall on his way to Hereford. Charles Burleigh of Orcop went E. to Llandinabo and then W. to Much Dewchurch, covering three sides of a square before arriving at Hereford via Callow. We can only speculate as to what shaped these routes: family ties, friendships or links with local inns.

When they reached Hereford the carriers parked their carts and stabled their horses at inns or livery stables, patronising between them fifteen inns and three stables. Most of these lay in the centre of the city, on or within the line of the city walls, the exceptions being the Saracen's Head in St. Martin's Street and the Royal George at 31, Widemarsh Street. The most popular inns were the Nelson in West Street and the White Lion in Maylord Street with nine carriers each and the Coach and Horses in Commercial Street with ten. Most inns, like the Hop Pole at 54, Commercial Street and Spread Eagle in King Street accommodated four or five, while the three livery stables accounted for four between them. Some of the inns seem to have had very specific local connections. All the carriers who congregated at the Booth Hall in High Town came from villages E. of Hereford, while the Nelson, the Plough and the Spread Eagle catered exclusively for those from the S.W. But the majority had services coming in from all directions. Only one hotel catered for carriers, the Kerry Arms, described in the directory as an 'agricultural, commercial and family hotel; home-brewed ales; good stabling...'

Quite apart from their value as an element in the local grapevine, the carriers fulfilled a significant economic role as part of the transport network. For the towns they brought fresh produce, with eggs forming a significant part of their loads in the summer and poultry at Christmas time. They also played a part, alongside the railways, in bringing more customers within reach of urban shops and markets. The population of Hereford itself in 1891 was just over 20,000, while that of the parishes served by carriers was about 27,000. For people living in the countryside they provided better access to outlets for selling produce, as well as to shopping facilities. They also helped village shopkeepers and craftsmen by bringing goods and raw materials to and fro and they furthered the carriage of goods by rail, including the cheap mass-produced goods from the great Victorian factories. The number of carriers serving a single town might be small, but nationally it has been calculated that in the Victorian period there were probably between 25,000 and 30,000 on the road at any one time.[7] Without them both the towns and the countryside would have been very much poorer.

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The Reconstruction of Hoarwithy Bridge

By HEATHER HURLEY

For centuries there has been an important river crossing at Hoarwithy joining the parishes of Hentland and Kings Caple (see *Trans. Woolhope Natur. Fld. Club*, XLIV (1983), 215-26). During the 1980s it became obvious that the iron bridge of 1876 was unable to cope with the increasing weight of modern transport. A detailed inspection was made in 1983 by Hereford and Worcester County Council's Engineering Department, and a number of repairs were carried out, but due to its construction of wrought iron it was difficult to maintain, and not practical to strengthen, so a replacement was proposed.

Around this date the local community and parish councils became increasingly concerned about the safety of Hoarwithy Bridge, which then carried a seven ton weight limit allowing school buses, light agricultural machinery and delivery lorries to cross the bridge, but heavier vehicles were required to use an alternative route. A reduction to three tonnes in 1988 caused even more traffic to make a lengthy diversion. By then the County Council's Highways Sub-Committee had approved a replacement superstructure at an estimated cost of £380,000 'to provide a bridge with a carriageway of 4.5 metres and 1.0 metre verges without extensive alteration to substructure and without the need to demolish the toll house.'

In January 1990 notices appeared publicising the temporary closure of Hoarwithy Bridge while being re-built. This subject became the main topic of conversation at school, post office, church, inn and Women's Institute meetings at Kings Caple and Hoarwithy. Without a bridge it necessitated a journey of either fourteen miles downstream to cross the Wye at Ross or twelve miles to Holme Lacy Bridge.

Heavy rain and gales in January and February caused severe road damage and flooding of the Wye at Hoarwithy, but despite this setback the contractors Dean and Dyball prepared sites at each end of the bridge, but further flooding submerged the hard standing and portable buildings. March brought better weather and work started in earnest on strengthening the stone piers from the original timber bridge of 1856. Although the bridge remained open, two packed parish meetings were held at Kings Caple to discuss the difficulties of travelling when the road bridge was being re-built.

Notices appeared stating that Hoarwithy Bridge would be closed from the 2 April for a period of thirteen weeks. This news was reported in the local and national press. 'People in Kings Caple between Hereford and Ross on Wye, will be robbed of a direct route to their family doctors. They face similar isolation from a post office and inn while contractors for Hereford and Worcester County Council replace the 200 foot deck of the 120 year old bridge,' appeared in the *Daily Telegraph* of 2 April. During this month the decking was broken and removed together with the iron parapets. Large cranes, which extend to a great height made an unfamiliar sight in the riverside village. These giants moved heavy pieces and positioned steel beams during May when good weather enabled the bridge builders to work from dawn to dusk, everyday, including Bank Holidays.

One or two local individuals established a boat service across the Wye, an attractive feature not seen since the erection of the original bridge except for a brief period in 1876 when the iron bridge was constructed. In the May edition of the parish magazine *Pax*, the following notice appeared 'FERRY ACROSS THE WYE, KINGS CAPLE - HOARWITHY LINK. Lent by Mr. John Edwards. As most of you will know, we have set up a ferry across the river and would like to say that anyone who wishes to cross is most welcome to do so. However, we would prefer ALL CHILDREN UNDER 14 to be accompanied by an adult.' The ferry operated in the traditional method with ropes and pulleys giving a safe, smooth and swift crossing.

In June it was occasionally possible to amble across the bridge between workmen concreting and tarmacing the deck and securing the parapets. Within the time limit Hoarwithy Bridge re-opened to traffic on 6 July with an official opening held on the 24th, when a small gathering of councillors and invited guests attended the ceremony. Chairman of the County Council, Mr. R. J. Carrington, O.B.E., officiated and cut the tape; this was followed by light refreshments served at the New Harp by courtesy of the contractors.

In a note of 2 August the County Council described the new bridge at Hoarwithy as follows:

'a continuous three span composite steel beam and concrete deck structure supported on the original masonry piers and abutments, suitably modified, and has been designed to carry all vehicles currently permitted to use British roads. The steel beams are in weathering grade steel which do not need painting. In a short time they will develop a purplish brown 'patina' which will protect the steel from further corrosion. The parapets are of galvanised steel left unpainted for the time being to allow them to weather. They will be painted in about ten years time.' (PL. LV)

The total cost of the scheme in 1990 amounted to £442,000, and it is understood that the reconstructed bridge will last a hundred years, nearly the same life span as the former iron structure erected at a cost of £1,804 in 1876. The original timber bridge of 1856 cost £2,090 which included building the stone piers, abutments, approaches and the toll-house.

Reports of the Sectional Recorders Archaeology, 1996

By R. SHOESMITH

THE CITY OF HEREFORD ARCHAEOLOGY UNIT

It has taken some twelve months to resolve the many problems resulting from the 1995 cut-back in the number of staff in the archaeology unit, the move into our central offices in the Hereford Cattle Society Offices at 3 Offa Street, and the forthcoming changes in the structure of the City of Hereford Archaeology Committee which is the governing charity. The changes will take place from April 1997 when the new charity 'The Hereford City and County Archaeological Trust' will take over the functions and responsibilities of the old Committee. The new organisation will have charitable functions throughout the forthcoming County of Hereford, but will also include a trading company that will continue to carry out archaeological work throughout the city and county and further afield.

The Unit has had one major report published during the year - *A view from Hereford's Past* by Richard Stone and Nic Appleton-Fox. This book, which presents a preliminary report on the excavations that took place in the Cathedral Close in advance of the new building to house the Cathedral Library and Mappa Mundi is not the usual interim report on an archaeological excavation. It is written in a way that anyone interested in finding out what has so far emerged from the archaeological work can do so without becoming frustrated by the specialist language and impenetrable cross-referencing from which many such reports suffer. It is published by Logaston Press. In addition, the forthcoming volume on *Excavations in Hereford 1976-90* is now at page-proof stage and should be available in Spring 1999. This volume, written by Alan Thomas and published by Sheffield University, deals with the many excavations in the city that were undertaken by the City Council's Manpower Services Commission team. It is hoped that the volume on the timber-framed buildings of Hereford, which is being written by Richard Morriss, will be completed during the year. The long-term publication project for the Unit is the Research Report on Goodrich Castle. Despite delays to this during the past six months, we anticipate considerable progress during 1997.

So-called desktop analyses of sites are becoming increasingly important as part of the overall effort to ensure that archaeological remains are preserved wherever possible. In these reports, documentary and cartographic evidence is examined together with the results from adjacent excavations. The whole is then analysed to obtain as accurate a picture as possible of the archaeological potential of the site. During the last twelve months the Unit has produced several such reports on sites in the city including The Former Wyelands Caravan Site with the important remains of the horse-drawn tramway on its perimeter; The Mead & Tomkinson Site adjoining the river and the Old Wye Bridge, where buildings included considerable warehousing associated with river traffic and the

well-known inn - the Starre Inn (later the Bell) - which was serving 'chops, steaks etc. ...' to hungry bargemen in the early 19th century. Within the last month work has advanced another stage on this site by means of a borehole survey which is still being processed. During much of the year the Unit has been involved in helping the City Council to establish a suitable route for a new sewer in the Widemarsh Street area. The basic problem is to find a route across the medieval precinct associated with the Blackfriars Priory. The precinct was much larger than the present Blackfriars Gardens and included a church and extensive monastic buildings. Several reports have been produced involving many historical sources, geophysical studies and previous excavations in order to establish the most appropriate route. Indeed, discussions with English Heritage are still in progress. A very important desktop survey was produced towards the end of the year. This involved the whole of the site of the present County Hospital which is entirely within the bounds of the precinct of St. Guthlac's monastery, re-founded there in 1144. This is the proposed site for the new hospital and, as members are aware (Shoesmith, 1984, 321-57), although the monastic burial ground is well-defined, the monastic buildings have totally eluded all archaeological efforts to find them during the last quarter of a century. On the western side of the city a desk-top analysis of the Greyfriars surgery site, which sits astride the city defences, was followed by evaluation excavations to establish the depth of modern deposits. The architect is now able to produce plans for an extension to the surgery that will have shallow foundations thus respecting the important archaeological deposits beneath.

The Unit has undertaken several watching briefs in Hereford during 1996 including the extensions at the *Orange Tree* in King Street, repairs to the grotto at the suspension bridge side of Castle Green, and a careful but rather damp watch on material being dredged from the river Wye to clear the navigation channel for a pleasure boat.

One very important part of the Unit's work is associated with the cathedral and its Close. During 1995/6 there has been an immense amount of work carried out - most of which has an archaeological element. In the early part of the year the Bishop's Cloisters had a complete face-lift to accommodate the entrance and part of the exhibition associated with the Mappa Mundi and Chained Library. The opportunity was taken to examine the surviving N. wall of the double chapel of St. Katherine and St. Mary Magdalene and establish further significant details about this important building. This was followed by an investigation of the Chapter House Yard in advance of the installation of the temporary restaurant. Much of the area in the south-eastern corner had been used as a dump over a long period for fragments of worked stone. These have now been moved and the area was then levelled to take the new building without any archaeological damage occurring. During the work, the opportunity was taken to photograph, survey and analyse the E. and S. walls of the yard, which has considerably improved our knowledge of this area of the cathedral. Work on the cathedral tower is almost at an end; one of the last elements was the recording of the quatrefoil band on the W. side in advance of substantial stone replacement. For some time the E. face of the Lady Chapel has been boarded off because of the danger of falling masonry. The stonework over the whole face is very badly eroded and much of it will have to be replaced. Scaffolding was erected a few months ago in order that the Unit could prepare detailed drawings and these are now almost complete.

Formal excavations within the city have been mainly of a minor nature. They have included excavations in the cellar of 29 Church Street; trenches at the rear of 10/11 High Town; an evaluation in the grounds of Old Ford House on the S. side of the river, and trenches within All Saints' Church. Fully illustrated reports are produced on all these desk-top surveys, excavations and watching briefs and copies are deposited in the local studies department at the County Library.

Within the old county of Hereford, the Unit conducted a variety of projects including a watching brief on a development at Barrack Lane, King's Thorn. It lies within an area of prehistoric activity being near to Aconbury Iron Age Hillfort and close to the spot where a flint scraper was found. Further work is planned, but so far no signs of prehistoric occupation have been observed. The Unit has also been involved with the alterations that are taking place at Ross market hall. Here a small excavation was needed for the base of the new lift shaft. Remains of a cobbled surface that apparently pre-dated the market hall were exposed.

Archaeological work took place at two churches - Dilwyn and Wigmore. At the former the findings have, by and large, supported the only other major analysis of the church carried out by the R.C.H.M. at the start of the 1930s. For example, the study of the S. clerestory has demonstrated how the nave had been raised and the clerestory fenestration changed accordingly. There is a strong indication that the tower was probably built at the same time as an earlier nave, rather than being added to one. It does seem that the tower was built at the W. end of, and central to, the earlier nave shortly before *c.* 1200. Within a century it was deemed necessary to rebuild the nave further to the N. The S. aisle's S. wall is on the same alignment as the former nave and probably incorporates masonry from it. The work at Wigmore Church was mainly involved with the recording of the roof of the N. chapel during re-tiling.

One project which has involved both a desk top survey and a watching brief is the work at Upper Hall in Ledbury. The Upper Hall Estate, situated on rising ground on the eastern side of Ledbury, creates a transition between the town and the open countryside. Originally the property of one of the two portioners or prebends of Ledbury Church, Upper Hall was the home of the Skippe family and their descendants, the Martin family, until early in the 20th century when it became Ledbury Grammar School. Following a short spell as the junior department of the John Masefield High School, the building has been empty for some six years. The new owner's proposals for the site included the demolition of the redundant school buildings, the restoration of the main house and its conversion into seven residential units, conversion of the stable block into three residential units, the construction of a house in place of the school science block and erection of four houses on the site of the school tennis courts. The Unit continues to be involved as the project takes shape.

Just outside the city boundary, the Unit has been involved with the restoration of Lower House Farm at Tupsley, the new home for the Herefordshire Nature Trust. This has been a most interesting project involving a house which has had relatively little alteration since it was built. The Unit has carried out detailed survey work on the property and has provided advice on various aspects of the restoration work. Arrangements were also

made for a dendrochronological study of the timbers in the building - a study that has been completely successful. The felling date for the trees used in both wings of the building has now been established as 1613, indicating that the building is probably a few years older than the Old House in Hereford and that it was built well before the Civil War.

It is pleasant to record that many of the projects undertaken by the Unit in 1996 have been carried out in co-operation with Richard K. Morriss, previously the assistant director of the Unit and now self-employed. This has ensured continuity in several projects such as Witley Court and means that the Unit continues to benefit from Richard's considerable knowledge of historic buildings and industrial monuments.

Richard Stone and Nic Appleton-Fox, two other previous members of staff of the Unit, who were responsible for the management and running of the 1994 Cathedral Close excavation, are also working independently as Marches Archaeology. One of their major projects during the year was an excavation within the bailey of Wigmore Castle. The castle has recently been taken into guardianship by English Heritage and the excavation, within a collapsed section of the curtain wall, was necessary for engineering purposes. The depth of man-made deposits proved to be much greater than had been anticipated and the excavation - a trench 10 m. long and 3 m. wide - was eventually 7.5 m deep. The inside face of the curtain wall was exposed for a depth of some 6 m. and occupation layers relating to the castle in use and the spoilation and gradual collapse after the Civil War, were encountered.

From time to time the Unit takes work outside the county. One of the major projects has been in Worcestershire where the Unit has continued its long term project at Witley Court with the recording of one half of the stable courtyard and a detailed survey of the boat-house prior to its restoration. The latter adjoins the lake which was originally part of the Witley Court Estate but is now in the grounds of Pool House. The Pool House estate was bought by English Heritage in 1996 with the aid of a grant from the National Lottery Fund. In addition to the survey work, the Unit has undertaken further landscape studies of the original Witley Court Estate in co-operation with Dr. Pat Hughes who has carried out the associated historical research. In addition, on behalf of English Heritage, the Unit Director has monitored excavation and clearance work on the park and garden that was undertaken by the Archaeological Field Unit at Nottingham University.

The Unit also organised a small excavation adjacent to Church Street in Tenbury Wells in advance of the use of that area for residential accommodation. It would seem highly probable that the course of the Teme has changed significantly over the centuries and at one time described a large loop, (indicated by the outline of the old county boundary on the 1841 tithe map), which would have surrounded the castle motte on three sides. If this is accepted then, during the medieval period, Church Street may have been a major thoroughfare leading N. from the market, past the castle and then to a ford across the Teme. The excavation exposed one side of the metalled roadway associated with finds that could well support this hypothesis.

Outside Hereford and Worcester, the Unit has had two projects in the part of Avon that is now once again Somerset. In association with Richard Morriss, the Unit carried out a detailed survey and analysis of the remains of Middle Engine Pit, a colliery that

ended its life within an Edwardian garden and is now in the middle of a housing estate in Nailsea. The Unit also provided recommendations for the development of the site.

For some years the Unit has carried out archaeological work at Tewkesbury Abbey and during 1996 it has been responsible for watching briefs during drainage works; reporting on the structure of the ambulatory roofs; and paying regular visits during the work of repairing the old National School, which is within the abbey precincts, for use as meeting rooms, a restaurant, and offices for the abbey staff.

The Unit is going forward into 1997 with an almost full order book for the first four months of the year and several projects that are likely to take place later in the year. This is the strongest position that the Unit has been in for many years.

Botany, 1996

By PETER THOMSON

Using records held by the Botanical Society of the British Isles Recorder for Herefordshire

A long cold spring with the first warm days free from northerly winds coming in early June ensured that spring flowers were late to bloom but that they remained in good order for some time. This cold start was followed in July and August and most of September with extreme heat and drought such that when significant rain came in late September the ground was parched and many plants had rapidly gone to seed. Whether or not this pattern of a late spring and a very hot, dry, period in summer portends a change of climate remains to be seen but our wildlife, including plants, can be very sensitive indicators of such change. The bluebell, *Hyacynthoides non-scripta,* may decline and disappear from its old haunts whilst non-native or alien plants may multiply and extend their range. Two thousand or more such plants will be included in those to be recorded for the new *Atlas of the British Flora* mentioned in the 1995 report, but relatively few of them will be found in Herefordshire.

Several of these aliens have been reported this year and are incorporated in the list below. The definition of an alien plant is not easy as most of our plants have invaded the country since the end of the last Ice Age, some 14,000 years ago, and should perhaps be classed as alien species. As a working definition, however, it may be said that the hand of man should have been involved in their introduction to class them as aliens. According to Clements E. J. and Forster M. C. in *Alien Plants of the British Isles* (BSBI 1994) there are over 4,000 species which have been recorded as aliens or are likely to be found if their spread on the continent allows them to cross the Channel.

Many aliens are of long standing and have naturalised in this country. The sycamore, *Acer pseudoplatanus,* may have been introduced no later than medieval times. Slender speedwell, *Veronica filiformis,* came from S. E. Europe and Turkey as a garden plant in the early 19th century but was first recorded in the wild in 1927, and now, because of its easy accidental propagation, readily invades our lawns. Himalayan or Indian Balsam or Policeman's Helmet, *Impatiens glandilufera,* introduced as a hothouse plant in 1839 spread rapidly to achieve weed status in E. Anglia by 1900. It has now spread to many suitable riverside sites along the Wye but has been slower to colonise the Lugg valley. Our first record along the Lugg came from near Presteigne a dozen or so years ago. Now it abounds along the Wellington Brook and has begun to appear beside the Lugg at Marden and near Lyepole Bridge. Pineapple weed, *Matricaria discoidea,* came from N. E. Asia around 1871 but spread rapidly in the early 20th century possibly with the growth of long distance transport. Seeds could be moved in mud stuck to tyres. Now it is almost universal in muddy sites.

Some of these examples represent introductions for horticultural purposes whilst others, such as the pineapple weed, probably arrived accidentally. Other sources of alien plants include those brought in in ships ballast, as contaminants of grain seed, attached to

wool and distributed with wool waste, such as fertiliser, and arguably, most important for Herefordshire, from bird seed. If alien plants are able to naturalise and spread in their new surroundings they often reach pest proportions as they are likely to lack the constraints which may have held them in check in their original home.

Records for plants in 1996 have come from a variety of sources and I am indebted to the following for information which they have supplied: Dr. Anthea Brain (A.B.), Stephen Chambers (S.C.), Mark Lawley (M.L.), Ann Powell (A.P.), Stephanie Thomson (S.E.T.) and Jean Wynne-Jones (J.W.-J.).

Cystopteris fragilis, brittle bladder-fern, (ML). Byton area growing with *Asplenium adiantum-nigrum,* black spleenwort. Cystopteris is rare in the county, as it was in 1889, because of the lack of moist, rocky habitats.

Thalictrum minus, lesser meadow-rue, (ML). Second county record. Growing in a roadside ditch near the western boundary of the county.

Amaranthus retroflexus, common amaranth, (AP). Eardisley. A bird seed alien from N. America.

Agrostemma githago, corn cockle, (SET). In a field near Bosbury. Native in E. Mediterranean area. Formerly a common arable weed. Almost certainly introduced to this site possibly in a wild flower mix.

Abutilon theophrasti, velvet leaf, (AP). Eardisley. A bird seed alien native to S. E. Europe and S. E. Asia.

Arabis hirsuta, Hairy rock-cress, (ML). Nash.

Oenanthe aquatica, Fine-leaved water-dropwort, (ML). Near Staunton-on-Arrow. Described as 'rather rare' in Purchas and Ley 1889. Now rarely recorded.

Apium inundatum, lesser marshwort, (ML). Stansbatch area. Formerly known as lesser water-parsnip. Rare now and in Purchas and Ley's day. Pools on hilly, heathy ground.

Ammi majus, bullwort, (JW-J). Rushall. A bird seed alien from the Mediterranean area.

Datura stramonium, thorn-apple, (AB). Dinmore railway station. An alien from N. America.

Thymus pulegioides, large thyme, (ML). Several sites in N. W. Herefordshire.

Marrubium vulgare, white horehound, (SC). Symond's Yat. Always uncommon and becoming increasingly rare. First modern record.

Lathraea clandestina, purple toothwort, (SET). Putley. A parasite usually on poplar or willow. A garden escape which may naturalise in damp sites.

Jasione montana, sheep's bit, (ML). Lingen area. Described as rare by Purchas and Ley in 1889 and it remains so.

Sambucus ebulus, danewort, (AB). Roadside at Marden. Often a persistent garden escape but may be native in some places.

Picris echioides, bristly ox-tongue, (AP). A bird seed alien in this case. The species may have been introduced to Britain originally but it is well naturalised in places in the S. and E. of the country.

Filago vulgaris, common cudweed, (ML). Nash area. Described as common by Purchas and Ley but this is the first modern record.

Ambrosia artemesifolia, ragweed, (AP). Eardisley. A bird seed alien native of N. America. Sometimes persists.

Elaphomyces granulatus, false truffle. (Cocker spaniel, Millie). Queen's Wood, Dymock. A subterranean fungus more frequent in coniferous than deciduous woods. The specimens were scented and dug up by the dog who subsequently ate them with no apparent ill effects. The fungus is often parasitised by another fungus: *Cordyceps ophioglossoides* but this has not so far been recorded from Queen's Wood as far as I know. Purchas and Ley record them in parasitic association from Dinmore Hill.

Mycological Celebrations in Hereford The B.M.S. Centenary 1996

By TED BLACKWELL

A singular event occurred in Hereford in April 1996 which, for anyone with an interest in fungi, reconfirmed Herefordshire's place on the mycological map.

Those having some knowledge of the early history of the Woolhope Naturalists' Field Club will be aware that one of its leading members, Dr. Henry Graves Bull, who was also curator of the Hereford Museum, invited Woolhopians in 1867 to participate in a field meeting with a novel objective, which he dubbed (archetypally, as it turned out) 'Foray amongst the Funguses.'

The 'Foray' was an instant success and became an annual autumn event, of which the culminating highlight was a dinner held at the Green Dragon Hotel in Hereford, at which edible fungi collected during the Foray figured on the menu.

Mycologists from abroad as well as various parts of Britain converged on these forays ('foray,' following Dr. Bull's innovative coinage, is now the traditional term for a mycological field meeting) and new knowledge of the fungus flora of Herefordshire was gained as well as benefits to mycology more generally, many of the findings being published in the *Transactions* of the Woolhope Club.

The Club's annual Fungus Forays continued for about twenty-five years, held traditionally in the first week of October when the autumn burgeoning of fungi is at its greatest, and based on a different location each year, often in the grounds of large country houses. These continued after Bull's death in 1885, but without his stimulus the Hereford tradition eventually ceased after 1892.

However, in 1891 the Yorkshire Naturalists' Union had started fungus forays in its own territory, and with the demise of the Woolhope Club's fungus activities, it set up a Mycological Committee in 1892 anticipating that its annual forays would take the place of the Hereford forays. Moreover, at the Yorkshire Naturalists' meeting in Huddersfield three years later a decision was taken to launch a completely new society 'for the study of mycology in all its branches' which was followed in 1896 by the inaugural meeting of the British Mycological Society (the B.M.S.). From such Hereford-inspired beginnings, the B.M.S. has continued to flourish, and with a current membership of about 2,000, is now one of the leading international mycological societies.

To celebrate its Centenary in 1996, a series of special events was organised by the Society, and with Hereford very much in focus as the cradle of British field mycology the first event was held there at the beginning of April. This was conceived to re-enact in some measure the activities of the Woolhope Club which had originated 'Fungus Foraying,' and which led ultimately to the formation of the Society.

The event took the form of seven days of field meetings at various sites across the county, under the title of the B.M.S. Centenary Spring Foray. A party of about forty B.M.S. members, including the Society's President, Professor John Webster, assembled on Saturday, 31 March at the Royal National College for the Blind.

The College proved a first-class venue, being sited in pleasant surroundings in a quiet but near-central position. In addition to providing excellent residential accommodation and fare, it also fulfilled the essential requirement of mycologists, that of established laboratory facilities with space to set up microscopes, a computer, and a 'foray' reference library, with a lecture room close by.

On the evening of arrival, Peter Thomson gave a wide-ranging and informative slide lecture on the ecology and geology of the county, spiced with historical notes on places of interest, thus setting the scene for the ensuing week's explorations.

Sites to be visited County-wide during the week had been selected to provide a variety of differing habitats from which a varied assortment of microfungi might be collected. Microfungi found on living leaves and plant debris are the predominant quarry in the spring, the larger fungi being more prevalent in the autumn. With the generous collaboration of site owners, the places visited included the National Trust properties at the Weir Garden, Breinton Springs, Croft Castle Estate and Brockhampton Park; nature reserves of the Herefordshire Nature Trust at Great Doward and Lea & Pagets Woods, Fownhope; the English Nature National Reserve at Moccas Park; Forestry Authority woodlands at Haugh Wood and Queenswood, Dymock; the Queenswood Arboretum at Dinmore; and two private sites at Humber Marsh and Garnons Hill Woods.

On the evening of Tuesday, a Grand Centenary Dinner was held at the Green Dragon Hotel in Broad Street, attended by about sixty people, in celebratory emulation of the precedent set by the Woolhope Club more than a century ago. A reproduction of a Woolhope Club menu card of 1877 was used as the model for this occasion's menu, though rather more modest in the choice of fare offered. In addition to the residential forayers and senior officers of the Society, among the distinguished guests were representatives of local Natural History and Conservation interests, visiting mycologists from abroad and TV and radio Gardening personality Prof. Stefen Buczacki, a former Vice-president. Principal toasts were given by the B.M.S. President, Prof. Webster, for the guests, the Secretary of the Woolhope Club, Mr. Jim Tonkin, on behalf of the Woolhope Club, and by B.M.S. Vice-president, Dr. Jack Marriott, responding on behalf of the Society.

Later in the week an evening talk was given to the forayers by Dr. John Ross whose topical subject was the work of Dr. Bull, both as physician and Woolhope Club activist, which he illustrated by examples of Dr. Bull's original note-books together with copies of early issues of the Woolhope Club's *Transactions.*

Although the onset of spring temperatures were much delayed, the weather throughout the week was dry (except for an occasional brief snow shower) which ensured pleasant, if somewhat invigorating, conditions for foraying. The cold late spring undoubtedly inhibited the appearance of some early season fungi such as the St. George's Mush-

room (*Calocybe gambosa*) traditionally fruiting on that saint's day, 23 April, but in compensation it seemed admirably fitting that a tiny fungus, first named from Herefordshire in 1872, called *Asconzonus woolhopensis* was found again at Lea & Pagets Wood only about a mile from Woolhope. A number of infrequently recorded or rare species were found and several have only recently been added to the British list, of which from Fishpool Valley *Diplomitoporus flavescens* on Pine wood is reported as only the third British record. One from Queenswood Arboretum called *Epibryon interlamellare* is probably new to Britain but confirmation is awaited at time of writing. Although the total of records made for all sites amounts to about 1750 records, this includes duplications as a number of species were found several times on the same site or on more than one site.

The B.M.S. Hereford Centenary Spring Foray will go down in the Society's annals both as a great success and an historical milestone, and the Herefordshire countryside, until now long neglected by B.M.S. mycologists, has been voted eminently worthy of an early return visit, perhaps on the next occasion timed for the autumn fungi.

B.M.S. SPRING FORAY AT HEREFORD 1996

Species considered notable, uncommon or rare.

Weir Garden	*Rebentischia unicaudata* (Berk. & Br.) Sacc. on *Juniperus.* Minute black pustules on stems. Not well known, described by Berkeley from *Clematis,* although it has also occurred on *Sambucus.*
Humber Marsh	*Trichothyrina parasitica* (Fabre) v. Arx. On a Pyrenomycete. A parasite invading certain Sphaeriales, with characteristic spores bearing 'whiskers' (cilia). Infrequently recorded.
Great Doward Lords Wood Quarry	*Dichomitus campestris* (Quélet) Domanski & Orl. Not common (although recorded at Crow Wood Nature Reserve, Turnastone, in 1993).
King Arthurs Cave	*Litschaurella clematidis* (Boud. & Galz.) Erikss. On *Clematis,* rarely recorded.
Woodside	#### DETAILS NOT YET AVAILABLE - TO BE REPORTED LATER ####
Haugh Wood	*Plectania melastoma* (Sow.) Fuckel. On *Pinus* twig. A footnote by Dr. Dennis (*British Ascomycetes* 1968), said 'Apparently common a century ago but not reported for many years.' However, Clark in *Fungus Flora of Warwickshire* 1980 reported it from six Warwickshire sites and commented 'A very striking species up to 2 cm across, black with the outside of the cup stippled with red granules, often in groups.'
	Scopinella barbata (Pers.) (Lév.) ex Sacc. On a rotting acorn. A minute species, having an onion-shaped perithecium with a long neck, infrequently recorded.
Lee & Pagets Wood	*Ascozonus woolhopensis* (Renny) Boud. Notable not for its rarity but in acknowledgement of the origin of its specific epithet, having been collected on rabbit pellets at Lea & Pagets Wood only about a mile from Woolhope.
	Erithricium laetum (P. Karsten) Erikss. & Hjortst. An uncommon but distinctive pink corticioid (paint-like) species on broad leaved logs.
Queenswood Arboretum	*Ceratellopsis acuminata* (Fuckel) Corner. On *Pinus* needles. It is reported that the only other UK records are from the Scottish highlands.
	Desmazierella acicola Lib. On *Pinus* needles. The apothecia (teleomorph state) which are set with stiff bristle-like hairs are seldom found, although the anamorph is common on pine needles.
	Epibryon interlamellare Dobbeler. Probably new to Britain but confirmation awaited.
Croft Castle Estate In field leading to Croft Ambrey	*Ceriporiopsis gilvascens* (Bres.) Dom. (= *Poria g. & Tyromyces g.*). A waxy thin whitish-pinkish polypore which bruises reddish-brown when touched, growing on a stump. Infrequent.

Fishpool Valley	*Diplomitoporus flavescens* (Bres.) Domanski. (*?Antrodia f.*) on *Pinus.* Reported as only the third British record (not yet officially published) and confirmed by Dr. Leif Ryvarden.
	Mucronella calva (Alb. & Schw.) Fr. A hericioid (spiny or toothed) fruitbody not often recorded.
Moccas Park	*Oliveonia fibrillosa* (Burt) Donk. On ?oak log. An unremarkable-looking corticioid (paint-like) fungus, only recently added to the British list.
Garnons Hill Woods	*Trichothyrina parasitica* (Fabre) v. Arx. A minute fungus which is parasitic on other Pyrenomycetes.
Queens Wood Dymock	*Galzinia incrustans* (Höhn. & Litsch.) Parm. On oak branch. Another unremarkable-looking corticioid (paint-like) fungus, only recently added to the British list.

Buildings, 1996

By J. W. TONKIN

This year the old Buildings Group looked at three areas just outside the county; Norton Court in Skenfrith, Gwent, Glasbury Old Vicarage in Breconshire, and Ludlow in Shropshire.

Two week-end schools with the writer as tutor were based in Bromyard.

In the notes below information in the R.C.H.M. Inventory has not been repeated though in some cases the two need to be read together.

ACTON BEAUCHAMP

CHURCH HOUSE. SO 680504 Tithe No. 166

This house was reported on in these *Transactions*, XLVI (1988), 96. A further visit this year gave an opportunity to look at the roof construction of the roof over the stable and granary. They are both of the upper base-cruck type and it is interesting to find good dated examples (1802) of this tradition continuing.

HOLMER

SHELWICK COURT. SO 527430 R.C.H.M. 11 Tithe No. 609

This house was briefly reported in these *Transactions,* XLIV (1982), 127 and XLVII (1993), 358-9. Since then it has been restored by the Landmark Trust and is now used by that body.

As one approaches it appears to be a good example of a well-to-do farm-house of *c.* 1700 with its stone front facing S. and single mullioned, single transomed windows and central front door. However, the E., N. and W. walls are all typical Marcher timber-framing and, though now weather-boarded, hide a good 15th-century first-floor great chamber of three bays with cusped braces to the tie-beams and cusped principals with cusped raking struts from the tie-beams forming a central sex-foiled opening with trefoiled decoration either side. There is one tier of cusped wind-braces with sunk cusp points. The most striking feature of the room is the big quatrefoiled panel either side of the truss on the E. wall. These are very similar to a feature at Swanstone Court in Dilwyn parish which were against the end wall of the base-cruck hall. In the S. room of the ground floor is a transverse painted beam, again typical of later medieval houses. As the rooms to the W. seem to be part of the *c.* 1700 alteration it seems quite likely that there was a 15th-century hall to the E. of the present building.

KINGTON

TOTHILL. SO 280528 Tithe No. 699

This house is not mentioned in the Historic Monuments Survey of the late 1920s/early 1930s which was trying to cover all buildings built before 1715. It should have

been included for it has features of the late 16th century as well as some re-used 15th-century work. However, its solid, square 19th-century appearance probably misled the investigators.

The main room with its window facing S.E. seems to have been originally about 24 ft. by 20 ft. with its ceiling divided into panels about 8 ft. square, by heavy beams with a broad chamfer of 6½ ins., each big panel being subdivided into four about 4 ft. square by timbers with a 3½ in. chamfer. The joists in each of these smaller squares were chamfered with a plain triangular stop and ran at right angles to those in the adjoining squares giving a chequer-board effect. These joists are now hidden by a later ceiling, and the south-western 8 ft. and north-western 4 ft. have been cut off, the former to form an entrance hall, the latter into the next room. The fireplace is on the N.E. wall and there is evidence in the wall of a much bigger elliptical-arched lintel before the present fireplace was made. This is a room with evidence of considerable wealth in the builder. The deep chamfer points to a date probably in the third quarter of the 16th century. There are very similar beams and joists in the White House at Aston Munslow in the Corvedale in Shropshire. The chequer-board effect is found in a number of wealthier houses in the main room, the parlour.

To the N.W. of this main room is a room about 17 ft. by 16 ft. with beams laid flat running across its width. This is usually a sign of early work, but there seems to be no evidence of an earlier date unless this is part of a 15th-century house of which there is some more evidence in the roof. The window is in the N.E. wall and the fireplace on the N.W. The external doorway in the N.E. wall is opposite a doorway into the room to the S.W. which is about 23 ft. by 21 ft. with windows in the N.W. and S.W. walls. There are two beams, one running the length of the room, the other across it into a cupboard and stair-well which projects about 3 ft. 6 ins. into the room. The fireplace is in the N.W. wall close to the window and the longitudinal beam runs into the wall over its south-western jamb.

The main entrance in the S.E. wall leads into the entrance hall, mentioned above, from which a stairway leads up to the first floor and the attics, with a big cupboard, mentioned above, occupying the space between the stairway and a ground-floor cellar about 9 ft. by 14 ft. with a window in the S.E. wall and a fireplace in the S.W. These ground-floor cellars are often found in 16th-century houses where it was felt an underground cellar might flood.

The first-floor rooms follow the pattern below and those over the chequer-board ceiling have the floor boards laid at right angles to the joists below. These floor boards are about 10 ins. wide.

On the stairs is some re-used panelling some of it from the later 16th or early 17th century. At the top of the stairs one stretch of a frieze from the same period has been inserted with typical early Renaissance ornament on it.

The roof is of three bays with two trusses made up from re-used 15th-century trusses with slots for braces on one of them and evidence of wind-braces of the same date on one of the purlins. Also on the purlins are peg-holes for rafters showing that the original roof was that of a wealthy house.

As it is today the trusses carry two trenched purlins on each side and a ridge purlin.

A row of later stabling joins the house to the barn. The latter is stone, of five bays. Three of the trusses are of queen-post type with carpenters' assembly marks similar to the few found in the house, i.e. scratched and about 3½ ins. long with a difference mark on them for different levels. This length of mark is normal in the period *c.* 1575-1640 in this area. The fourth truss is of a later type with raking struts and heavy punched carpenters' assembly marks typical of the late 17th century.

Beyond it to the S.W. is a later weather-boarded threshing barn.

LINTON BY BROMYARD

OLD YEARSETT. SO 707529 Tithe No. 780

This house is not mentioned in the R.C.H.M., but it seems to be pre-1715, so should have been included. It is a four-bay house, of regular, square, timber-framed panels, twelve panels long and three high, and from the weight of the timber probably dates from the early part of the 17th century. To the N. of the house and at right angles to it is a fine stone building containing cart shed and barn probably 18th century in date. There are also some modern buildings behind the house.

PIPE AND LYDE

OLD FORGE. SO 502451 Tithe No. 84

This building is not mentioned in the R.C.H.M. Inventory of the late 1920s/early 1930s, but the original timber-framed cottage of one room up, one room down seems to date from *c.* 1700 with the single storey forge as an extension to the S. Thus it should have had a brief mention in the Inventory.

The roof has been raised, the original cottage probably having been lit upstairs by a dormer window.

The brick front is of Flemish Garden Wall bond with a row of Flemish bond alternating with a row of stretchers and there is a single brick black plat band. The bonding looks late 18th century perhaps *c.* 1780 but could be later and with the plat band in black brick is probably into the 19th century perhaps *c.* 1830.

There is a well outside the N. gable and a privy in the garden to the W.

Until road realignment about thirty years ago this house and forge were immediately adjoining the main Hereford-Leominster road.

WELLINGTON

EAST COTTAGE. SO 495482 R.C.H.M. 6 Tithe No. 344

The R.C.H.M. suggests that this cottage was built early in the 18th century, but after an examination of the interior and the roof it appears to be about a century earlier. Externally the regular square panelling is broken by diagonal braces to the wall-plate which is

normally a late-16th-century feature in this area and could be early 17th, and by a big single diagonal brace against the eastern fireplace. At the western end a lean-to has been built against the big external stone stack. The posts at each end have enlarged heads as has the post in the lean-to typical of Herefordshire 1570-1640. All the windows on the front with the exception of the small one on the first floor could well be in their original position.

The western stone stack has a later brick chimney and the timbers above the tie-beam in this gable are later replacements, quite probably as late as this century.

The central longitudinal beam in each room has a 3 in. chamfer with ogee stops at the ends; this depth of chamfer is usually found in the early 17th century, *c.* 1600-*c.* 1630. The lintel of the western fireplace is also chamfered.

The best dating evidence is in the roof which has a collar-beam with V struts from it to the principals. These carry two through purlins in 'trenches' cut into them on each side, and there are three vertical struts from the tie-beam to the collar. There is a ridge purlin trenched into the apex where the principals meet. The pegging is interesting in that at the main joints there are double pegs while at the less important ones there are single pegs. Normally there are two pegs at each joint in the houses of the better off and only single ones in those of the less well off. It is unusual to find this mixture.

The carpenters' assembly marks are about 5 ins. long, usually a sign of later 16th-century work and they have little semi-circles on them to denote different levels.

A doorway upstairs has a four-centred head, again a 'Tudor' feature, but one which goes on into the 17th century.

Thus the evidence seems to point to a house of the late 16th century of a reasonably well-off person possibly a tradesman in the village or a husbandman or yeoman engaged in farming. As tradesmen are often referred to as yeomen, a social class rather than a farmer, this house could well be described as a yeoman's house.

STOKESAY, SHROPSHIRE

OLD RECTORY, NEWTON. SO 434826 Tithe No. 184

The external walls are of close-set timber-framing with a central rail with brackets on the corner posts to carry a jettied first floor. This is a real show-piece of diamond panels and there is some more of it in the attic gables. On the rear wall there is a big lateral stone external chimney with diagonal nibs on the brick shafts; there is a roof of stone tiles, probably of a local limestone. In the wall opposite the chimney is an oriel window. There is another big stack on the kitchen wing.

On the ground floor the parlour fireplace has stone jambs and a timber lintel all with the same elaborate moulding of a hollow, an ogee, a quirk and then a roll, which is typical of the mid-to late 16th century. The room is entered from the E. The two transverse beams are fairly heavy with a 3 in. chamfer. The stops on the fireplace jambs are quite high.

On the first floor is another fireplace above that below and again with a timber lintel and stone jambs, but this time with an ovolo mould. This is opposite the oriel window

which has alongside it a garderobe a feature often found in the master's room of medieval and 16th/17th-century houses.

In the attic the fireplace in the same stack as those below has a plain chamfer; so the three have become simpler floor by floor. There is a window at each gable and two trusses making a three-bay roof. The wind-braces which appear in each corner are straight instead of the more usual curved type. The window in the gable by the stairs is to the S. of them instead of in the centre as is more usual in gables.

Thus here we have a typical Renaissance type added parlour wing with the features one expects to find in them, the ovolo mould which seems to have arrived in this area very early in the 17th century, the symmetrical details of the panelling and the diamond pattern of the timber-framing. The diagonal nibs on the chimney are also common in the period 1570-1630. On the other hand the moulding on the ground-floor fireplace is more often found earlier in the 16th century. The plain chamfer has a long run but the ovolo mould is found *c.* 1610-40. Thus taking these features together a date ten or so years either side of 1625 seems probable for this wing, say 1615-35.

Although called the 'Old Rectory' this house does not appear ever to have been the official home of the incumbent. Stokesay is not in fact a rectory, as is clear in the Terriers, one of 1607 and the other undated, but probably a generation or so later. This states that there was a vicarage with a stable, barn, orchard and garden, and on the tithe map of Stokesay *c.* 1840 these are shown as plot 73 adjoining the churchyard which is plot 74.

The Rev. Thomas Dixon was instituted to Stokesay on 1 May 1829 and resigned on 17 August 1844. At the time of the tithe map *c.* 1840, he was living in the house at Newton which is plot 184 and described as 'House, garden, Buildings, Fold & Orchard' and belonging to the earl of Craven.

SKENFRITH, GWENT

NORTON COURT. SO 444202

Surprisingly this house is not mentioned in either Peter Smith *Houses of the Welsh Countryside* (1975) or in Fox and Raglan *Monmouthshire Houses* - 3 vols. (1951-4).

At first sight it looks as though it could date from the late 17th/early 18th century with new windows and some alterations in the later 19th. It is built of red sandstone rubble with the roof of the main block being hipped at each end, and some single mullion, single transom, †, windows still surviving at the rear.

However, the evidence in the roof points to an earlier house with an open hall, probably that shown on a map of Henry VIII's time now in the church at Skenfrith. The main block with its roof hipped at each end appears to be the earlier house and, perhaps significantly, this is where the older roof timbers can be seen.

N.W. of this block is a part of the house with a slightly lower roof and then at the N.W. end is the kitchen wing, the gable of which faces the visitor arriving by road.

The S.E. gable of the house has a blocked window toward the southern end and two blocked windows toward the other end indicating a stairway in that corner of the house.

Along the back there is evidence of a blocked doorway and two blocked windows, and the sill from the southern of these was found lying in the garden with the base of its two mullions carved out of the same piece of stone. Further along the wall are five other windows at ground-floor level, the one in the hipped block being of the single mullion, single transom type, and the others having elliptical heads, typical of 18th-century work. Upstairs there is evidence of two blocked windows, one above the blocked doorway and one above the northern blocked window. Just N. of the southern blocked window is a single mullioned, single transomed window and a similar one above the one like it on the ground floor. On the later part there is one window just S. of the cross-wing gable above the third window from the N. The N.W. wall of the wing has a doorway in the middle of the main block and another in the wing.

The W., front, wall of the house has two doorways, one close to the wing and the other in the main block with a three-light window to the S. and four two-light windows between it and the other doorway. These windows have typical 18th-century lintels made of thin pieces of stone set vertically. The first-floor windows on the main block are above the central doorway and the windows either side and are all of two lights. The wing has a window on each floor in the gable similar to those on the front of the house, one in the S.E. facing wall again on each floor and on the N.W. wall a doorway in each room down and a window in the upper, northern room. All the windows are splayed.

In the house it is difficult to be sure as to the original function of the rooms. The hall could have been either of the rooms which has its fireplace in the big central stack, but the southern one which had the big blocked window on its N. wall seems the more probable. It had transverse beams as opposed to lateral beams in all the other rooms, but as these have been cased one cannot tell whether or not they were moulded. There is a cupboard in the stack against the N. wall with the doorway through the thickness of the stack. Both rooms are about 15 ft. square.

If this was the case it is probable that the end, S.E., room was the parlour. It has a circular stairway in the S.E. corner against the gable fireplace, a blocked window on the other side of it and a three-light window facing S.W. The two longitudinal beams are about 18 ft. long, and the room is entered from the 'hall' by a doorway against the N. wall. It is the only room in the house which has evidence of murals remaining, on the S. wall between the windows and the blocked doorway. The gable fireplace has moulded jambs and lintel with a roll, quirk and a hollow.

The room to the N. of the central stack also has longitudinal beams and a two-light window on the S. wall and another on the N. It is difficult to be sure of its function. If it was the parlour it seems strange that it should be here where everybody would have had to pass through it between the hall and the service wing.

From the N. wall of this room there is a one-step rise to the northern part of the house; the part beyond the hipped-roof block. The lower part before reaching the wing consists of two small rooms one only 6 ft. wide and the other less than 9. Each has one window in the N. wall and there is a two-light window in the S. wall which would have lit this area before the modern longitudinal screen was inserted.

In the wing the room on the northern corner has three longitudinal beams each about 10 ins. wide with 4 in. hollow chamfer. It is 16 ft. longitudinally and 19 ft. wide along the length of the wing. The fireplace is central in the N. wall with a window either side and an external doorway in the E. wall. Another doorway in the S. end of the dividing wall leads through into the other room in the wing which also has a doorway in the N. wall, and a window in each of the S. and eastern walls. There is one beam about 11 ins. wide across the room, again with 4 in. chamfer. The room is about 16 ft. across the width of the wing and about 19 ft. long with ten exposed joists either side of the beam.

On the first floor the room at the south-eastern end has in the south-eastern corner the doorway at the top of the circular stairway, two windows in the N. wall and two cased longitudinal beams. To the E. side at the top of the stairs is a garderobe in the wall. There is a series of carpenters' assembly marks on the posts of the screen dividing this room from that to the N. The fireplace on the E. wall has moulding similar to those in the room below. The mouldings on the fireplace, the garderobe and the number of windows in this room mean that it was almost certainly the great chamber and this would confirm that the room below was the parlour.

In the next room, over the southern part of the hall is one transverse beam with a 1½ in. chamfer. The other side of the dividing screen can be seen here and there are two heavy posts each about 11 ins. wide with 4 in. chamfers. The room appears to have formed one room with that to the N. before the insertion of a later partition, and this second room has a similar transverse beam though with a rather wider chamfer.

Beyond this is the 5 ft. thick fireplace wall above that below with a cupboard at either side and a doorway against the E. wall through to the next room which has two longitudinal cased beams and a two-light window on each external wall.

There then follow to the N. two small rooms over the two below before reaching the stairway which leads down almost opposite the doorway in the corner between main block and wing.

In the rooms in the wing there are again transverse beams with 3 in. chamfers and 'Wern Hir' stops i.e. run-off stops with a little step to the chamfer. In the roof over the main block are four trusses which have evidence of smoke blackening on them and are presumably from the earlier house which occupied this site. The southern and northern trusses both have collars and terminate at an upper collar, presumably having been the end trusses of a hipped roof as they still are today. The southern one has straight braces diagonally from principal to collar, the southern principal being a re-used floor beam. The second truss from the S. has a collar, a ridge purlin and evidence of arched-braces which had been tenoned into the principals. It could well be the re-used central truss of an open hall as there is evidence of what appears to have been a spur to a post on the eastern principal. The third truss from the S. has a collar and evidence of two trenched purlins on each principal, one above and one below the collar. It is, however, finished in a single-pegged joint at the top with no provision for a ridge purlin.

Thus although the first appearance is of a house *c.* 1700 with 19th-century alterations there is considerable evidence for an earlier house. The smoke-blackened timbers appear to be from an open hall presumably of date not later than the early 16th century,

probably earlier and seem to be from a house with an open hearth and a half-hipped roof. This could have been thatched or stone-tiled and from the weight of the timbers probably the latter. Other evidence points to a major alteration in the late 16th, perhaps just early 17th century. The series of carpenters' assembly marks on the screen dividing the southernmost rooms on the first floor are of that period, as are the beams in the rooms downstairs at the N. end and in the wing. These have a hollow chamfer (cavetto) of about 4 in. depth which is usually late 16th century, Elizabethan.

The fireplaces in the rooms on the ground and first floors at the southern end of the house have mouldings of a roll, quirk, hollow which again is a feature of the period *c.* 1600, late 16th/early 17th century.

Thus there is at Norton a house which has changed and adapted itself to change over a period of four hundred years, probably a little more. An original house of the 15th century, probably open to the roof, major changes in the late 16th/early 17th century, the 'great rebuild', more changes about a hundred years after that, especially in the windows and finally more changes in the late 19th century, and now again in the late 20th.

During the year fifteen planning applications concerning listed buildings were received. Most were for minor additions and alterations, but one needed an objection. This was for the Grapes Tavern in East Street, Hereford. It had received an award in 1992 after being completely refurbished, and then in 1996 the removal of the ground-floor chimney stack was suggested and this would have changed the layout of the rooms and robbed the building of much of its architectural value.

As in the past my thanks are due to a number of people, especially those who have drawn my attention to buildings and those owners and occupiers who allowed me to wander around their houses and outbuildings.

Geology, 1996

By PETER THOMSON

At 5.32 am on 17 December 1996 the centenary occurred of the Hereford earthquake. The event was fully documented in the *Transactions* of 1896. All sites from which damage was reported were mapped and the resulting distribution suggested that the epicentre lay somewhere in the area of the Woolhope Hills. Notable damage was caused to pinnacles on the cathedral, St. Martins and St. Nicholas churches and at Dinmore. Chimneys also suffered in many places.

The 'quake is thought to have originated from movement some 30-60 kms. below the surface in pre-Cambrian rocks underlying the area. It lies within the zone of the Vale of Neath disturbance which is a line of geological weakness running from the Vale of Neath in a north-easterly direction across Herefordshire and on to the Midlands. The zone is said to be one of the most seismically active areas of Britain with its most active part in the Hereford district.

On the same day as the earthquake took place the Woolhope Club committee met and resolved to join the newly-formed British Mycological Society at an annual cost of 10 shillings. I know of no connection between the two events!

Other events of geological interest in which the club was involved in 1896 included a visit on 23 June to 'The works of proposed Birmingham water supply from the Elan Valley' in Wales. On the 19 May the club held its first outing of the year which took them on foot from Woofferton Station via Croft Ambrey, Aymestrey and Mortimer's Cross to Kingsland Station. In the course of the walk there were many observations of the natural history and history of the places en route not to mention a 4 o'clock dinner at Mortimer's Cross and a meeting in the shade of the Gospel Oak to hear Sir Herbert Croft read a paper. One can't help admiring their stamina.

1996 has produced little on which to report except two fossil finds. One was the head shield of a fish - possibly a Pteraspsis species - found and kept on a farm near Fownhope. The specimen is in the middle of a nodule about 30 cms. in diameter which split open when struck by a plough some years ago.

The second, reported by Dr. Peter Cross, was a specimen of *Orthoceras bullatum,* a straight Cephalopod, found in excavations for the foundations of a farm building in the Wigmore area.

Herefordshire Field-Names, 1996

By GRAHAM SPRACKLING

The supply of older, and additional field-names from sources other than the tithe-maps continues to come in at a steady, if somewhat slow rate.

Further contributions of older field-names for Part 2 of the survey would be most welcome.

PART 2 FIELD-NAMES FROM OTHER RECORDS

Parish Name: LEDBURY

Contributed by John Wickham King

TITHE NO.	FIELD-NAME	DATE	SOURCE
1663	Roberts Wood	1816	Inclosure Award
165	North Holborn Croft & Upper Orchard		
155	Lime Kiln Hill		
180 (part)	Bishops Orchard		
174	Pigshilth Orchard		
376	Palmers Crow Field		
159	Vineyard		
979	Roberts Wood		
958	Orchard adjoining Glover or Clover Piece		
960	Glover or Clover Piece		
380	Lower Picklehick		
379	Upper Picklehick		
957 (part)	Beggars Ash Meadow		
977	Mercotts Orchard		
997	The Seven Acres		
1579	Cherry Orchard		
1588	(includes) The Camp, Drews Hill & Richards Hill		
1608 (part)	Coneybury Cross		
1617	West Field		
1590	(includes) Fishpool Piece Longhill (part) Woollas (part)		
1592	(includes) Suggals, Sandy Woollas, Woollas, Siege Field, Sling (part), Bodman Orchard (part).		
1460	Wild House Homestead		
1365	Hazle Mill		
1380	Hatchfield Leys		
1385	Hazle Homestead		
1485	Long Meadow		
1528	Long Meadow		
1329	Kiles Croft		
662	Upper Windlass		
663 (part) (part)	Lower Windlass In Winsters Elm Meadow		

23	Barn Piece
1461	Pleck
113	Pigeon House Meadow
1468	Edys Meadow
1474 (part) (part)	Palecroft Cot Hopyard
545 (part)	The Ballas
557	(includes) Scotland, Howfoots & Crabtree Coppice
558	Scotland Wood & Howfoots
544	Brashes
588	Priors Court Homestead
583	(includes) Oldbury Hopyard & Hild Hopyard
694	Lower Grit
695	Upper Grit
702	Great Hadnor
784	(includes) Horse Hill Field & Birch Groat
783	Crossway Pleck
796	(includes) Little Horse Hill & Upper Horse Hill
687, 688	Roughett
690	Strits Meadow
692	Allcotts Thorn
691	Strits Tillage
959	Beggars Ash Meadow
1379	Tatlers
1430	Maudling Furlong
1453	Maple Furlong
1458	Mouse Tree Barn Orchard
1459	Barbers or Winn Meadow
1439	Chadnors Horn
1492 (part)	Long Meadow
1498	Wheatridge Pleck
1522	Flax Field
1375	Pye Corner Orchard
1523	(includes) The Grove & Hall Farm Close
1012	Lower Pool Meadow
1005	Newberry
1013	Lower Horn Croft
1022	Winters Meadow
1061	Grove Field & Old Orchard
1058	Fairtree Homestead
1209	Fresh Man Land Orchard
1214	Lower Tripelow
1232	Upper tripelow
1120	Flights Homestead
1083	or Nash Meadow
1090	(includes) The Moor & Over Land
1091	Baldwins Meadow
1094	(includes) Cow Leasow & Square Meadow
1095	Grubs Hole Homestead
1141	Kites Ness
1150	(includes) Heart Piece & Old Womans Croft

657	Ninages
685	Pleck
80, 88	Chuckmoor Coppice
101	Coltham Wood
801	Cottage garden & 2 Orchards
1657	Pint Pear Orchard
804	Big Meadow
812	(includes)
	Wheatmoor otherwise Wetmoor &
	Young Hopyard
893	Old Fold Orchard
1661	Plaisto Homestead
900	Upper Tallyard
907	Lower Tallyard
936	Weir Field
602	Twinkler
605	Harvey Lands
609	Pig Orchard
608	Stonehouse Homestead
634	Twinkler Meadow
635	Root Homestead
636	(includes)
	Little Hopyard, Green Orchard and
	Fallow Orchard
637	Twin Kler Field
641	(includes)
	Old Orchard & Woodcock Farm
714	Woodhouse Homestead
725-6	Hopyard
924	New Mill Orchard
580	Pegs Farm Homestead
578	Hollow Meadow
579	Wainhouse Orchard
593	Crowcroft
565	Tunchy Leasow
569	Upper Gaston
571	(includes)
	Lower Gaston & Square Piece
751	Cold Ley
755-6	Ox Leasow
757	Cunningbury Orchard
759	Quatsford Homestead
760-1	Garden Meadow
822	Homebrook Orchard
753	Stiff Orchard
877	Round Bush Orchard
914	Rea Homestead
918	Orchard & Old Hopyard
1153-5	Round Bush Orchard
1154	Round Bush Homestead
659, 664,	
1649	In Winsters Elm Field
99	Homestead
814	Wheatmore orwise Wetmoor
847	Loak Field
1658	Three Acres
880-1	Wheatmoor orwise Wetmorw
1157	Baynham Place Homestead
1168	Bar Croft

631	Burtons Homestead
633	Barton Meadow
674	(includes)
	Pauls Meadow, Four Acres
680	(includes)
	The Green & Sawpits
1	Part of Long Meadow
2, 3	Snitch Wood
5, 8, 11	Great Orchard
95	Bullen Homestead
81	Lower Cheltmoor Orchard
87	Upper Cheltmoor Orchard
96	Hopyard
100	Cheltmoor Orchard
384	Near Beggars Ash Ground
1532	Argus Homestead
1369	Cottage, garden & croft
1370	Mill & croft
1563	Broom Gains
1560	(includes)
	Noad Homestead & The Green
1346	Seedington Homestead
1398	(includes)
	Ash Meadow & New Meadow
926	New Mills Homestead
934-5	Weir Field
768	Marley Hall Homestead
769	Marley Meadow & Farm orchard
938	Homestead & orchard
896	Orchard
1516	Chadnor Garden
625	Callow Croft
733	Baregains Homestead
734	Hopyard
736	(includes)
	Upper Meadow & The Sling
613	Whithers Homestead
598	Herry Field
548	Sling
975	Orchard
1604	(includes)
	Duggans Cross, Lower Beach &
	Great Heal Field
1606	Great Haf Field
723	Juggs Green Homestead
774	(includes)
	The Bank, Old Hop Yard &
	Wainhouse Field
778	(includes)
	Little Baginhall & Ox Pasture
943	Rea Meadow
337	Lower Butts
430	(includes)
	Siding & Linder (part of)
535 (part)	Loxter Field
417	Fishpool
418	Holds Meadow
427	Siding & Linder (part of)
434, 437	Comeley Ground

648	Hill Top Homestead
651, 1646	New Building
661	Butlers Pleck
666	Mill Meadow
36	Dingwood Park Homestead
31	Durlocks Orchard
45	Nursery
46	Meadow
48	Upper Woolpits Homestead
51	Home Park
1246	New Lilly Hall Homestead
1252	Crabtree Piece
1280	(includes)
	Wagnell, Siblas Acre & part of Wakenhill
1278	Cow Leasow
1673	Sea Bridge
845	Lower Walk Meadow
855	Upper Walk Meadow
856	Callow Hills Homestead
857	Pear Tree Orchard
858	Part of Linage Field
823	Hillcroft Coppice
73	Dunbridge House, garden &c.
76	Bandalls Meadow
90	Part of Wallcroft
1470	Gast Field
1295-7	part of Old Common Field
1320	Orlam Homestead
1317	Seeding Grove
863	Upper Wall Hills Homestead
1173	(includes)
	Old Hill & Home Orchard
1268	Old Lilly Hall homestead
1274	Bower Field
1103	Crabtree Piece
1073	Lower Wallhills homestead
1101	Little Peashill
413	Pudding Dog
1029	Hornhouses Orchard
1043	Walkers Hill Meadow
1045	Lower Tyning
1010	Lower Bargains
385	Beggars Ash Ground
386	Middle Beggars Ash Ground
387	Upper Beggars Ash Ground
982	Cales Croft
1283	Siblass Acre or Siblas Croat
747	The Field
1229	Brick Clump Field
1235	Rowlands Green Cottage & garden
1237	Burnt Land
1313	Great Boughshop
1672	Boughshop
1285	Siblass Acre
1286	(includes)
	Cloves Patch & Ludstock Meadow
1288	(includes)
	Ludstock Meadow & Rysters
1291	Pear Tree Hitch

1303	(includes)
	Siblass & Ludstock Croft
1304	Omblers Orchard
1306	Boughshop Croft & Boughshop Orchard
1308	Boughshop Crofts & Orchards
1325	New Inn House & Garden
1236	The Tynings
1302	Part of Old Common Field
965-7	New Mill Orchard
1502	In Wheatridge Field
1503	Cottage & garden
330	Mitchell Coppice
15	Clinchers Mill Wood
394	Briers Hundred
397	Further Banks
399	Striking Ground
410	Frith Homestead
416, 419	Bridge Moor Wood
489	Hacknell Wood
426	Davids Croft
82	Ox Leaze
236	Rister Field
243	(includes)
	Pigeon Close & Stoney Meadow
252	Bargains
256	Barn Pleck
259	Massington Homestead
1625	Hope Meadow
283	Stable Field
288	Netherton Homestead
290	Cow Pasture
294, 302	Rushey Ground
303	(includes)
	Lises Orchard & Gorsty Ground
201	(includes)
	Tucknall Bank & Kilbury Camp Field
203	Over Meadow
219-20	Upper Alledines
222	Alledines
210	Common Horn
329	Upper Mitchell Homestead
345	Hambling Croat
349	Lower Windmill Field
263	Cop Croat Field
272	Awkeridge Homestead
998	Nags Head Orchard

NB

Please note the following amendments to the Ledbury parish list of field-names in Part 1 of the survey of Herefordshire field-names from the tithe maps.

1237- Burnt Land (not Burut as printed)
1236 - The Tynings (not 1226 as printed)
769 - Marley Meadow (not Moseley meadow as printed)

SOURCE

Ledbury Inclosure Award 1816 HRO Q/R1/25

LEDBURY. Contributed by Bruce Coplestone-Crow

UNIDENTIFIED

NAME	DATE	SOURCE
Wysingsete, Wysintsete	(none)	St. K.
Le Garste (field), Jayescroft, Nozorathorne, Heycrofte, Wetcroft	*c.*1240	St. K.
Holemedewe	1242	St. K.
Neustret	1305	St. K.
Joustret	1301	St. K.
Southend	1321	St. K.
Le Homende	1360	St. K.
Mytulton	1347	St. K.
Middletune	(none)	St. K.
Novo Vico	1330	St. K.
Smethemedue	1319	St. K.
Attenhulle, Godescroft	1321	St. K.
Hoddenhope	1329	St. K.
Humbleworthin (field)	1323	St. K.
Tebelines perrockes in Ledeburefeld	1352	St. K.
Aldestresfelde	1360	St. K.
Hope under le frithe	1330	St. K.
Bruggescroft, Attenhull (field), Clerkenmuln furlong	1372	St. K.
Westonesfield	1373	St. K.
La Dirfaud	1200-15	VCH Worcs.
Westbrugge, Coningwode	*c.*1285	Red Book

KEY TO SOURCES

St. K. A. T. Bannister, 'A Descriptive Catalogue of Manuscripts Dealing with St. Katherine's, Ledbury, *Trans. Woolhope Natur. Fld. Club,* (1923).

VCH Worcs. Victoria County History, Worcestershire.

Red Book. A. T. Bannister, 'A Transcript of the Red Book of Hereford,' in *Camden Miscellany, (*1929).

Mammals, 1996

By BERYL HARDING

Bats: It now seems to be established that there are two species of pipistrelle not distinguishable by size or colour but by their echo-location patterns. One has a darker band across the face and echolocates at 46 kHz while the other has a 55 kHz call.

Fallow Deer: In 1956 the Forestry Commission ranger, Gerald Springthorpe, reported the existence of some long-haired fallow deer at Mortimer Forest - an area of some 2,000 hectares.

Three main coat types are found:-

a) the common dappled type with a rich, reddish summer coat and spotted. These spots do not occur in their thicker, brown winter coat.

b) the black type with a shining summer coat turning dark chocolate in winter,

c) the dun type, brown in summer and grey brown in winter - a cross between the other two.

Very occasionally, a white type occurs and also a menil type which is a pale version of the dapple but retaining its spots in winter. The long hairedness has, so far, only occurred in the first three.

John Voysey reports in the Nature Trust Journal that, following further study by himself and Gerald Springthorpe, the long hairedness is most obvious when viewed frontally with hairs up to 15 cms. in the ears; long eyelashes and eyebrows. The flanks and back have hairs up to 10 cms. compared with the normal 4 cms. and the tail has hairs up to 45 cms. rather than the normal 25 cms. First winter fawns are particularly shaggy and young bucks grow a thick mat of curls on the forehead. The quantity and length of long hair declines with age.

Reading University set up enclosures in Mortimer Forest and the New Forest to make controlled crossings to study the mode of inheritance and also the advantages and disadvantages of this characteristic. Results show that the long hair is finer and easily wetted, causing the coat to cling to the skin and perhaps lower insulation. The body weight of such fawns is below normal and their hair growth continues all winter, unlike the others.

Research is ongoing and could be of value for cell growth studies and animal coat utilisation. This unusual coat type has not been recorded elsewhere in Britain, nor seen in any other fallow deer species in other parts of the world.

Brown Hares: The results of the National Hare Survey carried out by Bristol University in early winter 1992/3 have now been published. The area allocated to me gave no sightings on the three occasions visited. The survey was completed before February when shooting starts and on average 40% are killed.

The results show that the population is only 20% of that at the beginning of the century. Numbers appear stable where they are preserved for shooting but not elsewhere. The population is also much less than anticipated with the midwinter number 817,000 ± 137,250 (95% confidence limit), earlier estimates were double that figure.

As a grassland animal it would be expected that the majority would be to the W. However, they avoid fields with stock and silage cutting kills many hares and leverets. So, unexpectedly, results show that the monoculture counties of Cambridge, Norfolk and Suffolk - although only 5% of the total land area - have 20% of the total population.

Ornithology, 1996

By BERYL HARDING

After the freeze that followed the 1995 pre-Christmas rain and floods, Bodenham Lake was almost completely frozen with two mute swans occupying the last 25 sq. ft. of water. Wellington Gravel Pits remained mostly ice free so the waterfowl moved down the valley - the presence of 155 tufted duck and 9 cormorant set a record, also three common golden eye (not common but scarce winter visitors) and six Bewick swans feeding in the fields nearby. The year closed with still more exciting counts, viz. 86 pochards, and 189 coots with 7 Gadwall drakes (also scarce winter visitors); with large flocks of fieldfare and redwing on the berries, and 21 mute swans and 65 widgeon in nearby fields. These figures are recorded by Paul Downes whose own personal count for this area is 108 species plus the black swan seen both last year and this. Originally four were seen in 1994, one has been killed and the others only sighted singly.

January gave milder overcast weather with snow and ice from the bitter N.E. winds at the close of the month. It had been the dullest January on record since 1909. The wetlands of the Lugg Valley continued to be well visited with widgeon and teal numbers increasing plus pochard, shoveller, snipe, golden plover and mute swan with some tundra swans and forty coot. Twenty-six Bewick were seen at Foy.

February continued cold with N. winds, snow and twenty nights below freezing. Snow on the ground obviously reduces feeding possibilities for owls but also for birds like great tits whose greater weight restricts feeding to ground level unlike the lighter weight members of the family able to feed at the uttermost twig levels. The small wren is also adversely affected but it has been found that tree creepers are more affected by cold wet weather when fewer survive as their plumage becomes sodden with constant contact with tree trunks and branches giving consequent chilling. The highlight for February was the red throated diver at Bodenham Lake, also seen by Paul Downes, the first record since 1887 when one was shot at Ross. Lapwing numbers rose to 1,500 in March along the Leominster bypass flood meadows.

The hot summer of 1995 followed by the record breaking warmth of October gave abundant beechmast and ripened the heavy berry crop which was exploited by many birds. These conditions also occurred in Scandinavia where millions of bramblings remained on the mast so only very few were seen here. The winter thrushes arrived later. However, berries were scarce there so an enormous irruption of *c.* 10,000 waxwings reached Britain. Their invasion though did not reach Herefordshire until February and then only in small numbers - by which time garden birds and tits had returned to gardens with a large influx of blackcaps from Europe.

With the re-issue of M.A.F.F. licences to shoot cormorants and goosander, both protected birds, a Wye Winter Bird Survey was carried out to monitor their populations. It was unique in that it involved six amateur ornithological organisations covering the Wye and its seven principal tributaries. The counts were made three times, once each in

November, February and March. Those involved moved upstream in their allocated sections and started at the same time. Hereford Ornithological Club covered from Ross to Hay. Full results have yet to be collated but the counts for the first survey in November are:-

250 goosanders along the length of the Wye in small numbers.
150 cormorants seen in most sections but none above Newbridge.
Also 100 grey heron in small numbers along S. and central sections.
50 kingfishers in small numbers along the S. and N. sections.
29 little grebe with few in the Herefordshire section.
3,200 mallard and common throughout.
425 mute swan along the S. and central sections.
15 dippers seen only in the northern section of Powys.

Ten other species were recorded plus snipe, woodcock and merlin. A second winter survey will be carried out in 1997 on the same basis for comparison.

March continued cold with a wet spell in the middle of the month. Northerly winds brought a hooded crow into the county.

The British Trust for Ornithology (B.T.O.) conducted a spring survey of rookeries as there seems to have been unexplained changes in their population since previous surveys. Unlike that of 1975 which was almost a complete national one this was done as a random sample of 2,000 tetrads (4 sq. kms.) across the country with the help of county bird clubs. 92% of the tetrads provided data giving a provisional count so far of 38,000 rookeries. For Herefordshire, of the sixteen tetrads allocated, the results were in 1975 eight rookeries with 173 nests and in 1996 seven rookeries with 375 nests, showing a nesting increase but the birds appear to be grouping more rather than dispersing.

Despite the chilliness of April it was mostly bright and our summer visitors began returning with the first chiffchaffs on 24 March and singing widely by the end of the month; the first sand martins by 17 March; swallows by 26 March and house martins by the end of the month. Swifts, one of the last to arrive, continued from 16 April. The cuckoo was first heard on 8 April at Dilwyn, Burghill on the 11th but not heard to the N. of the county until early June.

May was cold with ground frosts until the 16th, it was dry giving little wet mud for hirudine nest building. Far too cold for insects so birds needed supplementary feeding. It was the coldest May for thirty years with 2 May the coldest since *c.* 1690, so the caterpillar crop on trees failed causing those fledglings that hatched too soon to starve. If the swifts arrive too early for good food supplies they congregate over lakes and reservoirs where there is a source of emerging insects, or they finish nest building and close down their metabolism becoming torpid - their nestlings can also do this if necessary extending the fledgling period by up to twenty days longer. Needing a drop of 5 m. from the nest suitable places are becoming scarcer as more buildings are increasingly sealed at roof level.

The nest box results for the Herefordshire Nature Trust for 1995 showed that recording took place on 27 sites with 851 boxes recorded of which 478 were used. Fledgling number and occupied nest box numbers remained fairly constant with the previous

year, except for the tawny owl and nuthatches but a tree creeper used a box after an absence of five years. Our results for 1996 at Welsh Newton, where there are thirteen bird and four dormouse boxes, gave more blue tit eggs and fledglings reared than last year but great tit numbers were down. One dormouse box was used by a great tit and another by a dormouse and one bird box used by a dormouse.

At Woodside nature reserve, where there are thirty bird boxes and six dormouse boxes, our results gave the same slight rise on blue tit numbers. The great tits laid well but half only fledged but the nuthatch returned. Two pied flycatchers and one great tit were disturbed by wood cutting when nesting, the great tit sat tight but the pied flycatchers abandoned the eggs which chilled. However, they laid afresh in the same nests finally raising six young amid the old eggs. No dormice were observed but four bird boxes were occupied by field mice. Despite the cold spring the results were average as birds delayed nesting. Over the last five years the average egg laying had begun by 26 April whereas it was not until 4 May this year - this gave time for the later caterpillar crop to emerge.

Barn owls are reckoned to have bred well this year but the number of road deaths are taking a heavy toll, for tawnies also, so much so that the usefulness of releasing more rehabilitated owls in the county is being questioned and gradually phased out. 20% are being killed. Sightings of red kites are increasing and spreading further eastward - seen at Orleton and Woolhope. In mid-July sixteen were released in the Midlands as part of a future release plan of two hundred. Peregrines are also being seen over a wider area. Those at Symonds Yat successfully raised four young - beneath the gaze of some 6,000 visitors.

The summer was moderately dry with September mild into mid-October then rain, wind and cloud cover increased. The last of the house martins left by the first week in October by which time many wild-fowl species had returned. Although overcast, November was at first mild enough for leaf fall to be delayed. On 9 November the barometer fell to 960 millibars - the lowest for fifty years - with storm winds from the S.W. preventing the last migrations of several thousand Bewick swans.

Some of the other rarities seen during the year, apart from those mentioned, were a Mediterranean gull and a ring-billed gull in March, arctic tern, blue-headed wagtail, hobbys, hoopoe, two quail, a family of oyster catchers and two ruff. Two flocks of ostrich were also seen in May - presumably farm reared! Our winter roosting flock of pied wagtails seem to have abandoned the city centre. Small flocks were seen at the Bulmer/Sainsbury site in September-October but now gone.

City of Hereford Conservation Area Advisory Committee Report of the Club's Representative, 1996-7

By JEAN O'DONNELL

Many of the projected developments within the Conservation Area of the City have been delayed so that the threat to the riverside by a housing scheme near Belmont roundabout has been halted while plans were redrafted after objections. The river frontage is threatened upstream by an application by Hinton Football Club to rebuild a large pavilion and floodlight a new pitch on the flood plain below Broomy Hill. The use of lottery money for these schemes allows them to be more extensive than necessary. By the medieval bridge Mead and Tomkins is to be demolished and a temporary car park will occupy the site until it is redeveloped. It is to be hoped that an imaginative use will be made of this important site which affects the bridge and river aspects so dramatically. Out of the City but also on the riverside at Hampton Park a new housing development has caused consternation to local residents and the loss of a riverside walk. The threat to the Wye Valley within the City should not be underestimated as there are several schemes which need sensitive treatment.

The shops in the central area have been updating their appearance with guidance from the Planning Department. The current vogue for red, cream and dark blue are lending the facades a rather uniform appearance but the insistence of the use of correct materials has made for improvement. The Town Partnership scheme with English Heritage has meant that Church Street properties like Skinners and the Kemble Gallery have been refurbished. The Lewis Smith chemist shop building has been very well restored and is an improvement to Commercial Road. The original house was built by Leonard Johnson who became City Surveyor. It was part of the former Commercial Square.

In Bath Street the sudden demolition of Godsell's Garage meant the disappearance of the old fire station linked with De Lacy Street. Unfortunately it was not recorded in time although an exploratory excavation near the City wall has revealed the tail of the rampart. Bath Street now has a derelict appearance with an island occupied by the Venn Flats surrounded by a sea of car parks. On the N. side the complex of the old mill and baths once owned by the Hereford Society for Aiding the Industrious is not listed although an application has been made. Development on the car park next door could pose a threat to this example of social history.

The opening of the Mappa Mundi building in May by her Majesty the Queen has meant that a new view of the cathedral has been created. As it is the only new building in the precincts since the west front at the beginning of the century it is a welcome contribution from our time although it has obscured the appearance of the range of Tudor buildings by the bishop's palace. In Widemarsh Street the completion of the Angel House restoration by the City Council has reclaimed an important building. Its links with David

Garrick although minimal do give it some interest as part of City history. The Old House also received a face lift suitable to its venerable appearance. Continual repairs have become a necessity for the building's preservation. The Conservation Area Award Scheme was won by 4-8 Union Street which has been restored by a housing association and the City Council to provide homes. It is a worthwhile scheme which has enhanced the appearance of Union Street.

Plans for the new Hereford Hospital have not yet been submitted for planning approval but the scheme has been presented to the public and is likely to make a major impact on the City because of the closure and disposal of two major buildings: the General Infirmary by the river and the Victoria Eye Hospital in Eign Street. These are both to go to the development consortium as part of the contract. Fears for their future use in an alien scheme have already been expressed. The County Hospital site is to retain the temporary huts put up many years ago and the workhouse buildings are to be incorporated in the design but the main modern wing is to be demolished. The major problems of redevelopment on this constricted site are yet to be debated.

Archaeological Research Section, 1996

By THE COMMITTEE

The 1996 field meeting programme was carried out according to the schedule. Numbers 65 and 66 of the *Herefordshire Archaeological News* were published in the Spring and Autumn. They give full reports of the field meetings and of work done by members individually or in smaller groups. We are all grateful to our editor, Peter Halliwell and to Paul Remfrey who produces the master copies. In addition, Beryl and John Harding give us all a great deal of enjoyment in hosting what has now become our traditional garden party at their home in Llanwarne. They manage to make it equally pleasurable in summer warmth and sunshine or, as this year, in August's heavy downpours. In November the Eighth Annual Shindig was hosted by Monmouth Archaeological Society and enjoyed by everybody. As usual our A.G.M. and dinner were held in December in Hereford.

Thirty Years On

On 19 January present and former members gathered at the Teacher Centre to celebrate the thirty years of the Research Section's existence. Displays were on show of flints from the Garway Hill area; the late-11th-early 12th-century-pottery from the Castle Tump Field site in Upton Bishop; 1st-century material from a Romano-British site in Kings Caple where Iron Age and Severn Valley wares had been in use together; drawings and photographs of the Hereford and Gloucester Canal; also of castles and waterworks; photographs of the Roman road excavation at Mantooth in Bacton and of the Corras Chapel excavation. The Pitt Rivers Award Presentation dish for the work of the Field Survey team was proudly displayed, together with some of Geoff Gwatkin's excellent coloured tithe maps.

Muriel Tonkin gave a short talk about the formation of the A.R.S., and Rosamund Skelton, one of the founder members, spoke about its early days. Chris Musson of the R.C.A.H.M. (Wales), who has undertaken to do some flying for the Field-Name Survey as a result of the Award, showed some of the air photographs he has taken in Herefordshire. The celebratory birthday cake and refreshments were accompanied by a toast to the continuing success of the A.R.S.

On *9 March* our meeting was combined with the main club in a presentation by the Field-Name Survey team of the analytical work being done on some of the different groups of field-names. This will be fully reported in the *Transactions.*

Two unscheduled meetings took place: in March a day school in Presteigne was organised by the Clwyd Powys Archaeological Trust and the Radnorshire Society. This covered the extremely interesting post-excavation work as well as the excavations in the Walton Basin by Dr. Alex Gibson and his team, which we had been able to visit in the previous two years. In August we joined the Monmouth Society to see Dr. Nick Barton's work this year on the Paleolithic site at King Arthur's Cave.

FIELD MEETINGS

March 24. Huntington, Turret Tump, Lower Hengoed, Castle Twts and Kington Castles

Our first visit was to Huntington where we saw the little church set in a corner of the town walls. We walked up the western boundary of the town past a heap of stones which may mark a gate in the walls. The castle itself is set on a hill surrounded by walls that have deteriorated along most lengths into vegetation covered mounds. But some lengths still show the height of the curtain wall. The presence of a motte at one point of the curtain wall suggests an earlier castle which was substantially added to, when the curtain wall was built. Paul Remfrey said documentary evidence indicated that Kington Castle had ceased to function by 1216, and was replaced by the development of Huntington Castle on a site which was much larger than that at Kington. Huntington was a substantial castle which played a vital part in the border defences against the Welsh princes of Elfael at neighbouring Glascwm. Though Huntington Castle is frequently mentioned in documents from 1228, the town was not successful in replacing Kington.

The motte at Turret Tump at Middle Hengoed and a possible one at Lower Hengoed are also described in the report in *H.A.N.*; also the small motte and bailey called Castle Twts which probably dates from about 1100. The last visit was to Kington Castle where there is no evidence for any stonework. The timber castle may never have been replaced in stone after the burning of the town, and presumably the castle, by King John in 1216.

April 14. Richards Castle and the Bircher area

The site of the castle was explored under the guidance of Peter Carrow, director of the excavations. These had revealed a polygonal 14th-century keep, the remnants of a curtain wall, and a gatehouse with a garderobe shute. We also looked at the church with its detached tower. The nave was rebuilt in the mid-13th century, probably to accommodate the processions which were introduced into the liturgy at that time. The remains of the town's defences were seen.

In Haye Park, an ancient deer park, members examined a banked enclosure about 150 yds. square which was thought to be related to the management of deer. Possibly an area where deer were gathered before being released for a hunt.

May 12. Colwall and Herefordshire Beacon

In Colwall churchyard, E. of the church, there is a timber-framed building which was formerly the Church Ale House. This rare survival has been dated by dendrochronology to 1530. It probably owes its survival by being used as an almshouse until the 1930s. Only the exterior of the interesting church could be seen owing to the service taking place at that time.

After lunch members climbed up to the 'Citadel' of the Herefordshire Beacon. The outer enclosure showed the same construction features as the main hillfort defences which have a slight trough on the inner side of the ramparts. This feature was also found on top of the Citadel which suggests that the Citadel was also part of the hillfort which had much later been re-fortified by the Normans. Pottery from the 1870s excavation was re-assessed

in the 1950s and it was concluded that the Citadel was 12th-century work. Consequently that part of the hillfort was reclassified as a ringwork and bailey.

June 9. Penyclawdd and Olchon Court in Llanveynoe

Penyclawdd Court lies at the foot of Bryn Arw mountain in the parish of Llantilio Pertholey. The castle earthworks are in a defensively weak position. They consist of a mound or motte about 10 ft. high, surrounded by an inner dry ditch with a diameter of about 60 ft. This is surrounded by a bank at least 15 ft. wide, of the same height as the mound, with a stream-fed moat outside the bank. The bank gives the appearance of a ringwork which has been partly destroyed by the house and farmyard which occupy the S. and eastern sides of the enclosure, but the possibility of a bailey has to be considered. The top of the mound is solid and contains stone. The thickness and height of the bank, and the fact that it is as high, and on the N.W. side actually overlooks the mound, does suggest a ringwork.

By 1349 Penyclawdd was a manor held by Walter de Kymbard from the lord of Abergavenny for half a knight's fee. We were given a conducted tour of the house which has longhouse features in the earliest part. The Tudor wing had been replaced by sandstone by 1500. In 1984 the present owners began a sympathetic restoration of the house and garden which had been much altered.

Olchon Court in Llanveynoe lies at 1100 ft. between the Cats Back and the main ridge of the Black Mountains with a glorious view down the Olchon Valley with Longtown Castle in the distance. The house is partly of two storeys and partly of one storey and attics. The W. end displays ashlar dressings of the 15th/16th century, while the E. end is 17th century with a modern barn added on. We were shown a barn which Mr. Carter, the owner, thought might be the original house; the stonework is of good quality and there was still a piece of cruck truss visible in one of the walls.

Later, when the party looked down on the Court from higher up the valley, some small banks and undulations in the field below the house were spotted by Ruth Richardson who thought they might be Celtic fields. Near the adjacent farm, Beilli Bach, a cist burial was found in 1932 on Olchon Court land during ploughing. It contained a male skeleton buried with a beaker and a flint arrowhead. Another cist with no remains was found nearby. The first one was removed to Hereford Museum intact where it is still on display. It dates to the Early Bronze Age 17-16,000 B.C.

July 28. Old Lugg Mill, Bodenham and Shelwick Mill

At Bodenham, the lower stones of a weir can still be seen, just above and linking to an island in the Lugg. It has a gap of about 8 ft. wide against the right bank. It was breached when the river Lugg was made navigable at the end of the 17th century, and a lock was built at the weir. The substantial amount of stone on the island suggests the lock was built between the island and the bank. The mill-leat still makes a 3-4 ft. deep depression in the field and leads to a wide and deep depression on the other side of Riffins Brook, presumably the mill-pond. It seems likely that the brook, which is unnaturally straight, would originally have fed into the mill-pond, and that its present course is a diversion. Part of the course of the present brook reveals stonework of two layers of thin

pitched stones, with well made edges or kerbs. The brook which is 2.25 m. wide, crosses the stonework at right angles at a depth of 8 ft. below present ground level. The feature can only be seen when the water-level is very low. It has been suggested that this might be a causeway or a Roman road, however if so, the stones would lie parallel with the line of the road instead of across it - which would be most unusual. Anthea Brian's plan and report of these features was published in H.A.N. 46 (1986).

The remains of two weirs in the Lugg just downstream of Bodenham Church were seen, before we moved on to the old Shelwick Mill site just above the Lugg Mills near Hereford. Here there are substantial stone quays and other less identifiable structural remains.

September 8. Earthworks at Edwin Ralph and Park Farm.

Members met at Orleton Church which has a very fine 12th-century carved font of the Herefordshire school of sculpture. It shows nine apostles standing within arches. The party then drove to Edwin Ralph to look at earthworks adjoining the church and castle site. Those around the castle site are still quite clear and include a flat-bottomed holloway leading out to the road. There is an excavation which might be a fishpond draining southward along a made ditch to join a small stream rising in the still wet moat around the castle mound. The top of the mound is level with no signs of stonework.

In an adjoining field, a long bank, one and a half metres high by two metres wide lies on the W. boundary bank of what the tithe map shows to have been Park Farm. The mound looks like a pillow mound for breeding rabbits. The whole of the farm could represent the remains of a medieval park. The farmhouse has now gone and two other farmhouses were also found to have vanished. One is submerged by a new fishing pond and some of the stones of Lower House are still visible in a small, rough paddock.

October 13. Pipe Aston and Elton

The little church at Pipe Aston has a striking Norman doorhead, carved from coloured stones of red, pale grey and yellow. Adjacent to the church is the surviving early motte and bailey castle. The very high motte is surmounted by the foundations of a stone keep. This probably formed part of the Mortimer's lordship and was possibly besieged by the holder of the neighbouring Ludlow Castle, as Mortimer was described as 'unable to leave his castles.' A few hundred yards away, across a meadow and orchard, lies what may be identified as the siege castle. This has been almost destroyed, but part of the moat survives on the S.W. side and it lies close to a stream which could have been dammed to provide water defences to the low, partly natural mound. In an adjoining meadow, excavations were carried out recently which indicated the location of a pipe kiln.

We then moved on to Elton where the owners showed us a meadow containing undulations and banks which seem to be related to its past use as the location of pipe-making kilns. When the old pasture was ploughed for the first time, large concentrations of pipes were found at various areas in the field and we saw some of the finds made at that time. It was agreed that these finds should be taken for identification by a museum as the owners are moving away. They kindly showed us the interesting features of the timber-framed Elton farmhouse: a very large stone inglenook fireplace in the living room, backing to, but separate from an equally large kitchen fireplace with a bakeoven.

Natural History Section, 1996

By BERYL HARDING

The death of Mr. Howard Wagner, occurred during the year. In addition to being a regular and enthusiastic attender at Field Meetings and serving on the Committee, he and Mrs. Wagner ran the Microscopy Group at their home each month for several years. He will be greatly missed.

25 March. The year began with our Annual General Meeting held at the Friend's Meeting House. After the business of the evening and refreshments a talk with slides was given by Elizabeth Rushgrove on her 'Experiences in the Polar Regions,' both arctic and antarctic. The evening was less well attended than usual but most enjoyable.

17 April. We were meant to visit the nature reserves at Romer's Wood and Motlin's Hole to be led by John Voysey. Unfortunately this had to be cancelled at the last moment as he had another unavoidable appointment. He also recommended that the visit be postponed to another year as much 'lop and top' remained underfoot after the extensive tree felling and coppicing of the previous winter.

The increased light available will in turn allow the spread of the ground flora. No increase occurred this year as the soil had become too impacted by the heavy machinery used - although many of the acorns planted by the children at WATCH came through.

The river Wye is one of the few rivers in Britain designated as an SSSI from its source to its mouth, and from Mordiford downstream forms the Wye Valley A.O.N.B. Its sensitive environment is subject to a range of uses and interests - often conflicting. Consequently, an agreed and co-ordinated management plan is needed to reconcile opposing interests and to maintain its beauty and ecological stability. Dissent has now arisen as to which body should be responsible for its management and its navigation rights, with consequent recreational uses. In view of this we decided to look at one section of the Wye to examine the effects of farming and of possible increased recreational uses.

9 May. We made our first visit to the stretch of the river along the E. bank from below Caplar to the flats near Fownhope. The section below Caplar has steep, well-wooded cliffs with only a narrow strip of bank but which could be used for landings as the opposite site is agricultural. This attractive section of the Wye, with swans nesting on the slumped bank ledges, could have its peace easily disturbed for both birds and fishermen. A count of spring flowers along the riverside and woodland was made. The alien Himalayan balsam, introduced in 1839, is growing but not as densely as in other parts of the country. Meadow saffron was found in the woods.

Once the open flats were reached the fields were either given to cereal growing or semi-improved pasture which had creeping thistle with few species of grass and flowering plants. Only chickweed, daisy, dandelion and creeping buttercup were seen with no clover - due to the use of artificial fertilisers. The wheat fields had better banks without cattle treading them but are subject to spraying. This was being done on the opposite bank and the spreading drift could be seen.

As well as the spring birdsong heard, two active rookeries were seen in the woods opposite, also buzzards, a heron, cormorants and a swannery of sixty adults and juveniles. On the gravel flats extending from the bank six peewits were nesting amid grass tufts.

8 July. On this return visit a comparable plant count was made. The water crowfoot was in flower, trailing in large drifts - a considerable improvement on the last two or three years. Only growing on stony beds it is an indicator of a healthy river.

Near the banks of wheat fields large patches of pondweed (*Potamageton crispus*) were to be seen - preferring nutrient-rich water it consequently grows where fertiliser run off enters the rivers. In the 'improved' pasture a second search was made for the delicate pignut recorded there in past years - but to no avail. The grass has been closely cropped by sheep and if this continues for several years the underground tuberous root will be eventually killed off.

At Mansell's Ferry much stonework from old structures has been modified into fisherman's walkways on the W. bank and is typical of an area that could become commercialised with landing stages and picnic sites giving consequent noise and disturbance. Such action would require dredging and/or the building of weirs - both damaging to the riverbed. Weirs would cause a build-up of silt on the upstream side affecting the stony bottom and choking out the water crowfoot. Turning stones on our side of Mansell's Ferry gave a good invertebrate sample with abundant fish fry - all indicators of a healthy river. Many damselfly were seen with very large numbers of the banded Agrion (*Agrion splendens*) hawking for insects over the wheat fields.

Near the site of the old mill at Hancock's Weir the river became very orange for several hundred yards where a farmer had taken off water to irrigate his potato fields with the heavily silted run-off returning to the river, adversely affecting both the water crowfoot and the respiratory organs of most of the invertebrates, as well as carrying unwanted chemicals.

All that we saw emphasised the need that as the Wye is an SSSI nearby agriculture should not be too intensive and there should be wide headlands to protect the river from chemical drift and the banks from cattle damage. Heavier recreational use will not only prove a disturbance but further damage both the banks and river bed, in turn affecting the ecology.

13 June. A visit was made to Humber Marsh Reserve, a wetland reserve of thirteen acres recreated privately in 1988. It has three sections - the meadow, a marshland and an E.-W. railway embankment allowed to naturalise since 1951.

The three-acre meadow had been intensively grazed for many years with regular herbicide and fertiliser applications drastically reducing the wild flowers. The original sward was entirely removed to a depth of fifty mm./two ins. with the spoil used to construct tree planting banks. After further rotovation with a general fertiliser spread and harrowing, it was planted with a general purpose mix of sixteen wild flower and five grass species. Germination was rapid and the following spring gave 75% wild flower and 100% grass species return. It has since been managed as a traditional hay meadow, cut in July and grazed till mid-autumn with further planting of other species to increase the diversity. When we were

there the colourful meadow gleamed with the yellows of creeping and meadow buttercup and yellow rattle interspersed with the pinks and reds of ragged robin, red and pink campion, musk mallow and red sorrel, amid clouds of ox-eye daisies - all much appreciated by numerous small copper and common blue butterflies.

The marsh area is only a fraction of the original size, and known to have been dug by the Romans to give fishponds. Large parts of the surrounding agricultural land had been drained into the Humber Brook so the remainder was under threat and becoming dry. Site excavation also began here in 1988 to both create open water in three ponds of varying sizes linked by a channel and to build a water retaining dyke. The adjacent wetland had board walks made connecting the hide to different habitats, both designed for educational needs and to reduce disturbance centrally. Goat and white willow already flourished, so a further 3,500 indigenous trees and shrubs were planted to give greater shelter and provide a buffer zone against the surrounding farm land. Reed, rush, sedge and tufted hairgrass now give dense cover in the marsh to snipe, coot, moorhen and reed bunting. Teal nest on island patches and swallows and house martins skimmed the surface.

The disused railway embankment gives a well-drained strip colonised by trees and scrub over the years. Central clearance now allows a pathway through and coarse field plants are being managed to allow the more fragile plants to flourish. Many bird boxes of varying sizes provide homes to four species of tit, nuthatches, woodpeckers and tawny owls.

In all, twenty-two species of mammals have been listed, including the polecat, brown hare and the rare water-vole plus twenty-eight species of insects and seventy-three species of birds. Forty species of flowering plants are found on the embankment with seventy-four in the marsh. At its edge alder buckthorn was in bloom with its tiny green flowers humming with bees.

In addition, a dipping pond for school children, a dragonfly pond and a butterfly garden have been created as well as an observation platform and hides, an outside classroom and an education centre. Sadly however, the reserve has had to close this summer as it is no longer financially viable, being subject to insurance, and through lack of further funding. Its value as a mixture of sheltered habitats amid intensively farmed land is immense and as an educational and interpretive centre unequalled so far in the county.

The afternoon was to include a visit to the Humber Brook and Hill Hole Dingle to observe glacial effects on the drainage patterns. Peter Thomson gave us an interesting lecture with illustrations explaining how these changes were brought about with the consequent re-direction of these Lugg tributaries. However, there was not enough time for a site visit itself.

The deposits of glacio-fluvial gravels to the W. blocked rivers and pounded in water giving a lake to the E. of Humber marsh. The subsequent wetlands are still seen today at the reserve but long since drained elsewhere. The earlier, or proto-Humber Brook, was forced by these gravel deposits to take a southward course and after receiving the waters of Holly Brook cut the Hill Hole Dingle. As the Humber had to drop quite steeply to the

Lugg via this new route its down-cutting power formed the present small, gorge-like valley at the Dingle.

22 August. Continuing our theme of looking at the Wye and our impact upon it we visited the Broomy Hill waterworks. We were shown round by Dr. Mills, the Water Supply Manager, responsible for twenty-nine treatment works which serve 190,000 people within 1,800 square miles and process forty-six megalitres a day (1 megalitre = 1 million litres). All the water is from the Wye catchment area via boreholes or the river itself. £6,000,000 has been spent recently on updating the works and its processes at Broomy Hill.

The Environment Agency have stringent requirements with which water companies must comply to avoid water loss. On average less than 1% of Wye water is extracted by the company but farmers may take up to 4-10% which is then returned to ground water and can take anything up to 3-5 years to return to the river system. Pesticides and nitrate levels are rising especially to the N. of the county where extra treatment is required. Nitrate levels do not appear to be a problem with river water but are confined largely to ground water in boreholes. In which case alternative sources are used or the water is blended with others to ensure that levels are kept below the limit. Those showing persistently high levels have been closed.

At Broomy incoming Wye water passes into an 'acti-flow' system of tanks which treats one and a half times the mount of water dealt with previously in eight minutes as compared with one to forty hours previously. Ferric chloride is added which coagulates even the finest particles so that they clump and fall to the tank bottom, with the cleared water then filtered further through fine sands. If the Wye has a lot of algae then carbon is added. The sand, carbon and ferric chloride are then removed, cleansed and re-used. Ferric chloride is harder to work with than the previously used aluminium but less dangerous in the event of overflow. The addition of fluorides was discontinued two years ago.

Sodium hypochlorite is added at the pump-room stage to give chlorine to cope with bacteria. The water is then pumped to the reservoir of 1.9 million gallons capacity, (or 8.5 megalitres) and further pumped to reservoirs some 8-9 kilometres away, such as Ridge Hill, to be returned to the city by gravity. To ensure the biological purity sampling is carried out over ninety-six parameters and the samples taken daily by refrigerated van to the Bridgend laboratories for analysis.

The control centre is fully computerised but any part can be manually over-ridden. All stages are screen monitored with secondary automatic back up. Power cuts are compensated for by powerful generators en site with a guaranteed mainline return within half an hour. Excess storm water can be anticipated from weather forecasts with preparations made for power cuts and extra chlorine available to combat bacterial contamination. In dry weather, if signals show less that 40% water available, more is brought in from elsewhere, even outside the catchment area, giving a difference perhaps in taste, hardness and even colour.

The Victorian water-tower completed in 1883 is 34 m. (*c.* 112 ft. high). Built to supply the city by gravity it contained some 200,000 litres of water but is long obsolete - it would now only supply the whole city for two minutes. It is a Grade II listed building and

£30,000 was spent on repointing in 1995. Despite the magnificent view we refrained from climbing to the top as it was lunchtime.

19 September. A visit made to Croft Woods, the Ambrey and Fishpool Valley was led by David Hughes, the National Trust Area Warden.

We walked to the S. side of the castle where the stone ha-ha provides abundant niches for lizards. The castle attics, church and stables have bat roosts for four species - it is now thought that there are two species of pipistrelle, both of which are found, also natterer's, brown long-eared and a small water bat. Further work is being done with the Herefordshire Nature Trust to identify this latter species. Noctules occur elsewhere on the estate.

The lime avenue is a fairly recent feature planted some thirty years ago but nearby is a very rich, old woodland with horse chestnut, oak, small-leaved lime and redwoods. Beside an old quarry the largest sessile oak in the country grows - hollow and with a girth of 12.7 m./ 42 ft., it is so large that it pollardes itself periodically. Eight different species of lichen grow on the bark. It was obviously there before the quarry giving it an age of *c.* 700 years and showing both its strength and staying power. The present policy is one of slow clearance around it over several years to avoid upsetting the wind patterns around the tree and any over heating that may occur through loss of nearby shade. The very large sequoias now have circular surrounds of pitched stones to prevent cattle debarking them, which they will do if their diet lacks sufficient mineral salts. The soil at Croft is alkaline and very thin with rock near the surface, consequently it is dry and too poor for crops or first-class pasture.

The old sweet chestnut drive was very much longer originally but part has fallen into disuse beyond the present boundary. Much bark damage has been inflicted in the past mostly by deer, so new trees have been planted to one side for subsequent replacement. The older trees are *c.* 360 years old with the younger some 120 years. Six years ago the fungal 'ink disease' struck caused by *Phytophera cinammomi.* There are twenty-seven species of phytophera and this is not the same as that attacking alders at present. Both old and new trees have been affected and various remedies were applied but the results were inconclusive and conformed to no pattern. Since fencing off against stock, and preventing their urine build up below the trees, conditions seem to have improved. Judging from some misshapen older trees this disease may have occurred in the past so with the removal of fallen wood and better drainage matters will now be left to run their course.

At the lower end of the avenue is a 200-year-old hawthorn plantation which is unique as hawthorn seldom grows to that age. Fifteen have been pollarded recently with regrowth faster from those roughly cut. By new plantings from cuttings or seeds from the plantation it is hoped to increase the number. The nectar value of hawthorn is high giving sustenance and shelter to seventy-two species of invertebrates. A few sycamores are permitted as 'sacrifice trees' to confine grey squirrel damage but sycamore spread must be severely curtailed.

Nuthatches, redstarts, the three species of woodpecker and buzzard abound, and also goshawk. The gamekeeper provides alternative prey-birds to reduce the attacks on

pheasants. If goshawks are disturbed when feeding they will not return but kill afresh and could so take up to six pheasants a day.

En route to the Ambrey we passed through the Reservoir Field (where water is pumped up from Fishpool Valley to gravity feed the castle). Sweet chestnuts and oaks were planted there in the 18th century in a parkland. It is believed that they follow an old battle plan with the oaks as the English and the chestnuts the foe. Some of these chestnuts have been pollarded, again roughly which stimulates faster growth and provides more invertebrate niches than a smooth cut. Pollarding can only prolong the life of a tree if it is healthy in the first place. More oak will be planted to link the parkland and woods. Deer seen in the early mornings are mostly fallow with some roe and muntjac.

Lunch was taken on the Ambrey with expansive views in all directions. The hornbeams are a feature both old and large, although pollarded, and planted originally to mark boundaries. Management is by tenancy grazing, having continued for 3,000 years. Despite the number of visitors the hillfort is not too much eroded. The bracken could be invasive but at that altitude the cold weather and snow keeps it under control. Its die-back is some 4-5 ft. thick providing ideal cover for the slow-worm habitat.

The High Brown Fritillary butterfly is found on the Ambrey - its larvae feeding on violets. Even more are found on Yatton Hill to the W. and Bircher Common to the E. Glow-worms also are found on Bircher Common and the National Trust is participating in a national glow-worm count. At the E. entry to the Ambrey is a very large yew and although reputedly poisonous its bark is continually grazed by sheep with no apparent ill-effect!

Descending to Fishpool and Deerpool valleys five streams flow and with spring-sapping at their heads erosion has made their valleys very steep-sided. We reached Lady Wood, an area of oak and mixed woodland, where some of the oaks are so large that they have collapsed under their own weight. The opened-up spaces are being left to develop naturally with different patterns of care for comparison. Further gentle opening up may be carried out around some other giants. These oaks are *c.* 500 years old and surpass those of Moccas in size.

Fishpool Valley is a SSSI classed as a semi-derelict landscaped valley with a grotto and gothic pumphouse built in 1817 in the picturesque style and now partly restored. It was hoped that the dams and lakes could be restored as part of a centenary project but without success. The lakes and pools, created for recreation and to supply water to the castle, are stream fed and well oxygenated so trout are found and crayfish cluster near the pool outlets where there is maximum current. Several were found and seemed healthy with no signs of the imported virus which infected them previously. The valley was designated a SSSI in 1984 because of its varied woodland and wetland habitats and rich bird life. However, the designation did not extend to the ancient oaks above the valley or to the two lowest pools where there are the richest aquatic communities and which were examined by two members of the Section when carrying out a pond survey across the county a few years ago and due to be printed in the *Transactions.*

RULES OF THE WOOLHOPE NATURALISTS' FIELD CLUB

(HEREFORDSHIRE)

I. — That the Society be known as the "WOOLHOPE NATURALISTS' FIELD CLUB (HEREFORDSHIRE)" for the practical study in all branches of the natural history and archaeology of Herefordshire and the district immediately adjacent.

II. — That the Club shall consist of ordinary members (ladies and gentlemen) and such honorary members as may from time to time be admitted; from whom a president, four vice-presidents, honorary treasurer, honorary secretary, field secretary and editor shall be appointed at the annual winter meeting to be held in Hereford in the latter part of each year, and they shall hold office for one year beginning at the next annual spring meeting. The club may also accept for affiliation as approved such societies or groups as exist for the furtherance of similar purposes to those of the club. Each group shall be entitled to have one representative at all meetings of the club, to receive copies of the *Transactions* and generally be treated as one ordinary member.

The Club shall admit junior members between the ages of 14 and 18. Such junior members may become full members at the latter age, but those who are bona-fide full-time students may remain junior members until the age of 21. Nobody of the age of 18 or over may be elected a junior member.

III. — The management of the club shall be in the hands of a central committee consisting of the said nine officers *ex-officio* and twelve other members elected by ballot at the annual winter meeting. Each elected member of committee shall hold office for three years from the next annual spring meeting and four shall retire each year but be eligible for re-election. Every candidate for election to the central committee shall be individually proposed and seconded at the annual winter meeting and no proposal for election or re-election *en bloc* shall be accepted. In the event of ties the president or the chairman of the meeting shall have a casting vote. Casual vacancies may be filled at any general meeting and any member then elected shall hold office until the date when the term of office of the member whom he or she succeeds would have expired. The central committee shall be empowered to appoint an assistant secretary; its duties shall include making all arrangements for the meetings of the year. Seven shall form a quorum.

IV. — The members of the club shall hold not less than three field meetings during the year, in the most interesting localities for investigating the natural history and archaeology of the district. That the days and places of two at least of such regular meetings be selected at the annual winter meeting, and that ten clear days' notice of every meeting be communicated to members by a circular from the assistant secretary; but that the central committee be empowered upon urgent occasions, to alter the days of such regular field meetings, and also to fix special or extra field meetings during the year. The president shall have the privilege of choosing the place of one field day during his year of office. The committee shall also arrange such indoor meetings and lectures during the winter as they find possible.

V. — That the annual subscription for members and affiliated societies be £10.00, payable on the 1 January in each year to the honorary treasurer or assistant secretary. The subscription for additional adult family members of the same household may at their option be reduced to £2.00 each, but those paying this reduced sum shall not be entitled to receive the publications of the club. The annual subscription for a junior member shall be £2.00. This shall not entitle such member to a copy of the *Transactions*, but he may receive these on payment of an additional sum to be decided by the committee for the time being. Each member may have the privilege of introducing a friend to any field meeting of the club, but the same visitor must not attend more than two such meetings in one year. Members availing themselves of this privilege will be required to pay a capitation fee of £1 a meeting in respect of each visitor.

VI. — That the president be requested to favour the club with an address at the annual spring meeting on the proceedings of the year, together with such observations as he may deem conducive to the welfare of the club, and the promotion of its objects.

VII. — Every candidate for membership of the club shall be proposed and seconded by members. The central committee shall elect or reject the candidate and one black ball in five shall exclude.

VIII. — That members finding rare or interesting specimens or observing any remarkable phenomenon relating to any branch of natural history, or making or becoming acquainted with any archaeological discovery in the district, shall immediately forward a statement thereof to the honorary secretary or to the appropriate sectional editor.

IX. — That the club undertake the formation and publication of correct lists of the various natural productions and antiquities of the county of Hereford with such observations as their respective authors may deem necessary.

X. — That any member whose annual subscription is twelve months in arrear shall not be entitled to any of the rights and privilege of membership, and that any member whose annual subscription is two years in arrear may be removed from the membership of the club by the central committee.

XI. — That the assistant secretary send out circulars ten days at least before the annual spring meeting to all members who have not paid their subscriptions and draw their particular attention to Rule X.

XII. — That no addition to or alteration of the rules of the club be made except at a general meeting, after notice has been given of the proposed addition or alteration at a previous meeting, and the general purport of such addition or alteration has been circulated to all members with the notice of the general meeting.

XIII. — That no grant of money from the funds of the club exceeding £5 may be voted for any purpose, unless notice of such proposed grant has been given at a previous meeting or has been approved by the central committee.

XIV. — That these rules be published in each volume of the *Transactions*.

LIST OF PRESIDENTS

1851 Club formed in the winter months
1852 LINGWOOD, Mr. R. M.
1853 LEWIS, Rev. T. T.
1854 SYMONDS, Rev. Wm. S., B.A., F.G.S.
1855 CROUCH, Rev. J. F., B.D.
1856 WHEATLEY, Mr. Hewitt
1857 LINGEN, Mr. Charles
1858 BEVAN, G. P., M.D.
1859 BEVAN, G. P., M.D.
1860 BANKS, Mr. R. W.
1861 LIGHTBODY, Mr. Robert
1862 HOSKYNS, Mr. Chandos Wren
1863 HOSKYNS, Mr. Chandos Wren
1864 CROUCH, Rev. J. F., B.D.
1865 STEELE, Mr. Elmes Y.
1866 BULL, H. G., M.D.
1867 HOSKYNS, Mr. Chandos Wren
1868 McCULLOGH, D. M., M.D.
1869 RANKIN, Mr. James, M.A.
1870 COOPER-KEY, Rev. H., M.A.
1871 CAM, Mr. Thomas
1872 STEELE, Mr. Elmes Y.
1873 DAVIES, Rev. James, M.A.
1874 DAVIES, Rev. James, M.A.
1875 ROBINSON, Rev. C. J., M.A.
1876 CHAPMAN, T. A., M.D.
1877 MORRIS, Mr. J. Griffiths
1878 PHILLOTT, Rev. H. W., M.A.
1879 ARMITAGE, Mr. Arthur
1880 KNIGHT, Mr. J. H.
1881 LEY, Rev. Augustin, M.A.
1882 BLASHILL, Mr. Thomas, F.R.I.B.A.
1883 PIPE, Mr. George H., F.G.S.
1884 BURROUGH, Rev. Charles, M.A.
1885 MARTIN, Mr. C. G.
1886 PIPER, Mr. George H., F.G.S.
1887 ELLIOTT, Rev. William, M.A.
1888 ELLIOTT, Rev. William, M.A.
1889 SOUTHALL, Mr. H., F.R.MET.SOC.
1890 CROFT, Sir Herbert, Bart., M.A.
1891 CORNEWALL, Rev. Sir George H., Bart., M.A.
1892 BARNEBY, Mr. William Henry
1893 LAMBERT, Rev. Preb. William H., M.A.
1894 DAVIES, Mr. James
1895 WATKINS, Rev. M. G., M.A.
1896 MOORE, Mr. H. Cecil
1897 MOORE, Mr. H. Cecil
1898 MARSHALL, Rev. H. B. D., M.A.
1899 BEDDOE, Mr. H. C.
1900 LEIGH, The very Revd. The Hon. J. W., D.D., Dean of Hereford
1901 BLASHILL, Mr. Thomas, F.R.I.B.A., F.Z.S.
1902 CORNEWALL, Rev. Sir George H., Bart., M.A.
1903 SOUTHALL, Mr. H., F.R.MET.SOC.
1904 HUTCHINSON, Mr. T.
1905 BAYLIS, Mr. Philip, M.A., LL.M., F.Z.S.
1906 WARNER, Rev. R. Hyett, M.A.
1907 RANKIN, Sir James, Bart., M.A.
1908 MOORE, Mr. H. Cecil and RANKIN, Sir James,Bart., M.A.
1909 WILLIAMSON, Rev. Preb. H. Trevor, M.A.
1910 FARN, Mr. A. B.
1911 PHILLIPS, Mr. E. Cambridge
1912 STOOKE-VAUGHAN, Rev. F. S., M.A.
1913 WATKINS, Rev. S. Cornish, M.A.
1914 WATKINS, Rev. S. Cornish, M.A.
1915 WOOD, Mr. J. G., F.S.A.
1916 JACK, Mr. G. H., M.INST.C.E., F.S.A., F.G.S.
1917 GRINDLEY, Rev. H. E., M.A.
1918 BANNISTER, Rev. Canon A. T., M.A.
1919 WATKINS, Mr. Alfred, F.R.P.S.
1920 HUMFRYS, Mr. W. J.
1921 JAMES, Mr. Francis R.
1922 MARSHALL, Mr. George, F.S.A.
1923 BRADNEY, Colonel Sir Joseph, A., C.B., M.A., D.LITT.
1924 DURHAM, Herbert E., D.Sc., M.B., B.CH., F.R.C.S.(ENG.)
1925 MACKEY, Mr. J. C.
1926 SCOBIE, Colonel M. J. G., C.B.
1927 DAY, Rev. E. Hermitage, D. D., F.S.A.
1928 SYMONDS, Mr. Powell Biddulph
1929 SMITH, The Right Rev. Martin Linton, D.D., D.S.O., Lord Bishop of Hereford
1930 GILBERT, Captain H. A.
1931 SYMONDS-TAYLOR, Lt.-Col. R. H.
1932 SWAYNE, Lt.-Col. O. R., D.S.O.
1933 HAMILTON, Brig. General W. G., C.B., C.S.I., D.S.O.
1934 WALKER, C. W., M.C., M.D., CH.B.
1935 ELLISON, Captain F. B.
1936 ROBINSON, Mr. R. S. Gavin
1937 MORGAN, Mr. F. C., F.L.A.
1938 BETTINGTON, Mr. E. J., F.R.S.A.
1939 BENN, Mr. C. A., O.B.E., M.A., F.G.S.
1940 BENN, Mr. C. A., O.B.E., M.A., F.G.S.
1941 MARTIN, Rev. Preb. S. H., M.A.
1942 MARTIN, Rev. Preb. S. H., M.A.
1943 WATERFIELD, The Very Rev. R., D.D., Dean of Hereford
1944 TEMPLER, Mr. P. J. T.
1945 TEMPLER, Mr. P. J. T.
1946 RICHARDSON, Mr. L., F.R.S.E., P.A.INST.W.E., F.G.S.
1947 WINNINGTON-INGRAM, The Venerable Archdeacon A. J., M.A.
1948 GILBERT, Captain H. A.
1949 WALLIS, Captain O. B., M.A., LL.B.
1950 CLARKE, Rev. B. B., M.A., M.Sc.
1951 MORGAN, Mr. F. C., M.A., F.S.A., F.L.A.
1952 SALT, Major A. E. W., M.A.
1953 COHEN, Mr. L., M.I.MECH.E.
1954 JOHNSON, Colonel T. W. M.
1955 MOIR, Rev. Preb. A. L., M.A., F.R.HIST.S.
1956 WINNINGTON-INGRAM, The Venerable A. J., M.A.
1957 KENDRICK, Mr. F. M.
1958 LANGFORD, A. W., M.D., B.CHIR., M.R.C.S., L.R.C.P.
1959 LEEDS, Mrs. Winifred, F.R.P.S.L.

1960 MACLEAN, Rev. D. A. L., of Dochgarroch, M.A.
1961 STANFORD, Mr. S. C., B.A., F.S.A.
1962 ZIMMERMAN, Mr. A. U.
1963 COLEMAN, Mr. V. H.
1964 NOBLE, Mr. F., B.A.
1965 POWELL, Mr. H. J., F.R.I.B.A.
1966 KENDRICK, Mr. F. M.
1967 TONKIN, Major J. W., B.A.
1968 CURRIE, Mrs. D. McD.
1969 HILLABY, Mr. J. G., B.A.
1970 O'DONNELL, Mrs. Jean E.
1971 POWELL, Mr. H. J., F.R.I.B.A.
1972 HOMES, Mr. C. H. I.
1973 TONKIN, Major J. W., B.A.
1974 TONKIN, Mrs. Muriel, J. P.
1975 PERRY, Mr. R. C.
1976 HAYNES, Rev. W. B., B.A.
1977 WINCE, Dr. W. H. D., M.B., B.S., M.I.Biol.
1978 PAGE, Mr. R. A.
1979 GARNETT, Mr. A. T. G., L.D.S., R.C.S. (Eng.)
1980 KENDRICK, Mr. F. M.
1981 VOSS, Mrs. Marjorie, M., B.A.
1982 BRIAN, Mrs. Anthea, D., B.Sc., Ph.D.
1983 TONKIN, Mrs. Muriel, J.P.
1984 TONKIN, Major J. W., B.A., F.S.A.
1985 ATTFIELD, Mr. C. E., F.I.E.H.
1986 HILLABY, Mr. J. G., B.A.
1987 CHARNOCK, Mr. G.
1988 PERRY, Mr. R. C.
1989 WARD, Mr. E. H.
1990 PEXTON, F. W., B.Sc., Ph.D.
1991 RICHARDSON, Mrs. R. E., B.Ed., M.Phil., A.I.F.A.
1992 REES, Mr. G., C.Eng., M.I.E.E., M.R.Ae.S.
1993 EISEL, Dr. J. C., M.Sc., M.A., Ph.D.
1994 WHITEHEAD, Mr. D. A., M.A.
1995 TONKIN, Mrs. Muriel, J.P.
1996 O'DONNELL, Mrs. Jean E., B.A.

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Birmingham and Warwickshire Archaeological Society
Bristol and Gloucestershire Archaeological Society
British Mycological Society
Cambridgeshire Antiquarian Society
Architectural and Archaeological Society of Durham and Northumberland
Essex Society for Archaeological and History
Essex Field Club
Kent Archaeological Society
Staffordshire Archaeological and Historical Society
North Staffordshire Field Club
Oxoniensia
Powysland Club
Radnorshire Society
Shropshire Archaeological Society
Somerset Archaeological and Natural History Society
Surrey Archaeological Society
Worcestershire Archaeological Society
Yorkshire Archaeological Journal

THE FOLLOWING PUBLICATIONS ARE PURCHASED

Cambrian Archaeological Society
Council for British Archaeology
Council for Independent Archaeology
Habitat
Harleian Society
Journal of Industrial Archaeology
Midland History

LIST OF MEMBERS AS AT 31st DECEMBER, 1997

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BANGOR: Serials Acquisitions, The Library, University College of North Wales, College Road, Gwynedd LL57 2UN.

BIRMINGHAM: Birmingham Public Libraries, Bibliographic Services Division, Central Library, Chamberlain Square B3 3HQ

BIRMINGHAM: The Library, University of Birmingham, P.O. Box 363, B15 2TT.

BOSTON SPA: Acquisitions Unit (Unit DSC-89), British Library, Boston Spa, Wetherby, West Yorkshire LS23 7BQ.

BROMYARD: Bromyard & District Local History Society.

CARDIFF: The Library, National Museum of Wales, Cathays Park, CF1 3NP.

CARDIFF: Periodicals Acquisitions Dept. (Art), Arts & Social Studies Library, University of Wales College, Cardiff, P.O. Box 430, CF1 3XT.

EXETER: Periodicals Dept., University Library, Prince of Wales Road, EX4 4PT.

GLOUCESTER: City Museum & Art Gallery, Brunswick Road.

HEREFORD: Headmaster, The Bishop of Hereford Bluecoats School, Tupsley HR1 1UU.

HEREFORD: Botanical Society, c/o Mr. P. Thomson, Hall Pool, Marden HR1 3EN.

HEREFORD: Curator, City Museum, Broad Street.

HEREFORD: The Librarian, Dean & Chapter of Hereford Cathedral.

HEREFORD: Friends of the Record Office.

HEREFORD: Ornithological Club, c/o I. B. Evans, 12 Brockington Drive, HR1 1TA.

HEREFORD: The Principal, Sixth Form College, Folly Lane.

HEREFORD: Hereford City and County Archaeological Trust, 3 Offa Street, HR1 2LL.

HEREFORD-WORCESTER: County Libraries, Central Services, Sherwood Lane, Lower Wick WR2 4NU.

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KINGTON: Kington History Society.

LEDBURY: Ledbury Naturalists Field Club.

LEICESTER: The University Library, Periodicals Dept., P.O. Box 248, University Road, LE1 9QD.

LEOMINSTER: Leominster Historical Society.

LIVERPOOL: The Sydney Jones Library, P.O. Box 123, L69 3DA.

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LONDON: British Museum (Natural History), Cromwell Road SW7 5BD.

LONDON: London Library, 14 St. James Square, SW1Y 4LJ.

LONDON: Public Record Office, Librarian, Ruskin Avenue, Kew, Richmond, Surrey TW9 4DU.

LONDON: Society of Antiquaries, Burlington House W1V 0HS.

LONDON: The Library, University of London, Senate House, Malet Street WC1E 7HU

MEMPHIS: Acquisitions Dept. (Gifts), Memphis State University Libraries, Tennessee 38152.

MONMOUTH: The Museum, Priory Street, Gwent, NP5 3XA.

MONTREAL: Sir George Williams University Library, Acquisitions Dept., 1445 De Maisonneuve Blvd., W.

NEWPORT: Central Public Library, John Frost Square NPT 1PA.

NEW YORK: Cornell University Libraries, Serials Dept, 110-B Olin Library, Ithaca 14853-5301.

NOTTINGHAM: The Library (Serials), British Geological Survey, Nicker Hill, Keyworth NG12 5GG.

PRINCETON: Serials Division, Princeton University Library, New Jersey 08540.

SHREWSBURY: Shropshire County Library Headquarters, Column House, 7 London Road SY8 6NW.

SWANSEA: Periodicals Dept., Library University College of Swansea, Singleton Park, SA2 8PP.

SWINDON: The Librarian, RCHME, National Monuments Record Centre, Kemble Drive, SN2 6GZ

WEOBLEY: Weobley and District Local History Society.

WISCONSIN: Memorial Library, SOSC-CTS, University of Wisconsin, 728 State Street, Madison 53706-1494.

WORCESTER: County Archaeological Service, Tolladine Road, WR4 9NB.

WORCESTER: City Library, Foregate Street.

YORK: The Borthwick Institute of Historical Research, St. Anthony's Hall, YO1 2PW.

Members' names and addresses redacted.

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