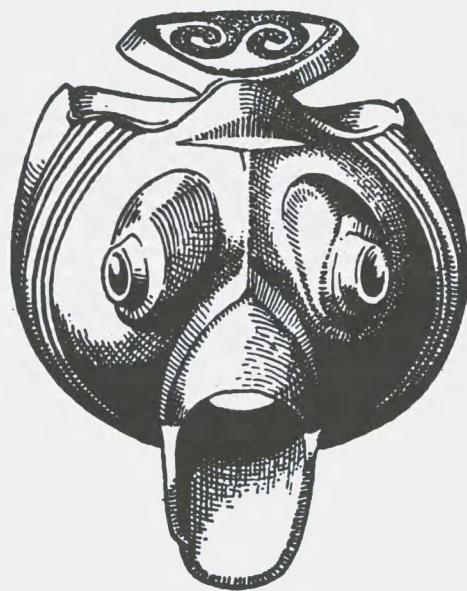


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VOLUME 9 1974

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BEDFORDSHIRE ARCHAEOLOGY

ESSAYS PRESENTED TO
FREDERICK WILLIAM
KUHLCHE, B.A., F.S.A., A.M.A.

being

BEDFORDSHIRE ARCHAEOLOGICAL JOURNAL

Volume 9 1974

Bedfordshire Archaeology: Essays Presented to Frederick William Kuhlicke
being *Bedfordshire Archaeological Journal*, 9, 1974
is a special issue of the *Bedfordshire Archaeological Journal*
to pay tribute to the work of Frederick William Kuhlicke as
Curator of the Pritchard Museum of Bedford Modern School, 1933 to 1959,
and Director of Bedford Museum and Honorary Curator of the Collections
of the Pritchard Museum of Bedford Modern School, 1959-1974,
on the occasion of his retirement, 31 January 1974.
An especially bound copy of the volume was presented to
Frederick William Kuhlicke B.A., F.S.A., A.M.A.
at the Bedfordshire Archaeological Conference
15 November 1975

Bedfordshire Archaeology: Essays Presented to Frederick William Kuhlicke
being *Bedfordshire Archaeological Journal*, 9, 1974
was edited and designed by David H. Kennett with additional proof-reading
by Jane Hassall and John Hutchings.
Cover by Terence Paul Smith.

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ARCHAEOLOGICAL
JOURNAL

Volume 9 1974

THE BEDFORDSHIRE ARCHAEOLOGICAL COUNCIL

LUTON MUSEUM, WARDOWN PARK

LUTON, BEDFORDSHIRE

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Frederick William Kuhlicke, B.A., F.S.A., A.M.A.: an appreciation



Frederick William Kuhlicke BA FSA AMA retired from the post of Director of Bedford Museum and Honorary Curator of the Collections of the Pritchard Museum of Bedford Modern School on 31 January 1974. In recognition of this and his long-standing commitment to Bedfordshire Archaeology, the Bedfordshire Archaeological Council felt that it would be a not inappropriate gesture to use the 1974 volume of the *Bedfordshire Archaeological Journal* as a tribute to his work, his encouragement and his vivacious enthusiasm. In recognition of this *Bedfordshire Archaeological Journal* 9, 1974, has been given the special title of *Bedfordshire Archaeology: Essays Presented to Frederick William Kuhlicke BA FSA AMA*.

Frederick William Kuhlicke was not Bedfordshire born, but he came to embody the traits of his adopted county, that could contain in the mid-seventeenth century both John Bunyan and

Giles Thorne. And he sought to make this small land, England's second smallest county, better known. His adopted county has good cause to be thankful that his wit and his scholarship have been put to good use. From the 1930s on, a steady stream of pieces, both authoritative and at the same time written in an engaging style to be read by Everyman, have come from his pen. Their scope was wide: from the Bronze Age to the present day in time, from medieval steelyard weights to Bedford charities in content. Though wide-ranging in his interests, one aspect held his attention for all time and this, his series of articles in the *Bedfordshire Magazine* under the individual and general title, "A Bedfordshire Armorial", must rank as one of the most sustained attempts to write for the layman on a topic which is both recherche and specialist. That these pieces have now reached their ninetieth contribution since

their inception in 1948 is a tribute not merely to his knowledge but also to his energy and the zealous application of his pen.

Frederick William Kuhlicke was a man of wider sympathies than just heraldic studies as the bibliography of his works here appended (pp.4-8, *infra*) demonstrates at a glance. It includes much on the history of Bedford and much on the archaeology of the county. It is this aspect of his life to which this volume particularly wishes to pay tribute. For not just one, not even two, but for over three long decades, Frederick William Kuhlicke embodies archaeology in the county of Bedfordshire. From 1933 until 1959, in addition to being a busy schoolmaster, and head of the Department of Modern Languages in Bedford Modern School for most of these years, Frederick William Kuhlicke was the Curator of the Pritchard Museum of Bedford Modern School. Founded in 1884, this miscellaneous collection had served as the repository of all kinds of bric-a-brac assembled by the late Victorian collecting mania. It had become rather more, a *de facto*, if not *de jure*, town and to a large extent county museum. Frederick William Kuhlicke had first come to know it when he initially joined the staff of Bedford Modern School in 1926 as an assistant master in modern languages and school librarian. The Rev P.G. Langdon was then drawing to the close of his long association with the school and its museum, until 1931 the only one in the county. When Langdon retired in 1933, Frederick William Kuhlicke added to his already multifarious duties the onerous tasks of a museum curator. For over forty years, Bedfordshire in general and the town of Bedford in particular has had good cause to be thankful for his caring concern for the museum, its contents and the recording of the past of the town and the county.

It was a task for which Frederick William Kuhlicke would seem to have had little prior training, beyond the possession of a catholic but systematic mind. His early life belongs to the halcyon years of late Victorian and Edwardian England. Born on the feast of St Cyprian 1893, graduated from University College, London, in 1913. A succession of posts followed, varied in their experience. A master of modern languages, they included not only the regular, but others too. Six years in Greece left an impression and a lasting knowledge of modern as well as classical Greek to which he also added Turkish. A wide linguistic competence made him a master of the written word in his own native tongue. For a

while, at Bedford Modern School he also taught English and one early acquisition, Anglo-Saxon, never left him.

The early years in the museum were long and arduous, made more difficult after the Second World War by the hostility of the school's new headmaster, J.E. Taylor did not evince much enthusiasm for the museum. The continued demands of education on the museum's space meant that when Frederick William Kuhlicke retired from the staff of Bedford Modern School in the summer of 1959 with no obvious successor as curator of the museum, the already on-going but somewhat protracted negotiations whereby the (then) Borough of Bedford might acquire the collections of the Pritchard Museum of Bedford Modern School from the Harpur Trust could be more speedily concluded. The Corporation of Bedford already had a museum collection of its own, ill-housed, unknown and without a proper series of accession registers. These were amalgamated and at an age when many men see fit to draw in the strands of their life, Frederick William Kuhlicke embarked on a new career. At the age of 67, though belied by his youthful zest, he became the Director of Bedford Museum. A former garage was acquired and in 1962, this new museum was opened to the public as Bedford Museum, incorporating the Pritchard Museum of Bedford Modern School.

Cases were organised, resorted and relabelled, and for over a decade, a man with whom age never seemed to catch up, worked single-handed to the betterment of the collections, amalgamating two collections of diverse history, but often containing items from the same site. Though time did not permit the production of a comprehensive catalogue of the museum's full collections, the first edition of the *Bedford Museum Guide* came out in 1968 and was quickly followed by a second edition in 1971. The constant demands of the multitudinous tasks of a museum curator left little time for reflection and writing, yet the 1960s were Frederick William Kuhlicke's most productive decade. No fewer than sixty-one items appeared from his pen. They included both editions of his joint work with F.G. Emmison, sometime Clerk of Records to the Bedfordshire County Council, entitled *English Local History Handlist*. It was done for the Historical Association, of which Frederick William Kuhlicke has been a Vice-President since 1947, and a stalwart supporter of the Bedford Branch for many years more.

In this he reaffirmed his belief not merely in the catholicity of all human knowledge but also in the need to encourage others. Many men have been rather more than grateful for his long years in Bedford, encouraging the proper and detailed study of material. Not all are now living to offer their contribution to these studies presented to Frederick William Kuhlicke. In one respect his varied interests have not been covered by these varied papers now offered as a tribute to his work. The Palaeolithic is well represented in the county of Bedfordshire and its archaeology much studied in the late nineteenth century, but of those who have been nurtured, or come to maturity within these boundaries, none is now living to place on record the debt which students owe to the happy preservation in Bedford Museum of the collections of James Wyatt and others from sites in the county and throughout the world. There have been other prehistoric interests, latent more usually than active, but no man who has controlled a museum with such masterworks of Iron Age art as the Old Warden mirror and the Felmersham Bridge fish-head spout would ever doubt the riches of the pre-Roman centuries. Equally Frederick William Kuhlicke felt it important always to emphasise the aesthetic in archaeology.

Frederick William Kuhlicke was a man whose life was based on that deep understanding of the relative importance of the material and the spiritual. For many years he was the embodiment of the residual wisdom of one of Bedford's ancient churches, that dedicated to St Paul. To its history he contributed much, to its life rather more.

He possessed that basic faith, that was not dulled by over thirty years as Vicar's Warden. The office enriched the man and the man the office.

It is characteristic that he should write on the church's bells as well as its history, and equally in tune that he should examine the history of more than one of the other ancient churches of Bedford.

To the history of the town Frederick William Kuhlicke contributed his vast knowledge, in newspaper articles, *Bedfordshire Magazine* contributions and pieces in collaborative works. These culminated in his definitive introduction to the reprint in 1970

of C.F. Farrar's *Old Bedford*. But Frederick William Kuhlicke did more than this. He collected the raw material of the town's urban past, and he conserved it, making it readily available to other, usually younger, students of that past.

It was not merely that free access to the material was readily given, but his knowledge was always at hand and available. More than one thesis, from more than one hand, has owed more than it might acknowledge to that ready gift of communication.

Frederick William Kuhlicke taught more than one contributor to this volume that lesson which all true scholars have to learn and show they have learnt that knowledge is there to be shared. More than one contribution reflects in its words that truth. It is perhaps more than fitting that the niceties of the calendar demand that on the day this appreciation is written, the words of the third verse of the second lesson at the office of Evening Prayer contain the comment:

A sower went forth to sow.

Frederick William Kuhlicke sowed in more than one man an appreciation of the past and how it should be studied in its entirety, without artificial division. It may be more than significant that his own multifarious contributions to scholarship, perhaps not adequately reflected in these pages, should be in the fields of heraldry and monumental brasses where artefact and document merge most easily. Instead, these essays on *Bedfordshire Archaeology* are on topics in which he has inspired others — Bronze Age barrows and a Roman settlement, most notably; but also they are in fields where his early influence on their authors may be most keenly recognised. The three pieces on aspects of Anglo-Saxon England, its cemeteries, its numismatics and its architecture, are each by a man whose interest was fostered by the encouragement of Frederick William Kuhlicke. The two last belong also to those pieces in this volume which reflect the town of Bedford and its history. Each of the contributors knows only too well how much more sparse would be our knowledge of that history but for the life and work of Frederick William Kuhlicke.

D.H.K.

The Feast of St James the Apostle, 1975.

Frederick William Kuhlicke: a select bibliography

Compiled by DAVID H. KENNETT

With the assistance of H.K. CAMERON, JAMES DYER,

JANE HASSALL, and TERENCE PAUL SMITH

INTRODUCTION

This bibliography has been compiled to give as complete a listing as possible of the writings of Mr Kuhlicke. Its guiding principle has been the permanent and the traceable. It is complete to 31 December 1974.

The permanent and the traceable have been deemed to be those publications which have an interest beyond an immediate and restricted readership. Thus this listing does not include the many contributions of F.W. Kuhlicke to two publications which are more ephemeral. Both the *Spire* and the *Eagle* have contained much from his pen, but these have not been checked as they are of small, and localised clientèle. The *Spire* from 1931 onwards carried pieces in many issues relating to the Church of St Paul, Bedford, of which it is the parish magazine. Many of these are of an historical nature, some culminating in his short history of the church, *The Parish Church of St Paul's, Bedford*. F.W. Kuhlicke contributed to the *Eagle* from 1930 onwards, and from 1947 to 1959 he acted as the editor of the school magazine of Bedford Modern School. To this from 1947 to 1955, he contributed a series of twenty-three parts of 'The Chronicles of Bedford Modern', given a slightly variant title in Summer 1951 onwards of 'The Chronicles of B.M.S.' which contain much on the history of this school. These articles and some earlier pieces in the same periodical have not been included in this bibliography.

ABBREVIATIONS

To facilitate a simplified referencing to the writings of F.W. Kuhlicke, this bibliography has used a number of abbreviations, not all of which might be familiar to readers of the *Bedfordshire Archaeological Journal*. A complete list of those used is therefore given:

Amat.Hist. *Amateur Historian*, (London, 1951 to date)

Beds.Archaeologist *Bedfordshire Archaeologist*, (Luton, 1955-59)
Beds.Arch.J. *Bedfordshire Archaeological Journal* (Luton, 1962 to date)
Beds. Mag. *Bedfordshire Magazine*, (Luton, 1947 to date)
BMS *Bedford Modern School Field Club Journal and Museum Bulletin*, (Bedford, 1934-37)
BTI *Bedfordshire Times and Independent*, (Bedford, 1872-1939, then continued as *BTS*)
BTS *Bedfordshire Times and Bedfordshire Standard*, (Bedford, 1939 to date)
Lock Gate *Lock Gate*, (the magazine of the Great Ouse Restoration Society, Bedford, 1961 to date)
T.M.B.S. *Transactions of the Monumental Brass Society*, (Cambridge, 1894 to date)
Univ. Coll. *University College, London, Magazine* (London, 1904 to 1919)

1913

'Round About Gower Street', *Univ. Coll.*

1914

'The Lyrical Poetry of Heinrich Heine', *Univ. Coll.*

1934

'Museum Bulletin', *BMS* 1, 6-8

'Some Remarks on Bedfordshire Heraldry', *BMS* 1, 29-32

1935

'The Museum Report and Bulletin', *BMS* 2, 39-42

1936

'Museum Bulletin and Report', *BMS* 3, 66-70

'Excavations on a Romano-British site at Bletsoe', *BMS* 3, 83-4.

1937

'Museum Bulletin', *BMS* 4, 90-4

- 'The Founding of Bedford', *BMS* 4, 116-23
 'The Early History of Bedford', *BTI* 5, 12, 19
 February

1940

Visitor's Guide to St Paul's, Bedford

1942

- 'The Waller Brasses in St Paul's, Bedford', *T.M.B.S.* 7, 355-6

1943

The Bells of St Paul's, Bedford, 1741-1941

1945

- 'Replanning Bedford in 1803', *BTS* 16 March
 'The Brasses at Barton', *T.M.B.S.* 8, 96-8

1946

- 'Notes on Some Bedfordshire Brasses', *T.M.B.S.* 8, 139-40

1947

- 'The Lost Peal of St John the Baptist, Bedford', *Beds. Mag.* 1, 57-62, 103-06
 'The Calt indent at St Paul's, Bedford', *T.M.B.S.* 8, 184-5

1948

- 'A Bedfordshire Armorial: I — The Beauchamps of Bedford', *Beds. Mag.* 1, 137-8
 'A Bedfordshire Armorial: II — Beauchamp de Eton', *Beds. Mag.* 1, 175-6
 'Bedfordshire Biographies: IV — The Salmons of Meppershall', *Beds. Mag.* 1, 177-80
 'A Bedfordshire Armorial: III — De Meppershall of Meppershall', *Beds. Mag.* 1, 221-3.
 'Bedfordshire Biographies: V — Thomas Tompion', *Beds. Mag.* 1, 249-55
 'A Bedfordshire Armorial: IV — Wahull, Wadull or Woodhall', *Beds. Mag.* 1, 269-71

1949

- 'A Bedfordshire Armorial: V — D'Aubigny or D'Albini of Cainhoe and Clophill and Daubeney of Kempston', *Beds. Mag.* 1, 311-12
 'A Bedfordshire Armorial: VI — Morteyn or Mortain of Tilsworth and Marston', *Beds. Mag.* 2, 13-14
 'A Bedfordshire Armorial: VII — Loring or Loryng or Loreng of Chalgrave and Sharnbrook', *Beds. Mag.* 2, 68-70
 'The Beaker Folk', *Beds. Mag.* 2, 103-07

- 'Bedford and Flitton Churches', *T.M.B.S.* 8, 347

1950

- 'A Bedfordshire Armorial: VIII — Hervey of Riseley and Thurleigh', *Beds. Mag.* 2, 136-7
 'A Bedfordshire Armorial: IX — Hoo of Luton Hoo', *Beds. Mag.* 2, 194-5
 'Review: L. Meynell, *Bedfordshire*', *Beds. Mag.* 2, 204-06
 'A Bedfordshire Armorial: X — The Borough of Bedford', *Beds. Mag.* 2, 270-2
 'A Bedfordshire Armorial: XI — Falk de Breaute', *Beds. Mag.* 2, 272
 'The First Bedford', *Bedford: a survey*, 3-6
The Parish Church of St Paul's, Bedford

1951

- 'A Bedford Armorial: XII — Woburn Abbey', *Beds. Mag.* 2, 333-4
 'A Bedfordshire Armorial: XIII — Warden Abbey', *Beds. Mag.* 2, 334
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Archaeology, Schools and Bedford Museum

CATHARINE REW

The relationship between those engaged in education and those engaged in archaeology has, if it has existed at all, usually been a wary one. On the one side both the value of archaeology as an academic discipline at school level, and the viability of providing manual labour on sites, have been questioned, and on the other side doubt has arisen as to the use of school or college students for limited periods of time, if they are inadequately prepared. Due to its history as a school museum and its present connections with schools and colleges through its archaeological assistant and its education service, Bedford Museum has long been in a position to provide common ground for both education and archaeology, and this it still aims to do. However, as the nature of archaeology has changed so has the role of the museum in education.

When the Prichard Museum first opened in Bedford Modern School in 1886 its collections naturally reflected the interest of its founder and others associated with it. Natural history and geology specimens predominated, and archaeological material was difficult to distinguish in the growing mass of curios. It was not until the Rev. Percy Langdon took the museum under his control after the First World War and started a systematic clearing and sorting that archaeology emerged as a separate and recognisable area. Collection was as necessary as clearance, and in 1921 he was able to announce the exciting acquisition of Roman and Saxon pottery and jewelry from Kempston, given by Mrs Charles Williamson. This was one of several donations of important local finds with which he persuaded owners to part, to what he hoped would eventually become the county museum.

The school's needs were not forgotten: in founding the Archaeological Section of the Natural History Society he aimed, as he did in developing the museum, to foster the boys' awareness of, and interest in their surroundings. Its inaugural meeting was held in the summer term of 1917 and by December 1918 it had become the Archaeological Society with a membership of over 100. Activities

at this period took the form of cycle rides to places of interest, often churches, during the summer, and then, in winter, lectures, often on architecture and heraldry, illustrated by lantern slides. To one such lecture on Prehistoric Man, in 1918, the Geological Section of the Natural History Society was invited; "it was much appreciated. A number of flint implements, similar to those shown in the lecture were examined at the next meeting,"¹ they noted, for it was then more often the Geological and Zoological Sections which worked specifically on museum material.

The only 'excavation' carried out by the Society was the digging round Millbrook Churchyard, in 1919, to locate two stone effigies, formerly positioned in the church, but at some period, probably for reasons of superstition, taken down and buried outside. This undertaking aroused considerable interest in the local and national press, but was not typical of the society's activities. Two pupils in the 1920s who went on, however, to become notable archaeologists after leaving school, were W.F. Grimes and G.C. Dunning. Dr Dunning had the good fortune in the Sixth Form to receive the approval of the Headmaster, H.W. Liddle, in undertaking pot mending and skeleton assemblage with Langdon, and in making plaster casts with E.S. Nightingale, the Art Master — and all during school hours. The only 'field work' he recalls from his schooldays was walking out to the gravel pit at Biddenham on Sunday afternoons to acquire, for half-a-crown, any palaeolithic handaxes that might have been turned up.

After Langdon had left the school in 1933 it was decided to combine the activities of the Archaeology and Natural History Societies and form a Field Club. By this time Mr Kuhlicke had taken over as Museum Curator, and the close contact between club and museum can be judged from the annual publications, between 1934 and 1937, of the Field Club Journal and Museum Bulletin. Talks and outings continued but members branched out into such projects as a village survey of Stevington, which included an excavation to investigate

the presence or otherwise of Stevington Castle. Recording the discovery of an outcrop of oolite where it had been hoped to find walls, the Journal adds defensively that "Mr G.C. Dunning, F.S.A., visited us and expressed approval of the manner in which the excavations were being carried out".² They were also carried out, with more satisfactory results, in Bletsoe, Bromham, Felmersham, and Sandy, and, in addition to school concerns, when sites were exposed by demolition within the town, Mr Kuhlicke and other local antiquarians kept watch and the museum collections benefitted accordingly.

In 1937, thanks to a donation from the Harpur Trust, it was possible for several years to employ an Assistant Curator, Mrs Kuhlicke, and to open the Museum throughout the week instead of only on Wednesday (or Thursday) and Saturday afternoons. Groups from other schools, which had always been welcome in the past, came in greater numbers, and they were encouraged to study museum material in the class room by the provision of loan cases prepared by Mrs Kuhlicke, though distribution of these proved difficult. Some of the war years provided even greater opportunity for school visits, for with the coming of the London evacuees, the Bedford Modern School buildings were shared by Owen's School, Islington, which took possession in the afternoons and gave Mr Kuhlicke more time with the museum than as both a teacher and school librarian as well as the curator, he had before and after the war. The increased use of the museum was not an unmixed blessing; it was "inundated with crowds of uncontrolled evacuee children" and though teachers of both LCC and Bedford schools were given preparatory sessions on the exhibits, "everything gradually devolved upon the voluntary work of the Staff". However "as a result of the visits of London children the Bedford Schools began to realise the great value of the museum for teaching purposes."³

This state of affairs did not continue after the war, and opening hours were reduced to Wednesday afternoons only, or by special appointment, until, with conditions becoming more and more cramped, in 1962, the museum's collections were joined with those of the Corporation, and all were housed in converted garage premises on the Embankment. Mr Kuhlicke, having retired from teaching, was still in charge, as he continued to be until 1974.

The educational use of the museum, when it was housed in Bedford Modern, had always been

emphasised by its curators, but full benefit was probably only gained by the relatively few boys who belonged to the Field Club, or who were the curator's official helpers. One such helper in Mr Kuhlicke's time, Bernard West, found the museum 'a haven of study' where his interest was kindled in such diverse subjects as lepidoptera and architecture when 'at school the amount of ridicule to which one could be exposed with an interest in Natural History or Antiquity was considerable.' In 1955 Mr Kuhlicke recorded with asperity the difficulties he encountered in the museum due both to the inadequate accommodation and to lack of interest shown by the school itself:

'At a recent conference on Schools and Museums called by the Ministry of Education, our Curator heard how our other schools, with no museum of their own, go a considerable distance to a museum at regular intervals. This suggests that we are behindhand in not taking more interest in our own'.⁴ Just before the war the Headmaster, H.W. Liddle, had, in fact, encouraged Mr Kuhlicke to include in the 3rd year timetable a course of studies in archaeology, but this only lasted a few years. The museum itself was too small for frequent class visits if they had been thought desirable, though individual objects might be borrowed for use in the classroom. Its size also hindered outside school parties from visiting in any way other than to have a general look round. The loan cases, and the talks given to teachers, students and children were the results of Mr Kuhlicke's feeling of responsibility towards these outside schools as curator of the only museum in the area, but however energetic his time was not limitless.

After the move to the Embankment school visits were easier to arrange thanks to the increase in space and the lengthening of opening hours, but it was not until recent years that a variation in the type of visit in both term time and holidays could be offered, and in particular for those interested in archaeology. It is also, of course, only relatively recently that education authorities have been prepared to finance more frequent visits than the Annual Outing, and that archaeology has enlarged its sphere of activity and widened its appeal to the general public.

The range of educational facilities the museum was able to offer was extended by the appointment of a full-time Schools Museum Liaison Officer in 1971 (paid by the Borough Education Committee) the appointment of a Museum Archaeological Assistant in 1972, and the provision of teaching,

office and storage space in a converted warehouse in Castle Lane, also in 1972. The archaeological horizon had cleared generally in the same year with the appointment of an Archaeological Liaison Officer within the Planning Department at County Hall, and co-operation between the museum and what has since become the County Conservation Section has been close.

The Schools Museum Service, which became the Museum Education Service on 1 April 1974 when it was incorporated into the museum and no longer came under an education authority, aims to cover as many aspects of the museum's collections as possible in its programme of activities. The Education Officer is responsible for schools visits a small loan collection and holiday projects. However, due no doubt to the recent increase in archaeological activity and personnel in the area, it is the archaeological aspects that have evoked some of the greatest interest in teachers, students and children as well as in individual visitors. Archaeology as an academic subject still plays a very small part in the school curriculum, but at a time when even respectably established subjects like history and geography can find themselves side by side under a covering term such as environmental or general studies, it is not too difficult to find a place for it if desired. This is particularly so for the middle school age range of 9 to 13, which, as in many other museums, is the age range of the majority of school parties visiting Bedford Museum. The main block to more sustained archaeological involvement at this age and in upper schools is the scarcity of teachers with the necessary knowledge. A few teachers with an out-of-hours commitment to excavation or field walking may inspire their particular classes to scrutiny of pot sherds and bones, but many feel uncertain of their ability in that sphere. Inservice courses can help the immediate situation but this situation may change slowly over the next few years as the number of qualified archaeologists increases, and as more Colleges of Education offer courses in archaeology. Since 1972, for example, at Bedford College of Education, there has been a one year optional course in archaeology, both practical and theoretical, for those taking history as their main subject.

But it is not only the study of the subject itself that is changing, the use of the museum, it is the general awakening to the value of primary source material of all kinds, whether documents in the Record Office, layers of earth on a site, or different types of pot on a shelf. And this principle is,

or should be instilled during every student teacher's course. The museum was involved in one project on these lines, instigated by Bedford College of Education, when a videotape recording was made for the benefit of future students, of a course of lessons in prehistory, incorporating museum visits, given to a class of 11 year olds. After preparatory work at school the class was taken for a whole day to visit the British Museum, and later in the term they made two half day visits to Bedford Museum and to Castle Lane. Here, after seeing a film and discussing and making notes and drawings from material on both open and cased display, they made models of Bronze Age huts, and pots from natural clay. These pots were fired in a bonfire kiln in the Museum Education Service yard, and the results of the term's work were displayed at the School Open Day.

The museum side of this project used ideas originally tried out in a Christmas holiday session 'Archaeology Indoors', organised by both the Archaeological Assistant and the Museum Education Officer, when apart from the making and firing of pots in a spectacular blaze, talks were given, films shown and archaeological finds washed and marked. Other holiday activities, less archaeological in name, have nevertheless, introduced various aspects of the subject. 'Umber Ochre Sienna and Soor' involved looking at natural pigments used by man in cave painting, Egyptian wall painting and medieval fresco. 'Siege 74', 'Rushlights and Gruel' and 'Bedford 1224' encouraged investigation of the lives of both rich and poor in medieval times, with particular emphasis on the siege of Bedford Castle in 1224.

Such sessions can only cater for a limited number of children but the interest generated in teachers seeing how museum material and archaeological evidence could be used in school work is considerable. Those who have taught prehistory, and Roman history, usually to children of lower and middle school age, have always realised the extra stimulus that can come from seeing what was made and used at a particular time in the past, and even more from handling a flint arrowhead or a piece of Samian ware. The medieval and Saxon periods can also be studied through their material remains, though as Bedford's settlement during those years is still being investigated, it is likely to be through slides of, or visits to, current excavations as much as through what is already on museum shelves.

Schools' interest in museum connections with

archaeology, therefore, is long established as a general principle and gradually becoming more practical to realise through visits and loans. Archaeological field work in school time is a more recent phenomenon, but digging, at least, is becoming a commoner activity. Bedford School was the first to release groups of boys to dig on a regular basis for an afternoon a week; in 1965 while David Baker was a teacher at the school, it was suggested that excavating might be a suitable alternative occupation to, in some cases, games and, in other cases, social service projects or the Combined Cadet Force. Digging at Elstow Abbey got under way with a predominantly school-age labour force in the years 1965-8, and other Harpur Trust and grammar schools joined in, with the more enthusiastic reappearing on Sunday afternoons and in the holidays. In the last few years Bedford School and Bedford Modern School have again sent groups to work on excavations in the Bedford area, and schools with a more mixed intake of pupils have also shown interest. The age range has usually been 14-18 years old, but one middle school has allowed several keen 13 year olds to dig on what would normally be a general studies afternoon. With younger children a timetable flexible enough to release the few individuals able to benefit from such a painstaking pastime is obviously rare, and any less selective procedure involving whole classes on a site, obviously impractical. With older pupils archaeology is still considered an outdoor pursuit with educational trappings; although several people

have gone on to take archaeology at university, it is not taken as an A Level subject, and yet it is as long ago as 1947 that Mr Kuhlicke with Glyn Daniel and Miles Burkitt worked on the Cambridge Board's first mock examination paper.

There is certainly scope for more field work, and not necessarily excavation, but if, as seems probable, schools' involvement with their archaeological environment becomes more established, classes in both the museum and the field are likely to become a more regular part of the syllabus than is the case at present. And there is always the incidental archaeological stimulus that the museum might provide, such as the bones which prompted Christopher Fry (Arthur Harris) while still a pupil at Bedford Modern School, to write the poem "To the Skeleton of a Bronze Age Boy", which was published in an anthology of public school verse in 1926.⁵

NOTES

- 1 Bedford Modern School Magazine, *The Eagle* 13, 9 (December 1918).
- 2 *Bedford Modern School Field Club Journal and Museum Bulletin* 3 (November 1936). Complete sets of this rare periodical are available in Bedfordshire County Library, Bedford Town Library, Bedford Town Hall, Bedfordshire County Record Office, Bedford Museum and Luton Museum.
- 3 *The Museum in War Time*. Anonymous report in Bedford Modern School Archives.
- 4 Bedford Modern School Magazine, *The Eagle* 30, 3 (Summer 1955).
- 5 *Public School Verse - An Anthology* 6 (1925-6).

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The Excavation of Two Barrows on Galley Hill, Streatley

JAMES DYER

SUMMARY

Barrow No 3.

Originally constructed to hold prehistoric burials of unestablished date, the barrow was enlarged to a kidney-shape, in the horns of which a young man and joints of oxen were buried. In the fourth century AD eighteen burials hastily placed in shallow graves may represent a massacre. In the middle ages a gallows was established on the barrow and the remains of six victims were uncovered. A pit of unknown function contained a horse skull and dice.

Barrow No 4.

This barrow was probably constructed in the mid-1st century BC, and consisted of a burial pit covered by a simple ditchless clay mound. It was badly damaged by military activity during the Second World War, which practically destroyed the burial.

GALLEY HILL, with Warden Hill to the south forms a promontory of the middle chalk, in Streatley parish, 6 km north of Luton Town Hall in Bedfordshire (TL:092269). At its foot runs the traditional route of the Icknield Way, which has probably always followed this course. The track, which today is unmetalled, runs from north-east to south-west. Also at the base of the hill ran the old Bedford Road (replaced by the A6 in 1832), which crossed the Icknield Way on the western side of the hill. A further road, the Salt Way, documented as Thiodweg in AD 926, runs west from the cross-roads towards Oxford.¹ Consequently, during the Middle Ages, this area had become a route centre of minor local importance.

Galley Hill is a prominent feature, rising 45 m from the plain below, and affording wide views westwards to Dunstable and the Five Knolls barrow cemetery, and east to Lilley Hoo and south-east Bedfordshire. Although the hill is composed of chalk, it is capped in part with clay-with-flints, the division between the two passing beneath barrow No 3. Today the surface of the hill is covered with scrub, and it forms a popular public

open space.

The Ordnance Survey 25 inch map records four barrows on the hill, two of which (Galley Hill 1 and 2) are situated on the north-western slope. Whilst I somewhat reluctantly accepted these in 1961 in my paper 'Barrows of the Chilterns'² I no longer seriously consider them to be of any great antiquity, and feel that they are probably products of lime working or military activity in the First World War.

Barrow No 3 is on the highest point of the hill at 614 ft O.D. (187.15m), whilst Barrow No 4 lies 45m to the south on the edge of the ploughed hilltop.

BARROW NO 3

Barrow No 3 first received the attention of the writer in July 1951 when, as a precocious and almost totally inexperienced schoolboy, he led the Luton Grammar School Archaeological Society to cut a trench 9m long, 1.2m wide and 0.6m deep in the western side of the barrow. The discovery of four burials and unexpected national press coverage brought the proceedings to an abrupt close, but not before the skulls of two of the skeletons were removed to Luton Museum for examination by the late Dr Osman Hill. The trench was carefully back-filled and left for re-examination in 1961.³

In October 1960 a group of people were seen climbing Galley Hill with digging equipment. A few hours later the tenant farmer informed the police that someone had dug a hole at the centre of the barrow and that human remains were scattered over the surface (Burial No 7). Efforts to trace the diggers failed, but as a result a policeman was assigned to patrol the hill daily!

Because of this action it was decided to totally excavate Barrow No 3. At the suggestion of the late Charles E. Freeman, Curator of Luton Museum, and with the permission of the Crown Commissioners who owned the site, the late F.J. Manning Esq., the tenant farmer, and the then Ministry of Works, excavation of Barrow No 3 began on 21st July 1961 and continued for three weeks. The work

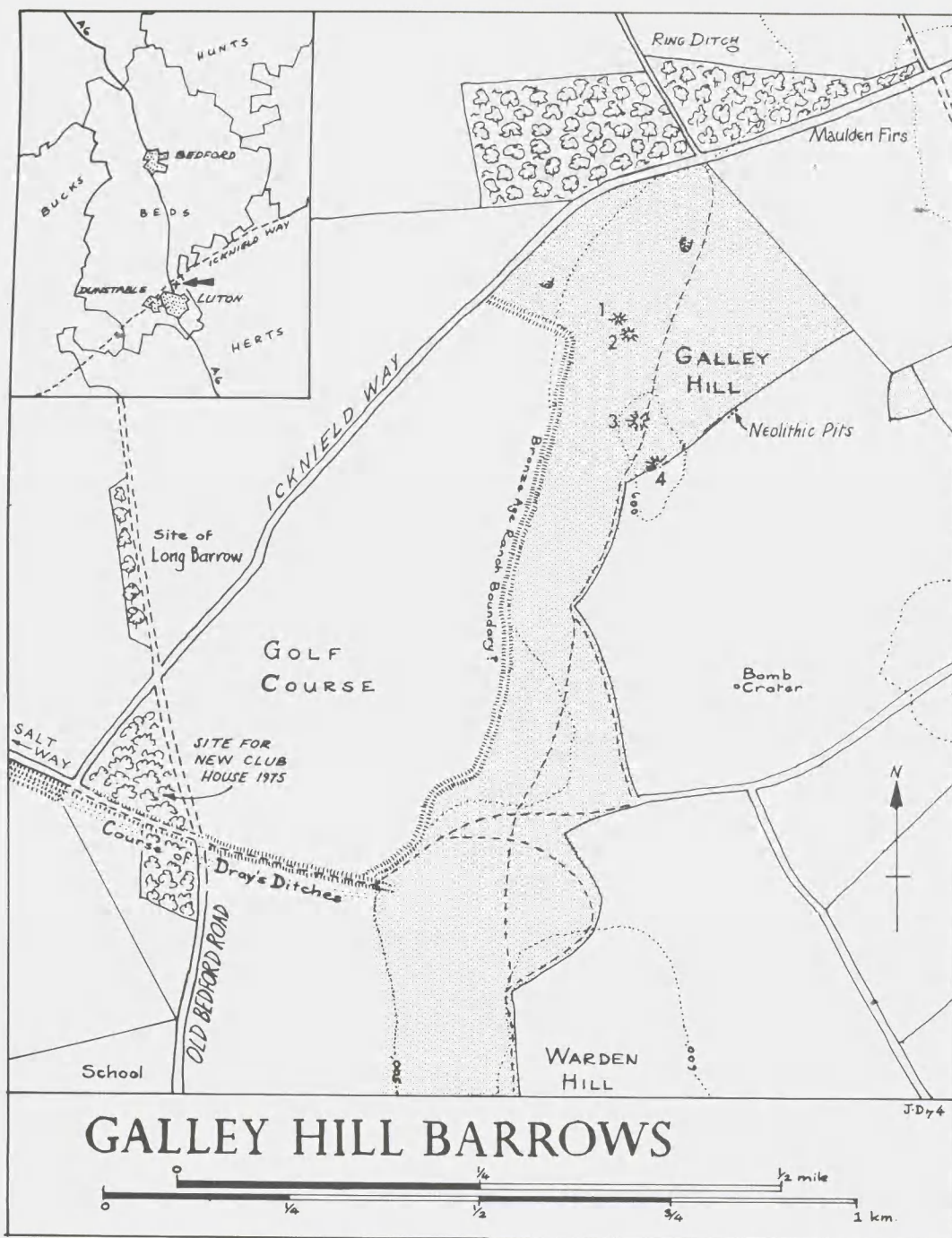


Fig 1 The location of the barrows at Galley Hill, Streatley, Bedfordshire.

was directed by the writer, ably assisted by Miss Christine Wilkins B.A., and with the help of some thirty volunteers.

The barrow, in 1961, presented a rather irregular appearance. Nowhere was it more than 1.2m high, and a contour survey by A.J. Hales Esq. ARIBA, showed that it was in fact kidney-shaped, with a distinct concavity on the northern side. Its greatest width from east to west was 19m and its average length from north to south some 17m. It did not have a surrounding ditch. Excavation was by an 'expanded quadrant' system, in which the barrow was cut into six approximately equal areas, and baulks were left across the greatest width and along the two 'horns' of the kidney plan.

Summary of the history of Barrow No 3.

Attempts to unravel the sequence of construction have been made difficult due to the situation of the barrow partly on clay and partly on chalk, and to the succession of burials added to its surface at different times. The probable sequence and subsequent history is as follows:

- 1 Large area of turf stripped off hilltop and stacked for subsequent re-use.
- 2 Primary grave dug into subsoil and burial presumably took place.
- 3 Main barrow mound constructed of turves and clay.
- 4 Mound extended to north-west and north-east to construct 'horns' using chalky material and giving mound its kidney-shaped plan.
- 5a Shallow pit dug at end of north-east horn and one (or possibly two) human burials placed in it.
- 5b Ritual involving burial of numerous pieces of young oxen in shallow pit at end of north-west horn.
- 6 Passage of time during which barrow turfs over.
- 7 Fourth century AD Roman burials.
- 8 Erection of gallows and accompanying burials.
- 9 Digging of 'horse pit'.
- 10 Robbing of primary grave?
- 11 Luton Grammar School 'dig' 1951.
- 12 Sunday morning 'dig' 1960.
- 13 Total excavation in 1961.

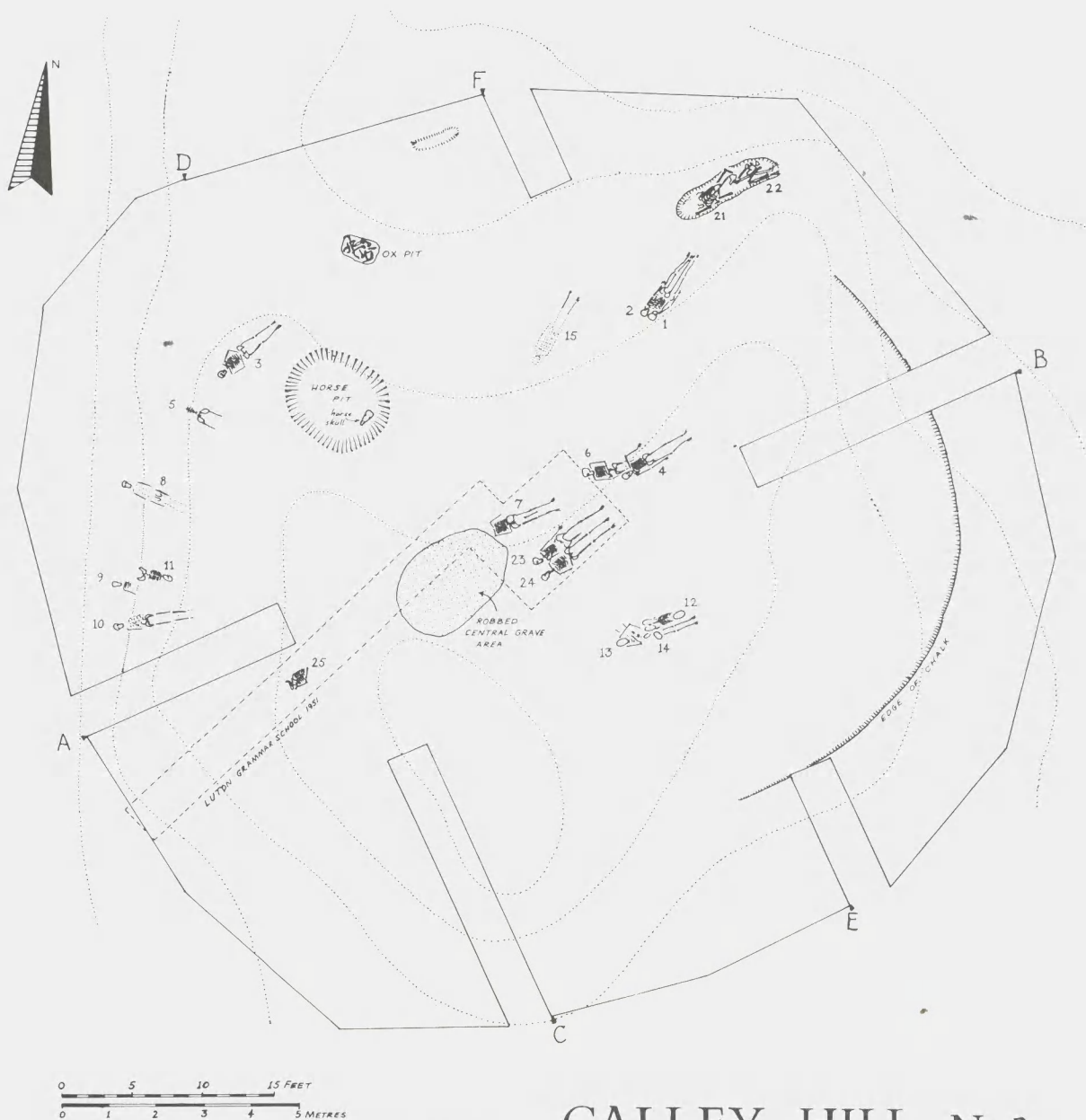
Barrow Construction

Before the barrow was built a large area of turf

was removed from the hilltop, thus exposing on the eastern side, the bare chalk beneath. This remained uncovered long enough for a distinct weathered 'step' to form along the south-eastern curve of the barrow (noticeable in Section A, fig 3). Beneath the turf on the west was a clay layer with a large number of flints which accumulated on it. It was through this that the primary grave was dug. As this was enlarged and robbed in recent times its original size is uncertain, but its restricted shape at the bottom suggests an oval pit measuring some 1.2m by 0.75m and 0.75m deep. A number of human bones had been back-filled into this pit by the robbers, but whether they represented the original burials, or a subsequent burial, cannot now be established. Parts of at least five individuals have been identified (see page 27).

After the completion of the burial a shallow hole was dug some 1.5m north of the grave in which twigs and small branches were burned. This, like the grave, was then covered with the initial barrow mound, which was composed of clay with turves. Individual turves could be clearly seen on the western side. Further turves were added to form the horn on the north-east derived from an area with chalk subsoil. The north-west horn was constructed from turf with a clay subsoil. The whole barrow was then covered with more clay and chalk marl presumably scraped from the surrounding hillside.

During this final enlargement the two horns took shape with a vestigial forecourt between them. In this area a large number of domestic ox bones were found scattered, with a concentration of them in a shallow pit measuring some 0.9m long by 0.6m wide and 15cm deep on the northern edge of the north-west horn. In a comparable position at the end of the north-eastern horn was a shallow grave 2.1m long, 0.75m wide and 15cm deep containing the scattered but semi-articulated remains of two men (burials 21 and 22). On the edge of the grave were two wall-sherds of prehistoric character and amongst the bones were four small Roman bronze coins and a small iron hinge. On anatomical grounds one of these burials (no 21) is of typical prehistoric stock and may well be as early as of neolithic date. The second burial might also be prehistoric, but due to the associated finds it is more reasonable to see it as an intrusive burial of Roman date which caused the disturbance of the first. The very shallow nature of the grave is not unusual for neolithic burial and a similar fea-



GALLEY HILL No 3

Fig 2 Galley Hill, barrow 3, site plan.

ture was observed in the last century by W.G. Smith on the Downs 10km away at Dunstable.⁴ There, too, material for the barrow mound had been collected from a distance and not dug from a surrounding ditch.

The kidney shape of the barrow recalls the Whiteleaf barrow dug by Sir Lindsay Scott between

1934 and 1939. This produced neolithic material and seems to have contained a wooden burial chamber.⁵

The Roman Period

The barrow remained undisturbed for many centuries until sometime in the fourth century AD the surface was broken by a number of new

burials. Some twelve skeletons were found hastily buried in shallow graves often only a few inches below the present surface of the barrow, and others had been disturbed by the robbers' pit. On the evidence of coins, pottery and metalwork this seems likely to have taken place around AD 360, and might be connected with the destruction of a small Roman settlement at Runfold Avenue, Limbury, 2km south-west along the Icknield Way.⁶

The burials of this group were all lying approximately east to west (feet to west). No's 1 and 2 (two young men) had been buried one above the other in a grave 0.9m deep, on the north-east side of the barrow. This suggests a hasty burial. Burial No 3, a young man of some 20-25 years lay fully extended on the northern side of the barrow, again only a few centimetres below the surface. Similarly No 6, another young man, lay some 15cm below the present barrow surface, with No 4, a youth of about 18, partially over him. Burials 23 and 24 lay beside each other at a depth of 30cm. These were two of the burials discovered by the Luton Grammar School boys in 1951. The right leg of No 23, a young woman, was missing. Beneath her pelvis were five small bronze mounts suggesting that she had been wearing some kind of belt. A sixth mount lay beneath burial 24. At her side lay a slightly older man (No 24), his left arm passing beneath her waist. Burial No 7, a young woman, was also first uncovered and photographed in 1951 and was destroyed by the 'persons unknown' in 1960, who left only her feet and ankles. This skeleton was first found lying on its back with the legs extended, the right arm behind the back and the radius of the left arm lying quite separately between the legs. There was no skull present. (A visitor to the excavations recalled that his father had found a skull on the hill whilst digging a hole for a noticeboard: the signs of such a hole were quite clear in 1951). Close to the feet of No 7 were four small iron nails. These were examined by Mr J.W. Brailsford in 1951 who suggested that they might have been coffin nails, but no others were found in the subsequent excavation, nor were there any visible traces of coffins. A footpath over the barrow had destroyed most of the burial No 15, a young person of about 14 years. On the southern side of the barrow were a pile of three superimposed burials 12, 13 and 14. As described in the anatomical report (page 24) the lower body, No 14, an adult male, was bent double in jackknife fashion and appeared to be cut in two halves. However there was no anatomical evidence to suggest that

the corpse had been cut, and it is possible that it was disturbed by the subsequent burials. Burial 13, a young man, had been thrown into a shallow grave, face downwards, with head to the west, above No 14, and a young woman, No 12, thrown face downwards and to the east across his body. A calcined deposit that lay under this group of bodies suggests that the hollow in which they lay remained open to the elements for some time before it silted up by natural means. Again the uppermost burial was only a few centimetres from the modern ground surface. Associated with all the burials described above were a few sherds of abraded pottery of mid-second century AD date, together with a Roman iron strap hinge, and the four coins of the mid-fourth century. (See Appendix, p.20). With the exception of the bronze belt mounts, none of the burials were accompanied by any personal possessions.

The Gallows

Galley Hill has always been the traditional site for a gallows, and its name has existed at least since 1504 (Galowehill). Being on the highest point, Barrow No 3 would seem the most likely spot. Whether this stood in the 'Robber Pit' or the 'Horse Pit' is not known, since no trace of a post survived in either, but this need only mean that the gallows post was removed when it was no longer required. Subsequent disturbance would have removed all further trace.

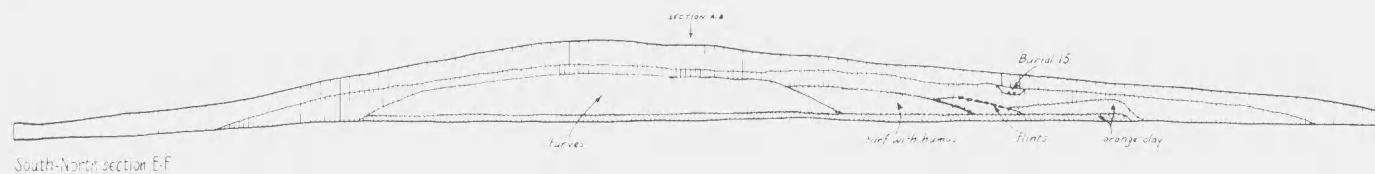
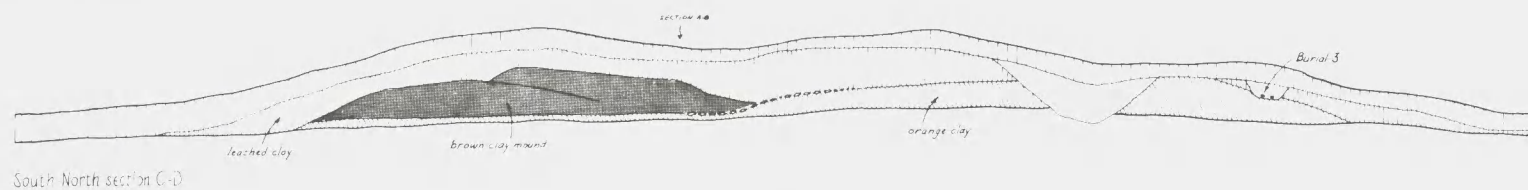
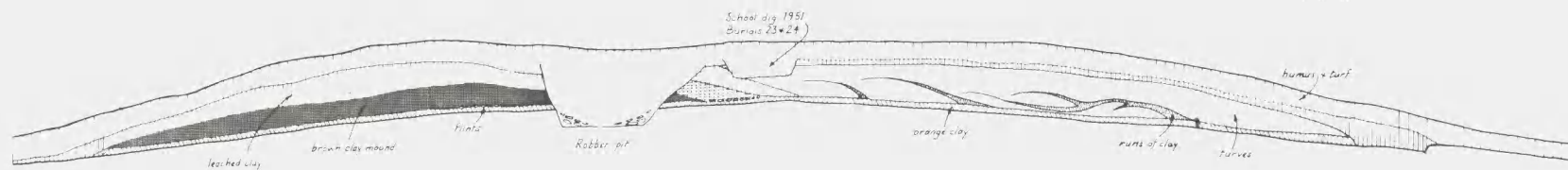
The Gallows Burials

On the west side of the barrow the decayed remains of six individuals who may have been gallows victims were exposed (No's 5, 8, 9, 10, 11, 25). They differed from the other burials in two particular ways. Firstly they were all in a very poor state of preservation, suggesting decay by exposure with the possible addition of some chemical agent such as quick-lime. Secondly they were buried at an angle of about 45 degrees on the steepest part of the barrow side, and all except No 11 had their heads at the foot of the slope, with their feet uphill. Anatomical examination showed that five of the burials were male and one female. No objects were found with them. Burial 25 was uncovered and photographed in 1951, but had disintegrated by 1961.

The Robber Pit

At some date, perhaps as late as the 18th century, a pit measuring 2.7 by 1.8m and 0.9m deep was dug into the highest point of the barrow, des-

GALLEY HILL No 3



GALLEY HILL No 4

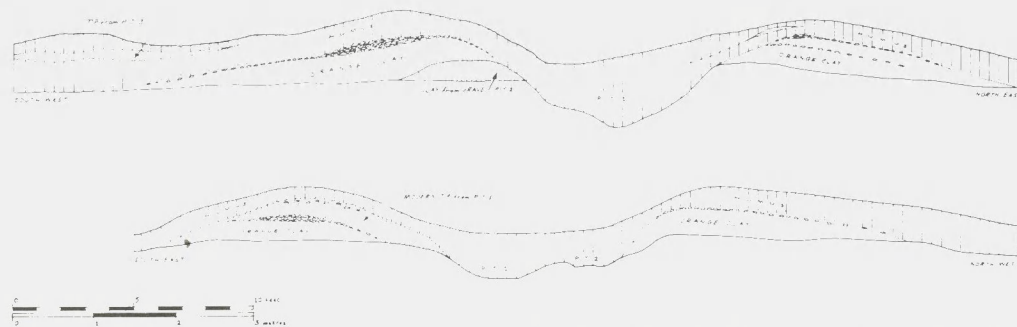


Fig 3 Galley Hill, barrows 3 and 4, sections.

troying some secondary burials and the primary burial pit. It has been possible to identify the scattered remains of five individuals dumped into it; these represent three men, a woman and child. All the human bones had been thrown back into the hole by the diggers. It is worth noting that the *Victoria County History of Hertfordshire* records that 'Gold and silver coins were found in the 18th century in barrows between Hexton and Lea-grave'.⁷ The Galley Hill barrows are the only known examples to fit this description.

The Horse Pit

The north-western horn of the barrow had been cut by a large oval pit 2.1m by 1.8m across and 1.2m deep. This was filled with a friable orange-brown clay. At a depth of 0.9m on a ledge at the south side of the pit was the skull of a horse 45.7cm long. There were no other bones in the pit. Touching the horse's right nostril was a small chalk-cut dice, six upwards! Also in the pit were the base fragments of a black-glazed vase and a small bronze tag at the end of a leather lace. The pottery, of Cistercian ware, suggests a sixteenth century date for the deposit and it will be discussed again later.

Discussion of the Roman Burials

Although the skeletal report suggests that all these burials might be as late as post-Norman, the associated finds of abraded Roman pottery and coins seems to indicate that they belong to the Roman era, and there are hints that they may represent at least two separate groups of burials. It is clear that No 14 was disturbed when it had partially decayed, by No 13, and that No 6 was disturbed by No 4. Only No 2 is in a fairly deep grave, and that is shared with No 1. Under burials 4, 5, 12 and 13 was the hard calciferous deposit representing sediment on the bottom of a long-open grave.

There is no clue as to the cause of death, although burial on a prominent hilltop might suggest some form of execution. Parallels might be drawn with Barrow No 5 in the Five Knolls group at Dunstable. The composition of the burial group, twelve men, four women and two children is perhaps indicative of some local massacre, and the coins offer a *terminus post quem* of AD 341. Whether this event might be linked with the end of the small Roman settlement at Runfold Avenue, Limbury, early in the 4th century AD is open to speculation. The latest coin found on that site is dated AD 348. The casual way in which most of

the corpses were buried, only a few centimetres below the surface, is consistent with a theory of hurried internment.

The Gallows burials and the Horse Pit

Galley Hill was a traditional gallows site, as its name reveals. In spite of this no documentary record survives of hangings on the hill, nor who administered this particular gibbet. It is possible that a gallows was set up from time to time as required. This would be consistent with the disturbed filling of the Robber Pit, or perhaps for the first digging of the Horse Pit as well. If a gallows stood in the latter, then the Cistercian ware would offer a useful clue to its date. It might also link the horse skull to the gallows. The skull, together with its dice, seem to represent some forgotten local folklore. One may suggest that the horse might once have belonged to an owner of Galley Hill; perhaps it raced on the nearby Lilley Hoo race course; but it is odd that only the skull should have been placed in so large a pit. The late Dr Margaret Murray suggested in 1961 that it might have been a sacrifice, made before the Church began its successful campaign against the Witch religion, the horse being one of the disguises of the incarnate God. The late Mr T.C. Lethbridge also considered that the skull represented some lost folk memory. He drew attention to the pony's skull found by himself in a barrow at Snailwell, Cambridgeshire.⁸ In a letter to Dr Murray he wrote that it was not possible to say whether the Snailwell skull was Bronze Age or intrusive with any conviction. More recently Mrs E.H. Rudkin has considered Dr Murray's suggestions but has come to the conclusion that they are coincidence and dismisses a hint that it might be connected with witchcraft since it is impossible to see what it was for, or against.⁹

It is interesting to note that an animal was slaughtered on top of a round barrow at Raundale in Norway whenever anyone died on a neighbouring farm. This was considered necessary to placate the Tanner who lived in the barrow. A heifer had been the last animal slaughtered before the barrow was excavated in 1909.

There are few excavated gallows sites in Britain, but much folklore is attached to the magnificent Danish Galgebakke (gallows hill) at Slots Bjergby in Zealand.¹⁰ This was an early bronze age barrow, enlarged in the iron age and again in the early middle ages. Some forty skeletons of men and women who had been hanged or beheaded were found in the barrow when it was excavated in

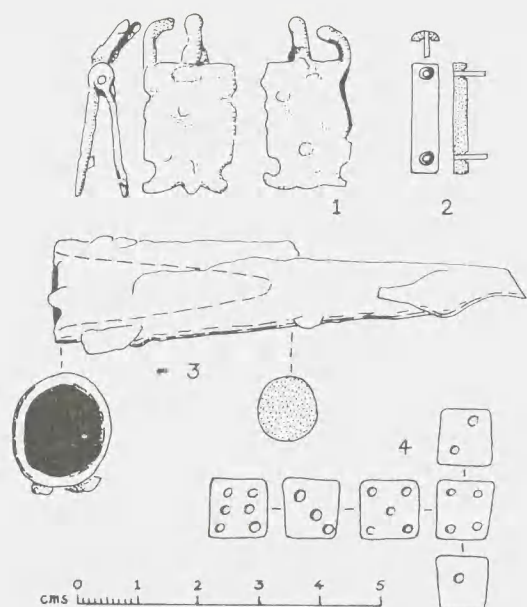


Fig 4 Galley Hill, barrow 3, small finds.

1946-7. It had last been used for an execution in 1847. The hanged burials lay flat on their backs; those beheaded lay on their sides, with their heads between their legs. At Galley Hill the gallows burials were too fragmentary to indicate the definite method of execution, but no heads lay apart from the bodies.

All the human remains from Barrow No 3, except for the skulls of burials 23 and 24, have been deposited in the British Museum (Natural History), South Kensington. Skulls 23 and 24 are in Luton Museum.

THE SMALL FINDS

Pottery

Most of the pottery was very abraded. Two sherds from burials No's 21 and 22 might be of Windmill Hill ware, but this is far from certain. The weathered nature of the sherds suggests that they may be derived and cannot be used to safely date the burials.

A number of wall sherds from beneath the barrow are of iron age character, including a rim sherd of sandy orange-brown fabric (Fig., No 1). It is similar to material from Barrow No 4.

Roman pottery included a fragment from the rim of a samian vessel probably of Curle type 11. The flange has been broken away at the junction with the wall. A.D. 75-100.

Coarse Romano-British material consisted of a number of wall sherds including (1) a moulded rim bowl sherd, with slightly undercut rim and girth groove (above carination) in soft, dense grey ware, with particles of black grit. It is a local copy of commercial types. Antonine c.150 AD.

(2) A sherd of a jar with moulded rim and out-turned neck in soft light grey ware with small particles of black grit. Local ware: 2nd half of 2nd century AD.

(3) Parts of the body of a flagon (?) deep orange, sand gritted ware. Probably 3rd or 4th century AD.

(4) Moulded rim on slightly flaring neck in dense, rather soft and slightly micaceous light grey ware. ? c.125-50 AD.

The base of a black glazed Cistercian ware vessel, c.16th century accompanied the horse's skull.

Flint

The ground surface beneath the barrow was littered with natural flints, amongst which a number of humanly fashioned blades were identified. This probably represents a pre-barrow occupation of the hilltop.

Clay Pipes

A number of pieces of clay pipe were found, one with a mulberry tree decoration on the base. They all belonged to Oswald's type 5, c.1670-1700.

Dice (Fig 4, No 4)

The dice, approximately 1 cm cubed, is hand made from a piece of chalk or limestone. It is assymetrical, and some of the dots forming the numbers are very shallow. It has not been weighted in any way.

THE METAL WORK

by Dr W.H. Manning (1963)

Bronze (Fig 4, No 2)

Six small bronze mounts from Burial 23. They are made with great delicacy from bars of semi-circular section with two rivets inserted into drilled and countersunk holes near the ends. Their function was shown by the circumstances of the discovery around the waist of one of the burials. Such ornaments are known in the Roman period though they are not common, and are rarely as delicate and small as in the present examples, each of which averages 17mm in length, and 4.5mm wide.

Iron (Fig 4, No's 1 and 3)

No 1. Small iron strap hinge; one strap being formed of two ornamental plates with the remains of a rivet or nail still in one, and the other of two (originally three) prongs. The details are unusual but hinges of this type are not uncommon in the Roman period and were used on small caskets. In this case the lid would have fitted between the plates and the prongs would have been driven into the walls of the casket. Found beneath burial 21.
No 3. Two hollow iron ferrules. These specimens are well made. They are usually said to be the sheaths of spear butts or for staffs. It is, however, possible that some of them may have bound the tips of wooden pitchforks to give them greater protection from wear; similar ferrules were used for this in the last century. In view of the size of the specimens and the care with which they have been made they were most likely intended to sheath the points of staffs. The ferrules were found at depths of 90cm from the surface in the north and south-west quadrants, unassociated with any burials.

Coins (Beside Burials 21 and 22)

Two copies of Urbs Roma type: AD 330-337.

One coin of Constantius II Aug. Gloria Exercitus (one standard type) 1 AD 337-41
|||

One coin of House of Constantine. Gloria Exercitus (one standard type) 1 (mint of Lugdunum: Lyons) Constantius II (?) Aug.
PLG

All the small finds have been deposited in Luton Museum.

BARROW NO 4

Excavation of this barrow took place from 24th July 1962 for eight days. It was directed by the writer with the assistance of some twenty-four volunteers, largely drawn from local schools. Prior to the excavation the barrow presented a very untidy appearance. Approximately 9m in diameter, it was nowhere more than 1m high. Its centre was scarred by a pit 5m in diameter and 0.6m deep. In addition to this the southern side was being eroded by ploughing. The barrow was dug using the quadrant method.

Summary of the history of Barrow No. 4

- 1 Turf removed from area to be covered by barrow.
- 2 Ritual involving breaking of iron age pottery.
- 3 Burial pit dug. Material from pit covers some

GALLEY HILL No 4

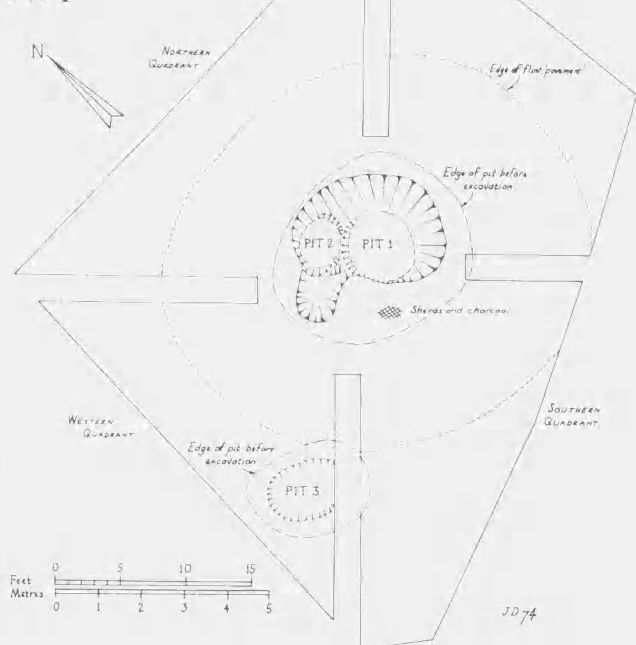


Fig 5 Galley Hill, barrow 4, site plan.

of pottery from 2.

- 4 Burial, followed by filling of pit.
- 5 Construction of barrow mound.
- 6 Central pit dug in modern times, c.1940. Burial found and 'stored'.
- 7 Central pit refilled and burial reinterred.
- 8 Excavation in 1962.

Barrow construction

The turf had been stripped from the hill top prior to the burial ceremony, revealing the natural orange clay beneath. A quantity of iron age pottery mixed with wood ashes were deposited near the centre of the barrow. The sherds had not been burnt. Most of them belonged to either a handmade cordonned vase or vessels with either bead rim or finger-nail impressed shoulder decoration. All were very weathered, and this suggested a ritual deposit perhaps brought from the home of the deceased rather than pots smashed on the spot. When the burial pit (Pit ??) was dug, the clay removed covered this ritual deposit. A middle aged man was buried in the pit, but later disturbance made it impossible to say in what position. The grave was filled and the barrow mound con-

structed. of local orange clay from an unknown source. No ditch was dug round the barrow. The turves originally removed from the site may have been piled over the top of the mound.

In 1940 troops on manoeuvres on the hill top created a small look-out post in the centre of the barrow. Their trench (pit 1) 1.5m deep removed the primary burial although the base of the grave pit (pit 2) was preserved. Most of the human remains were apparently destroyed, although the upper part of the cranium, the mandible and two pieces of femur were reburied by the military when the site was vacated. The skull was found buried with the leg bones crossed above it in pirate fashion! A milkbottle and fragment of the *Daily Mirror* for 1940 dated the trench satisfactorily. A second military pit (No 3) had been dug outside the barrow to the south-west.

THE SMALL FINDS

The Pottery (Fig 6, 2 to 6)

A large number of sherds were found, mixed with wood ash, south of the burial pit. Neither the wood nor the pottery had been burnt on the spot. At least three vessels were represented:

No 2. This was the upper part of a hand-made cordoned urn of weathered dark grey fabric, coated with orange slip, and similar in appearance to Burchell's Type 1A. There was no indication of the shape of its base.

No 5. One very weathered sherd, possibly from the above pot, may have a chevron decoration upon it. The fabric is identical, but its surface is very worn.

No 3. This vessel had a sharply out-turned bead rim. Made of an orange, biscuity fabric, it is of similar material to:

No 4. A shoulder sherd with finger nail decoration.

No 6. This rim sherd has a flat, slightly out-turned surface with lightly incised horizontal grooves on the neck. Brown in colour, it has a darker grey-brown slip on the surface and is finely shell-gritted.

All the sherds are probably early Belgic and can be dated to the middle of the 1st century BC. There are no obvious local parallels, although there are some similarities with the material from Cholesbury Camp in Buckinghamshire. All the pottery has been deposited in Luton Museum.

Clay Pipe

Numerous lengths of clay pipe stem were found and the bowl of one pipe inscribed G. Kiff-St. Albans.

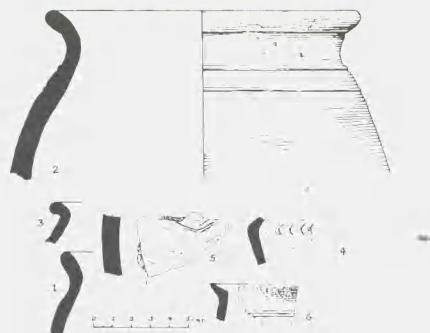


Fig 6 Galley Hill, barrow 4, pottery. (Scale $\frac{1}{4}$).

The Human Remains

These consisted of the top of the cranium of a well-built middle-aged man, the mandible with six teeth present (the rest were probably lost when it was moved in 1940) and two pieces of a femur. The bones appeared to be those of a middle aged man.

APPENDIX

REPORT ON THE GALLEY HILL BARROW 3 INHUMATION BURIALS

by R. POWERS and D.R. BROTHWELL

Burial 1. Young adult, aged 20 to 24 years probably male.

Skull and skeleton, practically complete. The epiphyses are united but the pubic symphysis is deeply rippled as in youth. The sex is probably male, though the pelvis shows a pre-auricular sulcus on one side, and the atlas and foot bones look small and feminine. However, the mandible and the bone prominences for muscle-attachments look male. The first lower left incisor is duplicated, the teeth being placed one behind the other, though normal in size and shape. They have not caused much malposition of the other teeth. The other peculiarities are five small wormian bones in the lambda region, and a slight cleft of the first sacral arch. The lumbar vertebrae show pitting of the bodies but no lipping.

This skeleton was buried above, and probably onto, the next, disturbing and damaging the bones of the trunk.

Burial 2. Male? aged 28 - 34 years.

Skull and skeleton, complete except for some damage to the pelvis and rib cage. Like the previous individual, it is not strongly masculine. The thoracic vertebrae show slight pitting but the lumbar do not. The right side of the occipital shows a horizontal suture which is obliterated on

the left. No wormian bones are present.

Burial 3. Male, aged 20 – 25 years.

Skeleton, lacking only a few foot bones. Skull with right side of face damaged, (the crushed molar bone was found in the N/NW baulk). The skull has 18 lambdoid ossicles and marked bathrocephaly. There is also an open metopic suture and bilateral ossicles in the parietal notches. Dental caries has destroyed two teeth, and attacked two more, and an abscess has formed on the affected root stumps. The post-cranial skeleton is normal.

Burial 4. Male (probably) aged about 18 years.

Skull and skeleton lacking only the manubrium sterni and some small hand and foot bones. The lower third molars are in course of eruption and epiphyseal fusion is incomplete. The epiphyses of the iliac crests and distal ends of the forearm bones are open, and the following are still distinct though fusion has started: proximal humerus, proximal and distal ends of femora, and the inter-articular rims of the lumbar bodies. Although sub-adult the left upper first molar has a caries cavity which has initiated an apical abscess. There are no other abnormalities.

Burial 5. Adult, perhaps male.

Remains of a right humerus and shoulder-girdle, both femora and a tibia. All are shaft fragments except the right femur, which retains its head. The pelvis and vertebral column are shown in a site photograph but were too rotted to remove. The tibia shaft fragment shows marked lateral flattening but could not be measured because the foramen at the level of which measurements are taken is not visible.

Burial 6. Male aged about 25 – 30 years.

Two minor developmental anomalies are present; firstly the sternal body remains in four entirely separate segments: and secondly the sacrum has a "transitional" lumbo-sacral vertebra fused onto it although five normal lumbar vertebrae are also present. There are dental caries leading to abscesses and tooth loss.

The pubic symphysis indicates a fairly young age though all epiphyses have fused. The cranial sutures are open.

Burial 7. Female aged about 18 years.

The feet and ankles of a healthy young adult, probably female, excellently preserved. The rest of the skeleton was removed by persons unknown in 1960. The distal epiphyses of the tibiae are closed. The size and appearance of the bones confirms

the age and sex as judged from the excavation photograph taken when uncovered (but not removed) in 1951 by the schoolboys. The skull at that time was missing.

Burials 8 and 9.

These were received in two boxes, one containing both skulls and the other both post-cranial skeletons. Both are very poorly preserved, and both are represented by fragments of vault, mandible, ilia and main long bones especially the femora. Some loose hand bones may belong to either.

Burial 8. Adult male, probably about 30 years.

The skeleton is the least well-preserved of the two. The teeth show fairly heavy wear, and there is some alveolar disease presumably in response to this. One wormian bone is present in the lambdoid suture.

Burial 9. Adult female, about the same age as 8.

The teeth show slight caries; a curious hole through the root of the left lower premolar looks like an unusual form of caries but is probably an artifact.

The right tibia is much deformed by a swelling of the lower half of the shaft. As the upper half of the same bone shows severe periostitis on the inner aspect the swelling is probably the end-result of the same inflammatory process. The left tibia and what remains of the other bones show no abnormality.

Burial 10. Adult male (?)

Sexed on a mastoid fragment, but the other bones are not robust. The fragments of the skull, a few loose teeth, long bones of legs and right arm and remnants of the ilia are all that remain. They show no abnormality.

Burial 11. Male aged about 22 – 25 years.

Back of the skull, part of the mandible, legs, ankles and remains of ilia. The skull shows one lambdoid wormian, slight periodontal disease and agenesis of an upper third molar.

Burials 12, 13, 14, were buried in a heap, numbered from above downwards.

Burial 12. Female, aged about 22 years.

This, the uppermost skeleton, is fairly well preserved except for the loss of the entire right arm and shoulder, both patellae and some hand and foot bones. The right molar bone was found detached, a little way from the skeleton. The pubic symphysis is young in type and the iliac crest epiphysis is still loose. The sacral segments

1	♂ ?	
2	♂ ?	
3	♂	
4	♂ 18	
* 5	♂	- - - - -
6	♂	
7	♀ 18	- - - - -
* 8	♂	- - -
* 9	♀	- - -
* 10	♂	- - - ? -
* 11	♂	-
12	♀	
13	♀ ? 18	- - - -
14	♀ ?	-
15	J 14	- - - - -
(16)	J 14	- - - - -
(17)	♂	- - - - -
(18)	♂	-
(19)	♂	- - - - -
(20)		- - - - -
N 21	♂	- - -
N 22	♂	- -
23	♀ ?	not much wear
24	♂	not much wear

Fig 7 Dental Attrition patterns.

*: Gallows Group

N: Neolithic

are still separate, but all other epiphyses are fused and obliterated. There is slight periodontal disease but no other dental pathology and all teeth were present at death.

The head of the left humerus has been fractured off through the neck and displaced backwards relative to the rest of the bone. The fracture is firmly united though the resulting deformity is considerable. The displacement is very striking, suggesting that the arm had been twisted or struck violently. The part of the shaft left exposed has

formed a false joint with the acromian process of the scapula. The whole joint was evidently fixed so that the humerus could not be raised from the 'hanging' position, and there is probably considerable shortening of the humerus. Nevertheless the shoulder joint shows no arthritic change, which suggests that the injury was inflicted not many years before death. This reasoning is confirmed by the fact that there is no sign that the epiphysis was displaced, so the injury must have occurred after it was firmly united at 17 years or later.

Burial 13. Young male? aged 18-21 years.

The skeleton is complete except for the proximal half of the left ulna and some hand and foot bones. The left molar bone was found detached. Dental attrition is slight, at least one third molar is 'congenitally' absent, and the lower molar crowns have been destroyed by caries. There is slight periodontal disease.

The femora are somewhat grooved and bowed, their heads being nearer a right-angle than usual, signs which might indicate mild rickets during the growth period. The arch of the first sacral segment shows a midline cleft. The sternal body consists of four segments, the middle two being partly ossified together.

The pubic symphysis is young in type and the bodies of the sacral segments are separate although their alae are fused. The epiphyses at the wrist, the humerus heads, and at both ends of the femur and the medial ends of the clavicles are still open, also those of the lumbar body rims.

Burial 14. Adult, possibly male.

This body was at the bottom of the pile, bent double in 'jackknife' fashion and apparently cut into halves. Although the trunk and limbs are fairly complete the arms and scapulae are absent. The foot bones and patellae are also missing.

Some mid-thoracic vertebrae are broken and rotted, but if the body had been cut through at that level some ribs must have been severed. Enough rib fragments remain to represent the rib cage and none show evidence of cutting nor do any of the other bones. It appears more probable that the body was partially decayed when disturbed by the burial of No. 13, and the lower half was pushed aside by the grave-digger, exposing the middle vertebrae (Thoracic's 5 to 10) to contact with burial 13 during its period of active decay.

There are several peculiar holes in various parts of skeleton No. 14, notably in the roof of the left orbit, the rear of a tibia at the knee, and the arches of two thoracic vertebrae. They were first

GALLEY HILL BARROW 3 PATHOLOGY.

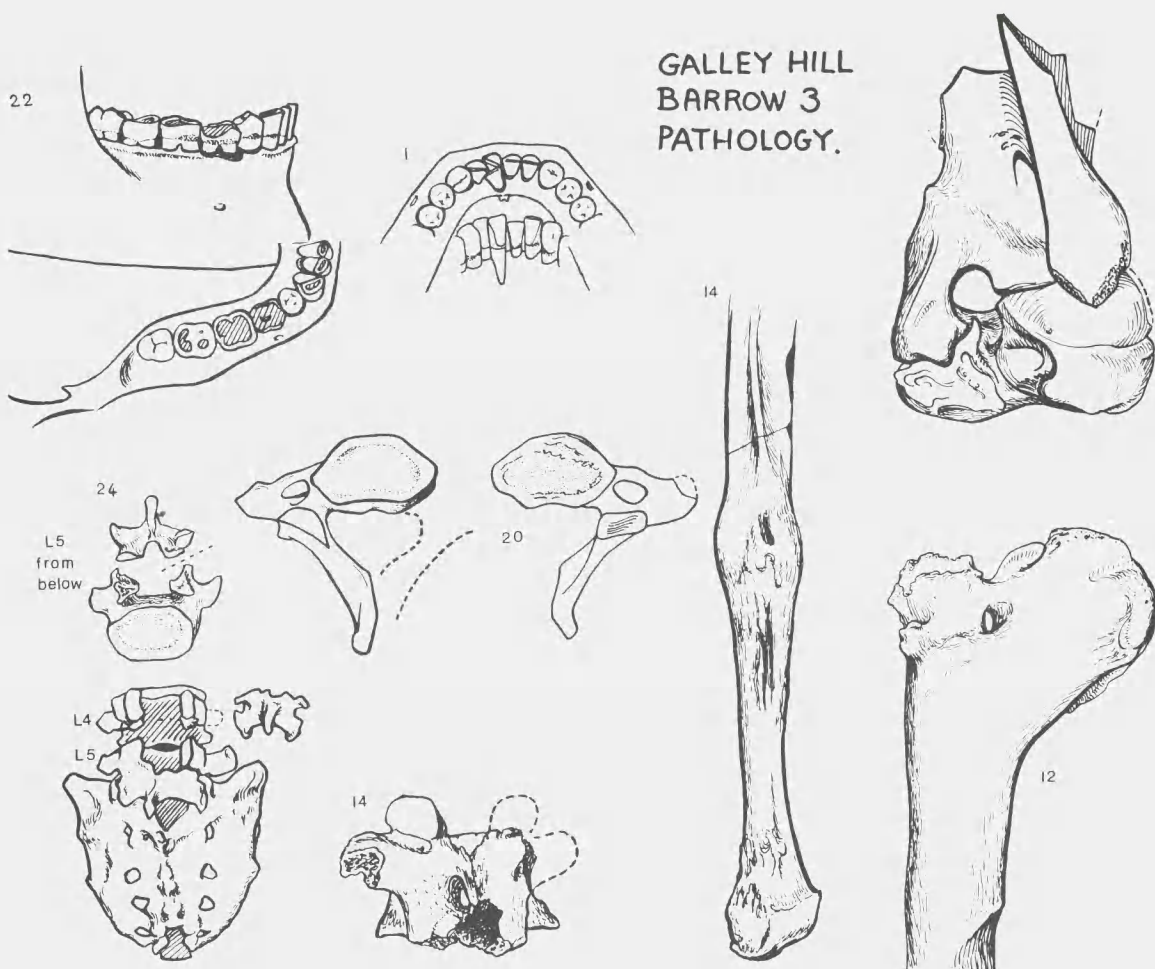


Fig 8 Pathology

- Burial 22 2 views showing the functional milk-molar.
- Burial 1 2 views showing the twinned lower incisor.
- no. 20 2 views of the anomalous cervical vertebra (above and below).
- Burial 14 Hole through arch of a thoracic vertebra.
- Burial 24 The vertebral anomalies (2 views of L.4).
- Burial 14 The healed fracture of the fibula (inner aspect).
- Burial 12 The deformed shoulder; view from above, and humerus head from outer aspect.

thought possibly to represent metatases or some other destructive bone disease, but further study suggests that they could equally be artifacts due to the decay process. There is undoubtedly a well-healed fracture of the left fibula at the junction of it's upper and middle thirds, which can also be seen in the excavation photograph. A defect exists in the first sacral arch like that in number 13, and

there is slight osteoarthritic lipping in the lumbar region. An abscess has formed on the roots of the upper right second molar (now missing) and attrition is irregular, possibly in consequence of the pain when chewing. Fourteen small wormians are present in the lambdoid suture and the upper half of the occipital is divided off by a horizontal suture (os inca).

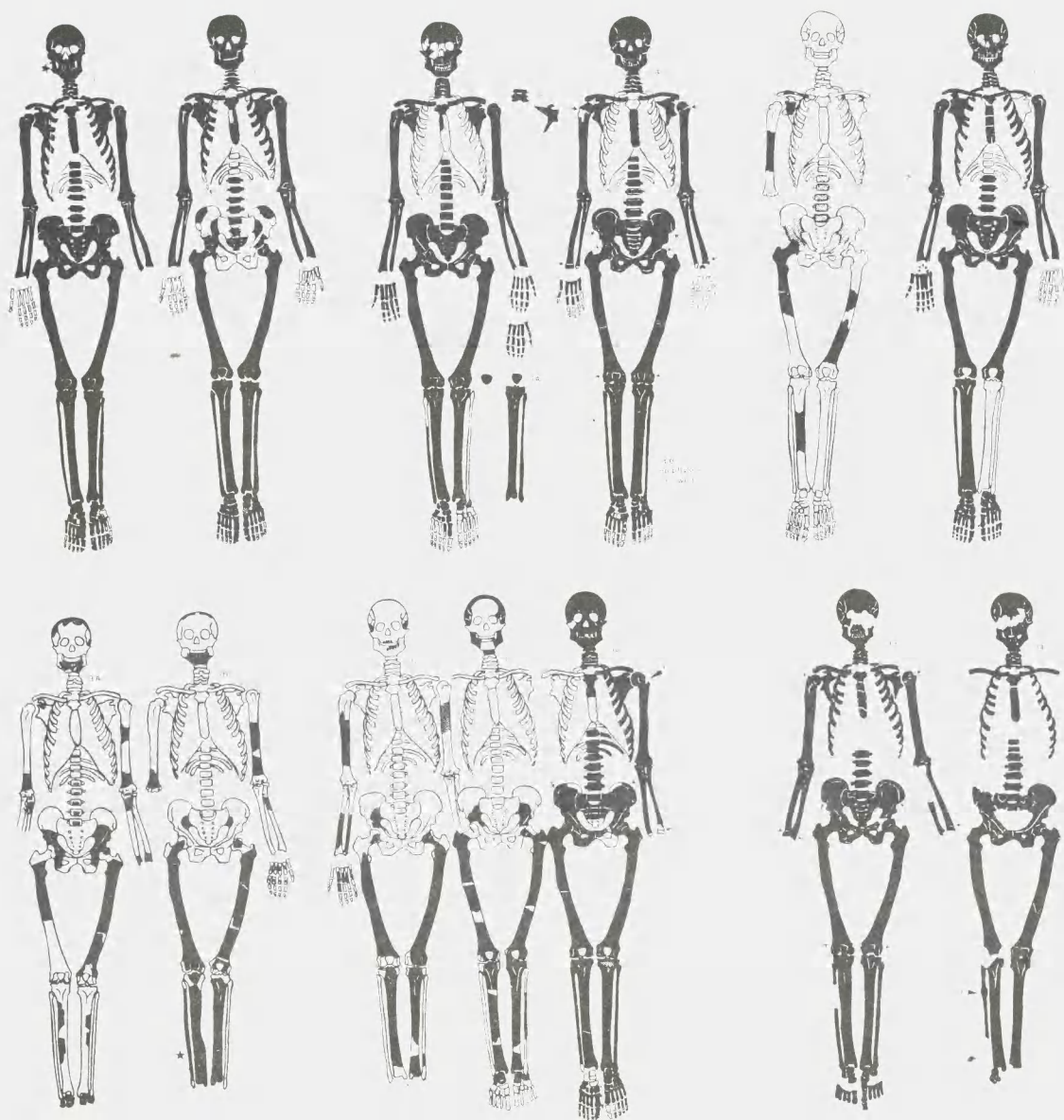


Fig 9 Skeletons from Galley Hill, barrow 3.

Presumably the absence of three arms out of a possible total of six in this series of bodies is due to post-mortem disturbance. Certainly there is no evidence of amputation.

Burial 15. Age about 14 years.

Most of this burial had been previously destroyed by a footpath. The proximal end of a femur, some hand bones and a scapula, all from the right side and lacking their epiphyses, are all that remains. The size is almost adult, the scapula in

particular resembles that of the 14 year-old from the Robber Pit and on the anatomical evidence they might all be parts of one skeleton, though this is unlikely since Burial 15 was 5.5m from the Robber Pit.

The Robber Pit Burials

The robber pit material has, as far as possible, been sorted into skeletons and assigned "burial numbers" (in brackets to distinguish them from the true burials) as follows.

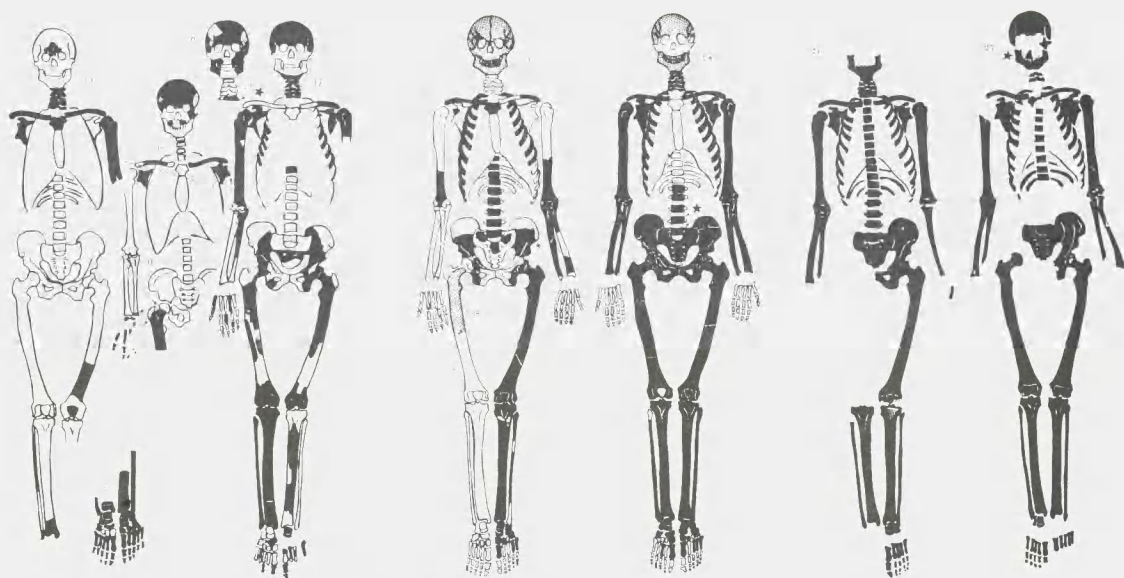


Fig 10 Skeletons from Barrow 3 at Galley Hill.

(16) One bag contained the cranium of an adolescent (aged about 14 years) whose clavicles, left scapula, and occipital fragments were mixed with the next specimen. As the only other bones of this age-group (rather infrequent in cemetery populations) are in Grave 15 it is possible on the anatomical evidence that they represent the same individual. After reconstruction the brain-case was almost complete. Two separate portions of the maxilla are also present, containing unerupted third molars and all other teeth distal to the first premolars.

The remaining bones comprise at least three adult males who are impossible to separate with certainty. The following is therefore approximate:

(17) *Male, probably over 35 years.*

Imperfect skull vault showing obliteration of the sagittal suture and some arachnoid pits on the endocranial surface. Also, part of the chin region of the mandible, including the tips of the sockets of the incisors and left canine. A complete cervical column and post-cranial bones representing most of the skeleton are also present.

(18) *Male, probably aged 20 – 25 years.*

Imperfect skull including the left side of the face and the outer halves of each mandibular ramus. The vault sutures are open and all teeth erupted excepting the left upper M3 which is 'congenitally' absent (agenesis). The skeleton is represented by a complete cervical column, and

some bones which duplicate parts of the previous specimen, notably the left clavicle and humerus head and the distal end of the right tibia.

(19) *Adult male.*

One fragment only; the glabella region of an adult male with an open metopic suture. It is deeply eroded so that the frontal sinus is laid open. The preservation is more similar to that of 21 and 22 than to the other Robber Pit Burials. Either it represents the missing skull of 21, or possibly 22, or it is the only remaining fragment of a totally decayed burial.

(20) *Adult (Part of burial 7 ?)*

This very well preserved cervical vertebra exhibits a very rare form of double cleft. It is puzzling that no other parts of the specimen are present, and quite likely it belongs to the stolen Burial 7 which was similarly well preserved and light in colour.

Galley Hill Skeletons 21 and 22.

The impression given by photographs of the skeletons in situ, was that two men had been hacked limb from limb, and the dismembered bodies buried in the one grave. Some bones had been marked "GH I" (No 22 while others were unmarked. None were marked "GH II". (No 21).

When sorted anatomically it became obvious that the two men differed slightly in build, one being taller than the other. The longer leg bones

TABLE 1 GALLEY HILL, BARROW 3. SKULL MEASUREMENTS

	1	2	3	4	6	11	12	13	14	16	17	18	21	22	23	24	
L	184.5	178	195*	178*	179	—	175	193*	175	174	202	198	—	184	169	169	Cranial
B	138	143	154	148	142	—	139	145*	144	143	146	149	—	141.5	141	134	
B'	103	106	107	103.4	100	—	100.5	98*	—	96	89	106	—	98	101	92	
H'	137	—	132.5	131	—	—	136	—	—	142	—	—	—	141	141	140	
LB	103	—	104*	99*	—	—	103	—	—	96	—	—	—	104	104	103.3	
S1	133	125	133*	123	135	—	125	130*	125	123	129	133	—	126	127	115	
S2	123	130	133	122	117	—	126	124*	126	121	125*	136	—	127	143	120	
S3	120	—	123	109	—	109	102	138*	122	107	—	—	—	119	117	98	
S'1	115.5	108	110	108	116	—	110	113*	107	109	116*	113	—	108	—	—	
S'2	110	112	121	109	105	—	109	112*	108	108	113*	125	—	114	—	—	
S'3	95.5	—	97.5	95	—	92.5	87	109*	102	91	—	—	—	97.5	—	—	
BiB	110.4*	112	—	118	112*	104	107	109*	114	108	—	116	—	113	—	—	
G'H	70	—	—	72	—	—	—	—	—	—	—	—	—	—	70	103.3	Upper Facial
GL	95.5	—	—	88	—	—	—	—	—	—	—	—	—	—	69	—	
GB	99.8	95.8	—	—	—	—	108.7*	—	—	—	—	—	—	—	—	—	
G2	42.7	44.6	—	46	—	—	42.5	—	—	—	—	—	—	—	31	—	
G'1	43.7	—	—	—	46.5	—	47	—	—	—	—	—	—	—	39*	—	
J	136	—	—	—	—	—	—	—	—	—	—	—	—	—	113.6	129	
O2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	32.2	32.6	
FL	31.4	—	35	38.2	—	34.3	35	—	—	34.5	—	—	—	34.7	—	—	
FB	29.1	—	29	31	—	31.6	36	—	—	28	—	—	—	28	—	—	Mandibular
MH	47.3	47.7	44.8*	48.2	46.5	—	—	47.7*	48	46.3	—	48	—	43.7	—	—	
NB	25	—	—	25	23.6	—	25.3	23	—	—	—	—	—	—	24.6	—	
NH'	51.9	—	—	50.9*	49.5	—	—	—	—	—	—	—	—	—	—	—	
DC	—	—	—	—	—	—	—	—	—	26.5	—	—	—	—	—	—	
W1	129.5	—	119	121	116.5	—	115	—	121.5	—	—	—	131	—	122.8	122.3	
GoGo	109.5	91	97	98.4	98.5	—	107.5	98.5	102	—	—	—	116.5	107.5	—	—	
ZZ	46.8	47.5	45.5	46.7	47	—	46.6	45	45	—	—	—	50	50.3	—	—	
RB	33.7	30.7	28	33.8	32.7	—	30.5	30.3	31.5	—	—	30	34	36	26.2	31	
H'	33.4	32	37	34	31.6	—	31.5	28.5	30	—	—	—	30.4	31.5	28.5	29.8	
ML	105	100*	99	104	105	—	103	97.5	102	—	—	—	105	96	98	103	
RL	62	57	60	59	62.5	—	61	56	61	—	—	—	67	62	—	—	
CYL	22.5	—	20.6	—	20.5	—	23	59.6	19.5	—	—	—	24	20.5	—	—	
CH	68	59	58	63.8	63.4	—	61	125.5	67	—	—	—	68.7	50.5	60	63.5	
M<	127	124	123	125	130	—	129	—	123	—	—	—	119.5	101.5	—	—	
Sex	M?	M?	M	M	M	M	F	?	?	?	M	M	M	M	F?	M	

Two Skulls have only some miscellaneous measurements:

8 F ZZ 48; M2H 28 10 F BiB 107

had noticeably more development of the muscle attachments than the shorter set, and these differences were also perceptible in the clavicles and innominates. Only two innominates were present, both left, and each articulating unmistakably with one sacrum. The sacra differ perceptibly, and so can be identified in the photographs taken of the bones in situ. Some of the other bones can also be identified, mainly through small areas of damage as on the left knee of the shorter legs, and the pubis of the larger individual, which are clear in the photograph.

When the photographs were used to make an approximate plan of the burials it was seen that the articulated trunk at one end of the grave was apparently connected with the longer left humerus (all the humeri are separately identified in the photo) and the shorter right leg. Thus, either the taller man had the shorter arms (which is not impossible, as the length difference is confined to the humeri and there is no perceptible difference in their robustness) or the legs at the other end of the grave belong to the articulated torso.

The difficulty in accepting the idea of a delib-

crate dismemberment is that there are absolutely no signs of artificial cutting on any of the bones. It would in fact be impossible to attempt disarticulation anywhere between the knee and the pelvis without leaving recognisable traces.

It is therefore suggested that the partly articulated trunk may represent a burial (No 21) with the knees drawn up and the head somewhat raised, and the more scattered bones and intact legs and feet represent another body laid over the legs of No 21 (as No 4 was laid over 16). Disturbance, perhaps by burrowing animals, affected mostly the middle part of the grave and the missing bones (skull and both right innominates, and one right femur?) may have been rather shallowly buried so that perhaps the flattening of the ground preparatory to building the barrow destroyed them.

If this is inconsistent with the archaeological evidence, it might alternately be suggested that the bodies were dismembered when partly decayed or mummified, either by accident or design.

Using both the anatomical evidence and the photographic evidence the skeletons were sorted as follows:

Burial 21 Male. Age within 25 – 30 year range

Areas missing are the cranium, left radius, sternum, right femur, innominate and foot. (The right tibia can be seen in the plan displaced towards the head while the trunk and left limbs are still in articulation).

The body of the first sacral segment is partly free, but there are no other skeletal anomalies. The mandible shows slight periodontal disease and caries has started in the occlusal fissures of both third molars. A hole through the distal end of the right radius is clearly a post-mortem artifact.

Burial 22 Male. (Stippled on grave plan). Age probably 24 – 28 years.

The skull, left humerus, sacrum, tibiae, femora and feet are inscribed "GH I". The legs are the longer pair, the arms the shorter pair.

Areas missing are: most of the face, most of the sternum, lumbar, right innominate, head of right humerus and some foot bones. (The hand bones of the two bodies are still mixed). The skeleton is normal. Two of the lower teeth have failed to develop: the left third molar and the right second premolar. The second milk molar is still functional in place of the missing premolar. There is no caries or other dental disease. One wormian is present in the lambdoid suture and one at each parieto-sphenoid suture. There is slight osteoarthritic lipping of the lumbar bodies.

These two skeletons are the only ones in the barrow which resemble the usual prehistoric British populations in their physique and dental wear. It should be noted, however, that the cephalic index of 77 for 22 is rather high for a male Neolithic skull, but would not be incompatible with a Medieval date. Contrary to expectations they showed no evidence of cutting or mutilation, being complete except for some minor damage and rotted areas (of post mortem date).

The following were the two burials excavated by schoolboys. The skulls were studied by Osman Hill and are now in Luton Museum. Only the post-cranial skeletons were sent to the B.M.N.H.

Burial 23 Female ? aged about 21

The skull studied by Osman Hill was said to be complete, but the left orbital corner of the frontal bone was found with the skeleton. The trunk bones are crushed and fragmentary, only a manubrium sterni and one clavicle being complete; the right leg is missing except for a femur shaft fragment found with 24; the right arm is represented by the distal half of the humerus shaft and the left

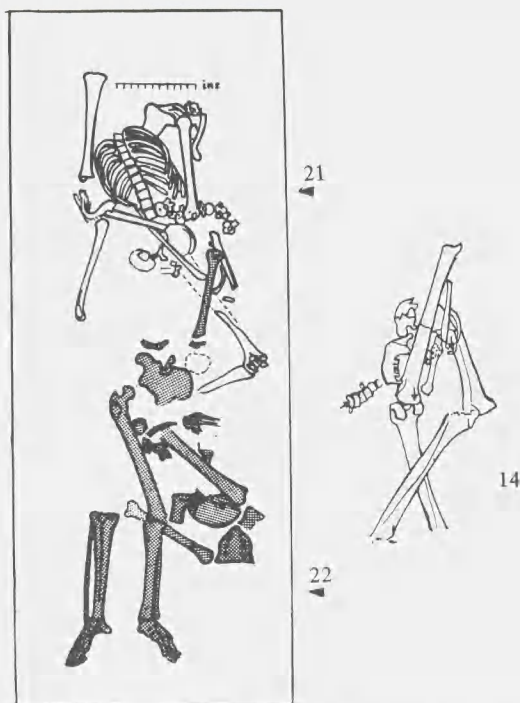


Fig 11 Galley Hill, barrow 3, the mutilated burials.

Burial 14 in situ, partly excavated.
The healed fracture and 3 'cysric' areas
are marked

arm is also incomplete. A small pre-auricular sulcus is present on each innominate.

The distal epiphyses of the forearm bones are loose, and the iliac and ischial epiphyses are fusing. Those of the knee, ankle, elbow and hip are obliterated. Slight overcrowding of the teeth, and an open metopic suture are the only anomalies.

Burial 24 Robust adult male, probably aged between 22 – 28 years.

The skeleton is complete except for the upper face, the sternum, one patella and some hand and foot bones. The leg bones, especially the femora, are a peculiar build possibly due to old, healed rickets. The femur shafts are more curved than usual and the linea aspera is very prominent as if it had formed a buttress to reinforce the curvature. The bone is also thicker than usual, asymmetrically reducing the marrow cavity.

There are multiple defects in the lower back which may have caused episodes of pain during life. The spinous process of the first sacral arch is cleft, there is a lateral cleft of the arch of Lumbar 5 on the right side only, and bilateral clefts on Lumbar 4 so that the arch is detached forming a

TABLE 11

GALLEY HILL BARROW 3. THE POST-CRANIAL MEASUREMENTS

		FeL1	FeL2	FeL3	FeD1	FeD2	Head D	TiL1	TiD1	TiD2	HuL1	HuD1	HuD2	RaL1	U1L1	FIL1	Stature
1	L	429	415	428	24.2	35.4	46	344	34	25.7	302	24	18	227.5	255	342	165 cms
	R	430	413	427	25	33	45	349	34.9	24.3	306	23	18	230	260	343	
2	L	447	428	446	25.4	33	44	359	34	23.3	316	22	19	232	249	360	169 cms
	R	443	428	428	26	32	45	361	36	23	314	21.3	18	231	250	360	
3	L	464	439	460	27	36	51	368	30	21	322	24.5	21	245	264	—	172 cms
	R	458	430	456	24	34	49.8	362	33	27	325	25	20.5	245	269	—	
4	L	465.5	448	460	23	39	46	365	36	23	330	20.5	18	246	—	—	172 cms
	R	467	446	463	24	39.5	46	365	34	22	334	22.5	17.8	247	—	—	
5	R	—	—	—	26	34.2	—	—	—	—	—	—	—	—	—	—	—
6	L	455	434	450	24.4	35.5	46	374	34	26	332	21	20	244	260	—	171.5 cms
	R	445	441	433	27	33.6	45	361	31	22	333	21	17	242.2	—	372	
8	L	—	—	—	28	33.4	—	—	—	—	—	—	—	—	—	—	—
	R	—	—	—	26.5	33.5	—	—	—	—	—	—	—	—	—	—	
9	L	—	—	—	24	32	—	—	35	21	—	—	—	—	—	—	—
	R	—	—	—	24	32	—	—	34.5	20*	—	—	—	—	—	—	
11	R	—	—	—	28.5	39	50	—	35	24	—	—	—	—	—	—	—
12	L	441	438	417	24	37	45	350	33	23	—	—	—	—	—	—	163cms
	R	433	430	—	24	36	45	348	33	23	—	—	—	—	—	—	
13	L	429	421	427	25	34	43	360	32	23	326	20	16	237	—	353	166cms ?
	R	428	424	425	26	34	44	359	32	22	329	21	16.5	236	257	—	
14	L	436	420	434	27.2	30.4	47	—	39	23	—	—	—	—	—	—	162 to 167 cms
	R	—	—	—	27.2	34	47.4	—	36.5	24	—	—	—	—	—	—	
15	R	—	—	—	25	32	—	—	—	—	—	—	—	—	—	—	—
	R	—	—	—	34	39	52	—	34.4	24.6	—	—	—	—	—	—	
(17?)	L	—	—	—	—	—	—	—	35	28	—	—	—	—	—	—	—
	R	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
21	L	—	—	—	29	33.6	49	360	34.2	26.5	351	22	20	254	—	—	169 cms
	R	—	—	—	—	—	—	361	35	26	358	24	20	—	267	—	
22	L	492	484.5	464	28	40	50	393	39	30	335	23	21	240	—	378	178.5 cms
	R	484.5	482	458	28	38	47	391	37	29	—	—	—	241.5	—	—	
23	L	436	436	418	32.5	37.5	47	353	32	23	—	—	—	—	—	—	162 to 164 cms
	R	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
24	L	475	472	446.3	28	33	51.4	—	38	25	340	21	17	253	273.5	375	176 cms
	R	474	472	457	27	33	51	390	34	25	346	23	17.5	253	275	—	

false joint. (Spondylolisthesis). There is mild pitting on the vertebral bodies. It is probable that the primary defect was in the supporting tissues.

Burial 25 Male?

The trunk and right arm of a well-built individual were uncovered and photographed in 1951. At that time they were in a very friable state and had vanished without trace by 1961.

The traumatic pathology and its implications for dating the burials.

Only burials 21 and 22 had well-built skeletons, all the rest that were sufficiently well-preserved to study had rather 'poor' lightly built skeletons. No's 4, 5, 9, 12, 13, 14, 24 in particular had signs which might perhaps be interpreted as healed early rickets. Because of their build the majority were extremely difficult to sex. The impression given is that 21 and 22 could be prehistoric, while all the rest might be much later, possibly post-Norman. This latter series should be considered as possible gallows victims, and representing the lowest social strata of the Medieval Society.

Contrary to expectations, none of the skeletons showed unhealed wounds or other signs of massacre.

Burial 12 had a healed fracture of the humerus head region, resulting in considerable long term deformity. It can be questioned whether this might have resulted from the Medieval method of torture — by drawing the person up on the arms while tied behind his back. Unfortunately, the other arm is missing, and so we do not know whether the damage is bilateral. Also, this form of torture is more likely to have produced dislocation than fracturing as seen here.

There is also a healed fracture of the upper third of the left fibula of number 14 in the same series. This is associated with other bone disease, although it is uncertain to what extent there is a direct association between these two anomalies.

The swollen osteitic tibia of number 9 is most probably due to some common-place cause, and is similar to a number of other Medieval cases known to me.

The dental pathology

Although most of the individuals died in their twenties, dental decay is fairly frequent, about half the cavities having commenced in occlusal fissures. Periodontal disease is slight or absent except where a large cavity has caused an abscess.

ANOMALIES AND PATHOLOGY

TABLE III

	Sex	A	B	C	D	E	F	G	H	J	K	L	M	N	P
1	M?	NO	NO	YES:1	NO	4	1	NO	NO	NO	NO	NO	YES	NO	NO
2	M?	6 caries	NO	NO	NO	NO	NO	1/2	NO	NO	NO	NO	NO	NO	NO
3	M	4 caries	NO	NO	NO?	18	2	NO	YES	NO	NO	NO	NO	NO	NO
4	age 18 M?	1 caries	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
*5	M	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6	M	3 caries	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	YES	NO
7	age 18 F?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
*8	M	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
*9	F	3 caries	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
*10	M	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
*11	M	NO	NO	NO	m3	1	NO	NO	NO	NO	NO	NO	NO	NO	NO
12	F	NO	Humerus	NO	NO	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
13	age 17 M?	2 caries	NO	NO	m3,m3	NO	NO	NO	NO	YES	NO	NO	YES	NO	NO
14	M?	1 caries	Fibula	NO	NO	14	NO	YES	NO	NO	NO	NO	YES	NO	YES
15 & R	J14	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
(18) R	M	NO	NO	NO	m3	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
(17) R	M	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
(19) R	M	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21	M	2 caries	NO	NO	NO	NO	NO	NO	YES	NO	YES	YES	NO	YES	NO
22	M	NO	NO	NO	pm,m3	1	1	NO	NO	NO	NO	NO	NO	NO	NO
23	age 21 F?	NO	NO	NO	NO	?	?	?	YES	NO	NO	NO	NO	NO	NO
24	M	2 caries	NO	NO	NO	?	?	?	NO	NO	3:L5rt,L4bds	NO	YES	NO	NO
		9/17 caries	2/19	1/18	4/18	2/6/13		2/12	3/15	2/7	2/15	1/15	4/11	2/12	1/12
		1/18 other infection	c 9%		c23%			c18%	20%				c35%	c18%	c7%

*Swollen tibia

*bathrocephalic

Key to Columns

A Inflammatory changes or caries
 B Healed fractures
 C Extra Teeth
 D Congenitally Missing Teeth

E Lambdoid wormians
 F Other wormians
 G Os Inca
 H Metopic suture

J Segmented sternum
 K Laterak Cleft of vertebra
 L Midline cleft of vertebra
 M Midline cleft of sacral 1

N Transitional lumbo-sacral vertebra
 P Holes in vertebral arches
 Other:
 R Robber Pit
 * Gallows Group

This is characteristic of the later post-Saxon populations of Britain.

Four out of seventeen individuals show absence (agenesis) of one or more wisdom teeth, one also showing absence of a premolar with retention of the milk molar as a functional tooth. Another individual shows a supernumary tooth, probably due to "twinning" of the left lower incisor germ, or, alternatively, the presence of a "mesodens".

Vertebral pathology

Probably due to the youthfulness of the individuals, there is very little osteoarthritis, although this is usually a common condition in early British populations. There is a high frequency of minor clefts of the first sacral arch, one of which shows lateral clefts of the lumbar vertebrae as a secondary condition. There is also an extremely rare case of double cervical cleft combining a midline cleft and a separation of the lateral structures from the body on the left side.

Sutural 'anomalies'

There are noticeable occurrences of open metopic suture, accessory wormian bones, and the os inca. Two crania are actually malformed as a

result of the sutural anomalies. The two cases of segmented sterna might perhaps be relatives. However, there is no strong evidence for any pair of individuals being related, although considering the smallness of the sample and the number of minor congenital anomalies, it is tempting to suggest that some might indicate family relationships, or the perpetuation of founder effects in small inbred communities.

Radiographic report

by *Theya Molleson: British Museum (Natural History)*

Only those bones that showed obvious or possible anomalies were X-rayed.

The skulls were radiographed in previously standardised positions (Brothwell *et al.* 1968, Stringer *et al.* in press), giving frontal, lateral, basal, and mastoid views from which a study of the sinus development, skull bone thickness and mandibular trabeculae could be made and integrated with similar studies of other populations from archaeological sites.

Some of the radiographs were shown to two consultant radiologists, Dr George DuBoulay, St Bartholemews Hospital, London and Dr John

TABLE IV DENTAL FORMULAE

NOTES

A = Abscess.
 X = Tooth lost during life.
 / = Tooth missing, socket remains.
 C = Massive caries.
 c = Small caries cavity.
 cc = Contact caries.
 oc = Occlusal caries.
 BC = Buccal caries.
 NP = "Congenitally" absent tooth.
 e = Persistent milk molars.

1M	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
2M?	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
		oc oc
3M	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
		oc oc
4M?	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
		oc oc
6M	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
		oc oc
8F	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
9F	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
		oc oc
10M	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
11M	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
12F	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
13?	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
		oc oc
14?	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
16	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
17M	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
18M	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
21M	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
22M	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
		oc oc

Price, Surrey County Hospitals, to whom grateful thanks are due for opinions used in the report.

Galley Hill 3, burial No 22.

The skull, which lacks the face, is noticeably asymmetrical in the basal view. This is probably a result of burial pressures, but it was also noted that both the basisphenoid and frontal sinuses were larger on the left side.

The basisphenoid sinus, does not extend into the basisphenoid. Since the maxilla is not present it was not possible to measure its development.

The air-cells of the mastoids are largest in the process itself, extending posteriorly somewhat short of asterion and anteriorly into the temporal bone above the temporal ridge. The air-cells are smallest in this area.

The bones of the skull are not thickened, inner and outer tables being separated by a thinnish but clearly discernible diploic layer. No bone lesions were observed.

The mandible shows fine trabeculae at the gonial angle and between the roots of the molars.

The right M3 is congenitally missing, while dm2 is retained on the left side and the second premolar is missing. The pulp-cavities are normal.

R L
 8 7 6 e 4 3 2 1 1 2 3 4 5 6 7
 c c

Galley Hill 3 burial 1

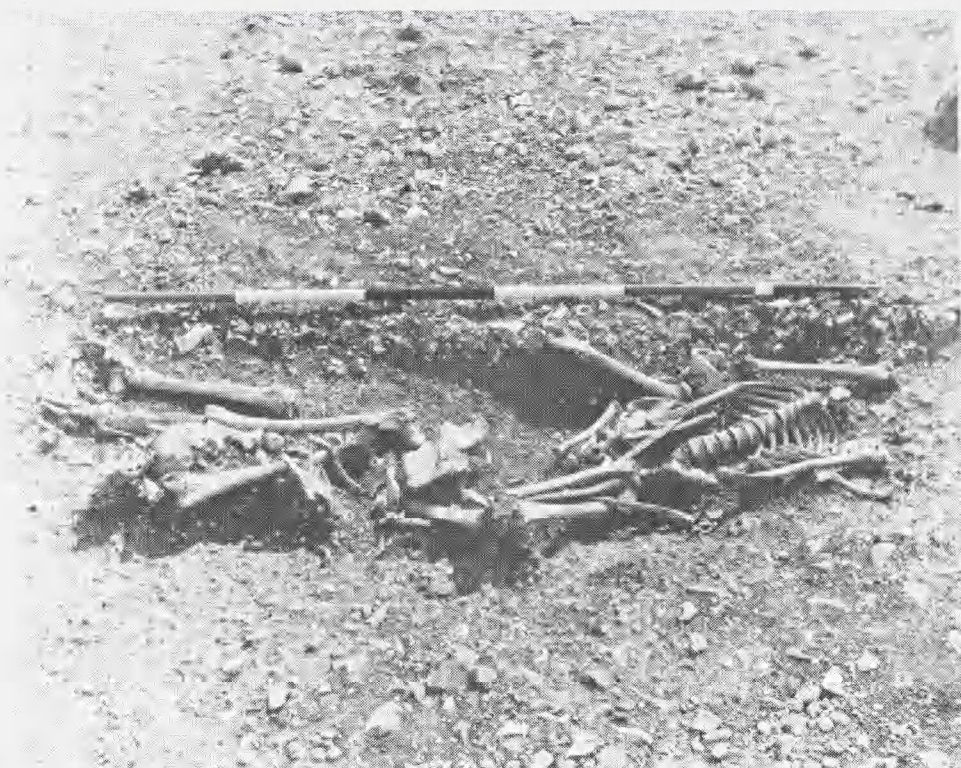
This skull is well preserved and reasonably complete. No bone lesions were noted, the thickness of the parietal and frontal bones being normal for a young adult. Inner and outer tables, separated by a well developed diploic layer were discernible.

The sinuses are well developed and of medium size as can be seen from Table 1. The mastoid sinuses although partly obscured by matrix, are seen to extend posteriorly beyond the third molars.

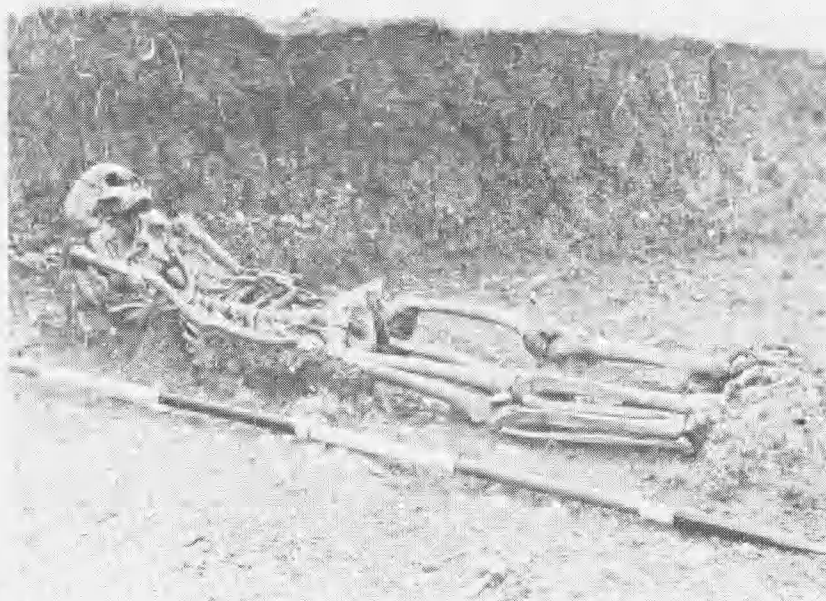
The size of the air cells of the mastoids is small especially in the process itself. The cells become larger just above the temporal line, the maximum dorsal extent of the mastoid air cell development.

The mandible has fine trabeculae at the gonial angle and between the roots of the molars.

The pulp cavities of the teeth are closed. No caries were noted. The supernumerary tooth behind the Left 1₁ is not repeated on the right side. It seems likely however that the extra tooth is in fact the rather small tooth in the position of the right 1₁; that the true right 1₁ has been displaced



a



b

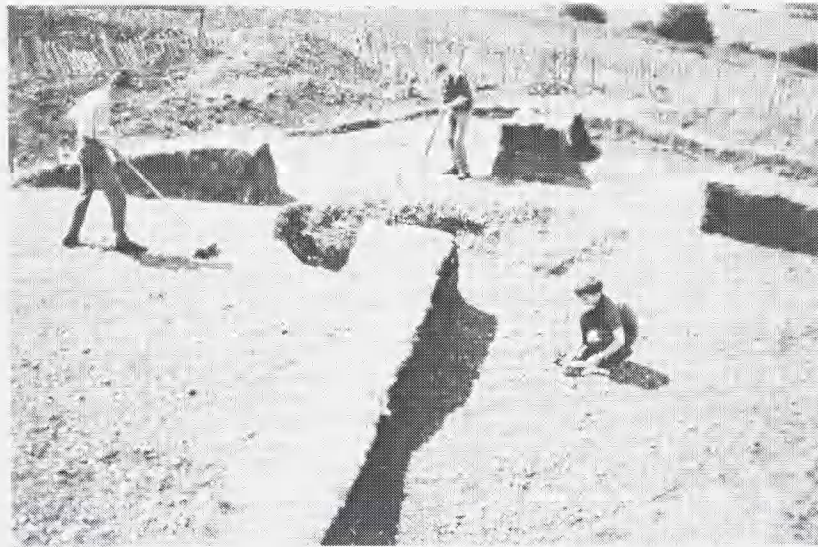
Plate 1a The Mutilated Burials from Barrow 3
1b Grave Group from Barrow 3

(Photographs: James Dyer)

GALLEY HILL BARROWS



a



b

Plate 2a Horse skull deposit from Barrow 3

2b Total Excavation of Barrow 4

(Photographs: James Dyer)

GALLEY HILL BARROWS



Plate 3a Bronze Phalera of Medusa
3b Roman Lamp
3c Sherd of Face Urn

(Photographs:

- a Museum of Archaeology and Ethnology, Cambridge
- b Ashmolean Museum, Oxford
- c Department of Archaeology, University of Southampton)



1,2



5,6,7



10,11,12

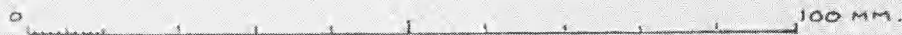


Plate 4 Anglo-Saxon Pennies in Luton Museum (Scale $\frac{1}{1}$)

(Photographs: W.H. Cox and Sons Ltd)

BEDFORD MINT PENNIES



Plate 5 Vertical aerial view of Bedford, 1969.
(Photograph: Hunting Surveys Ltd)

BEDFORD DEVELOPMENT



a



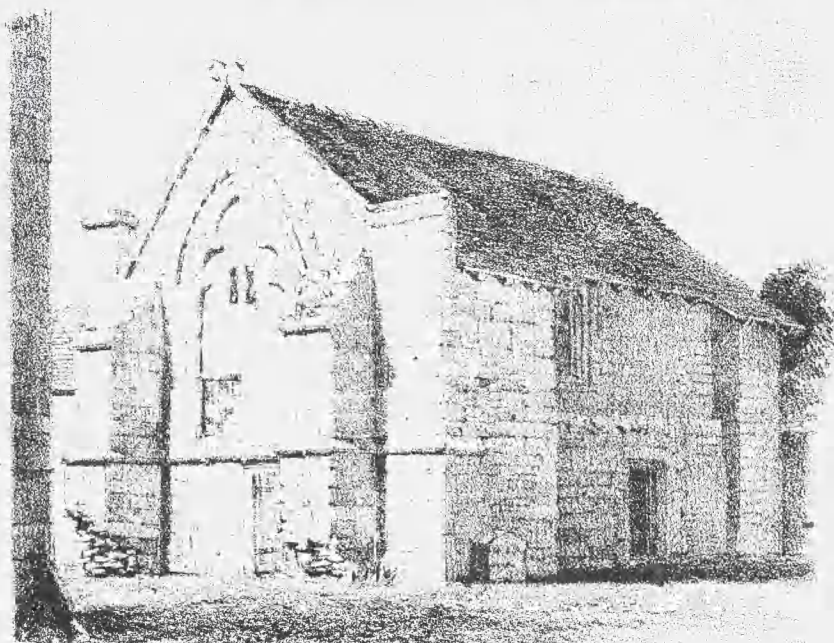
b

Plate 6a Excavated section across bank in front of Kingsditch

Plate 6b Hearths and ovens at 5-11 St Mary's St, Site 9

(Photographs: David Baker)

BEDFORD DEVELOPMENT



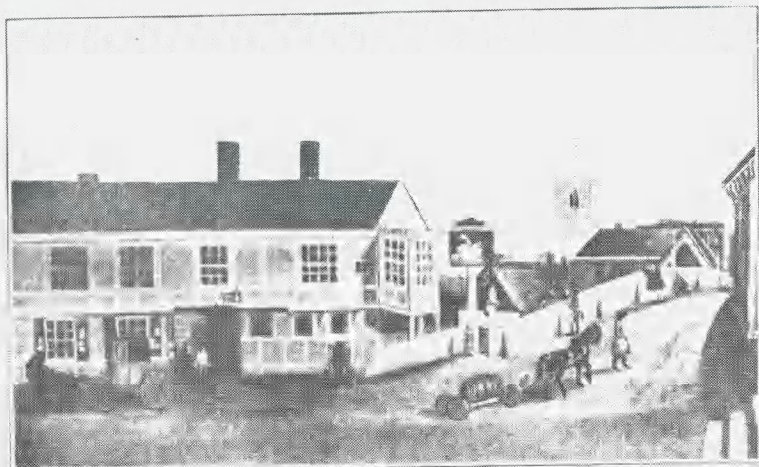
CHAPEL, ST PAUL'S SQUARE.

b B. Rudge, lith.

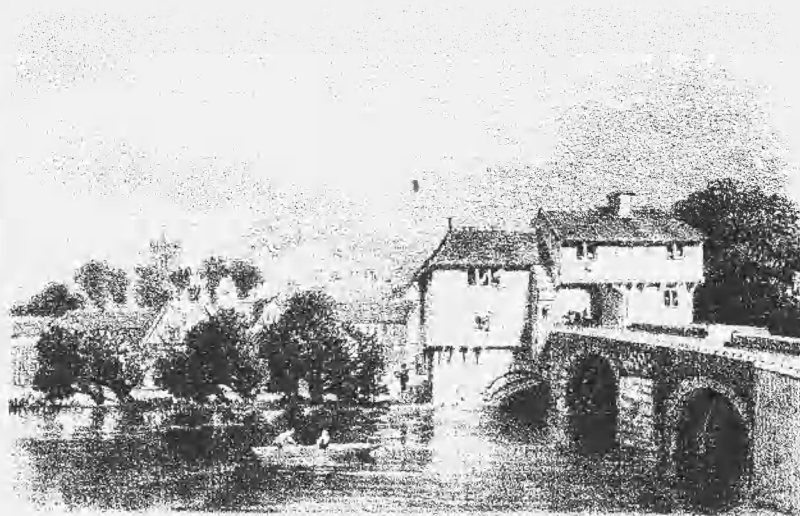
T. Way Imp.

Plate 7a Old St Cuthbert's Church from the north shortly before demolition
 Plate 7b Chapel of Herne (B Rudge, mid nineteenth century)

BEDFORD DEVELOPMENT



The Old Swan Inn



OLD BRIDGE, BEDFORD.

B Rudge lith

T. Way Imp.



The Old Swan Inn



OLD BEDFORD BRIDGE

Plate 8a Bedford Bridge: two reconstructed views by B Rudge, mid nineteenth century)
 Plate 8b Old Swan Inn: two eighteenth century views reproduced in Farrar's *Old Bedford*.

to the position of the Left I₁ and that the left I₁ appears in the position of the supernumerary.

Galley Hill 3 burial 14

This is a much thinner boned skull from an older individual. The diploic layer of the parietal and frontal bones is very thin and unevenly developed but still within normal limits. No bone lesions were noted.

The frontal sinuses are not developed. The base of the skull and most of the face are not preserved. As far as can be seen the roots of the upper molars do not extend into the mastoid sinuses. The air-cells of the mastoids are especially large on the right side while they remained small in the left mastoid process, suggesting an infection at some time. The air-cell development of the mastoids extends to the lambdoid suture and dorsally above the temporal line.

The mandible has medium sized trabeculae at the gonial angle and quite dense trabeculae between the roots of the molars, which are rather short. No caries were noted although there is a certain amount of periodontal bone resorption.

TABLE V

	GH3.1	GH3.14	GH3.22
Frontal sinus width	51.45	—	52.2
height	13.65	—	13.2
thickness	10.9	—	12.4
Basisphenoid width	—	—	—
length	16.3	—	—
Mastoid L. width	34.8	26.1	48.1
height	40.1	41.0	51.3
R. width	27.3	37.3	51.7
height	38.4	c 45.0	—
Parietal thickness			
L boss	7.55	3.8	5.25
R boss	6.3	3.6	4.35
Frontal thickness (mid-point)	7.35	3.7	5.3
subnase to inner surface	20.0	25.1	23.7

Post-cranial bones

Several of the post-cranial bones showed some unusual features. Unfortunately the most interesting cases were unassociated and it was difficult to assess the extent of the deformity in the rest of the skeleton, or even to determine its nature.

Galley Hill 3 burial 9

The distal two-thirds of a right adult tibia show-

ing a marked sclerosing periosteal reaction, giving rise to an uneven thickening of the cortical bone on the medial side of the shin, especially noticeable in the distal swelling. A translucent track through this thickened cortex could be related to a chronic infection but there is no definite evidence of a sequestrum. There are signs in the pitted texture of the periosteal bone of an inflammatory process about mid-shaft.

The inner trabeculae are somewhat coarsened, proximally, but their distribution and orientation is normal for a young adult. Distally the trabeculae are only slightly thickened and there are one or two Harris's lines near the condyle. The spongy bone extends some way up the shaft especially on the medial, diseased, side.

The cortical bone on the lateral side, that next to the fibula, is if anything thinner than normal. Its texture is normal.

The medullary cavity is constricted by the growth of the periosteal bone. The shaft is not bowed and the distal articular surface is still normal.

It would seem that here is a chronic osteomyelitis which developed after growth had ceased and was quiescent or completely healed by the time of death. It is rather more extensive than one would think could be due to a varicose ulcer. There is no clue as to whether it was the direct result of an injury or was blood borne.

The few other bones present of this skeleton were normal.

Galley Hill 3 burial 12.

The deformity of the humeral neck and upper shaft causing the articulation at the shoulder to be twisted at right angles to the articulation at the elbow. The shaft is much shortened even below the deltoid tubercle with an oblique bulge about mid-shaft. This could be the remaining callus of a well-healed fracture sustained during infancy. But, if this bone had fractured at the surgical neck, as it must have done if it fractured at all, it is unlikely that it would have re-united in one line. There ought to be angulation or overriding. Therefore, the possibility of a developmental abnormality should be considered, as well as that it is the end result of an injury in very early infancy.

The cortical bone is of normal thickness, suggesting that though twisted and probably awkward, the arm regained almost full power and considerable, albeit restricted movement. (fig 8)

Galley Hill 3 burial 14 skeleton

All the bones of the skeleton were X-rayed to

check on a number of cystic holes noted in the vertebrae and the tibiae as well as the orbits of the cranium. However, the radiographs did not reveal a generalised cystic condition. Some of the vertebrae showed mild arthritic lipping but otherwise appeared normal. The cystic cavity on the posterior surface of the left tibia appears as a translucent area surrounded by an unevenly distributed area of denser bone. The trabeculae of both tibiae are normal except for a number of Harris's lines both proximally and distally. The shafts are slightly bowed laterally (knock-knees) suggesting healed mild juvenile rickets. Below mid-shaft the external lateral cortex of the right tibia is rather thicker than that of the left tibia. This is probably related to the healed fracture of the distal end of the right fibula. The fracture is well healed but there is still a marked callus with cortical thickening extending proximally. The shaft is also slightly bowed but there is no misalignment.

Galley Hill 3 burial 20 Congenital hemivertebra

This is a double cleft of a lower cervical vertebra. There is no sign of the right half of the spinal arch. Trabeculation of the centrum is fairly dense but not otherwise anomalous. No other bones of this skeleton were found.

PHOTOGRAPHS — A complete set of photographs of all the burials has been deposited in Luton Museum.

ANIMAL BONES FOUND WITH GALLEY HILL BARROW 3 HUMAN BONES.

Identified by Juliet Clutton-Brock.

Animal bone with Burial 14:

? small domestic ox — vertebra of juvenile animal.

With Robber Pit Burial:

Rabbit — femur of juvenile animal. (Rabbits are post-Norman in Britain)

? Domestic sheep or goat — fragment of mandible of juvenile animal without teeth.

With Lower Burial No. 3:

Cervus elaphus — 1st phalanx. (Can be seen above

right shoulder of skeleton in excavation photo)
Domestic ox — upper molar.

Domestic sheep or goat — fragments of mandible with deciduous teeth.

Southern Quad:

Small domestic ox — 2nd phalanx.

2 fragments of bone — not identifiable.

With 23 and 24

Domestic ox — calcaneum of juvenile animal.

? Domestic ox — coronoid process of mandible.

Small fragment of bones, possibly fragment of tibia, — not identifiable.

With Burials 12, 13 and 14.

? Domestic ox — coronoid process of mandible.

Piece of flat bone, not identifiable.

With Burial 1 & 2:

? Domestic ox — condyle of mandible, possibly from a juvenile animal.

Piece of flat bone — not identifiable.

With Burial 15:

Small fragment of bone, — possibly from a metapodial, not identifiable.

With Burial 9:

Rib of small artiodactyl. Not specifically identifiable but could be from a domestic pig, sheep or goat, or from a deer.

NOTES

- 1 F.C. Gurney, *Beds. Hist. Rec. Soc.* V (1920) 163ff
- 2 J.F. Dyer, *Arch. Journ* CXVI (1961) 1ff
- 3 J.F. Dyer, *Bedfordshire Archaeologist* 1 (1955) 39ff
- 4 W.G. Smith, *Man the Primeval Savage* (1894) 332ff
- 5 V.G. Childe, *Proceedings Prehistoric Soc.* xx (1954) 212ff.
- 6 W.H. Manning, *Bedfordshire Archaeologist* 1 (1955) 21ff.
- 7 F.C.H. Herts IV (1902) 156.
- 8 T.C. Lethbridge, *Proc. Camb. Ant. Soc.* XLIII (1950) 30.
- 9 In a private letter to the writer.
- 10 P.V. Glob, *Nationalmuseets Arbejdsmark* (1947) 38ff.

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The Roman Settlement at Sandy, Bedfordshire

DAVID E. JOHNSTON

SUMMARY

A re-assessment of the pre-Roman and Romano-British occupation comprises three centuries of chance discoveries and excavations. The Roman settlement was undefended, concentrated at the junction of five roads, with a satellite native settlement and a cemetery containing inhumations in coffins and cremations. The economy is defined as consumption and redistribution of goods; pottery and limited bronze and iron-working are suggested.

A fresh assessment of the evidence for Roman occupation at Sandy must resolve a fundamental contradiction. On the one hand, the location of the site and the exotic objects discovered suggest a settlement of some importance. On the other, the lack of a planned outline, or of any substantial remains of dwellings, excludes it from any list of Romano-British "small towns". Occupation was continuous, and apparently substantial, from pre- to post-Roman times; do we invoke special factors to explain the phenomenon of prosperity without structures, or has the site suffered more than most from a millenium or so of land-use?

THE SITE

Sandy occupies a major gap in the ridge of Upper Greensand that sweeps roughly SW-NE across Bedfordshire. Through it the River Ivel runs northwards to join the Ouse some 3 miles to the north. To the east, steep wooded slopes and three Iron Age fortifications overlook the settlement, and to the west and south stretch several miles of flat alluvial soil and Oxford Clay. In the centre of figure 1 Stratford Road, to the east of the railway, marks the division. To the southeast lies the large expanse of Biggleswade Common. A lesser valley leads northeast from the settlement site, and is followed by a Roman road. Corallian limestone, a building material used in the settlement, is found 2 miles to the N.E. along it.

The site marked a major intersection of roads, comparable in function and importance to the modern railway junction. The settlement was on

level ground, occupying an imprecise area comprising the modern Cemetery, the Chesterfield to the south, and part of the Station and railway marshalling yard. To the west, there rose a small hill, Tower Hill, now entirely quarried away; this was the cemetery.

The subsequent history of the site is relevant to the state of the evidence. Saxon and medieval Sandy was to the north-west of the Roman, around the parish church; and further expansion was further west, towards the Great North Road, the modern successor to the Roman road and parallel to it on the west of the Ivel. The forgotten site became "nothing but a warren" (Blome, 1673, 45) until the creation and development of the railway. At the beginning of this century, before the establishment of the Cemetery on part of the Chesterfield, the land had been revived by "trenching", whereby trenches were driven across the field, the soil from one being shovelled into the next. The destruction of ancient features by this can still be observed in newly-dug graves; these graves, in turn, are the major source of recorded features. Within living memory, the Roman road across the Chesterfield was almost completely removed by farmers as an obstruction to the plough; and market gardening has ensured that the land is under almost continuous cultivation.

The site was once famous as a hunting-ground for antiquaries and collectors, and best known for the numerous coins found on the surface of the Chesterfield. They were known locally as "chester-pieces"; their frequency is attributed to the fact that the men hoeing the market gardens (for which Sandy has always been famous) work on their hands and knees, and no object, however small, escapes their notice. A ring with a Christian emblem was found by a woman in this way, about 1720, and reported in the *Gentleman's Magazine* (1764, 60). Many objects, now familiar, were found here and described, possibly for the first time in Britain. Camden, (1695) mentions an urn "red, like coral, with an inscription", a description also used by Stukeley in his unpublished *Common-*

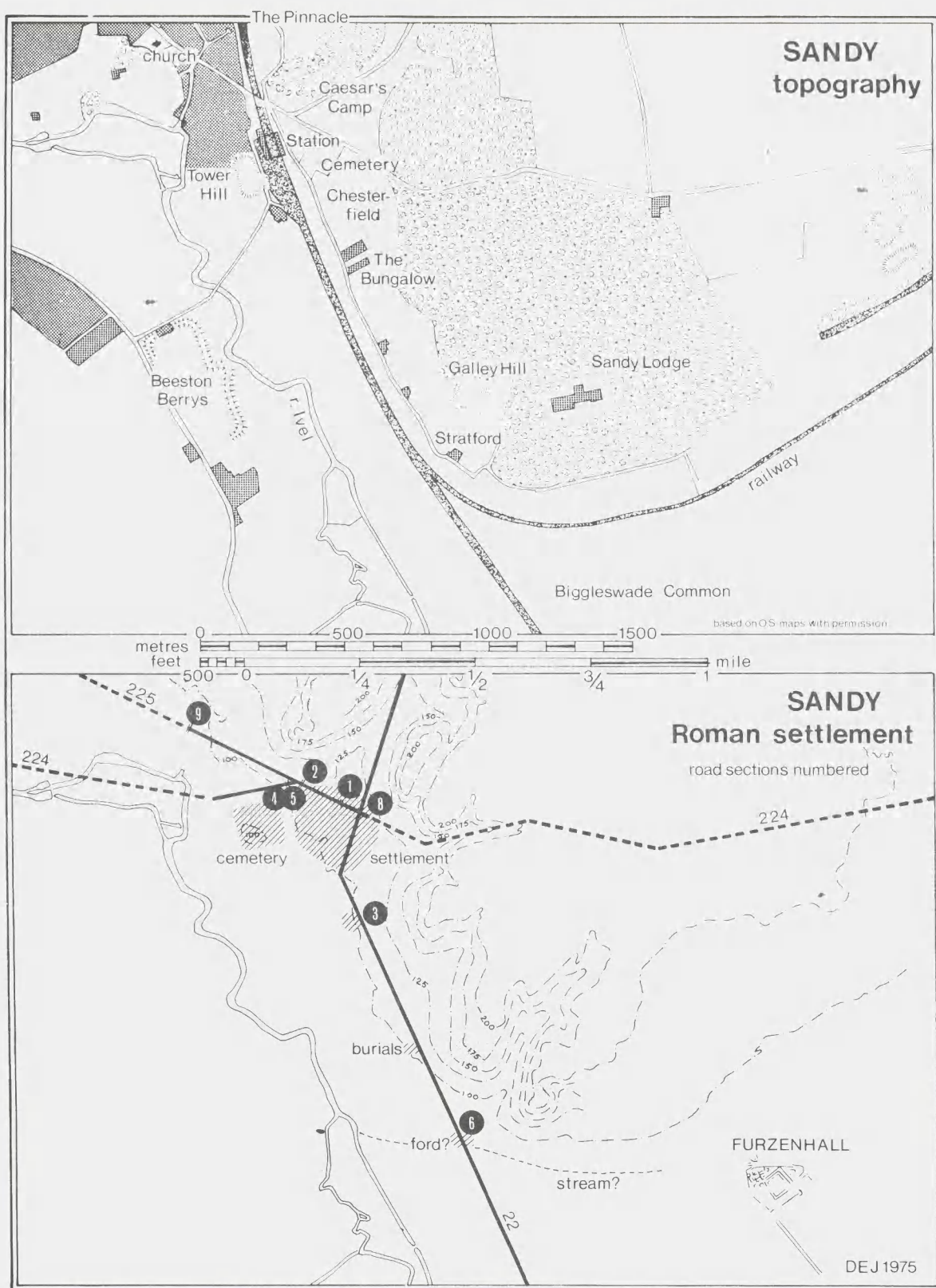


Fig 1 The Topography of Sandy and its Roman Settlement.

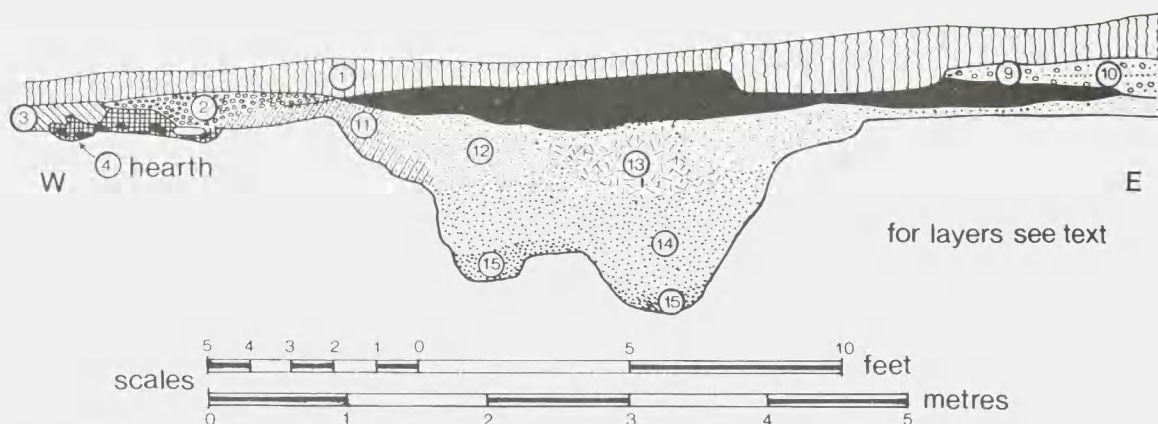


Fig 2 The Bungalow: Sections

place Book now in Devizes Museum. The phrase probably originated from the pen of John Aubrey in what is the earliest literary reference to the site – in his largely unpublished *Moumenta Britannica*, a manuscript now in the Bodleian Library, written about 1666. He was apparently used independently by Camden (1695), Gough in revising Camden (1806) Stukeley and Warren (1779). To Blome (1673) is due the first appearance of the erroneous identification of Ptolemy's *Salena(e)* with Sandy a mistake followed by Camden (1695 and 1806), Evans (1864) and Ransom (1886), in spite of two reasoned denials by Beldam (1868), and Bradley (1883). The fame of the site, established by the “vases, urns, lacrymatorys, lamps and immense numbers of coyns” (Stukeley) was enhanced by the contents of the Roman cemetery, when Tower Hill was quarried between 1850 and 1911. Captain Peel bought the land for the branch railway from Sandy to Potton, and “formed quite a museum from the antiques then found. Among the rest was a Roman sword in fine preservation, and he being a fighting man, had one made from it for his own use, which he used in India during the mutiny, where he fell at Lucknow” (Baker, 1874).

THE SETTLEMENT

(a) Origins

The evidence for the Iron Age in this area has never been adequately summarised. This will be the subject of a further paper in this *Journal*, and only conclusions are given here.

The earliest Iron Age settlement seems to have been not in the valley but on the high ground to the east and north-east. Of the three hillforts, none is securely dated. Abraded sherds excavated from

the interior of the Sandy Lodge site, from the rampart of Galley Hill and from the surface of Caesar's Camp may date the earthworks, but could be residual. However, settlement is indicated by a hearth and pit excavated on The Pinnacle.

The impact of Belgic-style Catuvellaunian influence in the Ivel valley is clearly seen in the pottery, coins and other objects. The fine pottery of Aylesford-Swarling type comes partly from a small cremation cemetery near the modern Cemetery, where other similar material probably indicates settlement.

Further south, at The Bungalow, there is clear evidence for settlement by the mid-first century A.D. Since its original publication (Johnston, 1955), the material has been re-examined and the pottery appears here for the first time (fig 14). The inhabited area was on the western lip of the ditch, and on the site of The Bungalow itself. The “hearth” (fig 2 layer 4) was a mass of burnt material containing stones, bones and pottery of Belgic type (e.g. 6). The intrusive brick belongs to the gravel layer 2 that seals it, and to layer 11, which is derived from the disturbance of 4 when the adjacent ditch was filled in.

The ditch, which runs NW-SE and whose double bottom is the result of either re-cutting or intersection with another, is roughly contemporary with its pottery; the lack of a primary silt and its unweathered condition suggest that it was soon backfilled. This filling, layers 12-15, was a fairly consistent reddish-brown sandy soil, though 13 had a more clayey texture. It had the tumbled appearance of deliberate backfilling (possibly in two stages) from a bank on the west; if so, the bank would have sealed the “hearth”, suggesting a panic defence at about the time of the Roman

SANDY cemetery

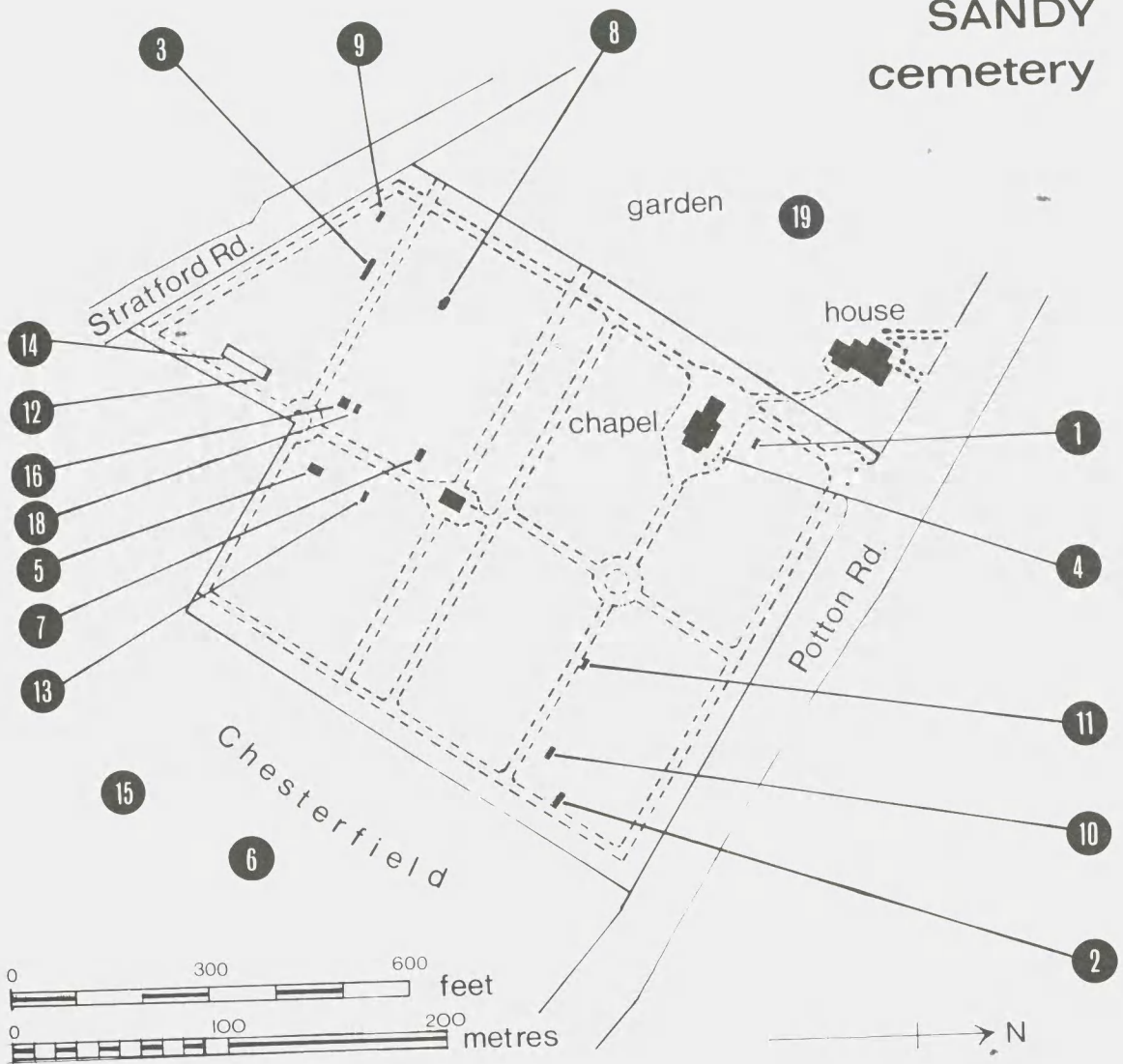


Fig 3 The Cemetery and Chesterfield

conquest. This was sealed by the Roman road, in whose foundation layer was a very small piece of samian "clearly of 1st century date . . . almost certainly pre-Domitianic"¹. The pottery from the ditch filling (e.g. 3, 14, 16, 17 and 21), with the brooch (fig 6, 1), would support this mid-first date for the backfilling of the ditch and the construction of the road. The filling also contained a fragment of human skull (parietal bone from a young individual).²

Continued occupation on the site of the modern house is shown by two coarse sherds (16, 17), the mortarium (18) and the amphora (22).

(b) The Settlement Pattern

The scatter of finds shows that the settlement was not compact, but strung out along the road through the valley, as far south as Stratford, where there may have been a ford across a stream which was diverted when the railway was built. A fair amount of undateable Romano-British pottery was found here in the excavation to find the Roman road. (Johnston, 1964, 238).

The density of finds shows that the main settlement was under the modern Cemetery and the part of the Chesterfield adjoining. The southern and south-eastern sections of the Cemetery produce

the most finds, and evidence for dwellings. It should be stressed that all finds are made in the course of grave-digging; that some sections thus exposed have been examined and recorded by the writer, but that the majority of the information recovered is due to the observant eye of the Cemetery Keeper, Mr H. Gurney, since 1956. There is thus a large quantity of unprovenanced pottery and coins; the recorded finds are listed below; and numbered on figure 3.

Road Metalling

- 1 Gravel metalling and mortar.
- 2 "concrete" metalling, 10-12ft wide, below layers of sand and fine limestone, and clay (prob. disturbed by "trenching").
- 3 An E-W gravel track, running roughly in the direction of Tower Hill, also observed in the part of the Cemetery to NE.

Structural Evidence

- 3 (cont.) burning and sandstone lumps.
- 4 NE of the chapel, sandstone blocks were found in quantity when making up the path, associated with road metalling. Possibly a roadside building?
- 5 large flat sandstones, almost certainly a floor.
- 6 in the Chesterfield, SE of the Cemetery, many large flat sandstones are pulled to the surface by cultivation [also: box flue-tile and tegula at Cambridge (unprovenanced)].

Pits and Hearths

- 7 a layer of ash and lime possibly a pit. No finds.
- 8 pit with Roman pottery, brick fragments and mortar.
- 9 A U-shaped pit, sectioned by a modern grave. Roughly 7-8ft deep, 6-8ft wide at top. It contained three skeletons (identified at the time as probably all male); of the three skulls, one was possibly dented on top. All dumped in head-first. Associated with light grey Roman pottery, including a mortarium, a narrow glass bottle neck (fig 10, 1), a bronze tool (fig 7, 15). Also a set each of horns of cow, sheep and goat. The pottery is in the Bedford Museum, but cannot now be identified.
- 10 "a hearth (?) with a pebble base, crackled flints and burnt clay. Horns and pottery. [also: fragments of burnt clay 18mm thick with rectangular edge and piece of burnt hearth with vitreous slag (at Cambridge, unprovenanced)].

Pottery

- 11 nearly ½cwt of pottery from one (modern) grave.
- 12 5 samian bases and other pieces with potter's marks (see below p.48) Forms Drag. 27, 33, 31, 29/37, 44 represented.
- 13 complete samian dish (Drag. 32 stamped MVSICI M).
- 14 flower-vase (fig 13a) and pottery face-mask (pl. 3, b).
- 15 pottery recorded from the Chesterfield (TL 179486) and published (Kennett, 1973), included a late third-early fourth century unguentarium (ib. fig 1) and graffito (below, fig 13b no 2).

Miscellaneous Material

- 16 part of a baked clay slab, grass-marked on one side, probably from a kiln or oven. Associated with pottery – samian and colour-coated wares.
- 17 a baked clay fire-bar. Provenance uncertain.
- 18 coin of Arcadius/Honorius.
- 19 from the Keeper's garden. Coin of Domitian.
- 20 from paths in Cemetery. 2 coins – Victorinus and Constans.
- 21 3 bronze bracelets (fig 7 nos 23-5).
- 22 SW section of Cemetery. Perforated pottery spindle-whorl (not illus)

(c) Roads

The roads have received more attention than any other aspect of Roman Sandy, and are published in detail by the Viatores (Johnston, 1964). In the following summary, page references are to that work (except where stated otherwise). Excavated sections are numbered on figure 1.

Route 22, from London, was missed by excavation at Stratford (section 6, pp 235, 238) and sectioned at The Bungalow (Section 3, above p.37). The angle in the Chesterfield is dictated by the road's course through the gap to the NE. Metalling was robbed out on either side of Potton Road (Section 8, p. 236). The branch, route 225, has been identified in the Cemetery (section 1, p 246) and sectioned in the Cemetery Keeper's garden (section 2, pp 246, 516). It was missed by electric cable trenches in Stratford road (section 8, p 236) and recognised by the Fire Station (section 9, p 246). Subsequently, Romano-British sherds from All Saints Church, London Road, have confirmed this line. The second branch, route 224, was sectioned twice by pipe trenches in the Keeper's garden (sections 4, 5, p 271). There

is also the possibility (above p. 37 and fig 3, 3) of a gravel track leading towards Tower Hill from the settlement. Dating evidence suggests the mid-first century for route 22, and late second century for 225.

The resulting geometry requires explanation. The junction in the Chesterfield doubtless marks the nucleus of the settlement. Observation confirms that there was not a northward extension of route 22 through the Cemetery to make a triangle. Route 224 did not branch off at this point because Tower Hill would have stood in its course, and so left route 225 at the more convenient point further north.

(d) *Burials (figs 4a, b)*

The Saxon and Roman cemeteries lay to the west of the Roman settlement, and the burials were found and recorded over a period of some 70 years during the creation and development of the railway.

The chronology of these developments, including the complete removal of Tower Hill for ballast, has been studied in detail by Mr Alan Johnston, on whose notes and drawings the following and figs 4 a-b are based. The Great Northern Railway was authorised by act of Parliament in 1846 and the London-Peterborough line opened in 1850. The branch line from Sandy to Potton was added between 1852 and opened in 1856/7. The quarrying of Tower Hill for ballast began, probably for this branch, in about 1852 and continued until at least 1911 (the latest dated find). The sources for this chronology include Ordnance Survey maps of 1884, 1901 and 1926 and unpublished documents of the G.N.R. (The finds are described in the sources quoted below.) The method of quarrying is clear from the quarry outlines, and a calculation of c.3940 sq ft per annum provides the estimated annual growth rings of fig 4a, where the five broad phases of quarrying are shown.

Coffins were found in two groups. The wooden coffins were found in 1853, in the same year as the mass inhumations and urns, which were "opposite to the station house and coal depot, and on Tower Hill". On the chest of one skeleton was a "shallow vessel of lead" (now lost). Three wooden coffins with lead linings were found in 1879 and 1880 (Elger, 1879; and Anon, 1880). They had angle irons and 6-7 large nails 8in long at the corners. One nail is at Bedford, with the head possibly of a second, and two more at Cambridge. The size of the nails implies thick wooden planks, as at Colchester (where they were thought to be

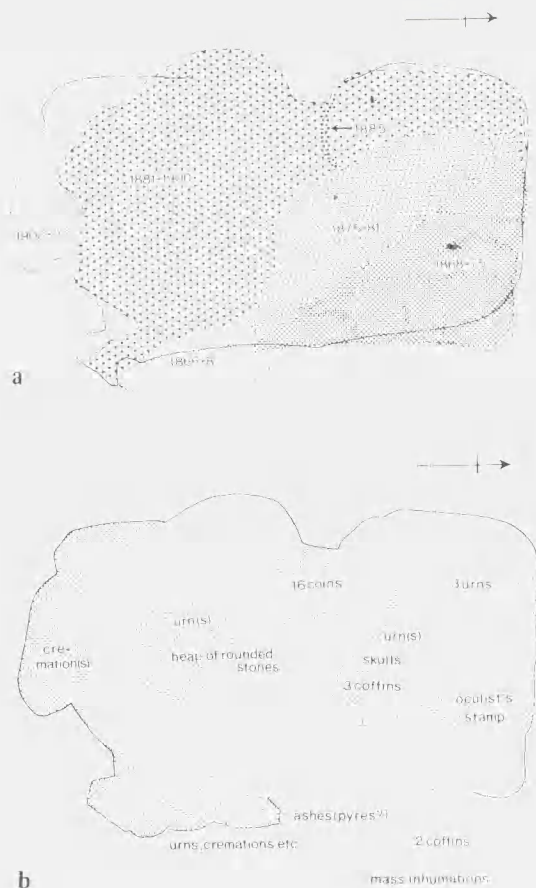


Fig 4 a: Tower Hill: progress of quarrying
b: Tower Hill: conjectural find-spots

hollowed tree trunks) (Hull, 1958, 256). Two coffins contained skeletons, and all three lay E - W.

Inhumations seem to be recorded from three areas. "A number of skulls" was found close to the northern coffins in 1878 (Elger, 1879) and "in the exhumations further south, near the station, the bodies were thrown together in a mass, so that, in the words of the workmen, it was a bank of bodies" (Taddy, 1853). The third discovery, in 1953, was in the corner of the modern cemetery the three inverted skeletons in a pit with grave goods (above p. 39 and fig 3, 9).

Urn, with and without cremations, were numerous and widely distributed. At least 14 cinerary urns are recorded (7 at Bedford, 1 in private hands), and between 10 and 30 complete vessels have survived. From the railway, one contained 3 sets of bones divided by small squares of netting, with a

ring and a coin. Another (Warren, 1779) contained cremated bone evenly mixed with grey sand, and a third (now at Bedford) held the remains of a young woman with a plain finger ring and clip-shaped pin (fig 7. 16a-b). Wyatt (1866) records at least 11 "deposited 2½ - 3ft below the surface, at the bottom of the alluvial soil and on top of the sand bed" (i.e. at the foot of Tower Hill). They were surrounded by ashes and associated with animal bones, some of which were burnt. This may have been the pyre area. One tiny piece of distorted and evidently burnt glass at Cambridge is probably from a cremation.

It has proved impossible to fit the extant pottery into the quarrying pattern of fig 4b, and to establish a sequence of urn burials. A few bear dates, either of their discovery or their acquisition by collector or museum, mostly after 1900. Only 3 (in the Ashmolean dated 1876) can be placed, and they are typologically early.

On the other hand, we can point to three distinct burial areas, Belgic, Roman and Saxon, with scattered burials elsewhere and at least two roadside burials: within the Roman cemetery, the coffins were in two groups, away from most of the urns and cremations, and possibly in an area dedicated largely to inhumations (cf the "skulls" and perhaps the oculist's stamp). If the same progression is found as, for example, at York – of cremation being superseded by inhumation by the end of the third century. (York 79, 105) – then the cemetery must have grown from south and east, extending northwards towards the railway bridge where the latest – Saxon – burials were found. This sequence is confirmed by the pewter dish: only three other cemeteries are known to have had pewter grave goods (Lankhills, Winchester; Richborough, Kent; Cogenhoe, Northants.) The date of this dish is likely to be fourth century.³ The mass inhumations closely resemble the elongated burial pits "on the outskirts" of the Railway Station cemetery at York (ibid, 79). It is also noteworthy that at Trentholme Drive (ibid, 101) the pyre area was distinct at first from the burial area, and was itself later used for burial – as seems to have been the case at Sandy, with at least 11 urns deposited in the pyre ashes at the foot of Tower Hill; at both sites the cremation of animals seems to have been part of the rite. York also provided the explanation of the "heap of rounded stones which had been carefully selected and were of equal size" (Letchmore, 1890); in two cemeteries (York, 79, 105) graves were marked by cairns of cobbles.

Evidently, the cemetery did not have precise limits, and – to judge from early accounts – stretched across the Chesterfield. In addition, the Tower Hill discoveries included much non-funerary material (e.g. the iron work hoard, "a quantity of charned wheat . . . amounting to near thirty quarters" (Mayle and Price, 1850), and much of the pottery). This mingling of domestic and funerary material was noted at Colchester (Hull, 1958, 252, 255). At the Union Cemetery, as at Vindonissa, the area seemed to have been also the town rubbish-dump. Elsewhere, however, the extra-mural houses and graves were mingled without system. Both observations might describe the situation at Sandy.

Some early discoveries, presumably from the Chesterfield, may have been roadside burials south of the settlement. Camden (1695) records glass cinerary urns and one samian vessel containing ashes, Warren (1779) a simple cremation in urn and Pownall (1787) another with several articles of a lady's toilet, including a curved pin and a mirror. Further south, towards Stratford (fig 1), a buff Romano-British jar (of which a sketch survives) contained a cremation. There was a small cemetery here, as skeletons were observed c. 1900 when digging up the track, now Stratford Road, and in the adjoining farmyard.

THE FINDS

(all objects are in the Bedford Museum unless otherwise stated).

(a) *Silver* Coins apart, no silver object has survived. From a cremation in Tower Hill came a "silver ring, set with cornelian, bearing the device of an eagle . . ." (Taddy, 1853), the second discovery of this stone, the first, "a cornelian intaglio" having been recorded by Stukeley (1724). More important was "a curious mirror, or speculum . . . of a mixt metal, copper, silver and iron . . . I measured it two inches five lines, by two inches four lines. It is surprising that it hath preserved its polish to so great a degree after lying buried so many hundred years." (Pownall, 1787). It accompanied a cremation in an urn.

(b) *Bronze* The finest surviving object is undoubtedly the small *phalera* (pl. 3a), now at Cambridge. When first published (Ransom 1905) it was identified as Mercury; a new interpretation was advanced in 1939 by Professor A. Alföldi and summarised by F.M. Heichelheim (1946) suggesting that "it represents one of the usual symbols for a happy after-life, and shows the head of Bacchus or one of his superhuman followers." It has three small holes, and it is suggested that it

was fixed, like other similar pieces, to a funerary car. Both interpretations are doubted by Professor J.M.C. Toynbee (1964, 337), who regards it as a Medusa, whose "hair is very snake-like, even if no actual snakes can be discerned in it; and the lightly incised wreath of leaves and berries that surrounds the mask would suit Medusa in her role as a goddess of earth and fertility. This was obviously an imported work, probably from Gaul." These *phaleræ* were charm-like decorations attached to metal or leather corselets, and were military equipment. However, as all three known British examples were found on civilian sites, she suggests that they may have been "lost by their owners after retirement from active service".

At Bedford is a small flat bronze head attached to a broken and bent handle (fig 5). Deriving from a trefoil-lipped jug it can be compared to examples at Hauxton (Liversidge, 1957, 8-9 and fig 1 and 4c) and Nijmegen (den Boesterd, 1956, nos 235 and 236). The face, poorly modelled and indistinct, is female, apparently enclosed in a cowl or bag suspended by the top two corners. It probably represents Medusa.

Gough's edition of Camden (1806) mentions "a brass female head about 3ins high, which he (the owner) supposed to be Boadicea, more probably a standard-pole." Watkin (1882) identified this as a steelyard-weight; it has since disappeared.

In 1856 on the estate of the late Capt. Peel "when they were making a branch railway from Sandy to Potton" (Baker, 1874) 3 fine bronze bowls were found, which are now in the Bedford Museum. As Capt. Peel bought the land for the branch line these might be from the Station end of it — a hoard buried between Tower Hill and the settlement. They have been published in detail by Kennett (1969), who at the time concluded that they are imports of the late fourth century though he now considers them to be more probably Romano-British copies of the continental types, having seen a greater range of the European ones. To this he has added (1971) a fourth, separate from the series; this is native work of the same period. A small fragment of a copper bowl with the rim turned over an iron wire was found (unstratified) at The Bungalow.

Ten brooches survive, complete or in part (fig 6). With the possible exception of no 10, they are all early types, of British workmanship (except no 6).

1) a one-piece brooch, of pre-conquest type, from the ditch filling at The Bungalow.

2) a one-piece, Nauheim Derivative brooch. The type was common by AD43 and continued almost to the end of the century. Exact provenance uncertain. For the decoration of the back, cf Wheeler (1930), fig 24; 2 and Hull (1947), pl. LXXXIX, 5 (AD43-8). (3, 4, 5, 8.) derived from the true Colchester type, these have the spring-pin made separately and secured to the body. Nos 3 and 4 are so closely similar that they might even be from the same batch. 3 is unprovenanced, 4 from the modern Cemetery and 5 from the excavations at Furzenhall Farm. A common first-century type. No 8 appears to be part of another (at Cambridge).

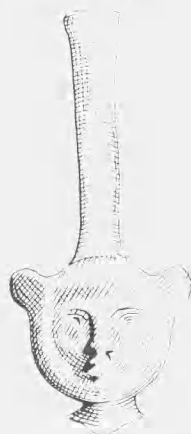


Fig 5 Bronze Handle from Jug with Medusa mask (scale $\frac{1}{2}$)

6) a Hod Hill type brooch, a continental derivative from the Aucissa type. The head is rolled backwards to hold the iron hinge-pin; the silvering of the lower part and the single hole in the catch-plate are typical. These brooches were imported at the time of the conquest, generally by the military, and remained popular for another 20-30 years. Of uncertain provenance; the pin, probably belongs to it.

7,9) British derivatives from no 6. No 7 which is closely paralleled at Colchester (Hull, 1947, pl.xvi, nos 129-30) is carefully made; the rolled-back head, however is unusual for a British brooch (Mackreth, 1972, 24). In no 9 the head is rolled forward and the additional hook indicates that it was probably one of a pair, joined by a bronze chain. The hinge pin is of iron. Both are of uncertain provenance, no 7 being now at Cambridge, no 9 at Bedford. Mid-late first century.

10) a penannular brooch, of uncertain provenance. The body is circular in section, with regular transverse ribbing, the terminals (apparently undecorated) turned back and flattened. The type

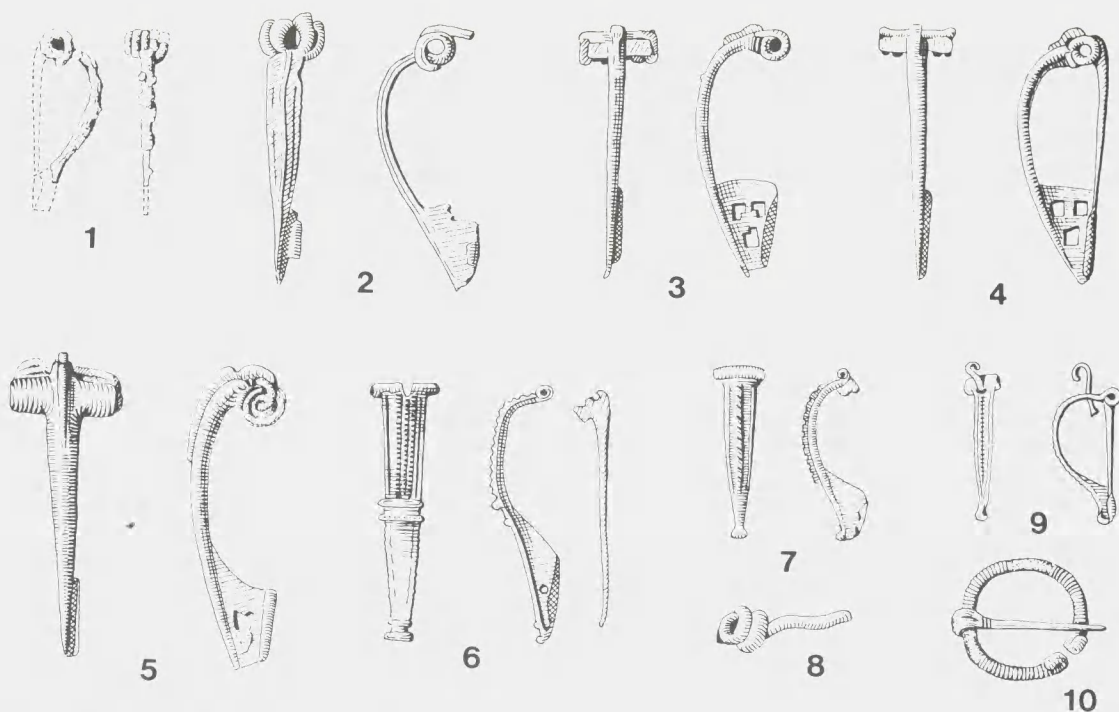


Fig 6 Bronze brooches (scale $\frac{2}{3}$)

(Fowler, 1960, type D) is not precisely dateable, and had a long life. These terminals are thought to be earlier than the cast knobs, in general; cf early examples at Verulamium, AD 5-35 and 80-100 (Wheeler, 1936, fig 24 no 4 and fig 45 no 39), Wroxeter prob. 80-120 (Bushe-Fox, 1916, pl xvi no 14) and a late, plain example at Latimer dated to late third – late fourth century. (Branigan, 1971, fig 44, 611). The ribbed body is paralleled in undated examples at Richborough (Bushe-Fox, 1926, p 46 no 25) and Lydney Park (Wheeler, 1932, fig 14 no 37).

The bracelets (fig 8 and fig 7 nos 21-28) call for little comment. All, except 23-5, are at Cambridge. These three, a set from one modern grave, would fit a child.

Three rings are known (fig 7, nos 16a-18), of which no 18 is certainly not a finger-ring. A further large ring (not illustrated) of bronze over an iron wire, was found unstratified at The Bungalow, and is not certainly of Roman date. No 16a was found with 16b and the "cremated remains of a young woman in an urn" (Bedford Museum registers).

The pins, nos 4-8 (at Cambridge) and 16b are of common Romano-British types. No 11 is a needle, no 10 has an expanded end for mixing medicaments or cosmetics on a stone palette, and

no 16b may be not a pin but a pair of tweezers. One wonders if this is Pownall's *hasta recurva* (Pownall, 1787). The ring-headed pin, no 9, has been thought by Smith (1905) and Fox (1923, 107) to be Iron Age, through an association (which cannot now be verified) with a La Tene III urn (which cannot now be found). The dating of this type of pin, sometimes known as "ibex-headed", is disputed, and a fourth century AD date has been proposed by Stevenson (1955). This particular specimen, which is in the British Museum, is listed by Fowler (1963, 153) among pins of Roman date; she suggests that some, at least, may go back to the first century BC, that they were made and worn throughout the Roman period, and that they have a high survival value.

Miscellaneous bronze objects. The Cambridge collection, given by W. Ransom, includes a number of fragmentary objects (fig 7 nos 1-3, 14, 20-28) which have the appearance of scrap metal. 1-3 in particular look like offcuts of bronze, with trial toolcuts, and it is not impossible that working, or re-working of bronze for small metal objects was carried out on the site.

No 12 has been carefully bent, and the hole suggests that it might have held a pin for scribing or surgical work. If it were straight, however, its

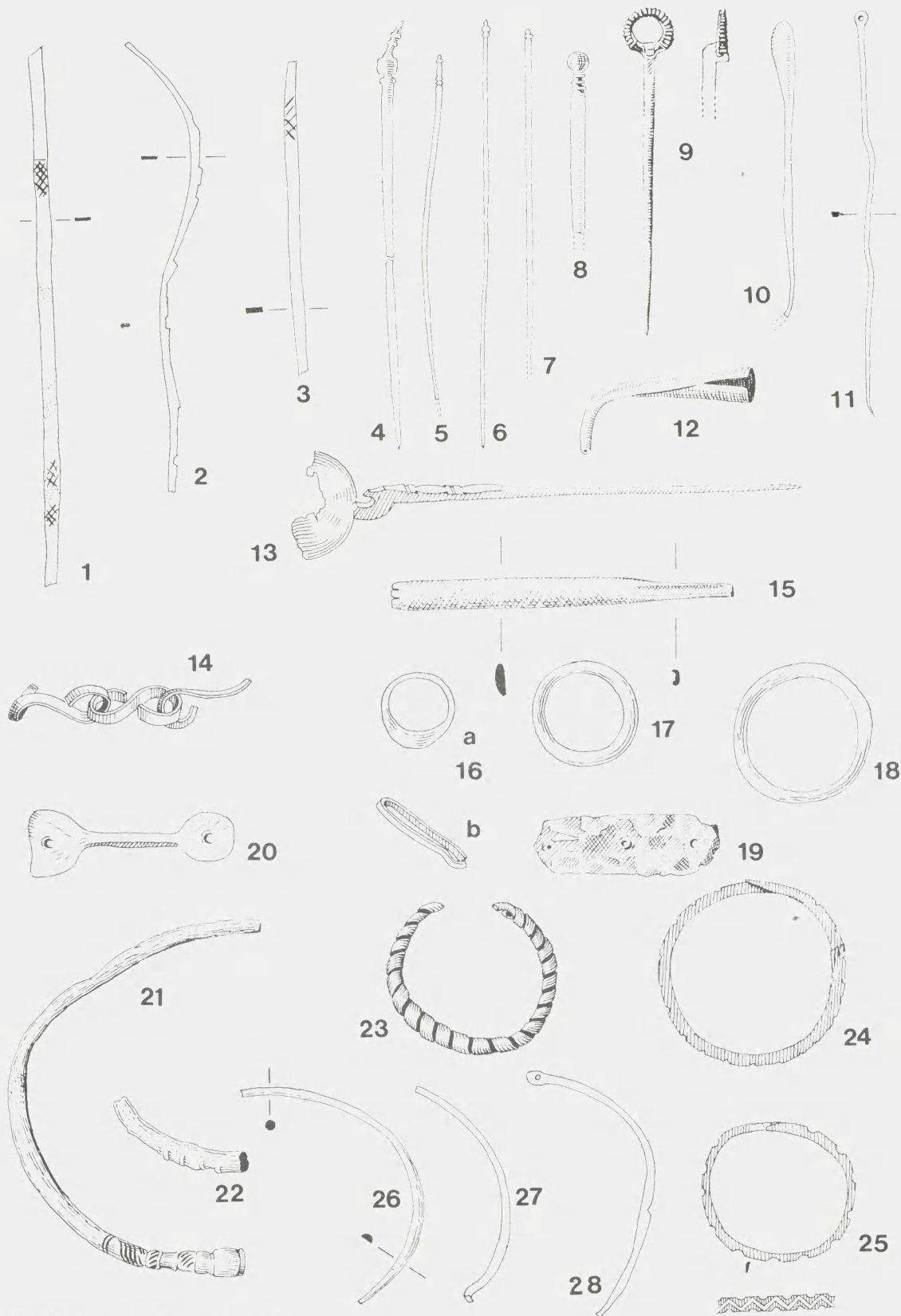


Fig 7 Bronze Objects (scale $\frac{2}{3}$)

form would be that of a simple ferrule. It is an unstratified find from The Bungalow.

No 1 appears to be a surgical or manicure tool, for which no precise parallel is known. It was found in the pit with the 3 inverted skeletons and the glass flagon (fig 10, 1).

No 19 is a small cast plaque, of uncertain form. It has three small holes for attachment.

No 20 is clearly a fastener, but since the holes are round, rather than square, it may have been attached by sewing, rather than nails or rivets.

(c) Lead/Pewter

1 A small, flat-bottomed dish of lead or pewter, was once at Bedford. Diam. 6.6 in and height approx 0.7 in. It was broken and distorted, but is doubtless that recorded by Taddy (1853) as found on the chest of one of the skeletons at Tower Hill, in one of the two wooden coffins. It is probably fourth century (see above, p. 40).

2 Cards at Cambridge describe, in Sir Cyril Fox's writing, a "lead pig, shaped like the prow of a boat," and a "leaden cushion-shaped weight with a constricted waist". Both are lost.

(d) Iron

The hoard, probably from Tower Hill, and now in the British Museum, has been published in detail by W. Manning (1964). It comprises 4 leaf-shaped linch pins, 1 hub rim, 4 hub linings, 1 axle guard band, 1 farrier's buttress, 1 curry comb handle, 1 firmer or paring chisel, 1 mower's anvil, 1 cobbler's last, 1 key, 1 anvil and 1 axe. Manning omits 3 items studied by the writer in c 1953. They are:

2 broken hub rims, resembling those published. Diameters approx. 4.5 in and 5.0 in.

1 unidentified object (fig 9, 4), length 13.25 in. At least one, and possibly 3, ornamental scrolls sprang from each side. The object was broken at one end, and much corroded; it appeared to have been forged in one piece.

In addition, it was noted that the mower's anvil was unused, and that the cart fittings did not make satisfactory pairs, supporting the identification as a hoard.

An iron plough coulter, of Roman type, is in the Bedford Museum (not illu). Its length, 2ft 9ins., and its provenance is not known.

An iron object at Bedford (fig 9 no 3) appears to be a large pin. But since it is of iron, the usual material for *stili* and nearly 4½ in. long, it may be the rare variety of *stilus* with a knobbed, instead of flattened erasing end.

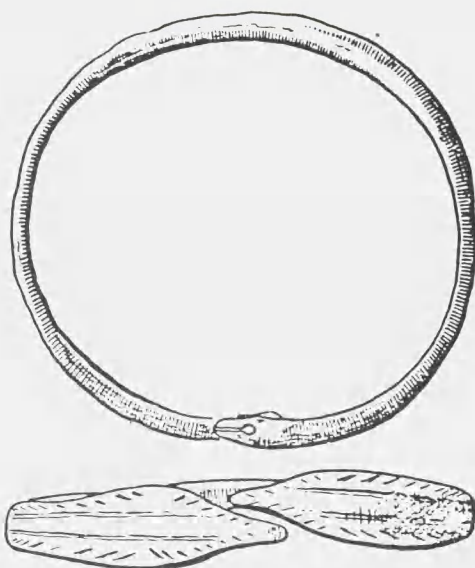


Fig 8 Bronze bracelet (actual size)

A much corroded knife-blade is at Bedford (not illu). It is 7.3 in long, and 1.5 in wide at its widest point.

A sickle-shaped object at Bedford (fig 9, 1) is identified there as a strigil. Only the size and curvature support this, as the strigil normally is broad and U-shaped in section. It might be the blank for a small sickle; although much corroded, it certainly had no cutting edge; nor is it clear whether the square end is intentional, or broken. It is too flat to be a latch-lifter of conventional form; but if a pivot hole or hook is missing from the broken end, it could be a door-handle of the kind found at Latimer (Branigan 1971, fig 43, No 588). Its provenance is unknown.

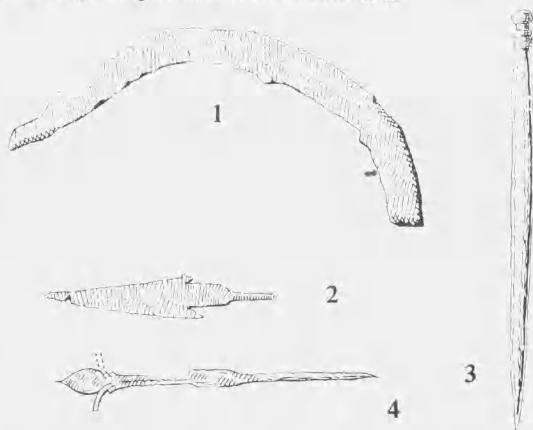


Fig 9 Iron Objects (scales: 1-3 at ½; 4 at ⅛)

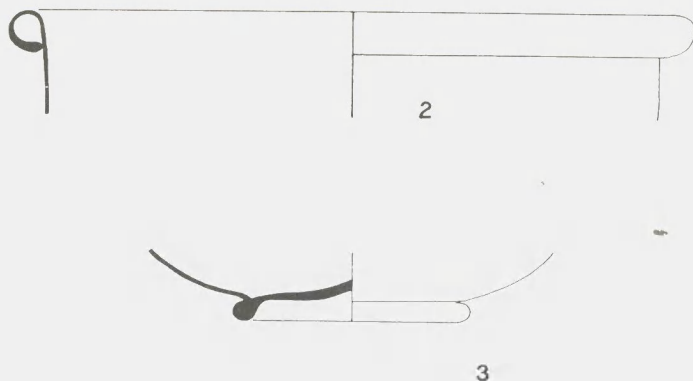
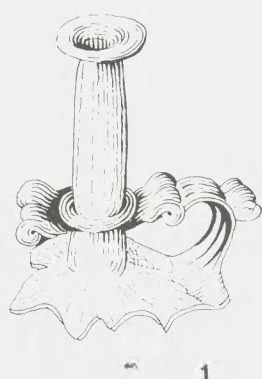


Fig 10 Glass (scales: 1 about $\frac{1}{2}$; 2, 3 at $\frac{1}{2}$)

A barbed and tanged arrowhead at Bedford (fig 9, 2) is described there as "Iron Age". While it could easily be medieval (though the tanged form is less common than the socketed), it is probably safer, in view of its accession number, to regard it as Roman (cf the arrowheads found in coffin burials at Colchester (Hull, 1958, 256)). The bow and arrow were occasionally part of a Roman huntsman's equipment (Liversidge, 1968, 364-5). Contrast the late first century B.C. specimen from Maiden Castle (Wheeler, 1943, fig 88, 9).

(e) Bone

No bone objects are recorded from Tower Hill. The modern cemetery has produced a circular bone counter with central perforation (not illus) and the Furzenhall Farm excavations 3 fragmentary pins (not illus).

(f) Glass (fig 10)

Camden (1695) mentions "Glass urns containing ashes" and Stukeley (1724) "lacrymatorys". Fragments of glass were found at Tower Hill (Wyatt, 1866) and a fragment at Cambridge is burnt.

Parts of three vessels from the modern cemetery survive (fig 6). The rim (no 2) is in yellow, and the base (no 3) in pale green glass. The neck of a two-handled flagon in pale green glass was found in the pit with the three inverted skeletons. (p.40). It is a

late third century vessel with a ribbed or plain body, possibly shell-shaped, but here probably bulbous. Probably from the Cologne area. ⁴

(g) Stone

The oculist's stamp (fig 11) is on the edges of a steatite slab 5.3cm x 3.8cm x 0.9cm. The illustration (drawn from an impression) reads:

- 1) C VAL AMANDI/DIOXVM AD REVMATIC (um)
- 2) C VAL VALENTINI/DIAGLAVC (ium) POST IMP (etum) LIP (pitudinis)
- 3) C VAL AMANDI/STACTVM AD CAL (iginem)
- 4) C VAL VALENTINI/MIXTVM AD CL (aritudinem)

On the slightly bevelled sides of the stamp are the following cursive graffiti: DIOX DIAGLAVC STAC MIXT as guides to the user of the stamp. The text means:

- 1) Gaius Valerius Amandus' vinegar salve for running eyes.
- 2) Gaius Valerius Valentinus'celandine ointment to be used after an attack of inflammation of the eyes.
- 3) Gaius Valerius Amandus' drops for poor sight.
- 4) Gaius Valerius Valentinus' mixture for clearing the eyes.

The stamp could be used to impress a cake of ointment or the clay or wax seal of a liquid container.

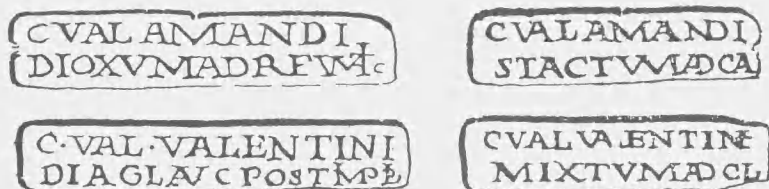


Fig 11 The oculist's stamp (actual size)

This stamp is described by both Watkin (1876) and Watson (1873) as having been found in 1873 "in a ballast-hole near Biggleswade Station". The British Museum registers, however, refer to this statement and explicitly contradict it, by saying "found at Sandy, not Biggleswade" (on the authority, it seems of the donor). The approximate find-spot is suggested on fig 4b.

At Bedford is an ironstone "lapstone or last" – foot-shaped but little more than 7in long. (fig 12). The lower half of a quern survives at Bedford, and a sandstone whetstone (?) at Cambridge. Cards there mention pieces of squared slate and sandstone, and three "mealing-stones" from the Chesterfield.

(h) Miscellaneous finds

1 Lamp. (pl 2) red glaze. Hellenistic type with one small side-lug. Length 3.1in. 2nd century B.C. Harden (1950) regards this as a genuine import in ancient times but Harbison and Laing (1974, 15, no 8) as probably a modern loss. If genuine whether it is from a Belgic or Roman burial is unknown, as its provenance (Evans Bequest) is uncertain.

2 Flower-vase (fig 13a) in cream, sand-gritted ware. The three vases and the handle have been painted with a light brown slip. The base is a clay ring, pierced with three holes, over which the miniature vases have been luted. In this it differs from the fragmentary specimen from Silchester (May, 1916, pl L no 75). No two seem alike; they may be joined without a ring (Wacher 1969, fig 74, 600), made as a group of four (Hawkes and Hull, 1947 274, fig 57, no 11) with or without a filling spout (Wheeler, 1930, pl LVIII) or a handle, as here. Dates range from mid-first century (Hawkes and Hull, *op cit*) to fourth century (Hull 1958 type 495).

3 Face-mask. (pl 3) in fine cream ware, with red paint on the hair and eyes, and two rings on the neck of the jug. Face-masks are not uncommon on Romano-British pottery, often used as funerary ware. This is a variety attributable to the Stibington kilns of the Nene Valley, a similar mould to Hartley (1960) fig 4 no 15.

4 Graffiti (fig 13b).

1 XVIII (or less probably, XIV N) The vertical stroke after the X is certainly deliberate, probably a mistake (XI or XIII intended and corrected). On a piece of thick white storage jar, from the modern cemetery.

2 A second graffiti (Kennett, 1973) incised after firing on the base of a very abraded? colour-coated vessel. Probably an owner's mark.



Fig 12 Ironstone last (scale ¼)

COINS

The recorded and extant coins comprise an alleged hoard and numerous chance finds. These have been examined by Dr R. Reece, whose detailed report will appear in a future issue of the *Bedfordshire Archaeological Journal*. He comments that the hoard contains obvious contaminants, but that there may be at the core of the material a genuine Theodosian hoard, many of whose pieces have strayed into the list of general site finds. The latter range from Republican to Monorian issues: there is little support for the other site evidence of occupation before the Flavian period. The coin series runs smoothly to the end of the 4th century, ending abruptly with the hoard of about AD400.

POTTERY

1 General

With the exception of the flower vase (fig 13a) and the face-mask (pl 3) the only pottery published here is from The Bungalow site. This illustrates most of the forms and fabrics that are found, out of context, elsewhere in Sandy. Moreover, fig 14 contains the dating evidence for the conclusions on p.52. The copious pottery from Tower Hill and the modern Cemetery can be dated only typologically; there is no internal dating evidence, or stratified groups.

There is, surprisingly in view of the quality of the local clay, no conclusive evidence for pottery manufacture here. Possible kiln waste has been detailed above, to which should be added one possible waster and blemishes on cinerary urns from Tower Hill suggesting that "seconds" might have been on sale locally. Finally, one might question, but should not ignore, Ransom's identification (1886) of "an iron implement with serrated edge . . . the teeth being alternately set in opposite directions. I was puzzled to understand its use, until, turning out a piece of pottery near, and comparing the indentations upon it, I found that they corresponded exactly with the marks which would be made with the teeth of the implement."

Pottery was certainly made on the "villa" site, 2¼ miles to the north-west, near Tempsford (Rudd, 1964). The products have not yet been identified at Sandy.

2 Fabrics

a A "soapy" ware, frequently found in the Ouse Valley. It is a medium hard ware, sometimes with shell or fine grit added; it appears waxy, when burnished with the back of a finger-nail. Probably the result of low-temperature firing.

b Shell-tempered ware, the crushed shell being, as far as is known, a deliberate additive, in varying densities. Calcite-gritted ware is not found at Sandy.

c A fairly hard, dry dull ware with slightly pitted surface, caused by the disappearance of shell temper in the firing.

d Grog-tempered ware. This is not common, and not readily recognised; perhaps for this reason it has not been identified on other Bedfordshire sites. In the south of Britain, it is found in hand-made mid-late Roman pottery; at Sandy, however, it appears on hand-made early wares. At The Bungalow, for instance, 5 sherds were grog-tempered, including no 9.

e A hard, grey ware with very fine sand grit (and very occasionally orange surface). It is not known whether this is of local or non-local manufacture.

f White ware. In its coarser, creamy variety it is found in Romanised wares, such as flagons. However, a few sherds of the Gallo-Belgic "white ware" were found at The Bungalow. This has very fine sand grit, a matt surface caused by throwing in a wet slurry, and the vessels are thin-walled and hard. Hawkes and Hull (1947, 238-9) suggest that it was made, in some quantity, in the Colchester kilns, up to 61 AD. This is probably the source of ours.

g Sand-gritted, handmade and undecorated. Sometimes rough externally, sometimes burnished. Varying hardness and colour. Its presence throughout the deposits at The Bungalow suggests a mid-first century date.

3 Non-Local Wares

a A single glazed sherd has been recognised at Bedford (Kennett). This has not been examined by the writer, and it is not known whether it is of British manufacture or imported from the Continent.

b Some, at least, of the fine grey wares might be from the Upper Nene potteries, though (with the possible exception of no 16) the distinctive traits have not been confirmed.

c The colour-coated "Castor" wares of the Peter-

borough region are certainly found at Sandy (e.g. pl 3).

d Colour-coated pottery (including one rosette-stamped sherd) from the Oxfordshire kilns have been recognised at Sandy.

e Mortaria. Two stamps are known:

1 MATVGENVS This specimen is now lost.
FECIT

2)DIX i.e.)DEX the stamp is from the same die as one found at the Hambleton villa (*Arch.* 71, 188 fig. 19, 4, read as DVX). A name such as VINDEX would be possible. Although the fabric has been heavily burnt, it is still characteristic enough to indicate an origin in the potteries near Watling Street, south-east of Verulamium. The rim may be compared to some produced in that area c. A.D. 110-140 (5)

f Samian. (6) with the exception of the sherd, quoted above, none of the samian has been found in a stratified context. One specimen of black samian is known. The following stamps are known:

Certain: DAGOMARVS: OF. ABN: OF. SEVER: LOGI-
RNI: IIALBINIM: ALBVCI: GIPPLM: BITVRIX F: OF
SABINI: NAMIL CROESI: OF. PONTEI: MVSICI M:
PINNAE M.

Interpretation uncertain: IINININIM: OITTEIR (?)EW

Possible potters (identified from decoration): Germanus, Passienus, Frontinus/Crucuro, Advocisus, Paternus.

4 Pottery from The Bungalow (fig 14)

Nos 1, 4, 7, 9, 11, 13-15 and 20, with the brooch (fig 6, 1), form a closed group from the ditch filling sealed by the road metalling. Nos 16-19 and 21 are from the foundations of The Bungalow, and belong to the later Roman occupation of the site.

The pottery from the ditch is of distinctly Aylsford-Swarling type, and the forms are not uncommon locally, as a recent ceramic survey (Simco, 1973) has shown. Only a more precisely dated group could show how far into the Roman period the tradition persisted. Nos 5, 6 and 8 would look at home in a Roman context; and as they are unstratified, and not part of the group, they may indicate continued occupation and the persistence of forms. However, the group as a whole (of which only samples are shown) has a purely Belgic look, undiluted by any sherds of distinctively Romanised wares. No 7, if not imported *terra rubra*, is a close imitation of it; and the 13 small sherds (of indeterminate form) of the white ware, Fabric F, strengthen the similarity

with the pre-Boudiccan deposits at Colchester that can be seen in the other forms.

1 cordoned bowl or jar. Handmade, mid-grey, roughly burnished. Layer 2.

2 cordoned jar. Wheelmade, grey sandy ware, lightly burnished. Narrow cordons between tooled lines. House foundations.

3 pedestal. Wheelmade, grey-buff, the footring probably turned, and certainly burnished. House foundations. A similar pedestal, from the modern cemetery, was sliced off obliquely above the foot, before firing.

4 butt-beaker. Wheelmade, fine hard grey, buff slip, burnished. The cup-shaped rim is a rare feature. Layer 11. From the same layer, a wall-sherd of classic butt-beaker, in fine buff ware, rouletted and burnished.

5 cooking-pot. Wheelmade, buff with grey core, shell-tempered. House foundations.

6 shouldered jar. Wheelmade, hard dark grey, smoothed outside, narrow cordon between tooled lines. House foundations.

7 beaker. Wheelmade, in fine hard pale orange-red fabric, carefully turned to a precise angular profile and burnished. The surface, which is a slightly richer, deeper version of the fabric, suggests that it is an imitation of *terra rubra*. There are slight traces of rouletted decoration that has strayed from the zone below. For a less angular version of the form cf. Hawkes and Hull (1947) pl LV, no 84a (pre-61 AD) layer 9.

8 storage jar. Wheelmade, buff, shell-gritted. House foundations. A similar specimen with a series of small holes pierced into (but not through) the rim came from layer 15.

9 storage-jar (?). Handmade, coarse grog-tempered, buff with grey core fired dark brown inside. Combed decoration. Layer 1.

10 storage-jar (?). Handmade, coarse gritty, grey. The rim thickening is not coil-built, but an addition of separate lumps of clay. Combed decoration and faint burnished lines with roughly burnished zone below the (missing) rim. House foundations.

11 storage jar (?). Handmade, coarse grog-and sand-gritted, grey. Combed and scored decoration. Layer 11.

12 storage jar. Handmade, coarse sand-gritted, buff with grey core, roughly burnished. Combed decoration, done from right to left. House foundations.

13 storage-jar (?). Handmade, coarse gritty, buff-grey fired black inside. Grooved decoration. Layer 9. Another similar in grog-tempered fabric

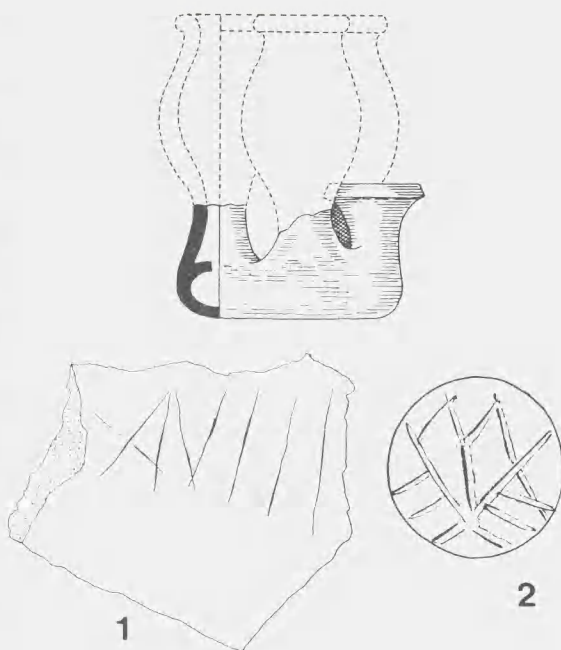


Fig 13 a: Flower vase; b: graffiti on pottery (scale $\frac{1}{2}$)

from layer 11.

14 storage-jar. Handmade, soft, shell-gritted, dark grey. Layer 14.

15 jar. Handmade, soft sandy, reddish-buff with grey core, fired dark brown outside, and burnished. Layer 14.

16 pie-dish. Wheelmade, hard grey, turned and partly burnished. A 2-3 cent. form. The neat chamfer was found to be characteristic of the potter(s) at Ecton, Northants (Johnston, 1969, no 45) and a specimen was dated to not later than 160 A.D. at Brixworth (Woods, 1967, 14 no 3). House foundations.

17 flanged bowl. Wheelmade, hard fine sandy, grey. House foundations. A 2-3 cent. type.

18 mortarium. Cream fabric, no grit visible. A mid-late third century form.

19 flagon, ring-necked with rim pinched to form a separate spout. Wheelmade, coarse sandy, with some white grit, grey fired buff outside. House foundations. A first-century type (cf Bushe-Fox, 1932 pl xxxiii, no 206.)

20 amphora (not illus) Sherd from shoulder of globular oil amphora. The neck has been broken off and the edge has become smoothed as a result of subsequent usage of the body. Spanish (7). House foundations.

21 amphora (not illus). Small body sherd of a second globular amphora. Layer 12-13.

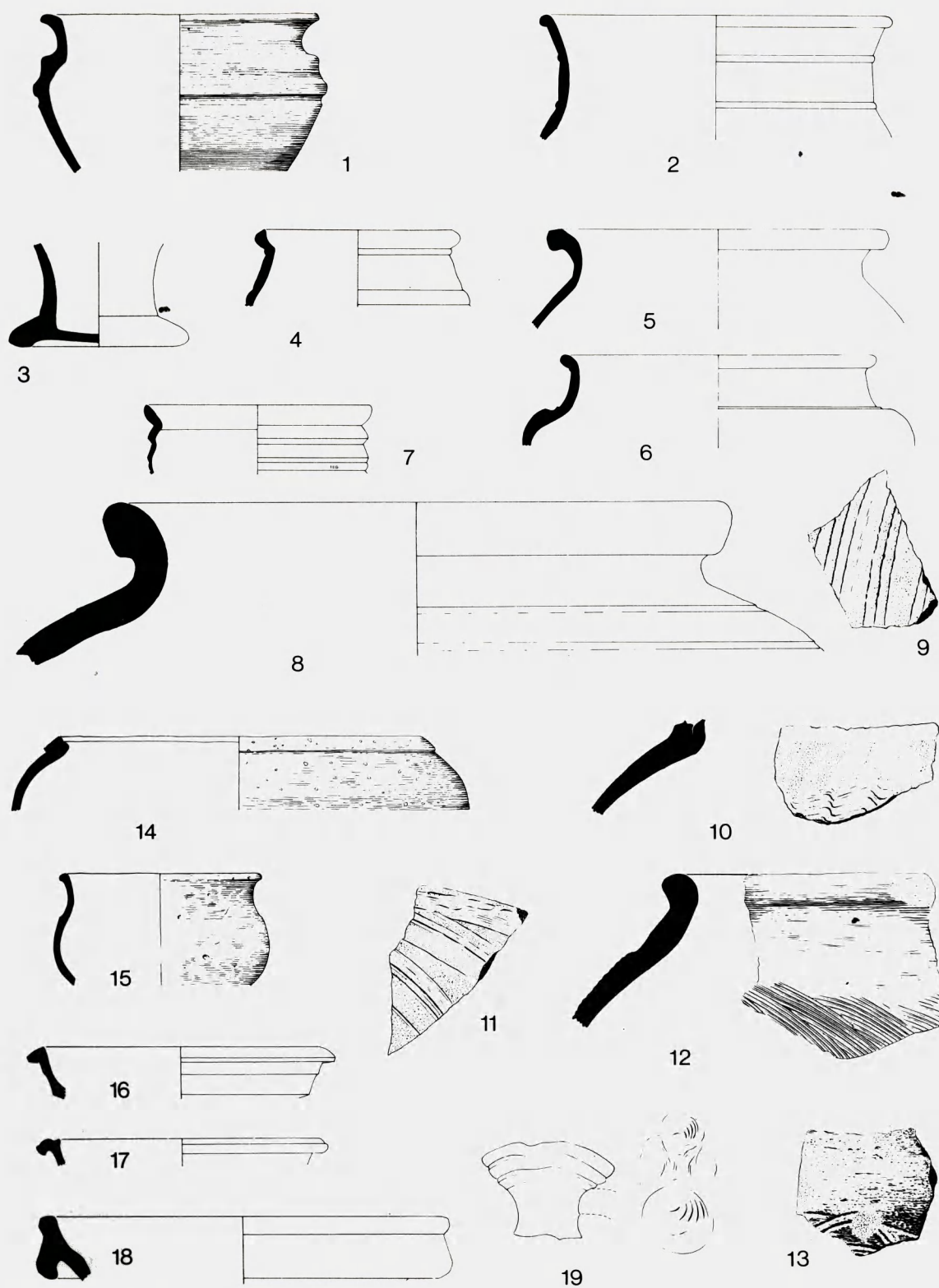


Fig 14 Pottery (scale $\frac{1}{4}$)

22 amphora (not illus). Ribbed sherd in fine creamy-white fabric. This came from the flat-bottomed form Dressel 30/Pelichet 47. Probable date mid 2nd – late 3rd century A.D. South Gaulish. House foundations.

DISCUSSION

It is hard to visualise the settlement in physical terms. Ephemeral buildings, possibly timber-framed on low sandstone walls, doubtless clustered around the road junctions, and straggled along the main road to the south, towards the ford. Dwellings and workshops would be indistinguishable, and a tiled roof would mark out the one building of importance. This was a diffuse settlement, the focus of a diffuse population, dispersed in the countryside during their lifetimes, and gathered in the large cemetery only after death.

If it is hard to visualise the settlement, it is even harder to visualise the surrounding countryside: there has been no systematic fieldwork to produce even a distribution map of surface finds. Apart from the undated and lost earthwork at Beeston Berrys (Johnston, 1959 and Dyer, 1972) two contrasting sites are known in the neighbourhood. The site near Tempsford (TL 165522) lies to the north, midway between routes 22 and 225. It has produced wasters and kiln evidence, over a wide area (Rudd, 1964). The quality of the material suggests a villa, doubtless materially self-supporting, with pottery as an ancillary industry.

Of probably greater relevance is the unpublished evidence from air photographs and excavation at Furzenhall Farm, Biggleswade Common. Here an enclosed kite-shaped settlement of 0.6 acres (0.25 ha) was apparently the focus of an extensive area of low-lying alluvial land whose cultivation is known from cropmarks – probably mixed farming with scattered peasant habitations. It produced third-fourth century pottery and slight building evidence from a pit, while the brooch (fig 6, 5) and scattered pottery suggests earlier occupation nearby. A droveway led to the south, and entrances opened to east and north-west; probably a farm track ran westwards from the latter under Galley Hill to join the main road. Here was apparently a satellite to the Sandy settlement, distinct in its form, and complementary in its economy. At last we can see one aspect of Sandy's connection with the surrounding countryside, the source of the corn-filled pit, the users of the plough-fillings, the cart-fittings, the mower's anvil and the hunting-arrow (if fig 9, 2 is correctly identified). This site

will be published in a future number of this *Journal*: it highlights the need for further regional fieldwork, a plea that has recently been made in general for the context of small towns and rural settlements (Todd, 1970, 130).

The roads invite us to consider briefly the wider context. The traveller from London via the small Romanised town of Braughing and the little-studied settlement at Baldock would not find Sandy a memorable event en route for the next town of Godmanchester. Through traffic from east to west would link the settlements of the Cambridge area to the extensive native sites, known from air photographs, in the Cople-Moggerhanger area, towards

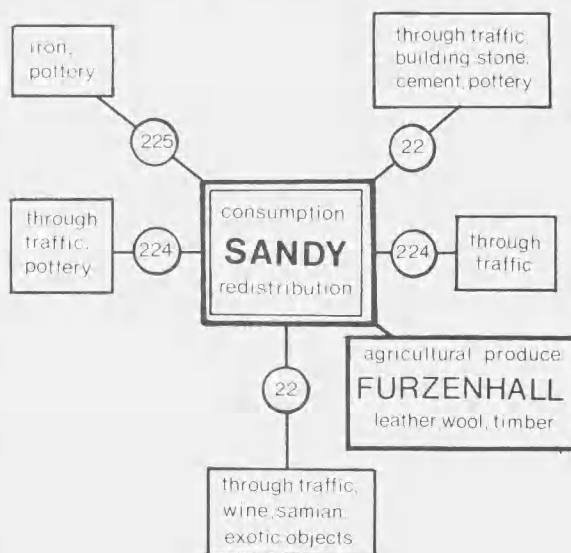


Fig 15 The Economic Basis

Bedford. To the north-west, along route 225, lay the sources of iron and pottery in the Nene Valley of Northamptonshire, and further west the pottery manufacturing establishments of Oxfordshire. Pottery, at least, from these sources has been recognised at Sandy.

Roman Sandy, therefore, was a centre for consumption and redistribution (fig 15). Some of the items stated in the model are reasonable speculation, and none is exclusive; but others are attested by the evidence detailed in this paper. To a limited extent, the settlement, was also a production centre, in iron-working, pottery and possibly bronzeworking. Like many or most road junctions in the Roman world, one might expect it to have been a religious spot; but any temple or shrine must have been a slight affair, to have left no

traces; cemetery apart, the only hint of ritual practices is the pit with three inverted skeletons and accompanying offerings. And yet the regular discoveries of unusual finds in and around the modern cemetery (copious coins, flower-vase, bracelets, mirror, lamp, etc.) might suggest temple offerings, rather than domestic rubbish. They did not accompany burials.

This paper opened with a reference to "special factors" – a question that has not been answered. The possibility of a posting-station or undiscovered military site as a nucleus is the least likely, and would rest purely on the possible military associations of the bronze phalera and the Hod Hill brooch, with much conquest-period material. Alternatively, one might suggest a function as a funerary and religious focus; but, of the circumstantial evidence quoted above, nothing is incontrovertibly dedicatory. What is certain is that this was not a residential centre for the conventionally wealthy – it is significant, for instance, that not a single *tessera* or chip of painted plaster has yet been found. The hypocaust evidenced by the single flue-tile cannot have been very substantial. Nor was Sandy a centre for bureaucratic administration, the collection of the *annona militaris* (for this would require secure defences), the upkeep of the roads and the *cursus publicus*, or even the policing of the neighbourhood (Todd, 1970, 120 and 126). The true nature of the prosperity of the place is surely the perfectly mundane one suggested in fig 15; this is the only conclusion to be safely drawn from the fragmentary evidence.

That the evidence is fragmentary is due to the exceptional and varied use of the land – the quarrying, the "trenching", the railway excavations, the intensive cultivation and the gravedigging. This paper has attempted what is perhaps impossible – to reconstruct a picture from a jigsaw when most of the pieces are missing.

DEDICATION AND ACKNOWLEDGEMENTS

This paper concludes on a more personal note. I was grateful for the invitation to contribute to this volume for two reasons. First, it was to Sandy that Mr F W Kuhlicke took me, exactly 20 years ago, to record the Roman road sectioned by a newly dug grave; from this visit grew a lifelong enthusiasm for archaeology. Furthermore, it has compelled me to look again at what I published a few years later; and enabled me to present the material afresh in the light of subsequent discoveries and more mature reflection. This is in no sense a final statement; there is more work to be done, and

the areas of need have been pointed out above. This paper offers a challenge which, it is hoped, other fieldworkers will take up.

Two people deserve my special gratitude. First, the Keeper of the Cemetery, Mr H Gurney, whose interest and watchfulness have made this analysis possible; and through him, the (then) Urban District Council. Second, my brother, Mr Alan Johnston, on whose surveys and notes the maps and much of this text are based. I would add my thanks to the specialists named in the text, and the staff of the British Museum, the Ashmolean Museum of Archaeology and Ethnology at Cambridge. Miss J Liversidge has helped me with many points of detail, and allowed me to reproduce fig 8 from her book. Latterly, I have been particularly indebted to Miss Jane Hassall, of Bedford, who has kept me abreast of developments, and saved me from many factual mistakes. The editor kindly made available his more recent researches on bronze vessels.⁸

NOTES

- 1 Identification by Mr B.R. Hartley.
- 2 Identification by Miss T. Molleson (British Museum, Natural History).
- 3 I owe this information to Mr D. Brown (Ashmolean Museum).
- 4 Drawings and notes were submitted to Miss D. Charlesworth for comment.
- 5 This specimen was submitted to Mrs K. Hartley for comment.
- 6 Rubbings and notes of most were submitted to Mr B.R. Hartley for identification.
- 7 The amphora sherds were submitted to Dr D.P.S. Peacock for identification.
- 8 Paper completed 25 October 1974.

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Some Decorative Aspects of the Anglo-Saxon Shield

DAVID H. KENNETT

SUMMARY

An examination of a shield from Kempston and its parallels indicates the range of material available for study in the decorative aspects of the Anglo-Saxon shield. The study notes that the boss may have a decorative top and rivet heads, that the shield board can be ornamented with appliques, some of which are zoomorphic, and that a metal rim may be present.

Some chance comments of the great Anglo-Saxon poem, *Beowulf*, may be roughly paraphrased:

the broad double-proofed shields, golden-plated were a part of the accoutrements of the well-equipped company.

Little did the poet sing the fame of warriors and their shields; much did he espouse the cause of valour of one warrior and his sword. It is perhaps no accident that whilst swords and their several fittings have received much discussion in recent years,¹ comparatively little has been said on Anglo-Saxon shields. Bosses have been treated² and equally the decorative aspects of one of the finest, that found in the royal boat-barrow at Sutton Hoo, Suffolk, have been described.³ But for the decoration of the shields of the warriors who sat in the Heorot there seems to be a strange lacuna in Anglo-Saxon archaeology. Individual pieces have been noted but no general discussion has ensued such as has been given to swords.

When therefore some discussion ensued on the make-up of this volume of commemorative essays for Frederick William Kuhlicke, it was felt that it would not be inappropriate to include a piece which linked a comment from literature and the Anglo-Saxons. As a schoolmaster, F.W. Kuhlicke taught modern languages. As a museum curator, he could still hold a conversation in Anglo-Saxon.⁴ This short piece seeks therefore to be a preliminary study only of some of the decorative aspects of Anglo-Saxon shields.⁵

It is perhaps fortunate that much of the best evidence about shields and their decorations has

come from the large and important cemetery of Kempston, Bedfordshire,⁶ in whose study, the present author was much encouraged by Mr Kuhlicke. It is therefore fitting to incorporate in this paper some of the results of that research begun so long ago and still not yet brought to fruition.

On 11 December 1863, the Rev S.E. Fitch⁷ recorded in his "Journal of discoveries" from the great Anglo-Saxon cemetery at Kempston, Bedfordshire,⁸ the following grave group:

Iron umbo of a shield: rivets to a broad button-like base, apparently of silver, serving as the means of fastening the boss to the woodwork. One found in situ, on the umbo; another connected with a fragment of the iron rim. Fragments of a cross iron bar with one of its rivets. A novel and curious relic in silver (*sic*) weighing three drachms, 34 grains with three button rivets of the same metal. This was in the shape of a fish, and by means of the rivets probably had been attached to the shield, for at the back of it were evident traces of woody fibre. This sign, crest, or mark might have been the means of distinguishing the warrior who bore it – some chieftain, thegn, or person of importance. It may have referred to his own peculiar quality as the great "swimmer". Found in the same grave a spearhead in iron, 8½ inches long; the blade not exceeding 4 inches. The socket at the entrance 5/8 (inches) in diameter.

Fitch clearly records a grave of a man with a shield and a spear. The shield was a rich one. Its boss had silver capped rivets and was ornamented with a device in the shape of a fish. The same grave was also recorded by another observer of the finds made at the Kempston cemetery. He was James Wyatt, who provided a much shorter and more general account⁹ than Fitch's daily (or almost so) record of discoveries. Of this grave Wyatt wrote:¹⁰

In the men's graves, of which several have been opened, there are the usual types of spear, and knife, and the long bronze fibula; but in one of these, where there was the skeleton of a tall man, were a pair of these fibulae, a large circular one also, and a spearhead thirteen inches in length, and remarkable for the length and small diameter of its socket, which will scarcely admit the finger. The shaft for such a long weapon must have been tough indeed to have been serviceable, for it was run very fine to fit such a socket. There was also the iron umbo of a shield, fragments of a bronze rim to it, and a curious article

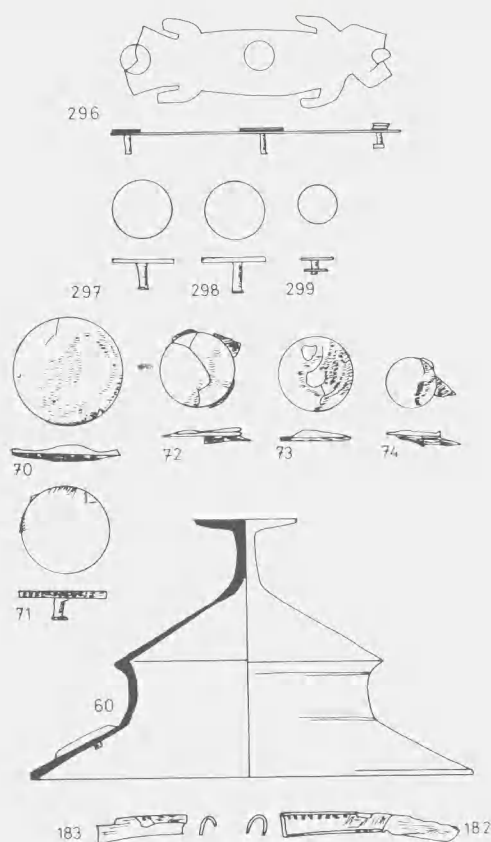


Fig 1 Shield boss and decorative pieces from Kempston grave 52 (scale $\frac{1}{3}$)

which is supposed to have been a device fastened on the front. It is a thin plate of metal, silvered (*sic*), and still retaining a polished surface, cut in the form of a fish, and having three rivets through it. There was also a large bronze hook, and a plain urn, fifteen inches high.

Wyatt's impression of this grave group can be seen to differ from Fitch's. Wyatt thought it contained a tall man, accompanied by a pair of small-long brooches and a large saucer (or applied saucer) brooch, with a distinctive spearhead, a shield boss and fragments of a shield rim and the same fish badge device. There was in addition a hook and a large pot.

This is perhaps the most perfect example of the lack of textual agreement which may be found in records of the original discoveries of the Kempston cemetery. Other grave groups have disagreements, but none are quite so complex as this group. The group, taken to represent a single grave was given the number of grave 52 in the recent revision of the whole Kempston cemetery.¹¹ To ease the confus-

ion which might arise, it will henceforth be called grave 52 in this paper. Other grave groups at Kempston will be so treated, as the need arises.

The grave of the warrior whose shield had an applique shaped like a fish is one of the graves at Kempston which possibly was not recorded in full by either observer. Fitch, we know, though he came every day was the local curate and also may be presumed to have acted as the local doctor as well: he was an M.D. of the University of Durham. He recorded that he took his information from the workmen who were digging gravel on the site of the Kempston cemetery (about TL 031474).¹² Wyatt's visits were less frequent. He sometimes obtained his knowledge from Fitch and his record is much less complete.¹³

The records agree on a fish badge. This is extant, and also three rivets in the same material, tinned bronze. These may be the rivets recorded by Fitch, or his record could refer to the rivets on the device itself, of which three were recorded by Wyatt and are present. If Fitch's record does not refer to these three rivets, there is little other textual possibilities for their discovery. It seems probable that these three rivets should be regarded as part of this grave group. Their heads would have balanced the fish badge on the face of the shield.

The other details of this shield are strangely recorded. There is a definite record by Fitch of a shield boss with silver capped rivets. Two bosses with silver capped rivets can be easily identified in the Kempston material. The other can be placed confidently in another grave, grave 151, (found before 20 December 1864). It is 'hemispherical' according to the Minute Book of the Bedfordshire Architectural and Archaeological Society (now in Bedfordshire County Record Office).¹⁴ A shield boss with silver capped rivets of the low, curved conical type, Miss Evison's 'Holdborough type',¹⁵ is extant and must be ascribed to this grave. The other boss with silver capped rivets has only one rivet extant and this suggests a greater credence may be placed on this ascription.

Fitch suggests that another silver capped rivet may have been connected with a fragment of the iron rim. He would presumably be referring to the shield rim, but there is an alternative suggestion possible for the object. There is in the Kempston material a number of iron discs with silver cappings. It seems more likely that Fitch was referring to one of these. One certainly is from the top of the shield boss. The boss, here suggested as belonging to grave 52, is topped by a broad disc. Fitting this

exactly is a large silver capped iron disc. There are three other iron discs extant in the Kempston material which have silver cappings. It is suggested, that in default of any other record of such objects in the Kempston material, that these should be ascribed to this grave.

Wyatt records a bronze rim, in fragments. This may well be correct for a shield of the richness which has been described must surely have had a rim. There are four fragments of bronze shield rim extant. Three graves including grave 52 record such a piece. One, grave 136, (found 18 May 1864)¹⁶ gives a length and one fragment can be confidently placed there. The suggestion that another piece can be placed in grave 38, (found 11 November 1863)¹⁷ may be a little arbitrary but the remaining three fragments of bronze shield rim belong to two different shields. One, with an overpiece has been placed in grave 38, as its opening is not dissimilar to the recorded depth of wood for the shield there recorded. The other two, less well-preserved, fragments co-join and have been suggested as part of the accoutrements of Kempston grave 52.

Both sources agree on the presence of a spearhead. They differ on its length and shape. No identifications can be confidently made and it would seem best to note that a spearhead was present. It seems strange that no other accoutrements were recorded by Fitch. Wyatt notes three brooches but the present author has some hesitation in accepting this record. Wyatt, as has been observed, was not always present. The record of two small-long brooches and a large circular one may be a mis-entry for either the preceeding or the following records made by Fitch. On 9 and 10 December 1863, a Wednesday and a Thursday, Fitch recorded two graves each of a child.¹⁸ One was accompanied by a pot with three small shoulder bosses.¹⁹ The other had a skull with a well-developed forehead and a pair of small-long brooches, one of which had a blob of glass on it.²⁰ Fitch's record is confused by the fact that he did not see the bones of the first child and the pot was discovered on the next day to the skeleton, near to the place where the skull had been found. Wyatt also gives a record of the child's grave, but he places the pot in the grave of the child with the well-developed forehead. On the Monday after Friday 11 December 1863,²¹ Fitch recorded a grave of unknown sex with a complex of objects. These included a pierced coin, a bronze hook, two saucer brooches, two small-long brooches, a bronze

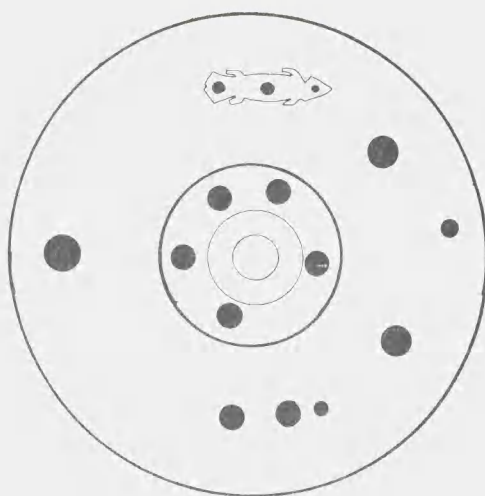


Fig 2 Reconstruction of the face of the shield from Kempston grave 52. (Scale, about $\frac{1}{6}$).

ring (size unknown) and fragments of iron from a bucket, or more accurately its bindings.²² These last²³ and the bronze hook²⁴ can be identified.

The period is one in which Fitch seems to have been making fairly regular visits to the workmen digging gravel. In December 1863, discoveries are recorded on Saturday 5 December, Monday 7 December, Wednesday/Thursday 9-10 December, Friday 11 December, Monday 14 December, Saturday 19 December and Saturday 26 December. It is at no time recorded either in the published or the manuscript sources that no graves or objects were found on a particular day. However, we lack the real test of such an assertion: the manuscript notebook of the Rev S.E. Fitch giving his daily account of the cemetery, and its finds.²⁵ Equally though, such nineteenth century manuscript accounts of Anglo-Saxon cemeteries as are known to me may not record the days when no discoveries were made. This is the case with the diaries of Richard Cornwallis Neville, later fourth Lord Braybrooke, now in the Museum of Archaeology and Ethnology, Cambridge.²⁶

On most counts, the present author is inclined to give greater weight to Fitch rather than to Wyatt. Partly it is that the record is the more complete, partly it is that it is, by and large, contemporary with the discoveries, and partly it is that the record of Wyatt is derived on occasions from Fitch. The brooches, about which the first doubt arises, may not be incompatible with a male grave, or

with this male grave, but there is a doubt of their authenticity owing to the conflict in the contemporary records.

The evidence of the large bronze hook is similarly conflicting. It is an object without many ready parallels. I know of one from Jordan's Hill, Kent,²⁷ but though there may be others, it is doubtful if there are many. The grave to which this should be more correctly ascribed may well depend on the interpretation placed on the bronze hook. It could be either a scabbard hook or a pot hook. It has distinct signs of wear, presumably from a strap. Neither Fitch nor Wyatt record a sword in *this* grave. The possession of a sword may not be incompatible with the rich shield suggested.²⁸ If this is the case a scabbard hook might suggest that there is a case for believing Wyatt's record rather than Fitch's. There are five swords in museum collections from the Kempston cemetery.²⁹ Two graves record a sword,³⁰ one is recorded as a stray find by Fitch³¹ and there is one robbed grave with scabbard fittings.³² Clearly more swords are extant than are recorded. On the other hand, the record made by Fitch is explicit for grave 53 (found 14 December 1863).³³ He places the bronze hook with the iron bucket binding fragments. The bucket and the hook may have been connected. This record, it can be suggested, was contemporary and should therefore be given a greater credence than any which was made after the day of discovery.

Kempston grave 52 is therefore a complex of somewhat unknown dimensions. The known material is illustrated on figure 1 and the objects are described in detail in the appendix (below p. To this grave, and more particularly to its shield, it is possible to ascribe a boss (fig 1.60), a fish-shaped applique (fig 1.296), three rivets (fig 1.297, 298, 299), a large silver capped iron disc from the top disc of the boss (fig 1.70), a group of three silver capped iron discs (fig 1.72, 73, 74) and bronze shield rim fragments (fig 1.182, 183).

The grave certainly also contained a spearhead, not identified and given differently by the contemporary record. It may also have contained brooches, a pot and a bronze hook.

The shield from Kempston grave 52 is important for a number of reasons. It is firstly well-provided and secondly it is possible to view each of its elements in turn as parts of the decorative features of Anglo-Saxon shields. The third importance which may be attached to the shield is that it can be reconstructed. This has been attempted in

figure 2. Any reconstruction must be largely hypothetical because the contemporary records, in the case of Fitch well up to the highest standards of the nineteenth century, fall short in providing the kind of information which would today be recorded as a matter of course if such a shield were to be found.

The shield can confidently be said to have a diameter of 57cm and a boss at the centre. This boss is decorated with a silver capped rivet set on its rim and with a silver capped top disc. The shield is thought to have been flat. It has been pointed out that curved shields were rare,³⁴ and can only be suggested with confidence for those shields with an extended curved strut surviving. They cannot be confidently suggested for shields whose bosses have an angled rim.³⁵ This may have been to give added hand room to the wearer of the shield and the resultant intervening spaces filled either with wood or leather chocks. All that we know of this shield is that it had a grip, found as a fragment with a single rivet remaining. It is not possible to identify this object, but none of the surviving shield grips from Kempston³⁶ is of the long type. One is slightly more elaborate than the others but is complete and presumably does not belong here.³⁷

Beyond the central boss and the rim diameter the remainder of figure 2 is hypothetical, based on such elusive matters as the length of rivet shanks and other not easily understood pointers. It has been taken that the shield was symmetrical in design, but this is by no means certain.

Two elements of decoration require definition in terms of an overall vision of the shield. The first is the fish-shaped applique and related to it the three rivets in the same material, tinned bronze. The second is the group of iron discs capped with silver plates. The fish-shaped applique is the more easily considered. It has three rivets, but these do not have shanks of equal length. Two are similar in length, but one is shorter. The shorter shank suggests a thickness of wood (and possibly also leather) of 0.6cm, which is remarkably similar to the opening suggested for the bronze shield rim fragments ascribed to this grave. The two rivets of longer shanks may not suggest more than a domed head on the inside, but no evidence of this was found. The other suggestion which may be made is that the wood was thinner at one end of the fish applique than over the remaining portion which it covered possibly due to a wooden strut or other reinforcement. However, this is difficult, if not

impossible, to prove in a contemporary discovery and virtually impossible to confirm at a remove of over one hundred years from the original discovery.

Two positions can be convincingly argued for the fish badge. One is above the boss. This would suggest that the three tinned bronze rivets should be placed below the boss, equidistant from it. One can suggest that the two larger rivets penetrated the proposed strut as well as the wood of the shield, but the smaller one was secured only to the wood of the shield and the leather fronting of the shield. Certainly the shank of the last (fig 1.299) is sufficient only to penetrate 0.6cm thick wood and leather.

Leather coverings on Anglo-Saxon shields are difficult to substantiate. The Shelford, Kent, mounts (fig 5, c-d), to be noticed later, have leather adhering to them. A leather bound grip is known from Lakenheath (fig 7b) but organic material is rarely preserved on old finds. One would not, however, be incorrect in making an assumption that the Kempston shield had a leather covering. If this is the case, the suggestion made for the small rivet would be tenable.

The alternative position of the fish shaped applique would seem to be to the left of the boss (the onlooker's right). Thinner wood may have been near the edges and the badge could have overlapped two strips. On the whole, I think this the less probable and the reconstruction favours the former suggestion (fig 2).

The other element is the three silver capped iron discs. There are two (fig 1.72, 73) which are of one size (3.0 cm diameter) and one smaller one (fig 1.74) of another (2.2cm diameter). There could have been others. Their position is totally hypothetical. The figure suggests a position to the right of the boss. They could equally be to the left, or above or below. It would take modern standards of recording, preceded by the most careful excavation, to be able to say with any certainty the exact position of these objects in relation to the shield boss.

The Kempston shield, while difficult in reconstruction, is provided with all the elements of decoration found on Anglo-Saxon shields. It has fragments of the rim binding. It is decorated with an applique, in the shape of a fish, and with discs, which are silver capped. It has a boss with silver headed rivets on the rim. It has a top disc with a silver capping. Each of these elements can be used as the starting point for a wider discussion of the decorative features of the Anglo-Saxon shield.

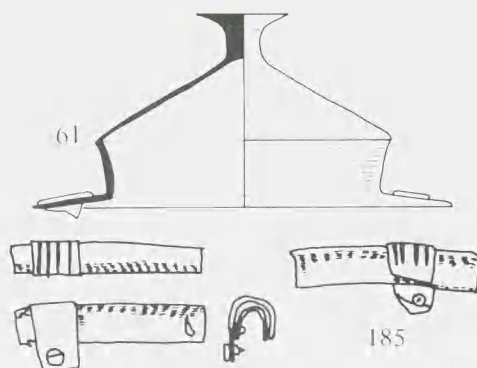


Fig 3 Iron shield boss (61) and bronze shield rim (185) from Kempston grave 38. (Scales: shield boss $\frac{1}{3}$; shield rim $\frac{2}{3}$)

To begin on the outside and work inwards means to begin the discussion with the bronze rim fragments. Rim fragments have only rarely been recognised in Anglo-Saxon shields. Limited evidence is currently available, but it is to be hoped that this discussion may stimulate investigations into further collections and provide a wider corpus than is currently available.

Most of the evidence of bronze shield rims known to me is from three graves in the Kempston cemetery. This is unfortunate as it does not give any geographical spread of evidence. However, fragments of rim bindings are difficult to find in grave fillings and may not have been saved from old excavations. Apart from grave 52, the other two Kempston graves with shield rim fragments are grave 38 (found 11 November 1863)³⁸ and grave 136 (found 18 May 1864).³⁹

Grave 38 is a male grave with weapons, including a shield boss, with fragments of the grip, fragments of the shield rim and two spearheads and a knife. The shield boss is described as having four rivets, rather than the usual five, and can thus be identified and illustrated (fig 3.61). By a process of elimination a piece of shield rim has also been assigned to this grave (fig 3.185). For this grave only a note of the presence of the rim can be made: little can be advanced in terms of reconstruction. There may once have been more decorative material.

The other fragment of shield rim from Kempston does not come from a grave with weapons. It is an ornament in a probably female grave. On 18 May 1864, Fitch records:⁴⁰

Two graves. One a blank. The other contained two spindle whorls of common well-burnt clay or rude pottery: one echinus-shaped, the other flat, not quite $1\frac{1}{2}$ in (ches) diameter. A piece of silver, $1\frac{1}{2}$ in (ches)

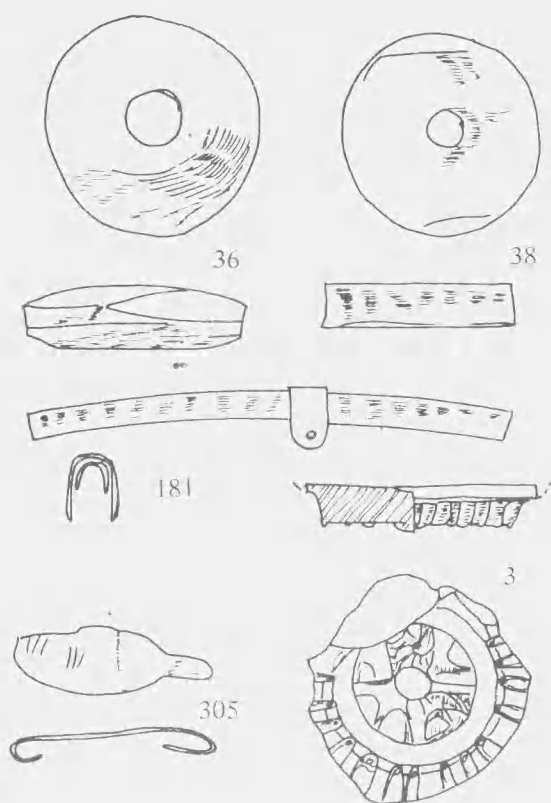


Fig 4 Glass palm cup (3), spindle whorls (36 and 38), bronze rim binding (181), hooked silver clasp (305), from Kempston grave 136. (Scale $\frac{2}{3}$).

long, $\frac{1}{2}$ in(ch) greatest width; gradually decreasing till it ended in two loops formed by the ends being bent towards the underside; used probably as a fastening to the dress. Piece of deep purple glass, probably the broken base of some goblet: smooth inside, rough and indented without, with rude figuring, tolerably transparent, and a few air bubbles, the other part was streaky or wavy in fine lines, as if the material had been too cool when poured into the mould. Several fragments of bone or ivory with bronze rivets, portions of a comb. About $3\frac{3}{4}$ in(ches) of the narrow bronze rim of a shield, with one of the fastenings which had been gilt.

Fitch's record, though uncorroborated by evidence from Wyatt,⁴¹ is quite explicit about this grave. It contained two clay spindle whorls (fig 4.36, 38), a silver dress fastening (fig 4.305), a fragment of blue glass base (fig 4.3), a number of fragments from a bone comb, not identified, and a piece of shield rim (fig 4.181). The composition of the assemblage suggests a seventh century date on account of

the glass base from a ribbed-and-toed palm cup of Harden's type X a⁴² and the silver dress fastening, to which no ready parallel can be adduced but which seems to fit most readily into a seventh century context.

For the purposes of this discussion, it is, I think, sufficient to record that a fragment of shield rim was later used as an ornament and as such was later found as a miscellaneous item in a seventh century grave. The three graves from Kempston with shield rim fragments together provide the only cemetery evidence known to me of shield rims. These fragments suggest that the wood and leather at this point, the outside of the shield, had an overall thickness of 0.6cm. It is possible that the only substance contained within the rim itself was the leather covering to the shield. It suggests merely a single fold, though it must be emphasised that the evidence on this point is very limited.⁴³

Virtually the only other shield rim evidence known to me is from the sumptuous royal assemblage found in 1939 at Sutton Hoo, Suffolk.⁴⁴ The word — 'sumptuous' — has been used advisedly. However, in discussions of the non-regal aspects of material found in cemeteries, which forms the bulk of the evidence for Anglo-Saxon funerary practices, it is not legitimate to quote a grave group so obviously much more elevated in status than the general level of accoutrements. To seek a parallel from another field, equally one in which Mr Kuhlicke has taken an interest, that of Tudor monuments, one must ask how far it is possible to quote the lavish funeral of a lawyer as successful as Sir Nicholas Bacon,⁴⁵ whose landed estate stretched over many counties and included parcels in Bedfordshire as evidence of the scale of festivities appropriate to a mere gentleman.⁴⁶ The family whose fragmentary brass is on the north wall of the Wenlock chapel of Luton Parish Church seems to have been affluent. The three sons and four daughters kneel in filial piety to the figures of their parents. The man is now only his praying hands, his wife is complete.⁴⁷ Yet the prosperity their brass implies would not have brought so lavish a commemoration as the funeral in St Paul's cathedral with which Sir Nicholas Bacon bowed out.

Even Sir William Harpur,⁴⁸ himself, Bedford's most famous son of that age came home to be buried. He could not compare.

Sutton Hoo stands in the same relationship. The Kempston grave does not compare. The

Sutton Hoo shield will be mentioned more than once in parts of this discussion but its lavishness may preclude more than a passing relevance to the present enquiry. Its rim has a set of twelve animal headed mounts on the outside and these formed clips going over the edge to the back, so securing the leather binding.⁴⁹

The Sutton Hoo shield was also decorated with applique mounts: a dragon and a fantastic bird. Both are much outside the range of material considered within the present discussion. Their Swedish connections, long emphasised by Dr Bruce-Mitford,⁵⁰ are more pertinent than any English parallels, which can incidentally arise from this analysis of more humble graves.

The shield from Kempston grave 52 provides the two aspects of shield fittings most commonly found in Anglo-Saxon graves. Firstly there are the appliques in the form of birds or, as here, fishes, and secondly there are discs, either iron with another metal plating or iron or of some other metal. The animal appliques include material from a number of sites, not all of which is well-known and in consequence some of the unpublished material has been included here to provide a cross-section of the possible finds which may come from future discoveries.

The Kempston shield is decorated with a fish (fig 1.296). Other fish-shaped appliques are known from Kenninghall, Norfolk (fig 5a),⁵¹ and Warren Hill, Suffolk (fig 5b).⁵² From neither site is anything like the range of documentation available which has survived for the Kempston cemetery. The Kempston cemetery account by Samuel Edward Fitch must rate as one of the finest pieces of nineteenth century recording made of an Anglo-Saxon cemetery. It is fit to stand comparison with the work of Richard Cornwallis Neville, fourth Lord Braybrooke, on Linton Heath and Little Wilbraham, Cambridgeshire.⁵³ It is *not* Fitch's responsibility that between discovery and the acquisition of the material by the British Museum, the finds from individual grave groups were forever disarrayed from their original boxes and given to the museum as a mass of individual objects.⁵⁴ Yet these objects with much that is tantalising about them contain many smaller and less frequently recognised pieces missing from other collections made of other cemeteries.⁵⁵ Yet the Kempston cemetery has not received the due recognition of scholars for its completeness.⁵⁶

The two sites also with fish-shaped appliques have neither of them an adequate scholarly treat-

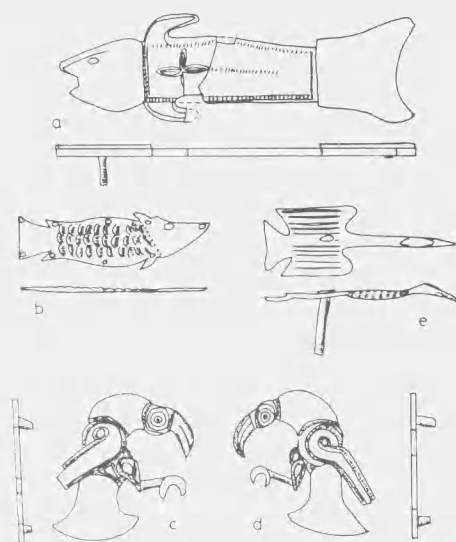


Fig 5 Shield fittings from Kenninghall, Norfolk (a); Warren Hill, Suffolk (b), Shelford, Kent (c-d), Ashwell, Hertfordshire (e). (Scale 1/3).

ment. Kenninghall, in particular, cries out for a total analysis.⁵⁷ The material is split between three museums, but its richness is apparent from a visit to any one of the Ashmolean Museum, Oxford, the Castle Museum, Norwich and the British Museum, London. The fish-shaped applique is in the last of these and has been well-known since it was noted by the late Reginald Allendar Smith in 1923.⁵⁸ The Kenninghall piece is a more lavish applique than the Kempston one. It has a body of gilt bronze and the tail and head are embellished with silver facings. On the body is a design of a four-leaf type as the central feature of a decorative scheme which includes elongated 'S' shapes. No associations are known.

Similarly unassociated is a piece from Warren Hill, Mildenhall, Suffolk, another cemetery whose totality is difficult to encompass as its material is split between five collections.⁵⁹ An individual piece is the fish (fig 5b)⁶⁰ of tinned bronze. It is rather different to the other two in that it has nine small holes along the edges to keep it on the shield covering to which it had been affixed. The shape is less stylised, and the decoration consists of imitation scales cut up into the bronze. I know of no object similar to this. The small holes, placed in a series along the top and bottom edges presumably took small rivets affixing the device to the leather or were holes through which cord was sewn. They seem hardly large enough for rivets of

the size found on the Kempston and Kenninghall devices.

Fish were only one of the zoomorphic forms found in shield decorations. Another is birds. The reader will remember that the fantastic bird, bearing little resemblance to any creature one may see flying, was one of the two devices fixed to the Sutton Hoo shield.⁶¹ Birds seem common on sites in Kent, rather more so than fishes. G. Baldwin Brown many years ago illustrated the series from Eastry,⁶² which has both birds and fishes, a series with which I have not personally examined in this connection. They deserve republication and with them should be placed an unprovenanced piece in Canterbury Museum, again a bird.⁶³

A bird from Kent which has been included here is the previously unpublished pair from Shelford, found in a male grave with a spearhead. This pair is one facing each way: presumably they faced one another on the original shield, though their positions vis-a-vis one another and the boss (not recovered) were not recorded. They are bronze, with beaks and wings gilt. The left-facing one (fig 5d) has silver plating on its tail and traces on the claw and crest. The less-well-preserved, right-facing bird (fig 5c) lacks these features. Of all the material illustrated here, the Shelford pieces come closest to imitating the royal splendour of Sutton Hoo, though they lack the decorative animal ornament of that bird. They are, however, a little more of a flight of fancy than the fishes already considered.

The final applique to be considered is a bronze gilt bird from Ashwell, Hertfordshire,⁶⁴ with expanded wings and a long neck. Through the centre of the body is a long bronze rivet. No ready parallel can be advanced for this object (fig 5e).

None of these sites, however, provides the other feature of the Kempston shield, a set of ornamented discs. These objects, in the case of the Kempston shield, silver-plated iron discs, are found in a number of decorative schemes. At their richest they are a group of four discs from Faversham, Kent, with style I ornament in the form of eyes,⁶⁵ but more usually they are plain metal. Frequently they are associated with shield bosses with silver capped rivets. Such is the case with a group of four iron discs from Barrington, Cambridgeshire,⁶⁶ and the same site has produced a grave group with a bronze rivet.⁶⁷ The rivet, presumably from a shield, was possibly associated with a string of twenty-seven amber beads, mostly multi-faceted, a multi-coloured bead, a three strand silver finger

ring and a piece of glass with three ribs, most recently interpreted as part of a 'Kempston type' cone beaker.⁶⁸ Another group from Barrington includes two tinned bronze rivets, attached to wood in one case but free in the other. Associated with these is a set of belt fittings, also in tinned bronze.⁶⁹

Also in tinned bronze is a set of twelve discs from Aylesbury, illustrated here for the first time (fig 6).⁷⁰ Associated with them is a shield boss, itself with five rivets on the narrow rim capped with tinned bronze and a top disc, now at an angle, also topped with a tinned bronze disc, (fig 6m). Without any documentation of the find, it is difficult to be certain how far any reconstruction can be supported. It is possible to suggest a set of discs placed in a circle round the boss. They could have equally been placed in some other pattern.

The complexity of patterns which may have been used can be seen from the fragments published from Lakenheath, Suffolk, (fig 7).⁷⁴ This quite remarkable group of items, taken to be from one shield,⁷² includes a piece of wood with two bronze discs attached, one with a substantial rivet surviving (fig 7a), and a silver disc (fig 7b) which will be noticed again later. The two, almost contiguous rivet heads, forming two discs, do suggest that decorative patterns may not be symmetrical in all cases. None of the items is of itself unusual but their collaborative evidence does suggest that shields were not merely highly prized but also very individual items.

So far this discussion has concentrated on decorative aspects of the shield board. It has not considered the boss. The shield boss is the most frequently found of all shield fittings. Often it is richly provided and X-ray techniques may well reveal that the whole is to be more richly provided still than at first seems apparent. Even a quite ordinary boss can be shown to possess silver capped rivets and a top disc when subjected to this treatment.

Anglo-Saxon shield bosses have been found to have been decorated with a variety of materials: gold, silver, bronze, gilt bronze, tinned bronze. They have had foil laid on their rims, as with Sutton Hoo,⁷³ or their top discs covered with silver plate, as with a boss from Faversham, Kent, now a congealed mass of decomposed iron but with a large silver capped disc clearly visible.⁷⁴ The decorative features can be summarised in three parts: the rivet heads, the rim, and the top disc.

Of these the two last are infrequent; but the

first is common and may by X-ray techniques be shown to be more usual than has been thought. Bosses have been found with rivet heads of silver, as with Kempston grave 52, of bronze, such as one from Brooke,⁷⁵ and tinned bronze, like the Aylesbury boss. The latter material is known to me also on a boss from Long Wittenham, Berkshire.⁷⁶ A recent listing of bronze capped rivets did not suggest any geographical concentration of the feature. Apart from Brooke, Norfolk, bosses are known from Malling Hill, near Lewes, Sussex,⁷⁷ Faversham, Kent,⁷⁸ Woodstone, Huntingdonshire,⁷⁹ and Long Wittenham⁸⁰ and White Horse Hill, Berkshire.⁸¹

The material most frequently found is silver. Kempston grave 52 is one of perhaps thirty which have been recorded. A large group are known from Kent. Werner⁸² noted bosses from seven graves at Ash⁸³ recorded by the Rev Bryan Fausett between 1760 and 1763 which were once in the Fausett collection of Liverpool City Museums, but are now lost owing to war damage.⁸⁴ Another Kent cemetery whose two ornamented bosses have been lost is Sibertswold⁸⁵ and single examples may be quoted from Eastry,⁸⁶ Faversham,⁸⁷ grave 57 at Sarre,⁸⁸ Ozingell⁸⁹ and it can be presumed that other sites, unknown to me, have similar rich material.

In the midlands there is an equal concentration of this decorative feature on shield bosses: one is known from Baginton, Warwickshire,⁹⁰ and two from Fairford, Gloucestershire.⁹¹ A group of sites in Cambridgeshire have each produced one boss with a set of silver capped rivets. These are the major cemeteries of Barrington,⁹² Haslingfield⁹³ and Little Wilbraham⁹⁴ and a site called Mutlow Hill, near the Fleam Dyke.⁹⁵ Also in this area are graves 56 and 60 at Holywell Row, Suffolk,⁹⁶ and to the south a single boss from Rainham, Essex.⁹⁷ In the Ouse valley there is a single example from Upper Winchendon, Buckinghamshire,⁹⁸ but this is without associations.

Apart from grave 52, there is another example from Kempston. This was found in a grave recorded after Fitch's diary ceases but noted fully in the *Minute Book* of the Bedfordshire Architectural and Archaeological Society on 20 December 1864.⁹⁹ This grave, numbered 151 in the complete catalogue of the Kempston graves, contained a low curved conical boss with three rivets surviving, each with traces of silvering and one retaining the cap (fig 8.62). Associated with this was a spear-head, a large knife (possibly a scramasax?) and an

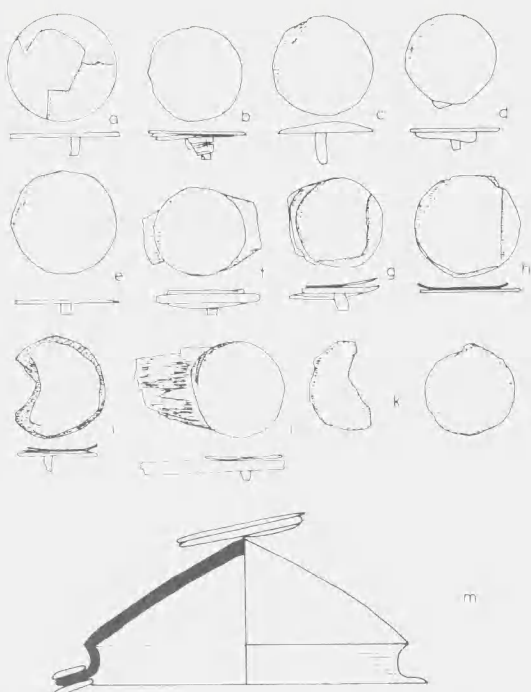


Fig 6 Shield rivets (a-l) and shield boss (m) from Aylesbury, Bucks. (Scale $\frac{1}{3}$).

openwork disc. The latter first interpreted as a disc-shaped girdle-hanger would seem to be more probably an openwork pouch mount, from a warrior's bag (fig 8.191). The association provides one of the best pieces of dating evidence for these bosses in England.

On general grounds the Kent cemetery of Sibertswold is unlikely to be much earlier than the new fashions of the seventh century and though there is nothing spectacular about the associations of graves 126 and 132,¹⁰⁰ they belong to the same general time span as the Kempston grave, though the latter is perhaps later. While the majority of English associations do not conflict with Werner's suggestions,¹⁰¹ mostly derived from continental evidence, of a sixth century date for ornamented rivets on shield bosses, these are three graves which suggest it should be extended.

Typical of the position of the majority is the richest of these bosses, that from grave 182, Bidford-on-Avon, Warwickshire.¹⁰² The boss here has five silver capped rivets on the rim. Between each is a decorative piece in the form of a pair of biting jaws placed back-to-back so that the jaws of each opposing pair converge on the rivet head. On the top is a gilt bronze disc ornamented with animal

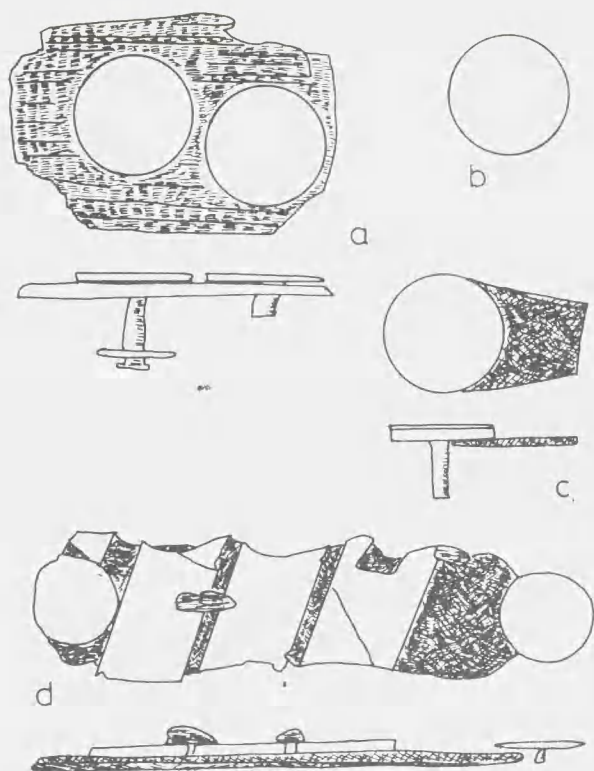


Fig 7 Wooden shield fragment with decorative rivets (a), silver disc (b), silver capped bronze rivet (c), and shield grip of leather wood and iron (d) from Lakenheath, Suffolk. (Scale $\frac{1}{3}$).

ornament of Salin's style 1. Associated in this grave group were the boss, a bronze bowl with raised triangular ears, a spearhead and a knife. The suggested date is late sixth century. The interlace on the space between the biting jaws of each applique on the shield boss rim and the ornament of the top disc provide the best indications of the grave's chronological position.

The remainder of bosses with silver-headed rivets do not have good associations. Some are unassociated. It is a moot point whether the fish shaped applique in Kempston grave 52 should be placed in the late sixth or the early seventh century.¹⁰³

Similarly the chronological position of decorated top discs is late in the sixth century or some time in the seventh. The richest is Sutton Hoo, with style II ornament and thin foil plates on the rim of the boss and domed gold rivet heads. The others are unassociated pieces from Burton Lati-

mer, Northamptonshire,¹⁰⁴ Cottesmore, Rutland,¹⁰⁵ and Barrington, Cambridgeshire.¹⁰⁶ The first two lack any part of the iron below the carination and the top disc of the last seems to have been reused from some other object, possibly a large cruciform or great square-headed brooch.

These are the finer versions of plain top discs in another metal, such as the silver one from Kempston grave 52. Other silver top discs may be noted on bosses from Faversham, Kent,¹⁰⁷ and Baginton, Warwickshire,¹⁰⁸ both unassociated, and grave 20 at Petersfinger.¹⁰⁹ The last, like the Baginton and Kempston bosses has silver rivet heads on the rim. It was found in a particularly well accompanied grave¹¹⁰ with a shield grip with silver plated rivets, a spearhead and ferrule, a sword with scabbard fragments and a sword bead,¹¹¹ a bronze buckle and tweezers, and an iron purse mount.

The Kempston shield was possibly an heirloom like that from Sutton Hoo. I do not think that the boss' fragmentary condition is wholly the result of breakage on discovery. It may well have been old when buried. For this shield we have brought together much that is comparable to its decoration, its boss and the decoration thereof, but for the grip no discussion has been advanced.

The reason for this is that the grip from the shield of Kempston grave 52, though probably surviving cannot be now identified. It is a casualty of the process whereby much of the material became mixed between discovery and museum acquisition. It was fragmentary when found and had one rivet. Three such grips survive, each of varying degrees of completeness.¹¹² Also from the Kempston cemetery is another grip with expanded ends, turned to provide curving settings for rivets, and with the centre turned up to provide an easier handhold.¹¹³ There is also from the site a plain bar without rivets which may be interpreted as a shield grip.¹¹⁴ No positive correlations can be made between these five grips and the ten bosses known from Kempston.¹¹⁵

Little of the remaining material considered in this essay includes a grip, with the exception of the group from Lakenheath (fig 7). The grip here is a valuable indication of what could well have been much nearer the norm than the plain iron bar, which is usually found. This grip is bound with strips of leather (fig 7b). Like all grips it would have been placed away from the diameter of the boss. This, as both Dr Bruce-Mitford and Prof R.J.C. Atkinson separately and long ago

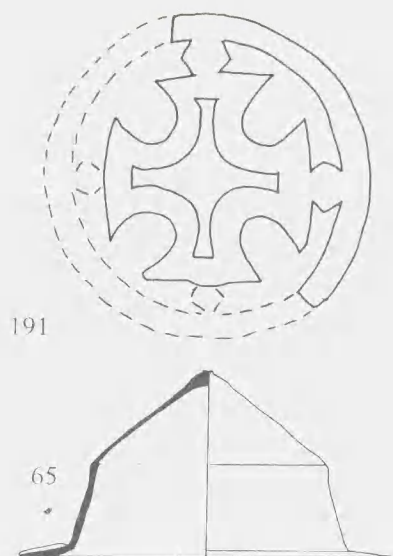


Fig 8 Shield boss and bronze circular pouch mount from Kempston grave 151. (Scales: shield boss $\frac{1}{3}$; pouch mount $\frac{2}{3}$).

pointed out, is to allow the hand to hold the shield in comfort.¹¹⁶ A grip across the mid-point of the boss is most uncomfortable. One placed to one side allows the fingers to curl round the grip and the hand to sit comfortably inside a boss.

Some shields, a few only, have long extended grips. They can be flat like Finglesham grave G2.¹¹⁷ They can be curved like Sutton Hoo.¹¹⁸ In these cases it is possible to postulate a flat board or a curving surface as the indications may be. More often it is not possible to be definite. The raised rim might be taken to be indicative of the curvature of a shield,¹¹⁹ but this cannot always be proved.¹²⁰ For the shield in grave 52 at Kempston, the present author favours a flat board, but it must be admitted that for neither interpretation is sufficient evidence to be conclusive available.

The discussion has centred mainly on objects from the Midlands and East Anglia. Perhaps it is right to emphasise again that the paper is only intended to be a preliminary survey and though the author does not think many objects in museum collections have been missed, it does take no cognisance of material from unpublished excavations which remains with the excavators. It similarly hopes that when further decorations to shields are found they will be treated in such a way as to allow technical material not available from the study of old cemeteries to be presented fully and to permit a more extended discussion of fittings.

It also may be a small, but perhaps fitting, tribute, to an old warrior who has laboured long in the cause of Bedfordshire, its past and its history, its antiquities and its archaeology. We have loved him well and we owe him the debt we can only repay by doing the same. Fredrick William (Bill) Kuhlicke encouraged his juniors to persevere and gave us the facilities so to do. Though this paper may not quote an object from Bedford Museum, it does owe much to his encouragement.¹²¹

CATALOGUE

Note: Throughout this catalogue of objects figured to save space in regard to items from the Kempston cemetery which are in the British Museum's collections, Department of Medieval and Later Antiquities, the museum register number 1891, 6-24, x has not been repeated. Thus shield boss 60 is British Museum register number 1891, 6-24, 60.

Figure 1

Kempston Grave 52

(Grave found 11 December 1863)

- 60 Shield boss, iron, with a single silver-topped rivet on the rim. Presumably all five rivet heads were once capped with thin silver plates. The boss is broken, lacking much of the rim and the sides below the carination. Upper part is straight-sided, lower portion concave below the carination. The rim is high and steeply angled. There is a wide top disc, taking disc 70, on the top of a tall thin spike. Total diameter 176mm, diameter at carination 108mm, diameter of top disc 41mm, height 104mm. No wood surviving.
- 70 Silver rivet head on iron backing. Diameter 43mm. Fits exactly on top disc of shield boss 60.
- 71 Iron rivet, with circular head. Diameter of head 35mm, shank is 8mm in length and has a hammered end.
- 72 Shield applique, iron with a silver top, broken and retaining only part of the iron, but has all of the silver capping. Diameter 30mm.
- 73 Shield applique, iron with silver capping. Diameter 31mm.
- 74 Shield applique, iron with silver capping. Diameter 22mm.
- 182 Bronze binding, curved in one plane only, side facing is flat. Broken, but fits binding 183, part of shield rim.
- 183 Bronze binding, curved in one plane only,

- with side facing being flat. Broken, but fits binding 182, part of shield rim.
- 296 Shield applique of tinned bronze, shaped like a fish, with the three original tinned bronze rivets surviving. Has lost parts of tail and fins. Iron stain on back of piece. Length extant 103mm, width overall 26mm.
- 297 Tinned bronze rivet. Diameter 25mm, length of shank 12mm.
- 298 Tinned bronze rivet. Diameter 25mm, length of shank 10mm.
- 299 Tinned bronze rivet with washer. Diameter of head 12mm, shank is 2mm between head and washer.

Figure 2

Kempston Grave 52

Reconstruction of shield. See above (pp.00-00) for discussion of location of items on shield face. Board is reconstructed as flat.

Figure 3

Kempston Grave 38

(Grave found 11 November 1863)

- 61 Iron shield boss of low carinated type, with straight sides above carination and concave sides below. The rim is almost flat and has one portion with one of the four original rivets missing. The spaces of the remainder do not suggest this boss had five rivets. There is a wide spike and top disc. Total diameter 172mm, diameter at curination 120mm, diameter of top disc 38mm, height 78mm. No wood extant.
- 185 Curved bronze binding with over piece, which is ornamented.

Figure 4

Kempston Grave 136

(Grave found 5 May 1864)

- 3 Glass base from palm cup, inside is flat with blowing spirals visible and outside is indented with cross design with central boss and small bosses between arms of a cross. On the exterior of the base is a series of indents. Glass is translucent under strong light, coloured deep blue, almost purple. Diameter 50mm. Greatest thickness 7mm.
- 36 Spindle whorl of burnt clay. Diameter 42mm.
- 38 Spindle whorl of burnt clay. Diameter 38mm.
- 181 Bronze binding, curved in one plane only. Side facing is flat. Shield rim binding. Length 98mm.

- 305 Hooked silver clasp of flat wide centre portion with both ends hooked. Presumably a dress fastening. Length 40mm.

Figure 5

Kenninghall, Norfolk

- a Shield applique in form of a fish, of gilt bronze with silver facings to the snout and the tail. On the body is a set of elongated 'S' decorations along the sides and down the centre. The centre line ends in a four leaf design. Only one rivet remains. at the front. Some damage to the body and the piece lacks the lower fin. Length 142mm. *Museum* British Museum, register number 1883, 7-2, 22.

Warren Hill, Suffolk

- b Bronze applique, probably used as a shield applique, but from general appearance of the type. Scales on body as a decorative feature. Along the edges is a series of small rivet holes. The eye dome does not function as a rivet. Length 74mm. *Museum* British Museum, register number 1927, 12-12, 32.

Shelford, Kent

- c-d Pair of bird mounts, one facing right and the other left.
- c Bronze mount in form of bird, beak and wings are gilt. Wing is broken. Head/crest, tail and claw are plain areas. More damage has been suffered by this piece than the other.
- d Bronze mount in form of a bird, beak and wings are gilt. Tail has silver plate and there are traces of silver on the claw and crest. Head/crest is plain. Wing is broken at the tip. *Museum* British Museum, register number 1928, 6-6, 1 and 2, (1 is d and 2 is c).

Ashwell, Hertfordshire

- e Shield applique in form of goose, bronze gilt with worn gilding. Oblong body with flighting to indicate wings, long square-sectioned neck with a head. Length overall 78mm. *Museum* Museum of Archaeology and Ethnology, Cambridge, accession number 1923. 251.

Figure 6

Aylesbury, Buckinghamshire

- a Tinned bronze rivet, diameter 43mm.
- b Tinned bronze rivet, with wood attached. Diameter of rivet head 38mm.

- c Bronze rivet, lacking tinned appearance. Diameter 39mm.
- d Tinned bronze rivet, with wood attached. Diameter of rivet head 36mm.
- e Bronze rivet. Diameter 41mm.
- f Bronze rivet, with wood attached. Diameter of rivet head 36mm.
- g Tinned bronze rivet, wood attached. Diameter of rivet head 38mm.
- h Tinned bronze plate, lacking rivet shank. Diameter 41mm.
- i Tinned bronze rivet, broken. Diameter 41mm.
- j Bronze rivet attached to large piece of wood. Diameter of rivet head 38mm.
- k Tinned bronze fragment. Diameter 34mm.
- l Tinned bronze fragment. Diameter 30mm.
- m Shield boss of iron, with tinned bronze top disc and tinned bronze rivet heads. One is extant of the five original ones. Overall diameter of boss 130mm. Top disc diameter 42mm.

Museum British Museum, register number. 1887, 6-10, 1 and 2.

Figure 7

Lakenheath, Suffolk

- a Piece of wood from a shield, length 65mm, with two bronze discs attached. Discs are 22mm in diameter, one has a shank 14mm long.
- b Silver disc, from a shield fitting, diameter 22mm.
- c Silver capped bronze rivet, diameter 22mm, with shank 12mm long, attached to a piece of iron.
- d Wood (? behind an iron) shield grip with leather fragments on top. Bronze rivet on one end 18mm in diameter. Length of grip 108mm.

Museum Museum of Archaeology and Ethnology, Cambridge, accession number 1899, 106.

Figure 8

Kempston Grave 151

(grave reported 20 December 1864)

- 65 Shield boss of iron, with silver capped rivets fairly complete but it has lost part of the rim and all trace of spike and button (or top disc). The boss is straight-sided above the carination and below, angled outwards. The broad rim has three surviving rivets. One has a complete silver head, one is broken and the

third can be identified from a stain. The boss originally had five rivets. Diameter of boss 150mm, diameter at carination 94mm, height 75mm. No wood surviving.

- 191 Circular pouch mount of bronze, part of the outer ring of piece is broken off. The centre part is an openwork equal-armed cross with broad edges. Original diameter 65mm.

ACKNOWLEDGEMENTS

I wish to thank the authorities of the British Museum, London, and the Museum of Archaeology and Ethnology, Cambridge, for permission to publish material within their collections. At the former, I am indebted to Mrs L.E. Webster for her kindnesses and at the latter Miss M.D. Craster. As the Kempston material was studied when I was in receipt of a grant from the (then) County Borough of Luton, it is my equally pleasant duty to pay tribute to the backing I received from their sometime Director of Education, Dr J.A. Corbett.

NOTES

- 1 See especially J. Werner, 'Zu fränkischen Schwerten des 5. Jahrhunderts', *Germania* 31 (1953), 38-44; A. Dasnoy, 'Les Épées du Vme siècle de la région Namuroise', *Ann. Soc. Arch. Namur* 53 (1967) 17-34; S.C. Hawkes, 'Swords and Runes', *Ant. J.* 47 (1967), 1-26; V.I. Evison, 'The Dover Ring-sword and other sword rings and beads', *Archaeologia* 101 (1967), 63-118; D.H. Kennett, 'Graves with swords at Little Wilbraham and Linton Heath', *Proc. Camb. Ant. Soc.* 63 (1971), 9-26.
- 2 V.I. Evison, 'An Anglo-Saxon cemetery at Holdborough, Kent' *Arch. Cant.* 70 (1956), 84-141, especially 95-97. This has been followed by V.I. Evison, 'Sugar-loaf shield bosses', *Ant. J.* 43 (1963), 38-96, by far and away the largest corpus yet published of Anglo-Saxon shield bosses. Of the individual cemeteries probably the best total publication of ironwork remains that of Little Wilbraham, see R.C. Neville, *Saxon Obsequies Illustrated* (1852), plates 34-40. Shield bosses are illustrated plates 37 and 38.
- 3 R.L.S. Bruce-Mitford, *The Sutton Hoo Ship Burial: a provisional guide*, (1947), 16-19 with fig 5 and pl 4 and 5 and pl 17. The reconstruction proposed therein, fig 5 has now been superseded. R.L.S. Bruce-Mitford, *The Sutton Hoo Ship Burial: a handbook*, (1968), 21-24 with fig 6 (the fig 5 of the 1947 guide), and plates 4-6. R.L.S. Bruce-Mitford, *The Sutton Hoo Ship Burial: a handbook* (second edition, 1972), 24-26, without a reconstruction figure, but see plates 3-5. C. Green, *Sutton Hoo: the excavation of a royal ship-burial*, (1963), 41-42, 70-71 and plates 11 and 12 showing the former reconstruction.
- 4 Conversation with the present writer, November 1968. The subject of this discussion (in which the present writer just listened) was the thoughts of Chairman Mao-Tse-Tung.
- 5 The present writer hopes ultimately to be in a pos-

- ion to provide a complete corpus for Anglo-Saxon shields on the lines recently published for spears, M.J. Swanton, *The Spearheads of the Anglo-Saxon Settlements* (1973).
- 6 The preliminary results of the author's researches into the Kempston cemetery were written up in typescript, see D.H. Kennett, *The Anglo-Saxon cemetery at Kempston, Bedfordshire, a reconstruction* (unpublished, 1968). Copies of this work are available Department of Medieval and Later Antiquities, British Museum, London, and County Record Office, County Hall, Bedford. It is henceforth cited as Kennett, *Kempston* 1968.
 - 7 Two published and one manuscript version of this journal survive. The manuscript version is the Minute Book of the Bedfordshire Archaeological and Architectural Society, 1847-1873, Bedfordshire County Record Office, document X 69/16. Fitch's account was first published in 1864, S.E. Fitch, 'The Discovery of Saxon Remains at Kempston', *A.A.S.R.* 7 (1863-64), 269-299, and later reprinted, S.E. Fitch, 'Anglo-Saxon Remains discovered in Bedfordshire', in C. Roach Smith (editor), *Collectanea Antiqua* VI (1868), 201-221. These are cited respectively as Minute Book; Fitch, 1864; and Fitch, 1868.
 - 8 Minute Book, 345; Fitch, 1864, 290; Fitch, 1868, 207.
 - 9 Wyatt's account of the Kempston finds was printed in two different versions. J. Wyatt, 'Saxon Discoveries at Kempston, Beds.', *Gentlemen's Magazine* 16 (1864), 223-224, and J. Wyatt, 'Anglo-Saxon remains recently discovered in Bedfordshire', in C. Roach Smith (editor) *Collectanea Antiqua* VI (1868), 166-172. These are cited as Wyatt, 1864; and Wyatt, 1868.
 - 10 Wyatt, 1864, 223; Wyatt, 1868, 169.
 - 11 The grave numbers have been taken from Kennett, *Kempston*, 1968. They will not be changed by any subsequent revision. Should any group of material seem susceptible of further sub-division into grave groups not recognised in 1968, these will be given letters 'a', 'b', etc.
 - 12 The grid reference for the cemetery is only approximate. Fitch, 1864, 269, records its position as one and three-quarter miles from the west door of St Mary's Church, [Bedford], and 240 yards beyond the fork to Marston Moretaine and Woburn (the modern B 557).
 - 13 Wyatt in all records only twenty grave-groups or collections of objects. Fitch notes one hundred and thirty-eight. In all, some one hundred and fifty-five graves or groups of objects were isolated. The probable size of the cemetery was in the order of three hundred graves. Grave 34 (found 31 October 1863) was one of those where Wyatt's information came directly from Fitch. See Kennett, *Kempston* 1968.
 - 14 Minute Book, 366, meeting of the Bedfordshire Archaeological and Architectural Society, 20 December 1864. The present writer is hoping to present a short account of the usefulness of the Minute Book of the Bedfordshire Archaeological and Architectural Society, 1847-1873, in a future issue of the *Bedfordshire Archaeological Journal*.
 - 15 Evison, 1956, 95-97, and 118, 119 and 120 with fig 14.3-4, fig 15.3 and fig 17.1.
 - 16 Fitch, 1864, 298; Fitch, 1868, 217; Kennett, *Kempston*, 1968.
 - 17 Minute Book, 344; Fitch, 1864, 288; Fitch, 1868, 205; Kennett, *Kempston*, 1968.
 - 18 These graves 50 and 51. Minute Book, 345; Wyatt, 1864, 223; Fitch, 1864, 290 with pl. 4.1; Fitch 1868, 207 with pl. 42.1; Wyatt, 1868, 167.
 - 19 British Museum register number 1891, 6-24, 33; Kennett, *Kempston*, 1968, object 33.
 - 20 British Museum, register numbers 1891, 6-24, 229/230; Kennett, *Kempston*, 1968, objects 229 and 230. The glass blob is on 229.
 - 21 That is Monday 14 December 1863.
 - 22 Grave 53; Fitch, 1864, 290; Fitch, 1868, 208.
 - 23 British Museum, register numbers 1891, 6-24, 123/124/125/126/128/129/130. These objects, Kennett, *Kempston*, 1968, objects 123/124/125/126/128/129/130, were then merely listed as miscellaneous iron objects. Subsequent examination by the present writer has revealed their true identity.
 - 24 British Museum, register number, 1891, 6-24, 161; Kennett, *Kempston*, 1968, object 161.
 - 25 The author in July 1967 had a considerable correspondence with a wide variety of places about a possible diary of Fitch. He failed to locate it. This search was based on the scanty information given by Fitch about himself in successive issues of Crockford's *Clerical Directory* and the *Clergy List*. Examined at various times through the courtesy of Miss M.D. Crafter.
 - 26 British Museum, register number, 1912, 5-28, 16. It is very different to the Kempston book.
 - 27 The evidence for swords and rich shields in association in non-royal graves in Europe between 400 and 800 has yet to be collected. It is my impression that the correlation is not great. This is currently under investigation, in conjunction with an examination of the legal evidence of weapons and status, and the present author is hoping to present this in a paper in due course on 'Arms and the Law, Europe in the Early Middle Ages'.
 - 29 British Museum, register numbers, 1891, 6-24, 75/77/78/79/80, respectively Kennett, *Kempston*, 1968, objects 75/77/78/79/80. No object 77 was not located by the author in December 1966 when the swords were drawn and subsequent searches failed to find it.
 - 30 Graves 75 (found 2 February 1864) and 152 (recorded 17 January 1865). For the first see Minute Book 347; Fitch, 1864, 292-293; Fitch, 1868, 210-211; and Wyatt, 1868, 171. For the second, Minute Book, 367. For the relationships of the sword of grave 75 see Kennett, 1971.
 - 31 Recorded above grave 95 (found 14 March 1864) see Minute Book, 349; Fitch, 1864, 295; and Fitch, 1868, 213. This has not been identified.
 - 32 Grave 14 (found 15 June 1863); see Fitch, 1864, 285 and Fitch, 1868, 202. The scabbard fittings are Bedford Museum, accession numbers 3845 and 3846, respectively Kennett, *Kempston*, 1968, objects 365 and 366. Associated with this is a ring and attached plate, Bedford Museum, accession

- number, 3837, Kennett, *Kempston*, 1968, object 437.
- 33 Fitch, 1864, 290; Fitch, 1868, 208.
- 34 S.E. Chadwick [now Hawkes], 'The Anglo-Saxon cemetery at Finglesham, Kent: a reconsideration', *Med Arch* 2 (1958), 29.
- 35 *Contra* Evison, 1956, 96.
- 36 British Museum, register numbers, 1891, 6-24, 66/67/68/69/127, respectively Kennett, *Kempston* 1968, objects 66/67/68/69/127.
- 37 British Museum, register number, 1891, 6-24, 66. Kennett, *Kempston*, 1968, object 66.
- 38 Minute Book, 344; Fitch, 1864, 288; Fitch, 1868, 205.
- 39 Fitch, 1864, 298; Fitch, 1868, 217.
- 40 References as in previous note. The transcript is complete with abbreviations extended.
- 41 There are no records by Wyatt for discoveries made between February 1864 and July 1864, when Fitch's record is so complete as to imply daily visits.
- 42 D.B. Harden, 'Glass Vessels in Britain, and Ireland, A.D.400-1000', in D.B. Harden (ed.), *Dark-Age Britain*, (1956), 142 and 164.
- 43 Cf the remarks of R.L.C. Atkinson, 'Technical Notes on the construction of the swords, scabbards and shields', in E.T. Leeds and H.S. Shortt, *An Anglo-Saxon Cemetery at Petersfinger, near Salisbury, Wilts.* (Salisbury, 1953), 55-57.
- 44 See references given note 3 above.
- 45 A. Simpson, *The Wealth of the Gentry* (Chicago, 1966), 22; for Bacon see Simpson's chapter 2, *ibid.* 22-108.
- 46 For example, the funeral of John Franklin at Bolnhurst in 1583, but in turn this was more lavish than that of his neighbour Robert More a year later. Franklin muniments in Bedfordshire County Record Office, documents IN *passim*. For the buildings of the Franklin estate in Bolnhurst and an examination of the documentary background, see D.H. Kennett and T.P. Smith, 'Timber-Framed Buildings in Bolnhurst', *Beds Arch J* forthcoming.
- 47 To whom this clearly once lavish brass was erected is not known. The brass is omitted by C.I. Meacham *The Monumental Brasses of St Mary's Church, Luton*, (Luton, n.d. but about 1972).
- 48 F.W. Kuhlicke, 'Harper of Bedford and London', *Beds Magazine* 6 (1958-59), 246-248; and for the brass, F.W. Kuhlicke, 'The Harper brass in St Paul's, Bedford', *Trans Mon Brass Soc* 10 (1964), 68-74. Either spelling is acceptable.
- 49 See references to photographs in note 3 above.
- 50 Bruce-Mitford, 1973, 80-83.
- 51 [R.A. Smith], *Guide to Anglo-Saxon and Foreign Teutonic Antiquities*, (British Museum, 1923), 83 but no illustration.
- 52 G. Baldwin Brown, *The Arts in Early England III* (1915), pl 24.1.
- 53 R.C. Neville, *Saxon Obsequies Illustrated*, (1852), for Little Wilbraham; R.C. Neville, 'Anglo-Saxon Cemetery excavated January 1853', *Arch J* 11 (1854), 95-115, for Linton Heath. For the manuscript diaries of both these cemeteries see the muniments of the Museum of Archaeology and Ethnology, Cambridge.
- 54 Part of the story is retold, D.H. Kennett, 'Seventh Century Cemeteries in the Ouse Valley', *Beds Arch J* 8 (1973), 106; for a fuller account see Kennett, *Kempston*, 1968, the introduction. Incidentally I owe the story to the kindness of Mr Kuhlicke.
- 55 This is particularly true of minor bronze items. For the details see Kennett, *Kempston*, 1968..
- 56 This is partly due to the split nature of the museum holdings of the cemetery, partly due to the lack of correlation between the objects and the accounts, partly due to the lack of a single publication of the cemetery. This last is in one sense now the fault of the present author, whose account has remained in typescript since 1968 and has not been completely revised. In his own defence, the author would like to quote the late F.T. Wainwright, *Archaeology, Place Names and History*, (1962), 128: "Perhaps there will always be a few, blind or enthusiastic or both, who will refuse to count the cost".
- 57 The fullest account is that by R. Clarke, 'Norfolk in the Dark Ages, 400-800 A.D.' *Norfolk Arch* 27 (1939), 223-224, but despite being a complete list of the objects, it has no illustrations and no discussion or detailed descriptions.
- 58 See note 51 above.
- 59 A.L. Meaney, *A Gazetteer of Early Anglo-Saxon Burial Sites*, (1964), 236 lists Moyse's Hall, Bury St Edmunds, Suffolk; Ipswich City Museum, Suffolk; the Ashmolean Museum, Oxford; the British Museum, London; and Birmingham Museum as holding material from this site. My notes can only confirm the first four. There is an account in *Proc Suffolk Inst Arch* 4 (1874), 287-299 of finds made in 1866 and another in *Proc Suffolk Inst Arch* 6 (1888), 57-72 of those made 1875-1877 and in 1881.
- 60 Brown, 1915, pl 24.1.
- 61 Bruce-Mitford, 1968, pl 5, a-b, 6b.
- 62 Brown, 1915, pl 24.2 and 3.
- 63 Brown, 1915, pl 24.4
- 64 There would seem to be no other items in the Museum of Archaeology and Ethnology, Cambridge, from Ashwell, *pace* J. Morris, *The Age of Arthur*, (1973), 629.
- 65 British Museum, register numbers, 1251, '70 and 122A, '70.
- 66 Museum of Archaeology and Ethnology, Cambridge, Griffin bequest, accession number 34.832.
- 67 Museum of Archaeology and Ethnology, Cambridge, in Trinity College Loan Collection, but without accession number.
- 68 V.I. Evison, 'Glass Cone Beakers of the "Kempston" Type', *J Glass Stud* 14 (1972), 55 with n.34.
- 69 Museum of Archaeology and Ethnology, Cambridge.
- 70 As far as I am aware, this is the first notice of this find. They were acquired by the British Museum in June 1887.
- 71 The Lakenheath finds have never been properly published in depth. The fullest account is that of C.E. Fox, *Archaeology of the Cambridge Region*, (1913/1948), 269, 272-274 but this is based purely on material in the Museum of Archaeology and

- Ethnology, Cambridge, and draws heavily on the comments of R.A. Smith in *V.C.H. Suffolk* I (1911), 344. There is also material in the British Museum, register number 1910, 12-22, 1-12. There are no recorded associations and few details of the date of discovery. There is a second cemetery in the parish, see P. Hutchinson, 'The Anglo-Saxon Cemetery at Little Eriswell, Suffolk', *Proc Camb Ant Soc* 59 (1965), 1-32.
- 72 These have always been exhibited together.
- 73 Bruce-Mitford, 1972, 24 and pl 3.
- 74 British Museum, register number, 1015, '70.
- 75 British Museum, register number, 1870, 11-5, 37; see D.H. Kennett, 'Anglo-Saxon finds made at Brooke, Norfolk, 1867-1869', *Proc Camb Ant Soc* forthcoming.
- 76 British Museum, register number, 1875, 3-10, 27.
- 77 British Museum, register number, 1839, 10-29, 153a.
- 78 British Museum, register number, 1002, '70.
- 79 Peterborough Museum.
- 80 British Museum, register numbers, 1875, 3-10, 31/33/39.
- 81 British Museum, register number 7-7, 45.
- 82 J. Werner, *Die Langobardien in Pannonien*, (1962), contains a discussion, list and map.
- 83 Graves 10, 22, 23
- 83 Graves 10, 22, 23, 39, 56, 82 and 89. See B. Fausett, *Inventorium Sepulchrale* (edited C. Roach Smith, 1856), for details of associations.
- 84 The two major losses through a direct enemy hit on the museum were ceramics and ironwork..
- 85 Graves 126 and 132; Fausett, 1856.
- 86 Cited by Werner, 1962, but not known to me.
- 87 British Museum, register number, 1004, '70.
- 88 *Archaeologia Cantiana* 6 (1886), 167.
- 89 C. Roach Smith (ed), *Collectanea Antiqua* 3 (1852), 11 and fig 2.1-4.
- 90 Coventry Museum, accession number A/1016/1.
- 91 Ashmolean Museum, Oxford, accession numbers 1961.7 and 1961.81.
- 92 Museum of Archaeology and Ethnology, Cambridge.
- 93 Museum of Archaeology and Ethnology, Cambridge.
- 94 Museum of Archaeology and Ethnology, Cambridge.
- 95 Fox, 1923, 293 and pl 32. 7a.
- 96 T.C. Lethbridge, *Recent Excavations in Anglo-Saxon Cemeteries in Cambridgeshire and Suffolk*, (1931), 30 with fig 21 B 2, and 32.
- 97 V.I. Evison, 'Anglo-Saxon Finds near Rainham, Essex, ...', *Archaeologia* 96 (1955), 169 and fig 6.4.
- 98 Aylesbury Museum, accession number, 1.05. This is the boss previously reported as from Newport Pagnell.
- 99 Minute Book, 366.
- 100 Fausett, 1856.
- 101 Werner, 1962.
- 102 J. Humphreys *et al.*, 'The excavation of an Anglo-Saxon cemetery at Bidford-on-Avon in 1924', *Archaeologia* 74 (1925), 276 and pl 57.
- 103 Miss V.I. Evison has suggested to me that there are no grounds for attributing this place to the seventh century. My personal inclination, for what it is worth, is to place it late rather than early in the time scale indicated.
- 104 British Museum, register number, 1891, 3-19, 15; for a discussion, omitting consideration of the animal ornament, see D.H. Kennett, 'Burton Latimer, Northamptonshire: Anglo-Saxon finds made in the late nineteenth century', *J Northampton Mus* forthcoming.
- 105 Rutland County Museum, Oakham, accession number 229.
- 106 Fox, 1923, pl 36.10.
- 107 British Museum, register number, 1015, '70.
- 108 Coventry Museum, accession number, A/1016/1.
- 109 Leeds and Shortt, 1953, 13, object 50, and fig 8 with pl 2.50.
- 110 Leeds and Shortt, 1953, 13-16.
- 111 V.I. Evison, 'The Dover Ring Sword....', *Archaeologia* 101 (1967), 81.
- 112 British Museum, register numbers, 1891, 6-24, 67/68/69; Kennett, *Kempston*, 1968, objects 67/68/69.
- 113 British Museum, register number, 1891, 6-24, 66; Kennett, *Kempston*, 1968, object 66.
- 114 British Museum, register number, 1891, 6-24, 127; Kennett, *Kempston*, 1968, object 127, but not there identified as a shield grip.
- 115 British Museum, register number, 1891, 6-24, 59/60/61/62/63/64/65; and Bedford Museum, accession numbers, 3806, B.M.124, B.M.125; respectively Kennett, *Kempston*, 1968, objects 59/60/61/62/63/64/65/406/454/455. Of these objects 60, 61 and 65 are here published, and 59 is figured Evison, 1963, 46 and fig 26a. However, it is not legitimate to claim a grave for the last, *pace* Evison, 1963, 46 n 2.
- 116 Bruce-Mitford, 1947, 19; Atkinson, 1953, 57.
- 117 Chadwick, 1958, 22 and fig 13, 14, P.
- 118 See note 3 above for the appropriate references.
- 119 The view was expressed by Lethbridge, 1931, 30, and reiterated Evison, 1956, 96.
- 120 Chadwick, 1958, 29.
- 121 Paper completed 25 December 1973. It embodies research begun in December 1966 and continued at intervals since. The Kempston material was drawn in December 1966, the remainder at various dates in 1972.

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Some Anglo-Saxon Pennies from the Bedford Mint now in Luton Museum

R.K. HAGEN

SUMMARY

A Listing of the Anglo-Saxon Pennies in Luton Museum's collections from those produced by the Bedford mint between 955 and 1135. An appendix gives a complete listing of locations of coins and moneyers known from the Bedford Mint.

Anglo-Saxon coinage is a subject which has long interested F.W. Kuhlicke and his interest culminated in his piece on 'The Bedford Mint' in the *Bedfordshire Magazine* in 1972. It is therefore fitting that one of the contributions to this issue of the *Bedfordshire Archaeological Journal* should reflect that concern, particularly as Bedford, a town of some importance in the later Anglo-Saxon period, was one of the places at which a mint was established probably in the second quarter of the tenth century.

The use of coins in England was by then of some standing and the penny itself has been in use for nearly two hundred years. In England, Heabert, King of Kent, minted the first pennies about the year 765 A.D. The penny was made of the same size and weight as the Frankish Denier, but the weight soon became standardised at 24 grains, or 1/240th of a pound. The new coin rapidly replaced the existing Saxon coins, Thrymsas and Sceats, and as the standard weight was strictly adhered to, and the quality of the silver guaranteed, the English penny was soon in use in vast numbers in international trade transactions.

In 928, Aethelstan, King of Wessex, decreed that every borough should have its own mint, obtaining dies and pattern coins from a central source to guard against illegal coining.

The record of a mint at Bedford is gleaned from the coins; no documents survive. The earliest coins definitely attributable to the Bedford mint belong to the reign of Eadwig (955-959) although the presence of a mint here at an earlier date can be inferred from a comparison of the moneyers of the reign of Eadwig with those of Eadred, which

suggests that the mint had been established for some time before 955. Bedford Museum possesses an example of a penny of Eadred (946-955) by the moneyer Baldwin (a Dane) who is known as a Bedford moneyer in the succeeding reign of Eadwig.

The Luton Museum collection includes a single coin of Eadwig, with the name of the moneyer Herewig. There are no coins in this collection of Edward the Martyr, but from the time of his successor Aethelred II (979-1016) there are five examples, all by different moneyers. Four of the coins have the 'Long Cross' reverse which was introduced at this time and continued in use until Tudor times. The purpose of the Long Cross was to divide the coin into four equal portions to facilitate the accurate cutting of a penny into halves (halfpennies) or quarters (farthings) as there were no coins of smaller denomination.

All the coins of Aethelred in this collection are from different dies, although the obverse types are similar.

Of the coins of Cnut there are two specimens, of similar type but from different dies. The king, appearing in profile, wears a crown for the first time.

The majority of the Luton Museum coins date from the reign of Edward the Confessor (1042-1066). There are thirteen coins which represent the work of seven moneyers. Three coins by Wulfwi are all from different dies, but Swota's work is represented by three coins, two of which are from the same obverse die, and all three are apparently struck from the same reverse die. The latest coin in the Luton Museum series is one of William I, by the moneyer Sibrand, although the mint continued in operation on a reduced scale into the reign of King Stephen.

The mint at Bedford had a life of just under two centuries. In all Luton Museum have twenty-two coins by sixteen moneyers from the mid-tenth to the late eleventh century, a representative sample of the mint's output.

BEDFORD MINT PENNIES. LUTON MUSEUM COLLECTION.

EADWIG

183/28 obv. EADWIG REX around a small cross
pl. 4.1 rev. HERE (HEREPIG M BEDA)
 BE  DA
 PIGM

diam. 22 mm.
purchased A.H. Baldwin 1928

AETHELRED II

177/28 obv. crowned bust facing left
pl. 4.2 rev. Long Cross type GVNNI M-O BEDA

309/34 obv. crowned bust facing left
pl. 4.3 rev. Long Cross type DORPINE MOO BEDA
 B.M.C. IVa. Br.5
308/34 obv. crowned bust facing left
pl. 4.4 rev. Long Cross type LEOFNO-D MO BED
 B.M.C. IVa. Br.5

diam. 19 mm.
ex Dudman 244
purchased Baldwin 1928
diam. 20 mm.
provenance: Sweden
purchased Spink 1934
diam. 20 mm.
purchased Spink 1934

A10/1971 obv. crowned bust facing left
pl. 4.5 rev. Crux type OSPIG MO BEDAFO

diam. 21 mm.
ex Elmore-Jones
sale 1971 lot 88.

All/1971 obv. crowned bust facing left
pl. 4.6 rev. Long Cross type AELFPI MO BED
 see *B.N.J.* 34, 1965, 37-41 and pl. II.1.

diam. 19 mm.
ex Elmore-Jones sale
1971 lot 90

All the coins of Aethelred are struck from different dies although all obv. and most rev. types are similar. A10/1971 is very crudely engraved compared to the others.

CNUT

179/28 obv. crowned bust facing left
pl. 4.7 rev. Quatrefoil type AEGLIG: ON BEDF
 B.M.C. VIII Br.2
178/28 obv. crowned bust facing left
pl. 4.8 rev. Quatrefoil type LIOFPINE ON BED
 B.M.C. VIII Br.2

diam. 18 mm.
purch. Baldwin

diam. 18 mm.
ex Cassel Colln.
purchased Baldwin

EDWARD THE CONFESSOR

315/34 obv. crowned bust facing
pl. 4.13 rev. small cross LEOF-DEGN ON BEDEFI
 B.M.C. VIII Br.8
311/34 obv. helmeted bust facing left
 rev. expanding cross AELMON ON BEDEFO
 B.M.C. V Br.5
A16/1971 obv. crowned bust facing
 rev. small cross PULFPINE ON BEDE

A14/1971 obv. crowned bust facing right
pl. 4.11 rev. Hammer-cross type PULFPI ON BEDEFOR

A15/1971 obv. crowned bust facing right; extra pellets on
 sceptre, otherwise sim. to above.
 rev. Hammer-cross type PULFPI ON BEDEFO
 'Radial spike' in 4th quarter

diam. 17 mm.
ex Crowther 1904*
purchased Spink
diam. 20 mm.
purchased Spink

diam. 17 mm.
ex Elmore-Jones sale
1971 lot 96
diam. 19 mm.
ex Elmore-Jones sale
1971 lot 94
diam. 19 mm.

ex Elmore-Jones sale
1971 lot 95

180/28 pl. 4.9	obv. helmeted bust facing left rev. expanding cross type PULFPI ON BEDEFO <i>B.M.C. V Br.5</i>	diam. 20 mm. purchased Baldwin
A12/1971 pl. 410	obv. king seated with orb and sceptre facing right rev. voided cross with four martlets in angles ∞ POTA ON BEDEFODI	diam. 19 mm. ex Elmore-Jones sale 1971 lot 92
313/34	obv. apparently from same die as A12/1971 rev. possibly from same die as A12/1971 <i>B.M.C. IX Br.7</i>	diam. 19 mm. purchased Spink
181/28	obv. as A12/1971 but a different die; the face is at a more upright angle, as is the cross on the orb. rev. possibly from same die as A12/1971 <i>B.M.C. IX Br.7</i>	diam. 19 mm. 'part of lot 255, sale Wm. Allen, Dorking 1898' purchased Baldwin
A13/1971 pl. 4.12	obv. crowned bust facing right: 10 hairs on beard. rev. Hammer-cross type GODPINE ON BEDEFO	diam. 19 mm. ex Elmore-Jones sale 1971 lot 93
310/34	obv. similar to above but 12 hairs on beard. (different die) rev. as above, possibly the same die. <i>B.M.C. XI Br.8</i>	diam. 19 mm. purchased Spink
182/28	obv. crowned bust facing right rev. Hammer-cross type ∞ IGOD ON BEDEFOR <i>B.M.C. XI Br.8</i>	diam. 18 mm. purchased Baldwin
312/34	obv. crowned bust facing rev. small cross ∞ IGOD ON BEDEFO <i>B.M.C. XIII Br.9</i>	diam. 19 mm. purchased Spink
<i>WILLIAM I</i>		
314/34 pl. 4.14	obv. crowned bust facing rev. short cross PAXC type SIBRAND ON BEDEF <i>B.M.C. VIII Br.8</i>	diam. 20 mm. purchased Spink

APPENDIX

A PROVISIONAL LIST OF MONEYS WORKING AT BEDFORD

Compiled from various sources. I have to thank Mr John Gaunt of the Bedford Numismatic Society for permission to integrate his list with that at Luton Museum. Locations of extant coins in public collections are given *other than* those listed in the British Museum catalogue.

EADWIG (continued)

Boiga	Bedford Museum
Frothgar	
Grim	Copenhagen
Herewig	Luton Museum and Fitzwilliam Museum, Cambridge
Leofstan	

EADGAR 959-975

Aelfsige
Baldric
Fordgar

EADWIG 955-59

Aelfsig
Badlwin

EADGAR
(Continued)

Grim Bedford Museum, Nat. Museum
Edinburgh, Fitzwilliam Museum,
Cambridge

Liofstan

EADWARD (The Martyr) 975-978
Aelfstan

Baldic Ashmolean Museum, Oxford,
(Baldric) -- Hunterian Museum, Glasgow

AETHELRED II 978-1016

Leofnoth Luton Museum, Bedford Museum
Aelstan Bedford Museum
Aelfstan Hunterian Museum, Bedford Museum
Gunni Bedford Museum, Hunterian
Museum, Luton Museum
Oswig Bedford Museum, Hunterian
Museum, Luton Museum
Lyfinc Bedford Museum
Dorwine Luton Museum
Aelfwi Bedford Museum, Luton Museum
Baldric Hunterian Museum
Bealdvlf Hunterian Museum

CNUT 1016-1035

Liofsi Bedford Museum
Swota Bedford Museum, Luton Museum
Godwine
Aeglig Luton Museum
Liofwine Luton Museum, Fitzwilliam Museum

HAROLD I 1035/1037-1040

Lio(f)thegn
Aellman

AEDWARD (The Confessor) 1042-1066

Ulfcytel Bedford Museum
Godwine Bedford Museum, Luton Museum,
Hunterian Museum
Swota Bedford Museum, Luton Museum,
Ashmolean Museum, Hunterian
Museum
Wulfwi Bedford Museum, Luton Museum,
Reading Museum, Hunterian
Museum
Sigod Bedford Museum, Luton Museum,
Fitzwilliam Museum, Ashmolean
Museum
Aelmon Bedford Museum, Luton Museum
Liofthegn Luton Museum, Ashmolean Museum
Wulfwine Luton Museum
Wulmier Hunterian Museum
Godric

HAROLD II 1066

Sigod Bedford Museum
Wulfwi Hunterian Museum

WILLIAM I (The Conqueror) 1066-1087

Sibrand Bedford Museum, Luton Museum
Sigod (Saegod)

HENRY I 1100-1135

Edri . . .
. . . . ine
(fragment) Royal Coin Cabinet, Stockholm

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Bedford: Aspects of Town Origins and Development

JANE HASSALL and DAVID BAKER

SUMMARY

Despite settlement in the Ouse valley above and below the present town of Bedford from earliest times there is no evidence for urbanisation before the middle or late Saxon period. A river crossing may have determined the location of a settlement which was given a rectilinear plan by Edward the Elder in 915-6. The excavation of a section across the Kingsditch is reported.

Bedford Castle (demolished c. 1224-5) dominated the town north of the river. The town does not appear to have developed significantly beyond the limits of the rectilinear plan until the eighteenth century. Major urban expansion took place in the nineteenth century and is traced through the study of a series of maps. Throughout its history, and especially in recent decades, the changing balance of urban functions between residential, commercial, office and transportation needs have determined the increasingly rapid evolution of the town's plan and fabric. Excavations since 1967 have produced some plan evidence for Saxon and medieval buildings, but, prior to the sixteenth and seventeenth centuries, standing survivals are almost all ecclesiastic. Many substantial timber framed buildings are known only from photographs and other illustrations. The main types of post-medieval buildings are indicated. A preliminary account of excavated medieval evidence for economic activity is given. The implications of recent development and the needs of a future research programme are discussed. Appendices list sites excavated 1967-1974 and pre 1841 buildings surviving today.

INTRODUCTION

The writing of local history is a long-established Bedford tradition, in which F.W. Kuhlicke has played a major part. As the new social and economic demands of this century, served by its powerful new technologies, increase the rate of change in urban fabric and form, it is natural that interest should quicken in the past of the town, a new dimension of which has been revealing itself

through rescue excavations since 1967.

This article is concerned with several aspects of Bedford as an urban settlement. It deals only indirectly with political events and notable persons. It discusses the topographic setting and pre-urban archaeological occupation in the area of the present town. The evolution of Bedford as an organised settlement catering for various human needs through the centuries is outlined, and a section is devoted to the architectural history of the town. The present stage of urban evolution is placed in an historical perspective and an assessment is made of the effects of twentieth century development on the survival of evidence for further research.

All this is offered as a contribution to Bedford studies, but the exhaustive synthesis has still to be written. It is also intended to serve as the Bedford version of the 'implications of development' studies which are now appearing for so many historic towns. The article is not aimed exclusively at an academic readership, so problems of evidence are underlined; much of the material presented (some of it provisionally) is commonplace for urban historic studies, but still has a unique interest for Bedford.

We have tried to avoid repeating material that is already available in printed form, much of which has been admirably summarised and given a wider context in Joyce Godber's *History of Bedfordshire*.¹ Earlier topographical studies of Bedford have proved to be a mixed blessing. Speculation and fantasy were often mixed with fact in the works of earlier antiquarians such as Blyth, Wyatt and especially Farrar. The recent republication of the latter has only been redeemed by a new Introduction from F.W. Kuhlicke gently correcting the more elevated flights of fancy.²

A Bedford bibliography can be found in the compilations of L.R. Comisbee,³ but two recent publications have been particularly relevant to the concerns of this article: the *Growth of Bedford Town, 1610 - 1973*⁴ has published and comment-

ed upon the major early maps of the town; Richard Wildman's scholarly annotations to old photographs in *Bygone Bedford*⁵ have greatly assisted the identification of important demolished buildings.

THE TOPOGRAPHICAL SETTING OF BEDFORD

Early Settlement

In order to understand how Bedford was initially established and subsequently developed, it is necessary to look at the patterns of settlement surrounding the town. The area in question is that part of the Ouse valley above Bedford extending upstream for 7–8 miles, and for 3 miles below the town.

The Ouse above Bedford flows through a fairly narrow, naturally marshy valley with several meanders. Immediately above the town the valley becomes significantly wider and this trend continues downstream, where in places the flood plain is up to 3 miles wide. The valley is well-drained by numerous small tributaries, and at Bedford the Ouse is 80 feet above sea level. The water table at this point is approx. 6–10 feet below ground surface, and the many wells in and around Bedford have their source in a supply of underground water held in fissures in the oolite rock, at the same level.⁶

Oxford clay and boulder clay form low undulating hills on either side of the valley, with small narrow outcrops of cornbrash lying close to the river and generally following its trend.⁷ Alluvium and gravels form the valley bottom and run immediately alongside the river, with the gravels (both recent and pleistocene) being especially widespread just below Bedford.⁸

The distribution maps for the prehistoric period are an attempt to show every known findspot for each Age, and this includes both settlement sites and chance finds. (Figure 1)⁹ For the purpose of the following discussion, chance finds are taken to be indicators of settlement. As with all archaeological distribution maps the patterns observed tend to be a reflection of chance and the amount of excavation and fieldwork that has taken place in the given area. Despite these limitations, a general picture of occupation during prehistoric times does emerge. It becomes apparent that the area of occupation that we know today as Bedford was not in existence before the Pagan Saxon period. Reference is made to 'Bedford' however, in order to give the reader a point of location.

There appears to be some relationship between

the location of settlement in Paleolithic times and the height of land above sea level. The majority of Paleolithic finds occur above the 100 feet contour, and the few which are below this lie close to the Ouse. As might be expected, a little over half the evidence has been found on the river gravel terraces; about a quarter on the alluvium, and the rest distributed evenly on boulder clay, cornbrash and Oxford clay. Some of the unprovenanced finds may have come from within the natural gravel, and not from deposits overlying it, thus being in a secondary position. Of all the palaeoliths, only one comes from within the area of Bedford, the majority occurring on the nearby gravel sites at Kempston, Biddenham and Bromham. Distribution of finds upstream beyond Clapham is sparse, and similarly few finds have been recorded below Bedford where the valley becomes much broader.

In Neolithic times, lower ground was preferred for settlement, and most of the finds have come from below 100 feet. Apart from one or two outliers, the distribution of finds tends to favour the flatter valley area around Bedford and with very few exceptions,¹⁰ the finds have come from the gravel soils of the river terraces. This pattern is emphasized in the Bronze Age, when according to the record of finds, there was no valley settlement above Kempston. There was, however, a marked concentration occurring below 100 feet around Bedford and particularly to the south of the river, spreading downstream. Without exception all Bronze Age material has been found on the river gravels.

A far more scattered pattern of occupation emerges for the pre-Roman Iron Age, with higher ground, 150–200 feet, being preferred. Promontories and small spurs of land which could be well defended were chosen, such as Mowsbury Camp (SMR 976) on the 200 foot contour, and these sites for the most part lie on the boulder clay. This diffuse pattern extends mainly up the valley on high ground. There are noticeably fewer sites on the open vale below Bedford. Despite the preference for higher ground all the sites are within easy reach of a water supply from one of the many small streams draining into the Ouse.

In Roman times, it was the fertile valley alluvium and gravel soils that were favoured for occupation, and all the sites were predominantly low lying. Proximity to the Ouse is an obvious feature of most of the sitings, and the spread of settlements appears to be northwards up the valley by the

shortest route, avoiding the larger meanders of the river. Settlement was still dispersed, but there were tendencies towards agglomeration, and nuclei can be seen at Milton Ernest, Clapham-Bromham, and Kempston.

There are a few finds from the area around Bedford, including some pottery from Putnoe (SMR 1909) and some more substantial material from London Rd and Mile Rd (SMR 979). Bedford was certainly not a Roman town as we understand the term, and it seems as though only Sandy and Dunstable held this distinction in Bedfordshire.¹¹ However it is possible that a small settlement existed here, as a number of artefacts have been found in the town.¹² At the south end of the town bridge various Roman coins are reported as having been found (SMR 251, 286) and occupation debris is supposed to have been found on the south side of Castle Lane (SMR 285). A small bronze key from Horne Lane (SMR 1899) and occupation material from Bromham Rd (SMR 249) are also to be considered. There is a record of a possibly Roman cremation urn discovered at the junction of the market place and High Street (SMR 284) and Bedford Museum has one or two specimens supposedly 'from Bedford' (Mus. Acc. 3276, 3393). It is clear from this scatter of finds, several of which have only marginal findspots, that there was little in the character of Bedford in Roman times that could be considered as urban.

The distribution of Pagan Saxon finds in the Bedford area is not particularly significant. With little exception, they occur on gravel sites above the 100 feet contour. They lie close to small streams, tributaries of the Ouse, and apart from one site, they are a little to the East of Bedford, and there are no examples of Pagan Saxon settlement, immigrant or indigenous, upstream. The Ouse, like the Thames, undoubtedly played an important role in the expansion of Germanic peoples westwards into Britain during the migration period,¹³ as well as being a vital means of communication for the local populace. The discovery of a large pagan Saxon cemetery at Kempston in 1863-4 included a number of artefacts, mainly brooches, of widely differing types, and Saxon, Anglian and Jutish examples are all represented here.¹⁴ It would seem from the artefacts and the different forms of burial that this cemetery was in use for a long while indicating a history of Pagan Saxon settlement nearby and in Bedford.¹⁵

The only traces of occupation in the town¹⁶ come from recent archaeological work in Castle

Lane, where parts of the ground plan of probably two timber halls were found, provisionally dated to the seventh or eighth centuries, and within 100 yards of the river.¹⁷ More pagan Saxon pottery was found in Horne Lane about the same distance from the north bank of the Ouse.¹⁸ Both these sites are close to an easily fordable part of the river and it is not impossible that some form of bridge came into existence at this time.

The evidence for settlement and occupation in Bedford is thus rather slight, but there can be little doubt that by the later Saxon period a pattern of small villages was developing along the Ouse valley, and that at Bedford in particular a consolidation was taking place. There is little in the way of archaeological evidence, as, with the exception of the Manor House excavations at Clapham, little or no planned excavation of the historic areas of the villages has been undertaken.¹⁹ There are certain architectural details on some of the churches, however, that are probably Saxon in origin. Examples are to be found at Clapham, Stevington, Kempston and Biddenham.²⁰ All these churches are close to the river, and are chiefly on gravel sites.

Only two sites, Harrowden and Bucklow, near Oakley, have an Anglo-Saxon derivation for their place names.²¹ There are no surviving Saxon land charters for the area, and no artefactual evidence has been recorded. But if it is permitted to 'read history backwards'²² it can be seen that at the time of the Domesday Survey or a little before, such villages as Cardington, Elstow, Kempston, Biddenham, Bromham Stagsden, Oakley, Pavenham, Milton Ernest, and Radwell were all established, and the implication is that they had been in existence for some time before 1086.²³

The fact that churches had been built at all in Saxon times indicates the presence of a relatively stable congregation in each village. The conservative estimate for population, as recorded in the Domesday Survey in this part of Bedfordshire, was 8 people per square mile, and they would have been living in agricultural village communities. They were occupied in cultivating the cleared, rich arable soils of the valley, and used the surrounding woodland areas as a source of timber, and for pannage for swine. The importance of the Ouse as a resource is demonstrated by the record of the renders of eels at mills at Bromham, Cardington, and Oakley.²⁴

In Bedford itself, the first urban elements were becoming noticeable by late Saxon times. Settle-

ment developed on both sides of the river, around the crossing point which afforded good communications north-south and east-west.²⁵ There are at least five entries in the Anglo-Saxon Chronicle²⁶ which refer to Bedford in the tenth century, and the entry for 915 indicates the existence of a fortified township to the north of the Ouse, and describes the founding of the southern *burh*, surrounded by the King's Ditch.²⁷ At least two churches were in use inside the town, St Mary's in the south, and St Peter's in the northern *burh*.²⁸ Both were situated in significant positions, St Mary's on a main road crossing, and St Peter's possibly incorporated into the northern defences of the town. Coins and other archaeological evidence have been found to show that Bedford had some commercial function in Saxon times. The ground plans of two late Saxon timber buildings were excavated fronting St Johns Street, in the SW quadrant of the southern *burh*, and parts of other late Saxon – early Medieval timber buildings have been found along the St Mary's Street and Midland Rd frontages.²⁹ There is evidence to suggest that a rectilinear street pattern was laid out probably by Edward the Elder, and it is likely that the frontages of these streets were built up in the same manner as found along St John's Street.³⁰

The pattern of settlement established in the Saxon period set the scene for the following centuries, and every recorded Saxon village became a Medieval one. As well as this consolidation in the Ouse valley, there were a number of new settlements developing on higher ground, and along the tributary valleys, particularly to the NE of Bedford. Proximity to a good water supply was an obvious factor when establishing a new homestead in the Medieval period. The loamy clay soils of the higher areas no doubt made attractive pasture land for the farmers. Bedford appears very much as the focal point, spreading out on both sides of the Ouse, and dominated by the river as the main means of communication with the villages up and downstream.

Early Communications

The network of *communications* in the area of Bedford before the medieval period is obscure. It must, however, have been a dominant factor in the growth of a major settlement around a river crossing, in its own turn affecting the local pattern of transport and travel.

The Icknield Way, which skirts the southern end of the County, is the only recognised prehistoric trackway in Bedfordshire. The Icknield Way follow-

ed a course running roughly parallel with the Ouse some fifteen to twenty miles from it, and was essentially a ridgeway once it reached the Chilterns.³¹

The Roman road system also appears to have ignored the central part of the Ouse Valley. To the east of Bedford, a route led north from Sandy to Godmanchester and beyond, and to the west was another north-south route from Verulamium to Towcester.³² Another road headed down towards the valley from Irchester, and traces of a road from Sandy running west into the valley have also been found.³³ Whether a Roman road was built along the valley is a matter for conjecture.³⁴ It is probable that an adequate track was in existence along the valley route by Roman times.

The river and ways across it have been vital factors in communications, particularly in the early period. There are several place-names containing the -ford element, such as Barford, Bedford, and Stafford.³⁵ Crossings undoubtedly existed from the earliest times, but have seldom been recorded before the twelfth and thirteenth centuries.³⁶ There is some archaeological evidence to suggest that a ford of the Roman period crossed the Ouse at Kempston³⁷ and another is reported from Milton Ernest,³⁸ but no other examples are yet known.³⁹ Timber bridges superseded fords in some places and the remains of one at Bedford have been noted during repair work and by members of the Bedfordshire Sub-Aqua group, on the north bank, and a little to the west of the present bridge. It may be significant that both Cardington Road and Cauldwell Street though aligned from outside the town on the south end of Bedford Bridge meet at the southern town cross-roads because they both bend southwards on crossing the Kings Ditch.

The first references to bridges built across the Ouse come in the early medieval period, when bridges at Bedford (by 1184) and at Bromham were built in stone. Stone bridges were no doubt built as a response to increasing mobility or the demand for it from local settlements and also from travellers going further afield.

The Ouse itself must have been an important if limited means of transport for the Bedford area since prehistoric times. It is likely to have been used as a goods route since the Roman period⁴⁰ and records of Ramsey Abbey indicate that sizeable amounts of grain were shipped downstream during the Middle Ages.⁴¹ The extent of past navigability for the Ouse in this area is uncertain but the number of natural barriers, as well as artificial ones

such as mill dams, must have meant that navigation could only be undertaken on sections of the river.⁴² It was possible to come upstream as far as Bedford in the tenth to eleventh centuries, as was shown by the Danish invaders, whose boats required only a shallow draught of around 2 feet.

THE EXPANSION AND DEVELOPMENT OF THE TOWN

It has been shown from the evidence available, that Bedford began to take shape during the later Saxon period, and the layout of the town had achieved some definition by the early tenth century.⁴³ The location of finds, structures and churches of Saxon date in both the northern and southern *burhs* indicates that a rectilinear street plan was specifically laid out. It has already been seen at Winchester and at other Saxon towns that a regular street plan is the result of deliberate town planning, and cannot be the result of casual growth.⁴⁴ When this planning took place in the northern *burh* is difficult to say with certainty. Before the arrival of Edward the Elder in 915, Bedford was occupied by the Danes for some twenty five years.⁴⁵ It may be that a rectilinear plan was laid out before this occupation, or more probably it may have been the work of Edward. Although Bedford was not a Burghal Hidage town, it would certainly have possessed those qualities which defined a Saxon town, that is, a wall, a mint, and a market.⁴⁶ No traces have been uncovered of the defences of the northern *burh* but as already stated by Hill,⁴⁷ the most likely line would have formed a rectangular area probably running east of the castle, as far north as St Peter's, with this church sitting astride or built into the wall structure,⁴⁸ and returning southwards somewhere near the Saffron⁴⁹ or Severn⁵⁰ ditch outlet. This natural stream had two separate branches, one rising near the Iron well⁵¹ and the lower part of its course could well have had some defensive function in Saxon times.⁵²

Edward was certainly responsible for the layout of the southern *burh*.⁵³ The King's Ditch, which today is culverted for the most part, is thought to fossilize the position of the bank and ditch built by Edward to delimit and defend the southern southern suburb. Its delineation can be seen on John Speed's map of Bedford in 1610. The area enclosed was of considerable size, and contained two main traffic routes, running north-south and east-west, which meant that gaps or gates existed in the West, South, and East parts of the earthwork.

Excavations on the King's Ditch

During the summer of 1971, a series of rescue excavations in Bedford were organised by David Baker, and an opportunity arose to investigate the structure of the earthwork. Permission to excavate was kindly granted by the Frederick Ray Trust, on whose land is to be found the only remaining stretch of earth bank and open ditch. Excavations were undertaken by Jane Hassall and David Hill in an attempt to discover if this bank, standing 1.80 metres high was a Saxon or later feature.

A trench two metres wide and some twenty metres long was laid out across the bank on the inside of the King's Ditch.

The turf was stripped and excavation proceeded down from the crest westwards to the tail of the bank, and eastwards to the wet ditch. As can be seen from the section (fig 2 plate 5a) the main feature of the bank consisted of a clay layer, rising up 5 metres from the wet ditch, and running west for a distance of 8.40 metres. This clay bank had a core some 3 metres long and 50 cm thick, with a tail, much thinner, running off. The clay bank core was set on a loamy gravel layer which represented the old ground surface. In places this became a band of sandy gravel with very little loam. Below this, the natural subsoil consisted of very fine sands and gravels. There was one patch of almost pure sand just above natural and some 30 cm below the base of the main clay core. Beneath this sand was a thin band of gravel which covered a small spread of mortar (not represented in the section). Mortar has been found in the same position during excavations on a similar earthwork, the *burgh* wall that was built at Christchurch, Hants, but its function remains unclear.⁵⁴

The face of the bank was interesting, as it consisted of five distinct gravel layers, separated by a loamy gravel soil, all tipping down at an angle of about 60 degrees. On top of these gravels, and between them and the wet ditch, the loamy gravels became distinctly more sticky, a silt-loam in fact, and may represent sludge cleared from the ditch and thrown up on to the bank face.

In order to maintain the flow of water, it would have been necessary to clear out the ditch from time to time. This certainly took place during the medieval period, as a few medieval sherds have been recovered from these layers.

At the tail of the bank, the tip-lines of gravel and three separate clay and clay loam layers indicate that material had been thrown up on to the bank from the west side at some stage. It is

possible that the bank was higher in Medieval times than today, and that these clay layers represent layers which have since been eroded from the crest of the bank. Several sherds of shelly St Neots type ware were found within these layers. (fig 4, 8 and 9).

Excavations were extended some 7.20 metres from the tail of the bank westwards, but no further medieval or earlier features were discovered.

As might be expected with a site of this nature, a small slice through the bank did not produce a large amount of finds. There were no significant small finds and the only material recovered in any quantity were some fragmentary Victorian sherds discovered in the modern feature shown in the section, and from the upper layers of the excavation. A dozen or so sherds of early medieval pottery of the shelly St Neots ware type were found, however, and some are illustrated here. (fig 4) A detailed pottery catalogue is not included at this stage, as the material is to be studied in relation to St Neots ware found in large quantities in other parts of the Saxon and Medieval town. Numbers 2 and 8 are decorated jug rim sherds, number 2 with a rouletted pattern on the top surface. The rest of the sherds are in cooking pot forms and are shelly wares with the exception of numbers 7 and 10 which have a light sandy fabric.

So far it has been assumed that the King's Ditch consisted of an entirely man-made wet ditch with an internal bank, but there is some evidence to suggest that an external bank was also built. During road works near Wilmer's Corner in August 1972 a large part of the lower south-east stretch of the ditch was culverted, though a length has been kept open running across a new large roundabout at the southern end of the town. As a part of these operations earth shifting took place which left a standing vertical section through land immediately to the south of the ditch (fig 3 and 9). Below the top 50cm of topsoil was a build-up of loamy gravel soil tipping back from the ditch, with ditch silt dug into it at the ditch edge, no doubt as a result of clearing. This loamy soil had some modern intrusions, and came down on to gravel layers where about 50cm depth of gravel was exposed. Separate bands of gravel were distinct in this section and at the southern end rose up steeply to form a gravel bank. No date can be assigned to this feature, although one or two sherds of St Neots ware were recovered from the loam above. It seems likely that this external bank was a primary feature of the earthwork. The width

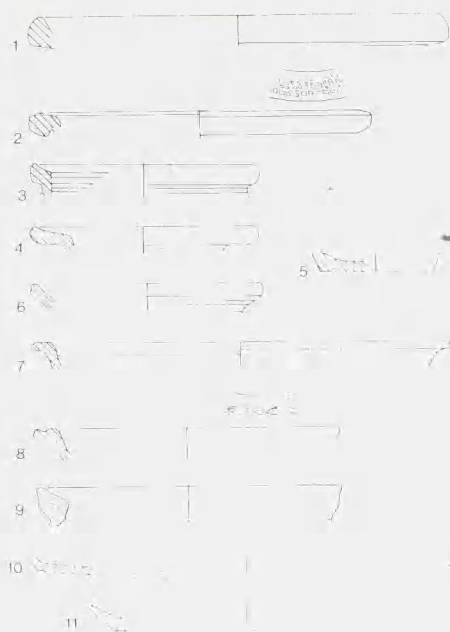


Fig 4 Pottery from the Kings Ditch excavation in Ray's Close (Scale 1/4)

of the stream at this point was at least 3 metres.⁵⁵ It is also probable that some form of natural stream existed, or that springs occurred along the line of the ditch in order for the water to flow, as a drop in the main river level between the west entrance and east exit of the ditch can hardly have existed.

Although the excavation has not been able to provide an absolute date for the construction of the bank, it has helped to clarify the picture. The structure was built by the late eleventh/early twelfth centuries, according to the pottery evidence, and it is possible this early medieval bank fossilised the position of an earlier Saxon one. So far there is no positive archaeological evidence for this, but whatever its date, the bank would have had a defensive function and would also have served as a boundary or limit to the town.

MEDIEVAL BEDFORD

No maps of the town before 1610 exist, and insufficient archaeological work has been done to define the limits of medieval urban occupation. In many respects medieval Bedford must have resembled a village: it was surrounded by its open fields.⁵⁶ If the street pattern had been ordered before the Norman Conquest, then it survived through to the early seventeenth century basically unaltered,

BEDFORD: RAY'S CLOSE

scale 0 1m

W

topsoil gravel
sand flint
loam clay

KING'S DITCH SECTION

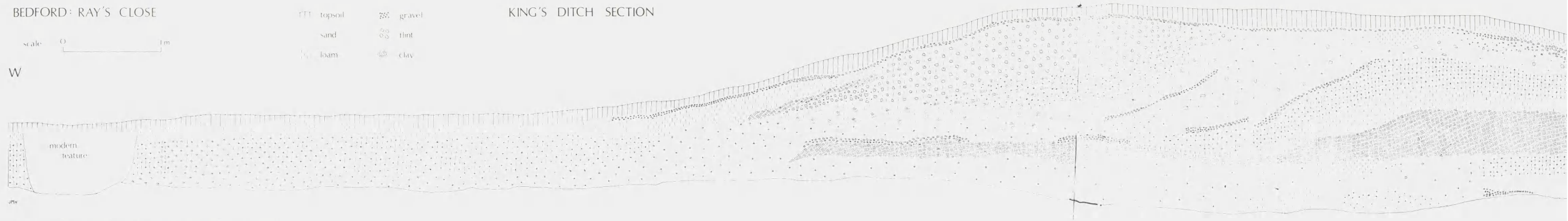


Fig 2 Excavated section across the Kings Ditch.

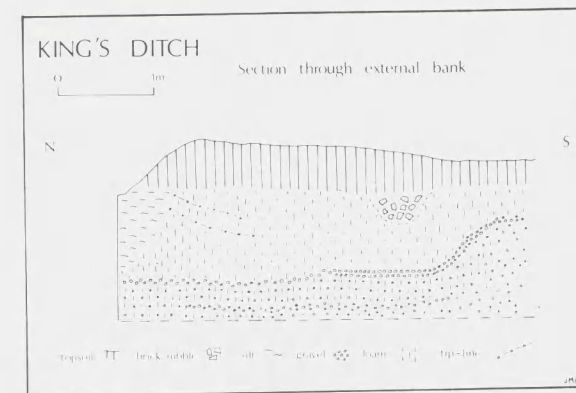


Fig 3 Observed section across bank outside the Kings Ditch.

Fig 1 (left) The Archaeological Evidence for settlement in the Bedford area.

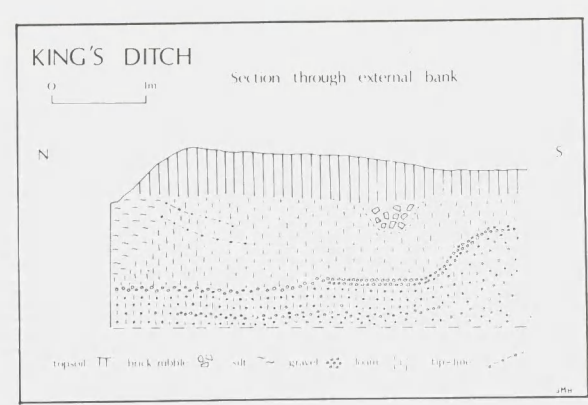
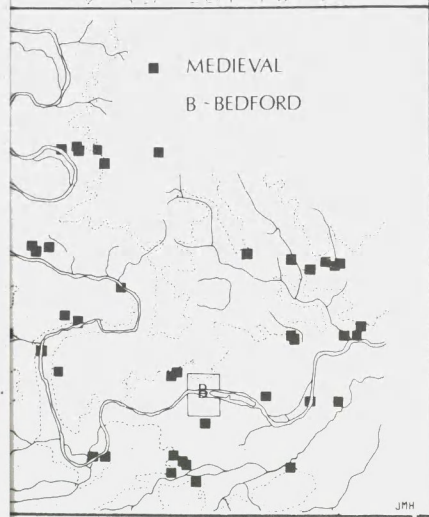
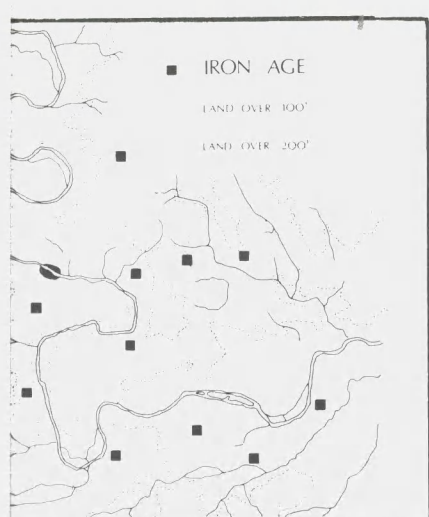
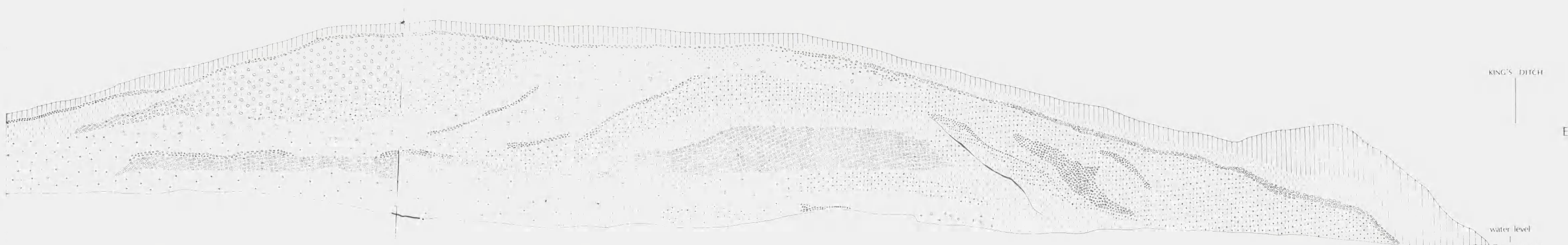


Fig 3 Observed section across bank outside the Kings Ditch.

Fig 1 (left) The Archaeological Evidence for settlement in the Bedford area.'

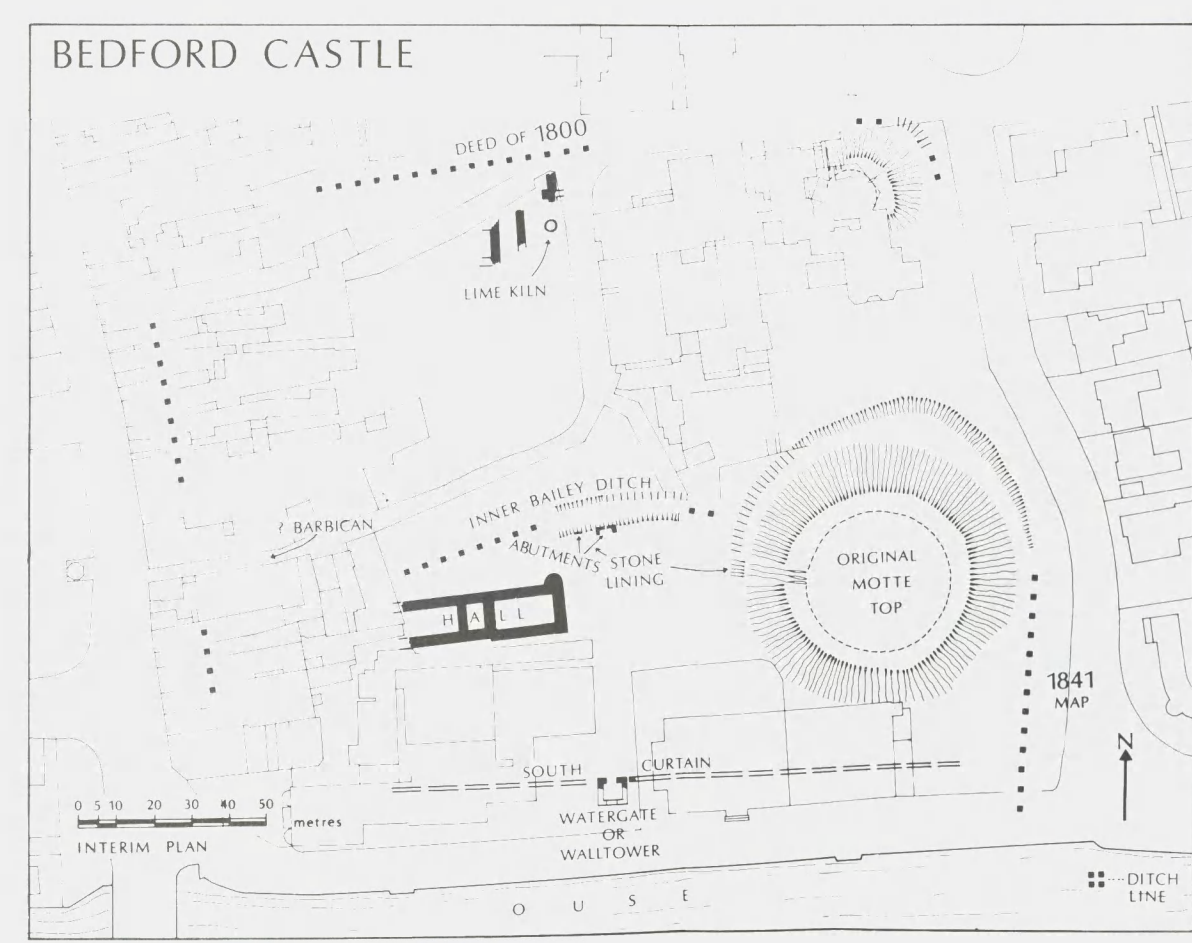


Fig 5 Bedford Castle.

BEDFORD HISTORIC SITES AND BUILDINGS



Fig 6 Bedford: historic sites and buildings.



Fig 8 Bedford: buildings of 1841 surviving in 1974.

except for the imposition upon it of the Castle. Thus the Bedford shown by Speed in 1610 probably resembles the Bedford of 1506-7 which can be partly reconstructed from the Newnham Rental.⁵⁷ It is probably also basically reliable as a guide to the distribution of buildings in the previous four or five centuries. The only guide available for the growth or contraction of urban settlement in the medieval period is the taxation figures: these suggest an economic and population decline in the fifteenth century, partly consequent upon the plagues in the second half of the fourteenth century.⁵⁸

From its foundation, at most a few decades after the Conquest, to its demolition following the siege of 1224, and subsequently as a derelict site, Bedford Castle has had great influence upon the form of the town⁵⁹ (fig 5).

Though a royal castle, Bedford figures little in crown building accounts, and thus is little known from documentary evidence. Most of our knowledge of it has come from rescue excavations, not necessarily designed to answer the key research questions.

It is tempting to see the classic situation of a castle site imposed by the Normans upon the pre-existing street grid in Bedford, with the original *motte* strategically placed athwart the south-eastern boundary of the northern *burh*. No indications of street grid have yet been recovered from the rectangle within which the castle was placed, and within which it must have expanded to its widest limits by several unknown stages, though pre-Norman structures and occupation have been found stratified under Castle layers.

At its greatest extent the Castle covered nearly a quarter of the town north of the Ouse. Its western ditch, with a main gate or barbican possibly represented by modern Castle Lane,⁶⁰ must have been set back about 30 feet from the frontage of the east side of High Street, since a number of deeds describe properties lying between the ditch and the street.⁶¹ The northern ditch ran along the line of Ram Yard, and is mentioned in a deed of 1563.⁶² On the east, Thames Street (now Newnham Road) formed the boundary, with the ditch round the motte running out into the Ouse, and perhaps forming a common ditch with the main defence. The river may have been an adequate water defence by itself on the south side.

Figure 5 shows the main features recovered in excavation. Stone-lined ditches, perhaps the *fossata pavimentata* mentioned in 1216, constituted the

defence around the motte, and the division between inner and outer baileys. A wall-tower or watergate has been found on what was presumably the southern curtain. Parts of several substantial structures have been found, including a Norman hall and a lime-kiln.

The siege of 1224 was followed by a royal command to slight the Castle. The motte was reduced in height and the ditches (where sectioned in excavation) were filled with destruction debris. It took about six hundred years for the Castle area to be redeveloped, though it saw a brief revival of military use during the Civil War. For much of the early post-medieval era it seems to have been used as a quarry for gravel and a tip for rubbish.

POST-MEDIEVAL DEVELOPMENT

The growth of Bedford from a town no larger than many modern villages to a modern urban centre (plate 5) surrounded by suburban and industrial estates has been chronicled in several maps, some of which were recently republished:⁶³

1610	John Speed
1765	Thomas Jeffrey
1807	Brayley
1841	M Reynolds
1854	Bedford Gas Company
1876-8	Thomas Mercer
1879-84	Ordnance Survey, first edition
1900-3	Ordnance Survey, second edition
1923-6	Ordnance Survey, third edition

These maps have been used for the following discussion and for the compilation of two figures. Figure 6, which also uses some documentary evidence, indicates street-names and sites or buildings of historic importance. Those of uncertain location have been excluded: several place-names in monastic rentals could not be located with certainty, such as Cuckingstole Lane.⁶⁴ Dates of occurrence of features in documents are shown selectively; buildings are mostly those demolished examples of which something is known from document or illustration. Dates of demolition rather than of construction are given since there is so little certainty about the latter in most cases. Items shown have been selected, and the map is not intended to be fully comprehensive. Figure 7 shows diagrammatically the expansion of the urban area. Information from the 1610 and 1765 maps has been presented in block form as street frontage development. The apparent boundary between urbanised land and countryside in 1841, 1876-8

and 1903 has also been shown, together with main roads and chief railway lines. Expansion after 1903 to the present day took place on a scale which dwarfs the changes to the historic core, and is not shown.

Possible shortcomings of early maps as evidence for urban expansion must be recognised. The probability of survey inaccuracy before 1841 cannot be ignored. In 1610 Speed shows individual houses, but their diagrammatic representation suggests that, apart from churches and isolated structures, it is a better guide to the location than to the number of buildings. In 1765 Jeffrey shows built-up areas in simple blocks. Only with Reynolds in 1841 are modern cartographic standards achieved.

Early seventeenth century Bedford looks like a shrunken settlement. This assumes that John Speed's map is to be trusted, and that the medieval town form was determined by the pre-existence of a planned late Saxon street grid. On the other hand it is not known whether at any time the street pattern was fully occupied on all its frontages, and archaeological excavation has only started to give limited answers for a few parts of the town, as in Mill Street. Areas with buildings in 1610 are shown black on Figure 7. In the absence of clearly defined defences such as ditch or wall, comment can only be made on obvious gaps in the rectilinear pattern. The site of Bedford Castle, though probably unfortified for three centuries, seems still undeveloped, and little building has yet occurred along Mill Street and St Cuthbert's Street. The churches are foci, yet St Peter's retains a detached position north of the town. Both northern and southern parts of the town contain a clearly defined square, though St Paul's is more a commercial centre than St Mary's. Main routes out of Bedford seem established.

One and a half centuries later, the picture shown in Jeffrey's map is basically unaltered, though slight growth has occurred. The additional built-up areas are shown on figure 7 as cross-hatched, though no attempt has been made to represent the few empty plots which had had dwellings on them in 1610. The expansion is general, but it is largely internal consolidation: insulae within the street grid have been completed, especially west of High Street and north and south of Silver Street, a little ribbon development occurs along the main roads where they enter the street grid. Some small encroachment upon the Castle site has commenced, moving eastwards from the High Street. This general impression of slow growth is also illustrated

by the Brayley map of 1807 (not used in Fig 7) which shows little extra building in forty years.

The improvement of navigation on the Ouse had reached Bedford by 1689.⁶⁵ This encouraged the construction of wharves by the bridge. According to Matthiason, Bedford in the first half of the nineteenth century was exporting wheat, barley, malt and wool, and importing coal, timber, stone and iron by river.⁶⁶

The next forty years marked the commencement of major nineteenth century growth, as illustrated by Reynolds in 1841. His map carefully depicts outbuildings and gardens, showing more exactly than previous cartographers how the town was pushing back into the fields. Like other nineteenth century maps it shows expansion in progress, and some streets appear laid out but not yet bordered with houses. This laying out of whole streets in conjunction with piecemeal filling of new plots shows the new form of mass development. South of the Ouse, the area bounded by the Kingsditch has been largely filled, and the beginnings of ribbon development towards Kempston are evident, together with its consolidation by hinterland development starting at Pilcroft Street. Development to the east of St Mary's and St John's Streets was inhibited by the low-lying ground with its tendency to flood. North of the Ouse, ribbon development has also started along the Kimbolton Road, and along the former Little Goldington Highway (now Newnham Street) as a continuation of Mill Street. The major surge of growth was however to the north-west as far as Union and Priory Streets: the Greyfriars buildings were then on the outskirts of the town though the moated site beyond it was still surrounded by fields. Property boundaries in the new development were more uniform and rational than those in the old town centre. Acts of God, such as the fire of 1802 in St Loyes gave an opportunity for systematic redevelopment of previously built-up areas.

The reasons for this expansion were social, economic and demographic. The population was increasing; a more advanced technology demanded more than market services from a county town, which was rebuilt accordingly. The educational provisions of the Harpur Trust schools were a magnet for the middle classes; constructional materials were plentiful and labour inexpensive. Enclosure took place north of the river in 1797, and in St Mary's in 1799, but does not seem to have greatly influenced urban expansion.

The development of communications between Bedford and the rest of England seems to have occurred in parallel with the expansion of the town, rather than as a direct cause of it. A combination of paths, tracks and roads, variably maintained, would have kept villages in contact with each other and with Bedford as a market town. Bequests in wills commonly provided sums for the maintenance of roads within and outside Bedford.⁶⁷ In the course of the eighteenth century, local turnpike roads confirmed the county town at the centre of a local road network, but neither the main national routes nor the canals came through Bedford.

The medieval stone bridge at Bedford (plate 2a) lost one of its gatehouses in 1765, and was finally replaced by Wing's bridge in 1812-3. This was widened to take two streams of modern vehicles in 1938-40. In 1884 the Prebend Street bridge gave a second road crossing over the river.

Mercer in 1876-8 shows the expansion of Bedford continuing, and the physical signs of industrialisation become apparent. By this date the railways had been built, providing a motive for urban expansion and a determinant of its layout to the south and west, in addition to two further bridges over the Ouse.

The development of railways in Bedfordshire has recently been traced by F.G. Cockman.⁶⁸ Between 1848 and 1872 lines were constructed which came into Bedford from five directions, and branched out to other directions beyond its boundaries. The direct link with London was, in 1868, one of the latest to be made.

All these lines ran outside the historic core of the town. The first station to be built, St Leonard's, later known as St John's, lay outside the Kings Ditch: by the time of its construction in 1846 a commercial centre was already growing up there. The Midland Road station was not built until 1859, and took the railway well to the west of the town centre.

The main results of this transport improvement can be seen to affect the development of Bedford. The existence of tracks provided some limit and dictated layouts in the extensive nineteenth century growth of Bedford; this can be seen especially with Ashburnham Road and with some of the street caught between the two lines entering Bedford from the south. Secondly, the railways provided the means by which people and materials could be brought to and from the town, encouraging settlement, and the import of materials to further dev-

elop the town.

In the triangle between the London, Hitchin and Bletchley lines, the Britannia Iron Works was located, perhaps Bedford's heaviest industry: to the south-west the terraced dwellings of the new class of urban artisan were being constructed, interspersed with branch lines and engine sheds. North of the river, Well Street had been renamed Midland Road to reflect its new, less parochial, status as the avenue to communication with a wider region. Most of the area between it, the river and the railway, was also filling with lower grade terraces. Expansion of the more genteel areas north of the Ouse was proceeding much slower. The ribbon development up Kimbolton Road had proceeded a little further, bringing the Bedford Union Workhouse just into the town. The removal of Grove House and its replacement by large scale speculative development in the 1850s seems to have provided a key for expansion eastwards, reaching just past the Grove in 1876.

The Ordnance Map of 1903 records a massive expansion. The development is again organic in process and speculative in motive, varied in quality and social purpose. The town has begun to reach out to the neighbouring villages: development east of the Amptill Road moves towards Elstow; the junction with Kempston has occurred, though the distance to Goldington has only been half covered. The development of the Queens Park area shows that railway lines can be crossed though they still seem to demarcate town from country in the south. More important determinants of the development pattern are however the new blocks of public open space such as the Park (1888) and Russell Park, providing real physical barriers and defining areas for infilling. The major expansion in the last quarter of the nineteenth century was for the benefit of the middle classes, reflecting the continuing educational importance and attraction for the professional classes of Bedford. Large houses were spreading rapidly in the north-east quadrant between De Parys Avenue and the Ouse, and also between Clapham Road and the railway. A wedge of cheaper terraces lay in between them, Waterloo, on the north bank of the Ouse, was cleared in 1889 and the Embankment gardens were being laid out in the last two decades of the century.

Subsequent development, at first uncontrolled and latterly within the planning acts, has further expanded the town. Two interlinked factors have become crucial in the topography of Bedford and

its area in this century: these are the relationship of the expanding town to its adjacent rural settlements, and its new role as a nodal point in a modern national transport system. These factors have altered and expanded its functions as a town.

The political boundary of the Borough has moved out in advance of development, and the only constraints affecting expansion today are community policy and the meanders of the Ouse. To the east, Goldington became part of Bedford in 1934 and its village green, surrounded by estates, is a suburban introduction to Bedford, beyond the outermost layer of industrial estate, now running well along the road to Great Barford. The Ouse had kept Cardington separate from Bedford, though its western hamlets of Fenlake and Eastcotts are now physically part of the town. Elstow has precariously retained a semi-separate identity, following the inter-war development south towards it from Mile Road. The integration of Kempston is now complete. Biddenham has been drawn towards Bedford by development east of the village centre, and there is pressure for more. Park, playing fields and policy are obstacles to union with Clapham, but the post-war estates at Brickhill and Manton Heights have shown that hillsides are in themselves no obstacles to modern building techniques.

In the last century and a half, Bedford has expanded outwards from its historic core. Its importance as a centre for marketing local produce has increased; as a place of work for commuters living in its rural hinterland, and with the establishment of a national road network, it has also become a town on the way to other towns. Traffic — initially horses and carts, followed by a small number of early automobiles, and later by much larger quantities of double-decker buses, commuting motorists and articulated lorries — have been funnelled into a centre unable to accommodate them effectively, either at rest or in transit. Alternative routes have become more difficult and expensive to construct as the area to be circumvented has increased in size. While ring-roads through countryside and inner relief roads within the urban fabric are being considered as means of improving the traffic flow, many recently constructed residential suburban roads are sharing with the historic streets of the horse age the pressure of heavy through traffic.

This urban expansion and the pressure of traffic have been instrumental in changes of function for the town, and this in turn is reflected in the fabric

of the oldest parts. Department stores and supermarkets have been housed in large scale buildings of modern design in mass produced materials, contrasting with the smaller vernacular buildings of small-scale retail trade which they replaced, particularly along Midland Road. The spread of office use has continued the nineteenth century practice of converting centrally placed residential accommodation to shops or offices, as in St Cuthbert's Street, Cardington Road and Bromham Road. Many new office buildings have been purpose-built, especially in the western half of the southern town, and; like the new shops in the Greyfriars area, have resulted in the redevelopment of whole insulae within the historic town. The functions of traffic interchange and traffic destination have been worked out temporarily or permanently through one-way circulation (around St Paul's Square), street widenings (in progress in St Cuthbert's Street) and street closures (proposals for Silver Street) and by new roads cutting through entire blocks previously covered by buildings: for the latter, the nineteenth century precedent of the Horne Lane diversion into St Paul's Square may be followed by a proposed gyratory system involving Duck Mill Lane. Multi-storey car-parks are also springing up throughout the town to accommodate visiting traffic.

BUILDINGS

The architectural history of Bedford is difficult to write because the fabric visible in 1974 is not representative of Bedford buildings in the previous millenium. It is more a piecemeal collection of survivals selected, until very recently, by forces unconnected with an awareness of architectural history. Even if one adds buildings remembered only through photographs drawings or water-colours,⁶⁹ and those whose plans can be discovered by excavation, the total will still be only a fraction of all that have existed. The gaps in a Bedford-based architectural history cannot be satisfactorily filled from a national account because of regional variations in vernacular building.

Apart from buildings with ecclesiastical functions or associations, no structures are known in 1974 that have definitely survived from earlier than sixteenth or seventeenth centuries. Only excavation can provide ground plan information for earlier buildings, providing later rebuildings and cellars have not destroyed traces. Furthermore, excavations have only been possible through the

largely irrelevant circumstance of demolition and redevelopment. The dating of vernacular building is necessarily imprecise: there are also problems of recognition when datable features are concealed behind wall-coverings, under floorboards and within roofs, or when buildings have been refronted or heightened.

The materials used in Bedford buildings reflect those available in the northern two-thirds of Bedfordshire. Limestone from the north west, higher up the Ouse Valley, is used in major buildings such as the medieval Churches, though Bedford lies at the limits of limestone influence on vernacular buildings. The former Town Bridge was repaired with stone from the demolition of St Peter de Dunstable. There are examples of timber framing with wattle-and-daub infill. Brick is used extensively in post-medieval buildings. Many thatched roofs have gone, replaced by pegged clay tiles, which in some cases have given way to modern concrete interlocking tiles. Pantiles are relatively rare. Slated roofs appear in the nineteenth century, and are also beginning to be replaced by modern synthetic materials. This article will not attempt to describe the wealth and variety of materials available to builders from the post-Georgian period to the present day through improved technical facilities and transport networks.

Figure 8 shows buildings surviving today on a base map of 1841 covering the historic core. The study of pre-1841 buildings is thus based upon a small sample. Many erected between 1841 and 1903 have also been replaced. For reasons mentioned above this map may not be definitive: some nineteenth century buildings can only be dated c.1841, and there has been little opportunity for detailed interior inspections.

Rumour would have the earliest identifiable trace of a building in Bedford as a Roman villa in the vicinity of Castle Lane,⁷⁰ though no evidence has yet been produced. For the moment this distinction belongs to a series of post-holes and slots containing possible middle Saxon pottery, stratified beneath occupation layers associated with Bedford Castle. The partial plan seen could be interpreted as sections of two hall-like buildings, constructed in timber, with a sill-beam interrupted at intervals by vertical posts. Excavations in 1974 at the junction of Kingsway and St John's St and immediately south of Midland Road on the old Bedford Modern School site have produced beam slots and postholes in association with late Saxon pottery. No other early buildings have been posi-

tively identified though it is quite possible that some undated postholes or beam slots from other excavations might belong to this period.

Surviving medieval buildings are stone-built and ecclesiastical or with ecclesiastical associations. Two have Saxo-Norman work. The central tower and chancel of St Peter de Merton were originally the west tower and nave of the Saxon Church, and it has been suggested that St Mary's early Norman walls in part respect Saxon foundations.⁷¹ It is indeed likely that these two Churches, as well as St Paul's and St Cuthbert's, stood on the sites of earlier examples built in the Saxon period. St Paul's must have been rebuilt in the thirteenth century because the previous Church had been demolished just before the Castle siege in 1224⁵⁹; even if this had been a Norman construction, the pre-Conquest canons of St Paul's must have had a Church. Engravings and water colours show that the present St Cuthbert's Church replaced a late medieval building; (plate 7a) this must have been rebuilt after its predecessor had also been dismantled for the sake of the Castle defences. Its position in relation to the suggested late-Saxon street plan may also hint at the existence here of a pre-Conquest building. It should however be noted that neither St Paul's nor pictures of old St Cuthbert's show much evidence of work c.1225.

A number of stone secular buildings must have existed, such as the Old George (though owned by Newnham Priory) and the house near Bedford bridge mentioned at the end of the twelfth century.⁷² In general however, such buildings were unprotected by the continuity of use and ownership enjoyed by churches.

Most archaeological evidence suggests timber-framed houses upon dwarf walls or with posthole construction. The Norman hall of Bedford Castle, with a newel staircase at the north-east corner had main foundations substantial enough for a full two-storey stone superstructure. The castle ditches were stone lined.⁷³ The Town Bridge was built in stone from at least 1184 and had stone buildings upon it. (plate 8a)

There is no trace of monastic buildings which might have been associated with St Paul's before the Conquest, or with St Paul's before the foundation of Newnham Priory in 1166. Both Augustinian houses of Newnham Priory and Cauldwell Priory have gone, though the series of engravings by the Buck brothers in the early eighteenth century show part of the buildings surviving (with Greyfriars erroneously captioned as Newnham).

The Greyfriars, parts of which survived until 1899, can be seen from early photographs and drawings. (W 1,2) St John's Hospital has its chapel surviving as a parish church with parts of the Hospital in the altered and restored building on its south side. St Leonard's Hospital is only known through the picture of a farmhouse said to have been on its site, over which St John's Station was built.

Many medieval towns are noted for the number of Churches they once supported. In Bedford four or five have vanished: St Peter de Dunstable stood opposite St Mary until the livings were combined in the 1540s;⁷⁴ on demolition its Norman south door was moved to St Peter de Merton. Recent service trench excavations located a wall foundation and burials in its churchyard, but did not substantiate the suggestion that its east end had protruded out into the street.⁷⁵ All Hallows (or All Saints) is noted on Speed's Map of 1610, but little more is known about it.⁷⁶ The Newnham Rental refers to a rectory and churchyard for All Saints in 1506-7. The Chapel of Herne, (plate 7b) whose site was in the car park of the new Town Hall, is shown in illustrations as a thirteenth or fourteenth century building. A fourth possibility is a small chapel which may have stood in the later fourteenth century on the site of the modern County Hotel, to the south of, and a rival to, the chapel on the old Town Bridge.^{76d}

An intriguing fragment is the Old George Inn, between High Street and Silver Street, translated by the imaginative C.F. Farrar from a major medieval inn of Bedford probably owned by Newnham Priory, to an alleged 'prioratus' or town house of priors.⁷⁷ Illustrations (W4, 5) show a stone range with an archway through, dating from the fifteenth century. One assumes that the equally intriguing "curious stone house" (W41) at 4/6 Broadway, demolished in 1936, was as in the Gothic revival style rather than in genuine late perpendicular.

Studies in vernacular building have postulated that a great rebuilding took place in much of England during the sixteenth and seventeenth centuries. No doubt most of the buildings Speed saw in 1610 were timber framed and included some medieval survivals. None survives today, and photographs do not provide sufficient evidence for any that have been demolished (W85).

Photographs and other illustrations do however show a number of substantial timber framed buildings which may have been part of this rebuilding. Hawes Farmhouse in Midland Road (W6) had a jettied gable end to a cross-wing. Like Bury Farm-

house (W39) with a double gabled front and the Bull Inn in Silver Street (W49) with a full H plan, these types are today more usually seen in remoter rural positions. The Old Swan Inn (plate 8b) was substantial. Smaller inns are known from photographs, such as the White Horse in Harpur Street (W55) and the original Fountain in St John's Street (W83). The surviving timber framed buildings in present use as Inns include the Ship in St Cuthbert's Street, the Flowerpot in Tavistock Street and the Kings Arms in St Mary's Street. Several timber-framed buildings were given later facades. Demolished examples include the Saracen's Head in St Paul's Square (W34) the Black Swan in Midland Road (W63). There are surviving examples in St Cuthbert's Street. In some cases the alterations have been so extensive that only a few pieces of evidence survived, as in 8 Midland Road (demolished 1974) which had about two-thirds of one elevation surviving in this original constructional method. Surviving buildings of this period are built long-side-on to the street, such as 11 St Peter's Street, (W43) 11 and 13 Cardington Road and Harrison and Gibson's showroom in Castle Lane: the exception is 13 St Peter's Street which presents its gable end, (W43)

The eighteenth and nineteenth centuries bring two new features to a chronicle of local architecture: the names of architects become known; the style is more formal and complex, less vernacular. As transport improves, so a wider range of materials is available. Also, after the early part of the nineteenth century, particularly for the period after Reynold's map, examples of buildings of all types, sizes and functions survive for study in the 1970s. The impermanent hovel or slum, burnt down in such quantity by fires such as that of 1802 in St Loyes, or simply failing to last for many decades, was being replaced in brick.

Brick town houses can be seen south of the river in College House, St Mary's Square, and St Mary's House (15 Cardington Road), representing the early to middle part of the eighteenth century. To these can be added others such as 13 St Cuthberts Street which was refronted in the eighteenth century. 38 Mill Street was built in 1760, and the former Moravian Ladies College (now the Howard Building) in Bedford School dates from 1752.

The neo-classical style of ashlar-faced eighteenth century buildings is represented by two fine examples near the river on its north bank. The former Bedford Grammar School building, now the old

Town Hall, was remodelled from an earlier building in 1767 and extended northwards in similar style in 1861. It shows a compact classical design with pediments and a semi-circular round headed statue niche for a figure of Sir William Harpur. The Swan Hotel, built by Henry Holland for the Duke of Bedford in 1794, has classical proportions, and replaced a timber framed building.

Much non-ecclesiastical early public building was for philanthropic purposes. Most of Wing's House of Industry of 1794-6 survives in the North Wing Hospital. He was also responsible for the earlier elements in the Prison (1801) in Bromham Road. This was the last in a line of County and Town Goals which had been sited variously on the old Town Bridge, at the High Street/Silver Street junction and close to the Wing building. The Town Bridge was also designed by Wing in 1811-13.

Bedford has a number of Gothic revival churches and chapels.⁷⁹ A good example of the relatively rare mid-century Romanesque style is St Cuthbert's Church (1846-7), and of Early English Holy Trinity Church in Bromham Road (1839-40 and 1866). Bedford School Chapel of 1907-8 by G.F. Bodley is in Perpendicular style. Two of the main surviving non-Conformist Chapels are in Mill Street. The Bunyan Meeting House of 1850 replaced an earlier and smaller building on the site, and in style echoed buildings of a hundred and fifty years earlier. The Howard Congregational Chapel was extended and restored by Usher a year earlier: drawings show the front elevation of the earlier version to have had more architectural restraint. St Paul's Methodist Church in Harpur Street (1832) has made way for a Library and Department store; the disused Bromham Road Methodist Chapel is partly visible behind single storey shop fronts.

The larger public buildings of the nineteenth century also show versions of classical, Gothic and Tudor styles. The Lion Hotel in High Street, after its conversion to a furnishing shop retains something of the neo-Classical in the upper two thirds of its facade. Three of the Harpur Trust Schools have these features. The old Bedford Modern School in Harpur Street, by Blore (1831-33) now also reduced to a facade for a supermarket complex, is mostly in the Tudor style, and, by virtue of being set back from the street and having projecting wings, gives a remarkably collegiate evocation in a small town. The Harpur Suite, latterly the Public Library, was built in 1834 in the Greek Doric style. Basil Champneys was responsible for two buildings in variants of a Jacobean style;

these are the Cowper Building in St Paul's Square, the Bedford High School in Bromham Road, and Bedford School itself (1888-9) is in a version of Perpendicular by E.C. Robins. Perhaps one of the more impressive examples of medieval stylistic assimilation in large scale nineteenth century buildings is the Shire Hall in St Paul's Square by Alfred Waterhouse (1879-81).

Later nineteenth century town houses, singly or in terraces, form the majority of visual landmarks in modern Bedford. Large houses of classical flavour were built along the Kimbolton Road in the 1840s. More severely styled mid-century speculative development took place on the Grove House site, around the south side of Goldington Road and into St Cuthbert's Street. Priory Terrace in Bromham Road (recently restored) is perhaps Bedford's largest late-Georgian-type group, and should be considered with slightly later buildings in the nearby Crescent. The neo-Tudor and 'cottage ornée' tradition is represented by a trio of stone houses near the junction of Ashburnham Road and Bromham Road: 122 has a clock tower, and 126/128 have characteristically ornate chimney pots and perpendicular style windows. In The Grove, 2/28 and 13/19 are neo-Tudor terraces of cottages, to be distinguished from the two or three storey buildings of 1840/50 in 52/62 Adelaide Square, in the same style. Victorian villas vary enormously, from John Usher's own house, the highly individual 'Hiawatha' (demolished) (plate 10b) to the more restrained and mass-produced examples in the development areas north-east and north-west of the town centre, and in Cardington Road (plate 10a) (mostly demolished).

At the lower end of the social scale, there are areas of terraced houses built in the nineteenth century, largely to accommodate a growing light industrial population. These can be seen in a ring around the older Town Centre. Architecturally they were deliverately functional, with the only concession to style in the front elevation. Mass-produced applied detail combines with an awareness of traditional elevational proportions in the relationships of windows and doors to produce streets of pleasing buildings in areas such as Commercial Road, Prebend Street and Gwynn Street. Even the humblest terraces, such as Bedeman's Place (demolished 1973) had faint echoes of the neo-Gothic influence in different coloured brick being used for string courses and in pointed headed windows or doors.

Industrial and commercial architecture is not

extensive in Bedford which was never a heavy industrial town. The Britannia Iron Works with its monumental gateway is the most substantial example of solid nineteenth century industrial architecture surviving. There is a malthouse south of St Peter's Street. Bedford Midland Road Station (shortly to be rebuilt) has a cast-iron framework with some pretensions to delicacy. Relatively few examples of mass-produced Victorian shop-fronts survive, such as Lindleys at 45 Midland Road.

This survey of buildings has stopped at about 1900. All that should be said here of succeeding years is that the technical capability to remove existing buildings and replace them with new ones has increased enormously in step with the desire for new buildings. Prior to this century, architects who were working above the vernacular threshold tended to design in the tradition of a master or of a style, which resulted in larger buildings being at worst pale imitations of recognisable genres. Smaller buildings struggled to echo this tradition, and at least usually managed something of it. Many modern buildings are criticised for the lack of basic design quality, an awareness of tradition of stylistic development or of their immediate street environment, and a failure to relate in scale to the people who use them.

EVIDENCE OF MEDIEVAL SOCIAL AND ECONOMIC ACTIVITY FROM RECENT ARCHAEOLOGICAL EXCAVATIONS

From Saxon times onwards, Bedford had a mint and a market. Coins were struck in Bedford for the Saxon kings⁸⁰ certainly from the time of Eadwig (955-959) and probably a little earlier than this, following the dictates of King Athelstan.⁸¹ His decree in 928 stated that every *burh* should have one to eight moneyers according to its importance. Bedford had five moneyers during Eadwig's reign which may be taken as some indication of the commercial activity of the town in the tenth century.⁸² Coins continued to be minted after the Norman conquest though the numbers of moneyers was reduced in Bedford as elsewhere in England.⁸³ As a market centre Bedford no doubt flourished and acted as a clearing house for produce all over the county. Documentary evidence is slight, but although a market in Bedford was not mentioned in the Domesday Survey one almost certainly did exist. Bedford was exempt from geld and tax, and town markets which yielded revenue to the crown were the only ones to be included at Domesday.⁸⁴ Bedford continued

as a trading centre well into Medieval times in spite of the existence of a number of other markets in the county.⁸⁵ A second market was established south of the river following a royal grant made in 1554. The market was held on the site of the church of St Peter de Dunstable, which was pulled down sometime in the 1540s.⁷⁴

It is difficult with the present amount of evidence available to separate subsistence economy from trading in Bedford before the medieval period. However some division can be made between the domestic and more industrial processes that were practised in the twelfth to fourteenth centuries, and most of this information has come from excavations within the town.⁸⁶

Wells were used for a water supply from the early medieval period onwards, and by the seventeenth century it was not uncommon for separate households to have two or three stone-lined wells in their backyards. A number of major wells are mentioned in the 1506-7 Rental.⁸⁶

Although there is only limited evidence to suggest a reconstruction of the houses in the medieval town, it seems likely that they had decorative as well as functional elements. Some houses had tiled roofs and both limestone and clay were used, the latter being glazed on occasion, green or orange-brown. The roof finial from Mill St provides an excellent example. Decorated floor tiles reused as hearth tiles were discovered at 43 Mill Street.⁸⁷

From the small finds recovered, it seems that spinning and weaving were carried out, spindle whorls have been found at Midland Road (Sites 24, 26) with a bone bodkin, and at St Mary's Street (Site 9). Cooking and baking were vital daily activities as a series of bread ovens at St Mary's (Site 9) indicated (plate 6b). Another example was excavated at St John's Street (Site 29) where a small rectangular oven built of limestone was found set into a hearth pit, and the whole structure placed a few feet away from the nearest medieval home.⁸⁸

Hearths and fire-places were likely to have been the focal point in most homes, and pitched-tiled examples have been found in Midland Road. The large number of hearths and ashly layers discovered in the St Mary's Street excavations indicates more than ordinary domestic activity. Here, as on most sites so far investigated slag has been found, as the waste product after iron-working and sometimes from glass. Pieces of furnace material have also been recovered and this would seem to indicate the existence of a number of small iron-workings,

possibly pit-furnaces, in use particularly during the twelfth to thirteenth centuries in Castle Lane, Midland Road, St Mary's and St John's Street. Iron working in a fifteenth century context was discovered during the Mill Street excavation in 1971.⁸⁹ The remains of a probable pit-furnace were excavated at St John's (Site 29) but apart

from this, iron slag has not been associated with any structure, and has usually been found in rubbish pits.

Lime was an important commodity for various purposes in the town, not least of which would have been the making of mortar for bonding stones. Lime was obtained by burning pieces of

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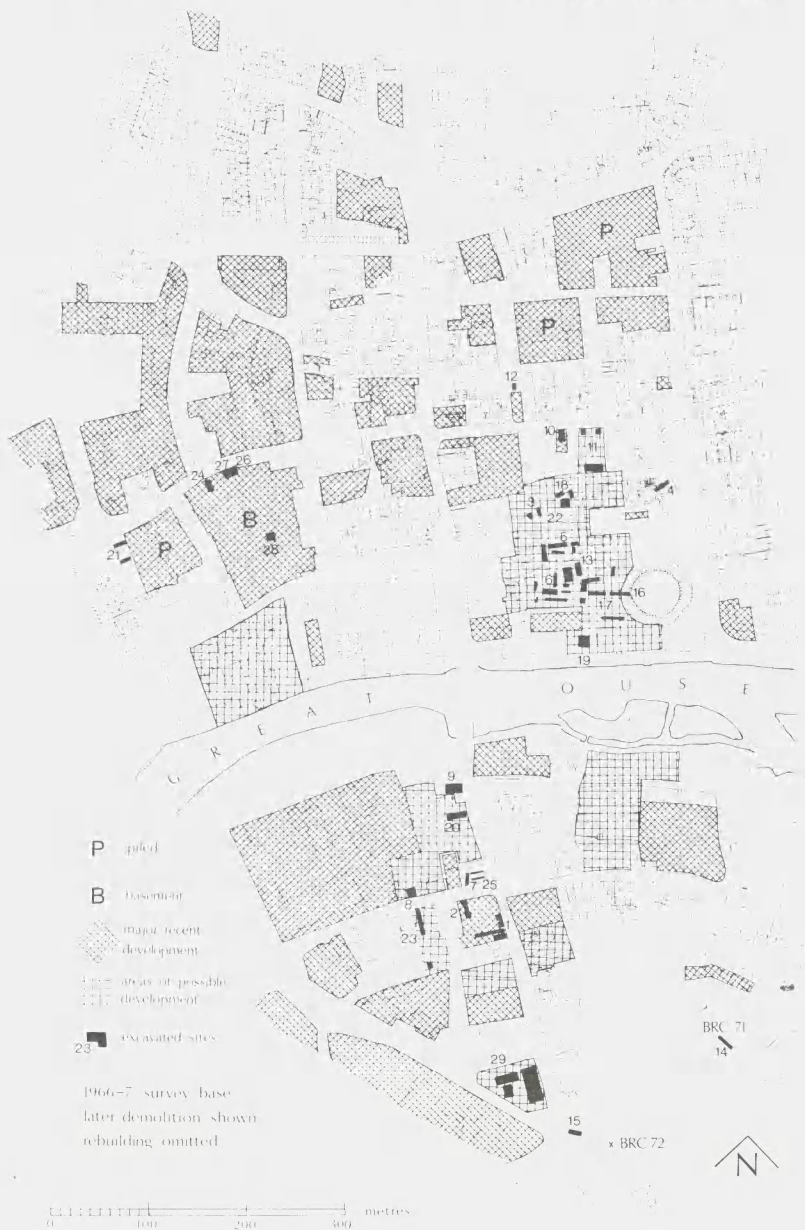


Fig 9 Bedford: Excavation and Development.

limestone with coal and kindling, and a large thirteenth century lime-kiln was built for this function in the outer bailey of the Castle. (in present day Castle Lane, Site 22). Elsewhere, small shallow pits were sometimes dug for lime-burning when only small amounts were required. One or two examples were discovered at St John's. (Site 29).

Pottery of the shell-filled St Neots type was in constant use over several centuries, and is to be found in large quantities on every medieval site in the town. This type of pottery may not have been made in kilns, as it was not fired to a very high temperature, and a bon-fire firing may well have been sufficient.⁹⁰ No traces of bon-fire kilns have been found in Bedford. However, the remains of a later pottery kiln have been uncovered at St John's, where the bottom two to three feet of stone coursing of a circular kiln were found intact, with opposing flue and stoke-holes. From the pottery discovered in the destruction layers above, it would seem that vessels of fifteenth century date were being produced here.

Most of the St Neots type pottery, and indeed most other finds, have come from the numerous rubbish pits. It was part of the social organisation of early medieval times that all detritus, organic and otherwise, but particularly animal bones, was buried in rubbish pits. These were usually dug close to the houses for maximum convenience and when one became full, a new one was dug. Cess pits functioned in exactly the same way and were similarly placed in relation to the houses. There is no archaeological evidence of drains being used until the seventeenth century, when drainage channels were dug and boxed, using flat limestone tiles, as have been found at Midland Rd and St Johns (Sites 26-29).

THE FUTURE OF RESEARCH AND THE FUTURE OF BEDFORD

Further detailed research needs to be carried out into a number of aspects of Bedford's history, though there will always be gaps for lack of evidence. Additionally, advances in the general understanding of town development from other studies may put Bedford evidence in a new light. For example the hypothesis of a rectilinear late Saxon town plan was derived from a study of late Saxon royal policy in relation to other Saxon towns.

A thorough review and collation of all available documents relating to land tenure and transfer

may enable place-names and sites to be identified with more certainty on the ground. The poor survival of Bedford documents will not allow the kind of reconstruction carried out so effectively for medieval Winchester, but the possibilities should be explored. Work for this general study has not included such an exhaustive study.

On the archaeological side, nothing short of total excavation of the town could provide all surviving information. In practice, sites will continue to become available on a largely random basis, and many will have already been destroyed by development of various periods.

Figure 9 shows the location of trenches excavated between 1967 and 1974 (Appendix 1) and the areas which have been developed on a large scale, mostly since 1945, and those areas where development within the next decade seems likely. The unevenness of excavation opportunities as a distribution over the historic core of Bedford will be immediately apparent, though the investigation of Bedford Castle was a deliberate matter of policy. It is clearly desirable to excavate scientifically in every part of the town shown occupied on the Speed map of 1610. Seven years excavation has shown that the detailed excavation of single street frontage plots can have limited value: safety considerations prevent the full excavation of plot-width and investigations are particularly vulnerable to crucial disturbance by post-medieval cellaring. It may be that excavation in areas which have already been sampled should be confined in future (or at least as long as scarce resources require the establishment of priorities) to sites with features known to be of interest, or to sites sufficiently large to give more than a keyhole view. The 1974 excavations graphically demonstrated this: two small sites in Midland Road produced tantalising glimpses of late Saxon or early Norman timber structures while a large area excavated on the Kingsway/St John's Site allowed the definition of more than one late Saxon timber building. Yet single plot excavation at 43 Mill Street produced remarkable finds.⁹¹

As Figure 9 indicates, much ground is closed to investigation, either in the foreseeable future because of recent development, or because development is known to have involved construction of deep basements. In compiling this information we have become acutely aware of the difficulties involved in accurately assessing the destructiveness of recent development when compiling 'implications' reports. Only a large basement, such as

that for the new Harpur Centre, is totally and finally destructive. Yet while a multi-storey car park constructed on piles, such as that in Lurke St may seem much less destructive, the regular grid of square holes can destroy innumerable essential archaeological features and relationships, and seriously hamper a full future investigation. Major post-war (and some larger pre-war) developments are indicated in diagonal cross-hatching, but only in a few cases can the exact extent of ground disturbance be readily assessed. The indicated areas should not therefore be equated with areas of total archaeological destruction. Some of the damage might be assessed through a detailed basements survey, but this would probably not reveal most cellars and basements belonging to earlier buildings formerly on the site, and equally destructive of evidence.

The squared cross-hatching shows those areas where major development is anticipated in the near future. Within these, most archaeological work has been concentrated recently, but programmes are hard to predict: economic squalls may delay or modify programmes; land may be purchased by a company with the intention of immediate work but not in fact be disturbed for several years. Some composite sites may be assembled for demolition and rebuilding with amazing speed; others, like the Bedford Castle area may become enmeshed within a tangle of priorities that have to be settled before anything happens beyond site clearance.

Armed with growing information from the detailed study of documentary sources mentioned above, and with further excavation it will be possible to make a more thorough topographical survey. In particular it will be desirable to seek explanations for any subtle changes of ground level in the town. Some of these may relate to the terracing of the Ouse valley, but others may indicate limits of settlement or former banks and ditches, especially relating to the medieval period and earlier, where our knowledge is so scanty.

The more important earlier secular historic buildings in Bedford have been demolished; many others have been extensively altered or mutilated. By no means has this been an exclusively post-war phenomenon as the demolition dates shown on Figure 6 indicate, though the pace has quickened since 1945. A significant number of surviving important buildings appear to be likely candidates for demolition in the near or medium future. In this event, the archaeological research programme must include the full recording of the standing

buildings.

In summary, the archaeological research programme should be guided by the following aims:

- 1 Through the sample excavations throughout the historic core, the establishment of the location and chronology of settlement for the period up to 1610.
- 2 The excavation of sites of known importance, such as the Castle, demolished churches, former bridges etc.
- 3 The investigation of possible defensive features.
- 4 The investigation on a large scale of any large areas likely to give information at one time on several adjacent tenements.
- 5 Recording of threatened historic buildings.

The changes which may give the opportunity for the archaeological examination of sites before the destruction of their evidence will be part of the larger process of Bedford's urban evolution.

The town has grown from a defended river crossing to a medieval market centre and county town: today the needs which shaped it have been joined or supplanted by others, and all do not necessarily need an urban framework to function satisfactorily. Bedford has shown a healthy respect for its past by supporting the rescue excavation programme, but for the future, like most other ancient British towns, it has not yet clearly decided how it wants to use its historic centre.

ACKNOWLEDGEMENTS

Our debts to former and present students of Bedford history are numerous, and we hope we have acknowledged them directly or indirectly in text or footnote. The County Archivist, Miss Patricia Bell, and Mr Alan Cirket of the Bedfordshire County Record Office have been a constant source of reference and made many useful comments on drafts of this article. Mr Richard Wildman helpfully commented on the section on buildings. The sole responsibility for remaining errors and omissions is that of the writers, and not of their employing Authorities.

APPENDIX I

Excavated Sites in Bedford (Figure 9)

No.	Date	Location	Publication
1	1967	7-11 St John's St	<i>Beds Arch J 5</i> , 1970, 67-100
2	1967	8-10 Caldwell St	<i>Beds Arch J 5</i> , 1970 67-100
3	1969	Rose Yard: Warehouse	

18	17th or 18th
24	17th or 18th
26	18th or e. 19th
34 (St John's House)	13th and later
St John's Church	13th and later
ST LOYES	
6-8	18th or e. 19th
ST MARY'S STREET	
St. Mary's Church	11th and later
24 (Kings Arms)	17th or 18th
31 (College House)	18th
ST PAUL'S SQUARE	
St Paul's Church	14th and later
1-3	16th or 17th
8	18th
Town Hall	16th, 18th and later
ST PETER'S STREET	
St Peter de Merton	11th and later
18-20	17th and 18th
22	18th
24, 26	c. 1750
Howard Building	18th
36-38	e. 19th
11-13	16th or 17th
21-27	17th or 18th
SILVER STREET	
7-11	17th or 18th
Rear of 14 (Debenhams)	15th and later
TAVISTOCK STREET	
25 (Flowerpot)	16th or 17th
51a-61	e. 19th
63-65	e. 19th
64-70	e. 19th
74-80	e. 19th

Dates can only be approximate: many have been taken from the Department of the Environment List of Buildings of Special Architectural or Historic Interest for the former Borough of Bedford.

Not all buildings can be confidently related from present structures or maps to the 1841 survey.

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- 9 Figure 1: these maps have been drawn up from information stored in the Bedfordshire County

Council Planning Department Sites and Monuments Record (SMR) and from Bedford Museum (Mus. Acc.)

- 10 A flint arrow head was found in Mill Street. Mus. Acc. 2632.

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- 38 SMR 1325: Note reported by North Beds Arch Soc.

- 39 SMR 251: Note reported by F.W. Kuhlicke.

- 40 *The Lock Gate*, II, April 1964, 168-171: Romano-British in the Upper Ouse Valley.

- 41 J. Hales-Tookey, 'Water and Corn', *Beds Mag* 7 19 127-9.

- 42 D. Summers, *The Great Ouse*, 1973, 9-24.

- 43 D.H. Hill, 1970 The tradition that Offa of Mercia (d 796) was buried at Bedford might imply the

- existence of a respectable settlement in the 8th century. We have not compiled a distribution map of Saxon or medieval finds from Bedford, since nearly all material other than that recovered from the excavations listed in Appendix I is unprovenanced.
- 44 M. Biddle and D.H. Hill, 1971.
 - 45 F.M. Stenton, *Anglo-Saxon England*, 1971, 260.
 - 46 D.H. Hill, The Burghal Hidage, *Med Arch* 13, 1969, 84-92.
 - 47 *Beds Arch J* 5 1970 98.
 - 48 This was quite a common feature in the towns of the Burghal Hidage. A good extant example can be seen at Wareham, Dorset.
 - 49 Information from Mr G. Gilmore on the situation and history of the Saffron Ditch, with thanks for his assistance.
 - 50 Mawer and Stenton, 1926.
 - 51 *Beds Hist Rec Soc* II Survey of Ancient Buildings, 5.
 - 52 The Viatores, 1964 255-7 for an interpretation of this feature as a 'Roman ditch'.
 - 53 D. Whitelock, 1965, 64. In the year 915 Edward the Elder came to Bedford. "And he stayed there four weeks and before he went away ordered the borough on the south side of the river to be built."
 - 54 R.D. Carr and D.H. Hill, 'Excavations at Christchurch,' *Proc Hants Field Club*, forthcoming.
 - 55 C.F. Farrar, *Ouse's Silent Tide*, 1926 republished 1970, 220 for a note on the width of the ditch in the fourteenth century.
 - 56 The location of the open fields around Bedford was shown (on a post-enclosure map base) by W.N. Henman on a fold-out map to illustrate his 'Newnham Priory: A Bedford Rental 1506-7' *Beds Hist Rec Soc* 25, 1945, 15-73.
 - 57 Henman, 1945.
 - 58 Godber, 1969, 117-119.
 - 59 David Baker, 'Bedford Castle: some preliminary results from rescue excavations,' *Chateau Gaillard* VI 1972 15-22. David and Evelyn Baker, Excavations at Bedford Castle 1969-72, *Beds Arch J*, forthcoming.
 - 60 There is a small bend in Castle Lane about 30 feet from High Street: this may be significant. References to footings of about 3 feet in width found when cottages were demolished sound too insubstantial for a main gate.
 - 61 Henman, 1945, 25.
 - 62 Information from Mr G. Gilmore. Miss P. Bell has shown us deeds of 1800 illustrated with a sketch of property boundaries including the northern Castle ditch (Beds C.R.O. document, (R4/534/13). P. Liddle (ed) 1973.
 - 63 Henman, 1945, but see his map.
 - 64 T.S. Willan, 'The Navigation of the Ouse between St. Ives and Bedford in the seventeenth century,' *Beds Hist Rec Soc*, 24, 1946.
 - 65 J.H. Matthiason, *Bedford and its Environs* . . . 1831, 172.
 - 66 Godber 1969 168.
 - 67 *Beds Hist Rec Soc*, 53, 1974.
 - 68 The County Record Office has an extensive collection.
 - 69 SMR 285.
 - 70 Smith 1966.
 - 71 Godber 1969, 54.
 - 72 Baker 1972.
 - 73 J. Fines, *Beds Hist Rec Soc* 36, 1956 12-19.
 - 74 T.A. Blyth, *History of Bedford*, 1868, 186.
 - 75 F.W. Kuhlicke, *Beds Mag* 14, 144.
 - 76 Information kindly supplied on S bank chapel by Mr R. Gilmore.
 - 76a Henman 1945, 19.
 - 77 C.F. Farrar, *Old Bedford*, 1926 reprinted 1970 98.
 - 78 N. Pevsner, *The Buildings of England. Bedfordshire and Huntingdonshire* 1968, 49-50, and generally for the major buildings of Bedford discussed here.
 - 79 Godber, 1969, 13.
 - 80 *V.C.H. Beds*, III, 2.
 - 81 F.W. Kuhlicke, 'The Bedford Mint,' *Beds Mag* 13, 1972, 167-171.
 - 82 Godber, 1969, 52.
 - 83 G.H. Fowler, Bedfordshire in 1086, *Beds Hist Rec Soc* 1, 1922, 72.
 - 84 Godber, 1969, 50.
 - 85 For a general background see *V.C.H. Beds*, II, 73-110.
 - 86 G.C. Dunning in David Baker, 'Excavations in the Area of Mill Street Bedford, 1971,' *Beds Arch J* 9, 1974, 112-122.
 - 87 Godber, 1969, 69. This gives a parallel for having an oven outside in the courtyard, in a thirteenth century context, at Elstow.
 - 88 Baker, 'Mill Street', *Beds Arch J* 9, 1974, 99-128.
 - 89 J.G. Hurst, 'Saxo-Norman Pottery in East Anglia,' *Proc Camb Ant Soc* 49, 1956, 43-70.
 - 90 Baker, 'Mill Street'.
 - 91

The Bedfordshire Archaeological Council is indebted to Bedford Museum and the Department of the Environment for grants towards the costs of the publication of this paper.

The Earliest Work in the Church of St Mary, Bedford

TERENCE PAUL SMITH

SUMMARY

The earliest work in St Mary's Church, Bedford, it is argued, is of the so-called 'Saxo-Norman Overlap' period. This has been argued before on the basis of architectural features in the south transept; but features not hitherto recorded suggest a similar date for the central tower. The plan of the church lends support to this interpretation, and also indicates a subsequent slight alteration of the axis of the church.

Late Saxon Bedford was a 'double burh' of a type found elsewhere in England, for example at Buckingham, Hertford, Nottingham, and Stamford.¹ To the north of the River Great Ouse was the 'original "burgh" where the ealdorman had his dwelling.² Of the several churches only St Peter's shows Saxon work,³ and this was possibly sited so that its tower formed a defensive tower to one side of the north gate into the northern burh.⁴ South of the river was a further burh, D-shaped and defined by the river itself to the north and by the artificial watercourse known as the King's Ditch on the other sides.⁵ 'The main purpose of the southern work,' it has been argued, 'was to provide a bridgehead or flank work to a fortified bridge blocking the Ouse at this point to Danish attacks from Huntingdon or Cambridge.'⁶ Bedford had been somewhat vulnerably situated on the Danelaw boundary since the time of Alfred's *Frith* with Guthrum the Dane.⁷

It is within the southern burh that St Mary's Church stands, near to the river and beside the principal north-south thoroughfare which runs from the site of the south gate of the burh to the bridge across the Ouse; the church stands at NGR TL051494. Its earliest work is, as I shall attempt to show in this short paper, of immediately post-conquest date and still largely within the Anglo-Saxon building tradition; that is to say, it belongs to that period of church building which is often designated the 'Saxo-Norman Overlap', a convenient if somewhat barbarous term.⁸

The church was not suspected of containing any Anglo-Saxon work until 1959, in which year the state of the fabric necessitated repairs to the building.⁹ Some time before this, however, the *Victoria County History* had conjectured, on the basis of the irregularity in plan of the Norman and subsequent building, that the Norman work 'early as it is, is not the first on the site, and that the tower is probably set over the lines of an earlier chancel.'¹⁰ Certainly the Anglo-Saxons often set out buildings without much concern for accuracy; this is well seen in the church of St Mary at Chickney, Essex,¹¹ or at the west end of St Mary's Church, Northchurch, Herts.¹² But later medieval builders could sometimes be equally inaccurate, and it would be temerarious to conclude *from this irregularity alone* (fig 1) that the present church is set out over Anglo-Saxon foundations.

Further light was shed on this problem as a result of the 1959 repairs. When the blocking of an early Norman window in the east wall of the south transept was removed it was found to have been cut through another window, which must therefore be of earlier date. This window is single-splayed without rebates; at the exterior wall-face it measures 51cm (20in) wide by 1.7m (5ft 6in) tall, and internally 0.8m (2ft 6in) wide by 1.9m (6ft) tall. The sill is horizontal and is some 4m (13ft) above the present floor. At the exterior wall-face the window has side-alternate jambs, although the stones are not through-stones. The voussoirs of the semi-circular head, both internally and externally, are neatly cut and radially-set.

In the west wall of the same transept (fig 1) a further window was revealed, above the later arch leading to the south aisle. Its features and dimensions are exactly similar to those of the east-wall window. Both windows are on the same axis through the transept.

The east wall of the transept is some 0.9m (3ft) thick; the west and south walls are a little thinner, but it seems likely that these have been cut-back a little internally at some time, their original thickness probably being reflected in the square

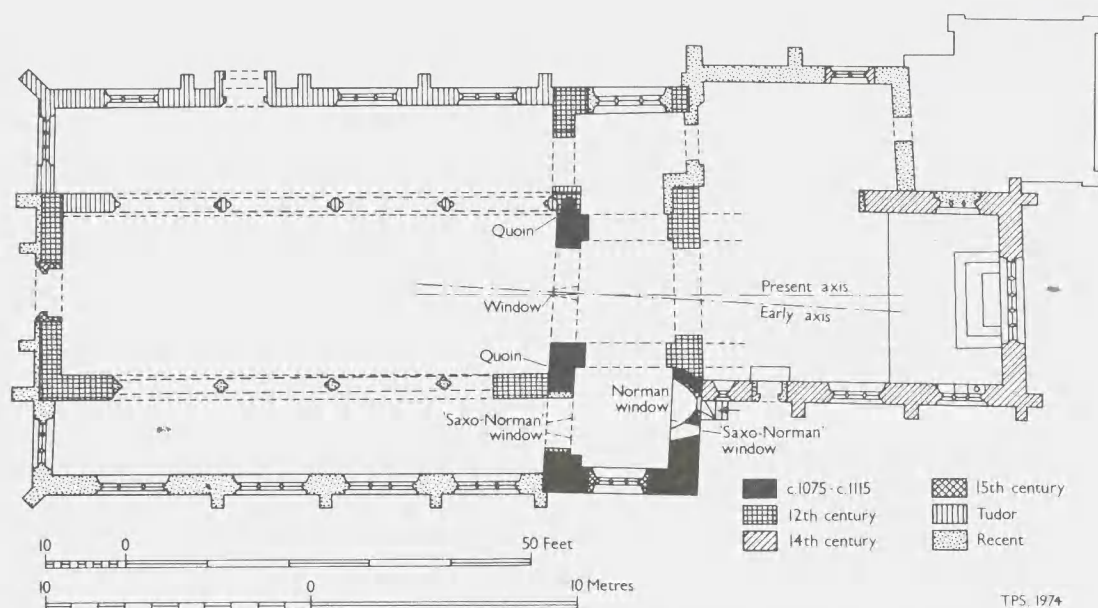


Fig 1 The Church of St Mary, Bedford, showing phases of building and realignment of the axis.

projection in the south-west angle (fig 1). The walling is of random rubble, and there are side-alternate quoins of small stones to the south-east angle. In the south wall there is a considerable amount of herring-bone masonry.

Plaster has been removed from the west face of the west wall of the central tower, between the top of the Victorian crossing-arch and the present roof. This wall is also of rubble, and contains features relevant to a discussion of the earliest work in the church. At the north and south ends of this wall, starting at a point about 7m (20ft) above the present floor, are the remains of former quoins of the tower. The straight edge formed by the northern quoin of this pair is about 15cm (6in) from the junction of this wall and the respond of the north arcade of the nave; the southern quoin, which has a less well-defined straight edge, is about 25cm (10in) from the junction of the wall and the south arcade of the nave (fig 1). Both these quoins are of large stones laid apparently in side-alternate manner, the largest stone measuring about 76 by 23 by 23cm (30 by 9 by 9in).

Midway between these quoins in the west wall of the tower is a small window opening, single-played and without rebates. In the west face of the wall the window measure 0.3m (1ft) wide by 0.8m (2½ft) tall to the top of the head; it is played towards the east. The sill is horizontal and is of stones undifferentiated from those of the general fabric, whilst the jambs are each of three

medium-sized stones (the largest about 30 by 23cm; 12 by 9in). The window has a semi-circular arch-head cut from the underside of a lintel-stone.

The width of the tower defined by the quoins is 6m (19ft), which is the width of the tower above roof-level externally. Clearly, as will be mentioned again later, the transepts on either side of the tower have been heightened at some period by building-up the flanking walls so that they abutted against the earlier quoins. The top stage of the tower had 'two or perhaps three small plain round-headed windows on each face'.¹³ These windows, which at some period have been blocked or in the case of the middle windows, if such there were, replaced by a two-light fifteenth-century window, were clearly of a very simple type and contrast markedly with the third-stage window of each face. These latter windows are of Norman type, with central shafts and responds all carrying cushion-capitals and with the two round-headed lights enclosed within a larger round-headed arch. There is thus good reason to suspect that the top-stage windows are in reality the belfry openings of an original Anglo-Saxon tower, and that the whole of the tower is therefore of Anglo-Saxon date in its general fabric, a point missed both by the Taylors¹⁴ and by myself,¹⁵ but noted by F.W. Kuhlicke.¹⁶

The date of the early building to which the described features belong must now be discussed. The side-alternate quoin of the south transept

suggests a date in the Anglo-Saxon period, although it *could* belong to a later (Norman) context. Of rather better diagnostic value are the large-stone quoins (probably side-alternate) which remain in the west wall of the tower below roof-level, for the use of such large stones does seem to be a characteristic of the Anglo-Saxon builders.¹⁷ Single-played windows occur in both the Anglo-Saxon and Norman periods,¹⁸ although the Norman examples generally show a rebate at the external wall-face; the absence of such rebates both in the transept windows and in the small window in the tower at St Mary's is amongst the strongest evidence for Anglo-Saxon workmanship. It is impossible to know whether the windows in the top stage of the tower were of similar type. Further evidence for an Anglo-Saxon date for the church is provided by the treatment of the arch-head of the tower window: such arch-heads, cut from a single stone, occur in a number of Anglo-Saxon buildings throughout the Christian period, for example at Great Hale, Lincs.¹⁹ and at St Peter-at-Gowts in Lincoln,²⁰ although they are not wholly unknown in Norman contexts, and occur, for example, in the Norman keep at Castle Rising, Norfolk.²¹

The herring-bone masonry in the south wall of the transept is, as some writers still fail to notice, no guide at all; herring-bone masonry was used from the Roman Occupation onwards and throughout the medieval period.²²

Far from being an indication of Anglo-Saxon workmanship, the neatly cut and radially-set voussoirs of the arch-heads of the transept windows point to the hand of a Norman master; on the other hand, the fact that one of these windows was later cut through by a window which is itself of early Norman date makes it abundantly clear that the more recently discovered windows are *extremely early* post-conquest work. The wall thickness of some 0.9m (3ft) also suggests a movement away from strictly Anglo-Saxon methods.

The mixture of Anglo-Saxon and Norman characteristics in the earliest work in St Mary's suggests a date in the so-called 'Saxo-Norman Overlap', that is the period of English building which lasted from c.1075 to c.1115 when Anglo-Saxon building traditions were still strong in the country and were not yet wholly displaced by the more cosmopolitan forms of Romanesque introduced, at first only in the major buildings, at the time of the Norman Conquest.²³ This interpretation of the evidence was suggested by H.M. and Joan Taylor²⁴

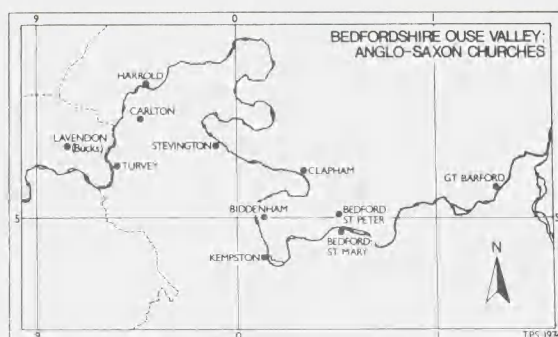


Fig 2 Anglo-Saxon Churches in the River Great Ouse valley.

and by myself,²⁵ and is further confirmed by the additional work described in the present paper.

In discussing the plan of Saxon St Mary's the *Victoria County History* conjectured that the central tower 'is probably set out over the lines of an earlier chancel'.²⁶ This was a reasonable suggestion at the time but is not confirmed by the more recent discoveries. The quoins in the west wall of the tower, and possibly the windows in its top stage, indicate that there was a central tower here from an early period. The alignment of the west wall of the tower is the same as that of the west and east walls of the south transept whilst the south wall of the transept is approximately at right-angles to this alignment. Because of this, and because of the general similarity in construction between the west wall of the tower and the east and south walls of the transept, it is safe to assume that all these walls — west wall of tower and east, and south walls of south transept — belong to one build; it is in just these walls that the surviving 'Saxo-Norman' features are found. All the other walls — in which no 'Saxo-Norman' features are found — are set out on a different alignment. It seems certain, therefore, that the irregularity of plan at St Mary's is due to a shift of the axis at the time of the building of the post-'Saxo-Norman' church. At some time too the transepts have been heightened, as mentioned above (*supra*, p. 95), perhaps as early as the Norman building period.

The earliest church at St Mary's seems, then, to have consisted of a narrow central tower with a south transept — or perhaps a *porticus* as Kuhlcke has suggested²⁷ — of equal width to the tower. Presumably there was a similar north transept or *porticus*. Further, one may safely assume a chancel to the east and a nave to the west of the tower, probably on the earlier axis. These may have been equal in width to the tower, or, like

their Norman successors, of greater width (fig 1). In either case, the church was clearly of a centrally-planned type.

St Mary's, Bedford is one of a number of towered churches along the Great Ouse from Bedford westwards. This distribution was pointed out in an earlier paper,²⁸ and has since been confirmed by the discovery of further Anglo-Saxon churches by Hare. This marked distribution is no doubt due to the availability of inferior oolite in the region (fig 2).²⁹

NOTES

- 1 D. Hill, 'Late Saxon Bedford', *Beds Arch J* 5, 1970, 97.
- 2 F.W. Kuhlicke, Introduction to new edition of C.F. Farrar, *Old Bedford*, 1970, ix-x.
- 3 H.M. and J. Taylor, *Anglo-Saxon Architecture*, 1965, 58; T.P. Smith, 'The Anglo-Saxon Churches of Bedfordshire', *Beds Arch J*, 3, 1966, 9-11.
- 4 Hill, 1970, 98.
- 5 F.W. Kuhlicke, 'The First Bedford', in *Bedford: A Survey*, 1950, 3-7; cf. Hill, 1970, 97.
- 6 Hill, 1970, 97.
- 7 Of 878; see, for a translation of the relevant document, D. Whitelock, *English Historical Documents*, 1, 1955, 380; for the Danelaw Boundary in Bedfordshire see J.F. Dyer, 'Danish Earthworks', *Beds Magazine*, 8, 1962, 235-40; cf. Smith, 1966, fig 1, p.7.
- 8 This term is further explicated below, p. 97.
- 9 *Bedfordshire Times*, 6 February 1959; work was carried out by Major John Gedge: see F.W. Kuhlicke, 'A Twelfth Century Carved Head from St Mary's Church, Bedford', *Beds Arch J*, 7, 1972, 85-6; this paper reports on a carved head found during the 1959 work and dated by Prof. E.P. Lasko and Prof. G. Zarnecki to the second half of the twelfth century, possibly to c. 1160; the head is interesting for showing the late survival of distinctly Anglo-Saxon traits.
- 10 *Victoria County History of Bedfordshire*, 3, 1912, 27.
- 11 Taylor and Taylor, 1965, 156-7; also A.W. Clapham *English Romanesque Architecture before the Conquest*, 1930, fig 34, p 105.
- 12 Taylor and Taylor, 1965, 462-3; also T.P. Smith, *The Anglo-Saxon Churches of Hertfordshire*, Herts Local History Council Occasional Paper no. 3, 1973, 17-19.
- 13 *VCH Beds.*, 3, 28.
- 14 Taylor and Taylor, 1965, 58.
- 15 Smith, 1966, 9-11.
- 16 Kuhlicke, 1970, x.
- 17 Taylor and Taylor, 1965, 7; cf., for another post-

conquest but Anglo-Saxon building with large-stone quoins: T.P. Smith, 'The Church of St Peter, Canterbury', with an Appendix by S.E. Rigold, *Arch Cant*, 85, 1971, 99-108.

- 18 Taylor and Taylor, 1965, 9; for brief discussion of post-conquest examples see A.W. Clapham, *English Romanesque Architecture after the Conquest*, 1934, 67-8; cf. also Smith, 1971, 105.
- 19 Taylor and Taylor, 1965, 276-8; A.E. Fisher, *The Greater Anglo-Saxon Churches: an Architectural-Historical Study*, 1962, 277-80.
- 20 Taylor and Taylor, 1965, 394-8; Fisher, 1962, 286-8.
- 21 Personal observation.
- 22 Taylor and Taylor, 1965, 12-13; cf. their discussion of Diddlebury Church, Salop., 211-14.
- 23 Cf. Smith, 1971, 99; I am grateful to Mr S.E. Rigold for his thoughts on this topic. The term 'Saxo-Norman' does not appeal to him!
- 24 Taylor and Taylor, 1965, 58.
- 25 Smith, 1966, 9. The absence of through-stones does not militate against the dating here suggested in an area in which the natural stone to use (and which was used) was the inferior oolite obtainable from the Ouse valley; related considerations apply in, for example, parts of Kent: see Smith, 1971, 105.
- 26 *VCH Beds*, 3, 27.
- 27 Kuhlicke, 1970, x.
- 28 Smith, 1966, 8 and fig 2.
- 29 M. Hare, 'Anglo-Saxon Work at Carlton and Other Bedfordshire Churches', *Beds Arch J*, 6, 1971, 33-40; this ref. to 39: 'Smith noted that the Anglo-Saxon churches of Bedfordshire were grouped "close to each other and along the Ouse valley west of Bedford" . . . This pattern is now quite unmistakeable, for Carlton, Kempston, Harrold and Biddenham are close to the River Ouse, while Riseley and Shelton are in the same part of the county, though not in the Ouse valley itself.' Hare is quite right to take me to task for explaining this distribution by reference to the transport of building limestone along the Ouse valley from the Northamptonshire Uplands (Smith, 1966, 8; Hare, 1971, 39). He rightly connects the distribution with the occurrence in north-west Bedfordshire itself of inferior oolite (39). Hare (38-9) dismisses Pevsner's claim that All Saint's Church, Great Barford has Anglo-Saxon (he actually says 'Anglo-Danish') quoins: N. Pevsner, *Bedfordshire and the County of Huntingdon and Peterborough*, Buildings of England series, 1968, 94. I should myself be inclined to include Great Barford amongst Bedfordshire's Saxon churches and may one day argue the case in a note; in the meantime I include it on my fig 2. (This paper completed July 1974).

The Bedfordshire Archaeological Council is indebted to Bedford Museum for a grant towards the costs of the publication of this paper.

Excavations in the area of Mill Street, Bedford, 1971

DAVID BAKER with G.C. DUNNING and ELIZABETH S. EAMES

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SUMMARY

Rescue excavations in 1971 on four sites fronting medieval streets in the north-east part of Bedford showed no positive evidence of structures before the late medieval period, though Saxo-Norman pottery was found. At 43 Mill Street, three or more buildings had occupied the site from the fifteenth century. Footings for a post-medieval cottage were found in the south of the former Litson's Timber Yard, sealed in the nineteenth century by the dumping of earth from the adjacent Bunyan Meeting House basement. Notable finds from 43 Mill Street included 14th century floor tiles with line figures, a fifteenth century knight-on-horseback roof finial which is discussed in relation to other finds of this type, an early medieval lamp bowl, and a group of fifteenth century pottery containing both local and non-local wares.

INTRODUCTION

The rescue operations reported here are part of a series on sites within the historic core of Bedford. In 1971, four sites were excavated in or near Mill Street, formerly School Lane, in the eastern half of the town to the north of the Ouse. They were part of a larger series of investigations in Bedford between June and September of that year, sponsored by the Department of the Environment, the former Borough and County of Bedford, and the Bedford Archaeological Society.

I am most grateful to all those who took part and who gave permission for work on their land. The site at 43 Mill Street was excavated and recorded in June and July by Geoffrey Summers, assisted by Susan Linger and Katherine Nichols, and by kind permission of H.F. and R.G. Gale (Investments) Ltd., who made a donation towards excavation costs. The other sites, part of the main

summer session, were supervised by Susan Linger, Katherine Nichols, Anthony Couchman and William Annan. Permission to excavate on the former Litson's Timber Yard was kindly given by The Trustees of the Bunyan Meeting and Headway Construction Co. Ltd., and in Howard Street by the Borough of Bedford.

The specialists contributing to this report are acknowledged with their sections. Corinne Renow and Peter Woodward drew the small finds, and Evelyn Baker drew the tiles. Jane Hassall discussed the pottery and a draft of this paper.

Routine rescue excavations such as these, on medieval (or earlier) street frontage sites, are a continuation of the process of site-watching undertaken by F.W. Kuhlicke in his years of responsibility at Bedford Museum. The small contribution which these excavations have made towards the history of Bedford, as well as their discovery of important late-medieval pottery, roof and floor decorations, is presented as a tribute on the occasion of his retirement and 80th birthday.

The material, marked with the under-mentioned site codes, has been deposited in Bedford Museum, together with copies of the notebooks. Another copy of the notes has been placed in the Bedfordshire County Record Office.

THE EXCAVATIONS (FIG 1)

43 MILL STREET (BMS 71 TRENCH 19:FIG 2)

The main trench was as wide across the frontage of the plot as safety and access allowed. Several southward extensions gave an irregular rectangle having dimensions of about 7.40m by 5.20m with an extension 2.40m by 1.20m on the south-west side. Mechanical plant removed the compacted demolition layers and latest concrete floors. The trench was not totally excavated to natural sub-soil throughout, due to problems

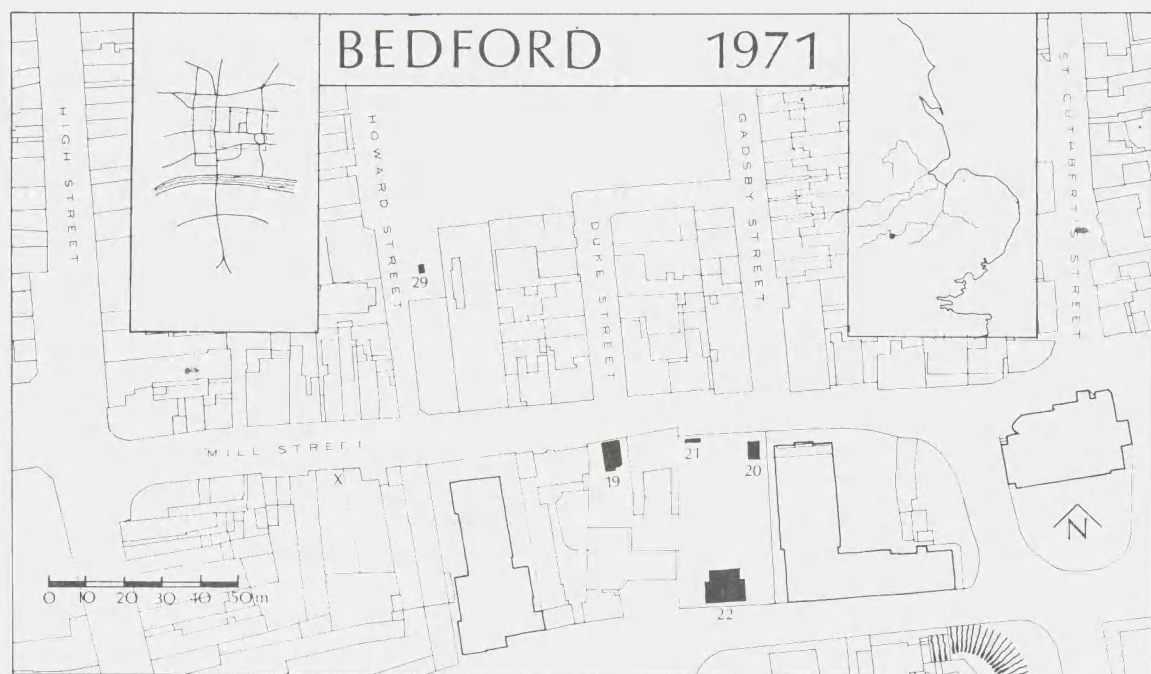


Fig 1 Location plan: Bedford Mill Street area with insets of Eastern England and Bedford town

of safety and the retention of some wall footings. Though back-filled in summer 1971, this site was not finally re-developed until 1974.

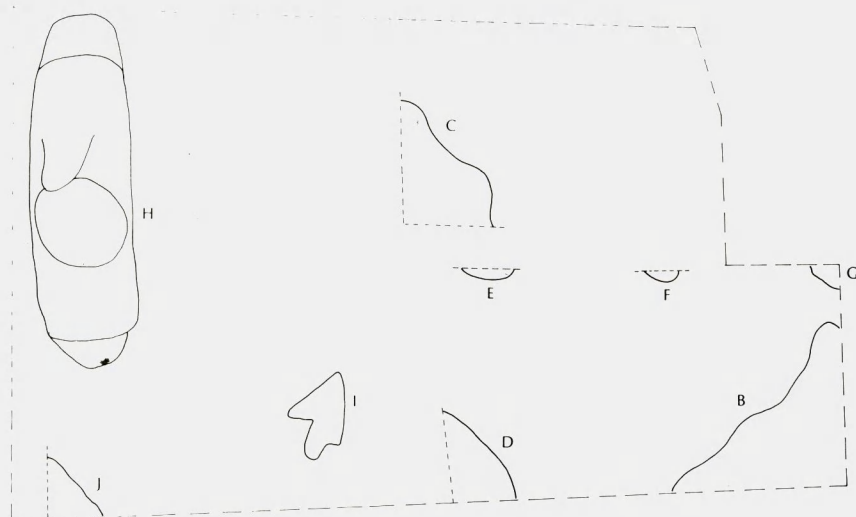
Natural sub-soil, dirty river gravels with some sand, was encountered at about 2.5m below pavement level at the north of the site. It sloped downwards to the south, and in the south end of the trench was partially below water table. Where not cut by pits, it was overlaid with black sticky marsh-like material (layer 61) through which the water table must have regularly risen. The upper part of this (layer 59) was more humus-like and less sticky, perhaps representing an early turf or silt line. Pottery of thirteenth century date was found in it, probably deposited as occasional rubbish rather than as occupation material. There are traditions of a stream running parallel with and south of Mill Street: the slope of natural sub-soil and the silty material may be evidence for it though unevenness in the valley-side terracing is as likely an explanation.

At least 9 pits cut into natural sub-soil through the silty layer, but sealed by later occupation layers, were partly or completely excavated. Their distribution over the trench leaves little room for buildings contemporary with them. Only 2 pits, 43 – D, 57 – H, contained significant deposits of

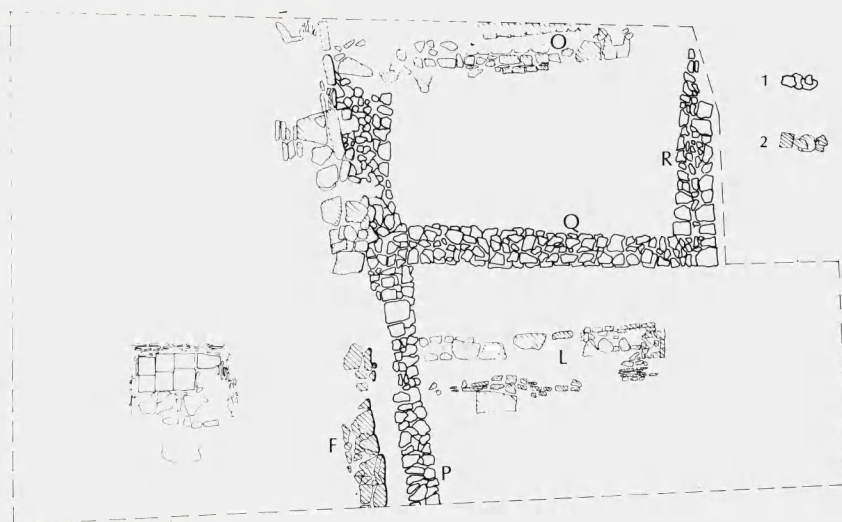
pottery, dating respectively to *c.* 1200 and the later thirteenth century.

The earliest recognisable structure, Building 1 (Pl. 11a) was represented by Walls P, Q and R. These were made of rough limestone chunks and some large pebbles. The width and depth of footing suggested a dwarf or sleeper wall for a timber framed building, perhaps made more substantial to deal with the boggy conditions. Wall P ran east-west and seemed to be the rear wall of a structure built side-on to the street. No front wall was seen within the limits of excavation, nor were side walls recovered: this could suggest the present property boundaries are of some antiquity. Wall Q abutted wall P, was of similar construction and may be close in date. With wall R it represents a wing added to the rear of the main unit, perhaps giving a courtyard space in the angle on the west side. No eastern foundation was seen, so it may have returned on the property boundary, or on a line with the main front unit.

Building 1 cannot be precisely dated, but it was late medieval at the earliest. 35, a layer of top soil and pebbles, lay under its three walls, and contained pottery up to the thirteenth century. The courtyard surface layer 34, probably put down to consolidate the soft ground before the



PITS EARLIER THAN BUILDINGS



BUILDINGS 1 & 2



0 1 2 3m

Fig 2 43 Mill Street: plans



0 1 2 3m

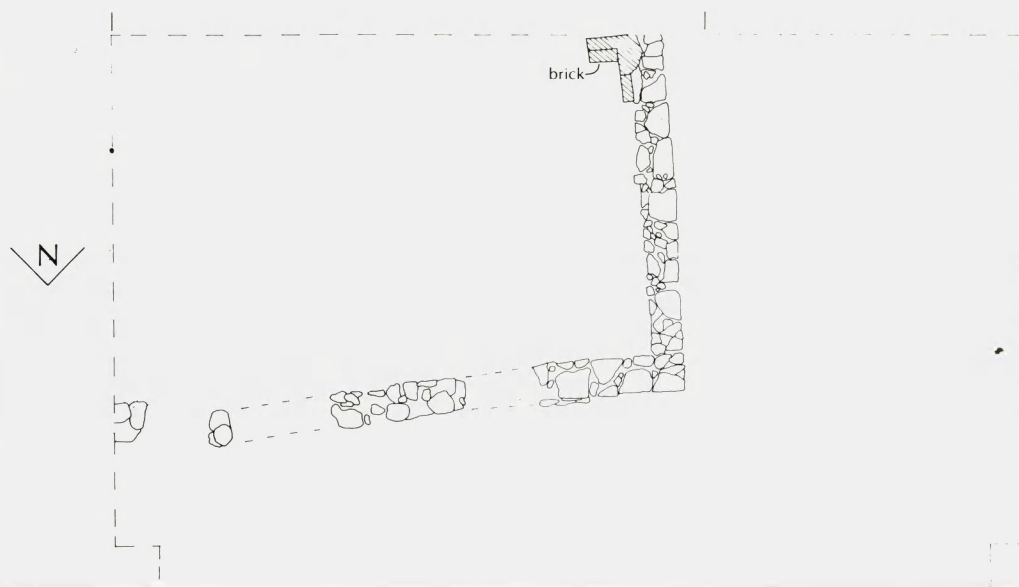
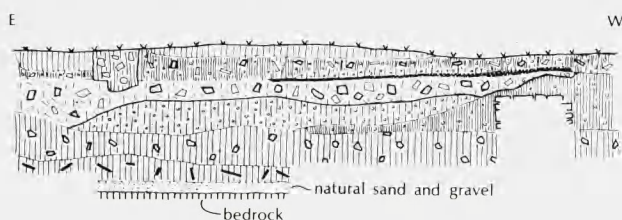
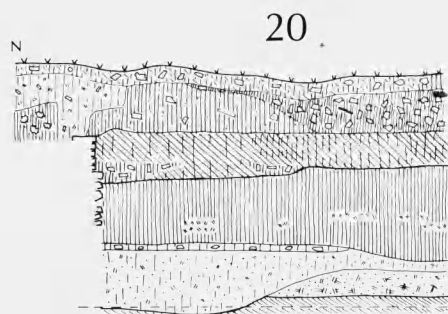


Fig 3 Litson's Timber Yard: plan and sections

erection of building 1, contained fourteenth or fifteenth century Potterspury type products. A thick occupation layer, 32, lay on the courtyard surface, representing the use of Building 1: a large

group of pottery from it was dated on internal evidence to the middle or later fifteenth century. The latest use of the building was represented by layer 31 containing pottery from about 1500 to

the early eighteenth century: this underlay or was cut by the footings of building 2.

Contemporary with Building 1, was a small hearth about 1m by 1m (Pl. 11 b, c). This was made of stone and tile laid over a wad of yellow clay: it had been re-built at least once. The floor of the hearth in its latest form included 4 re-used incised floor tiles dating to the early fourteenth century. These, and a fifth which had been broken in half and placed upright in the tile surround, are discussed below. Its position, free of any side walls suggests a hearth central to its room whose axis lay parallel to Mill Street. Another area of burning lay to the east. The layers overlaying the hearth had a number of shallow slots or floor joist imprints running west to east.

Building 1 was demolished: its replacement was represented by various walls relating to a structure also fronting onto Mill Street. It would seem that several modifications of plan took place, but the evidence is not clear: the last building on the site also disturbed some of these footings. The rear wall for the front unit was wall F, a badly robbed limestone footing set in sandy clay. Walls O and L, running south at right angles from wall F, represent structures at the rear, but no return south wall was seen. There was some brick in these two footings.

About 1m of stratigraphy above this included tips, spreads, layers and footings associated with the latest building on the site and the last 100 years.

Discussion

Single plot excavations surrounded by standing buildings give only a limited understanding of structural history. The finds on this site were the outstanding feature.

The apparent lateness of house building this far east on Mill Street is notable, particularly in conjunction with the evidence from the Timber Yard site further to the east. Nonetheless, timber buildings with sill beams laid on the ground surface, leaving no detectable trace, pre-dating the first structure with stone footings, should not be ruled out. However, the lack of building until the late medieval period is not inconsistent with the evidence of the earliest maps of Bedford.

LITSON'S TIMBER YARD, MILL STREET (BMS 72 TRENCHES 20, 21; BCL 71 TRENCH 22) (FIG 3)

Three trenches were excavated on this site,

consequent upon the removal of the Timber Yard buildings in the summer of 1970, and the understood intention of the then owners to redevelop it rapidly. In the event, the site is still not built upon in October 1974. Two trenches were on the northern or Mill Street frontage, and one larger area on the southern frontage to Castle Lane.

There were high expectations of recovering early, possibly pre-Conquest evidence of occupation in Bedford. These had been encouraged by finds of Saxon pottery further south under Bedford Castle in 1970 and by the knowledge that the earliest documentary references described it as open land. In 1506-7 the Newnham Rental described it as "open . . . a garden lying in School Street, between a horse mill east, and the prior of Chicksand's garden west; and it abuts north on School Street and at the other end on the castle ditch or land . . ." In 1672, title deeds of the Bunyan Meeting described it as an orchard and garden with a barn.² Brayley and Reynolds maps of 1807 and 1841 show buildings on the north and south frontages. Mechanical trial trenches were therefore dug in a number of places to test the stratigraphy. These immediately showed that over most of the whole site, soil and rubble had been dumped to a thickness of up to 1.5m within the last two centuries. Few finds and no apparent structural evidence came from below the covered ground surface. Whilst this accumulation may have been the product of casual dumping on open space over a period of years, it is more likely to have been chiefly derived from the excavation of cellars for the Bunyan Meeting House, immediately to the east, restored and extended in 1849.

Systematic investigation was therefore confined to enlarged mechanical trial trenches in the north of the site, and to a large area in the south where it was intended also to see if the castle ditch had run that far north.

Trench 20

The upper 1.3m of the trench was mechanically removed and consisted of disturbed layers of earth with rubble, and contained a mixture of pottery reaching well into the nineteenth century. It sealed and abutted a footing in the north of the trench; this was five courses of brick set more broadly on six courses of stones. A horizon was seen at this depth, but no indication of settlement or occupation, in spite of somewhat mixed layers at about the level of natural gravel.

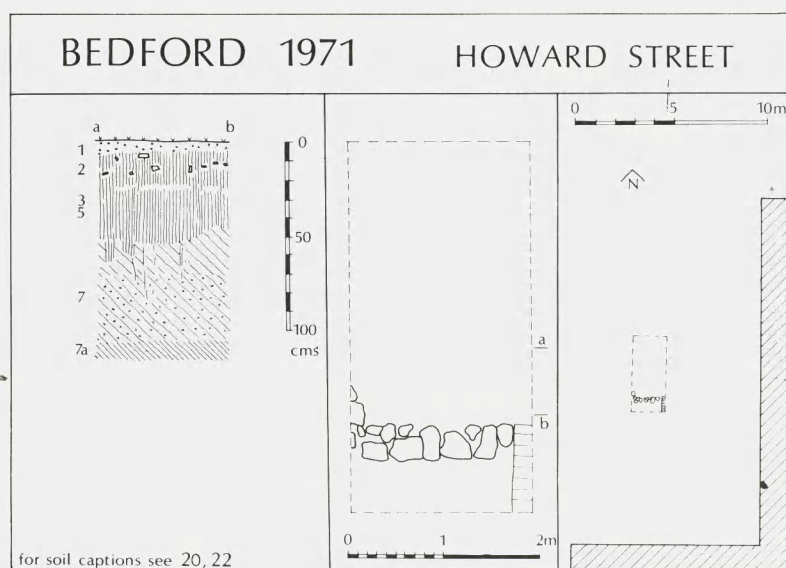


Fig 4 Howard Street: plans and section

Trench 21

This trench was excavated mostly by machine, and cleaned up for recording by hand. It showed the same confused stratigraphy as in Trench 20. There were no signs of early occupation apart from casual finds.

Trench 22

Initially this trench was mechanically excavated to a general depth of about 0.75m below ground surface. The various layers of earth and rubble removed included broken pottery, china, earthenware and glass of nineteenth century date. It lay on top of the presumed old ground surface. The trench was subsequently extended northwards.

The north and west foundations of a building were seen. These were of stone and brick and need not have pre-dated the eighteenth century. (Pl.11d).

Natural sand and gravel lay close under slight external cobbling layers associated with this building. Beneath this was bedrock. Silt was mixed in with the layers above the rock, and contained a few sherds of pottery, including two Lyveden ware jugs (Fig 6, Nos 38, 39). There was a deep pit filled with black silt cut into the rock, but it was not the northern castle ditch.

REAR OF 22 MILL STREET/HOWARD STREET (BHS 71 TRENCH 29: FIG 4)

The land at the rear of the former Bedfordshire

Times Office was vacant pending the redevelopment of the whole site. The opportunity was taken to excavate a trial trench in an area apparently not built upon until the nineteenth century. In 1807, the Brayley map of Bedford shows it as fields, though surrounded by established roads; on the Reynolds map on 1841, development on the north side of Mill Street appears to be only just starting.

The trench was 2.0m by 4.0m, running north-south. A limestone footing went across the south end of the trench, perhaps belonging to the out-building associated with the nineteenth century predecessor of the Bedfordshire Times Office, which had been built in 1896. The trench was excavated to natural sub-soil which consisted of mixed sandy clay and gravel.

No occupation layers were seen under the mixture of brick, earth, stone and mortar (layer 2) found under the destruction layer (layer 1). 20-30cms of old turf line (layers 3, 5) lay over natural sub-soil under the nineteenth century layers. It contained small pieces of abraded St Neots type pottery (Fig 5 Nos 5, 28, 31) as well as five sherds of Saxon pottery, doubtless derived from nearby occupation in the town at a time when this was probably open ground. The top of natural sub-soil was uneven, though no clear features such as pits, post holes or plough marks could be seen.



Engraved by Henry and John G. F. W. Cookells, St. John's Church, Bedford

High Street, Bedford

Published by the printer, April, 1818, at the shop, New Bond Street

a



ST MARY'S CHURCH, BEDFORD.

Printed by J. P. Thomas, Bedford

b

Plate 9a St John's Street looking south from St Mary's (Stockdale, published 1818)

Plate 9b Cauldwell Street looking east towards St Mary's (B Rudge, mid nineteenth century)

BEDFORD DEVELOPMENT



a



b

Plate 10a Late nineteenth century terrace in Cardington Road, now mostly demolished.

Plate 10b Hiawatha 1867–1968 by John Usher.

(Photographs: a David Baker; b Richard Wildman)

BEDFORD DEVELOPMENT



a



b



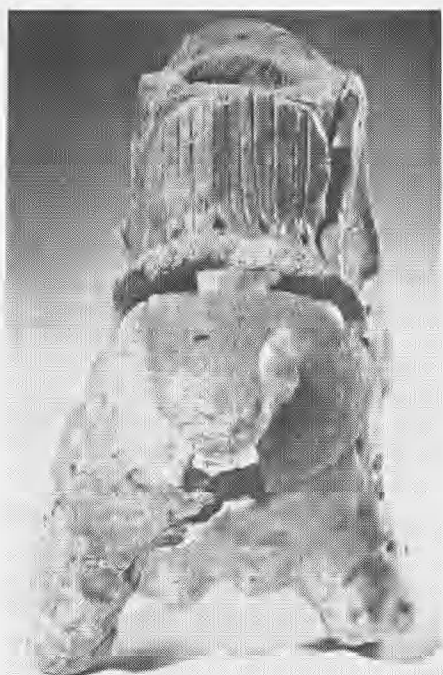
c



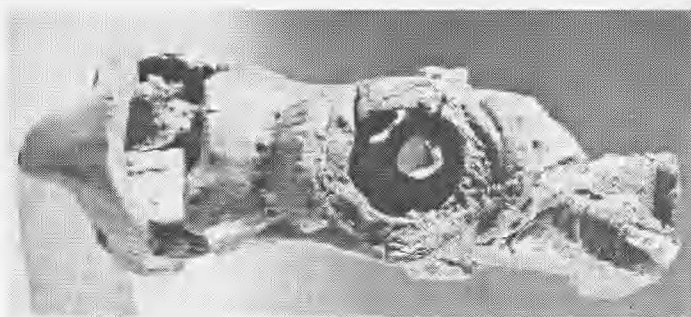
d

- Plate 11 a 43 Mill Street: walls of Building I.
 b 43 Mill Street: hearth with re-used floor tiles, facing W.
 c 43 Mill Street: detail of hearth with re-used floor tiles.
 d Litson's Timber Yard: Trench 22, foundations.

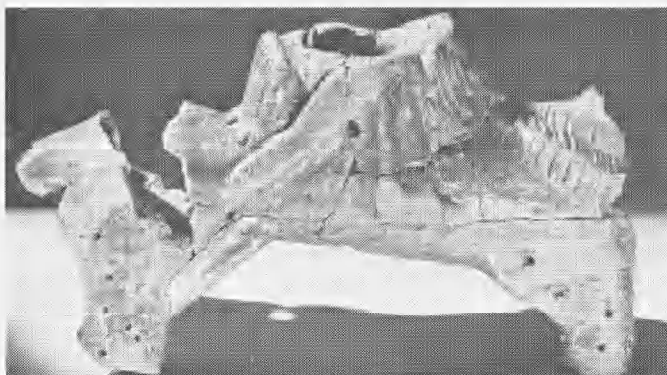
(Photographs: David Baker)



a



b



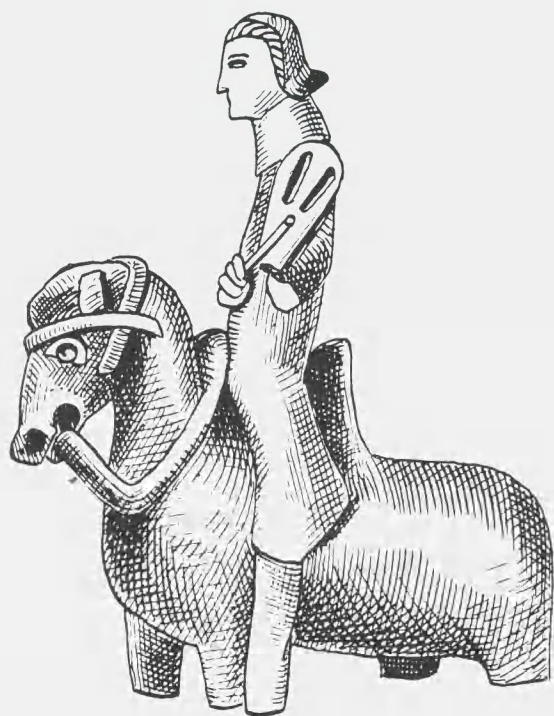
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d

Plate 12 a—d Knight finial. 43 Mill Street, Bedford (Scale $\frac{1}{4}$)
(Photographs: K. Whitbread)

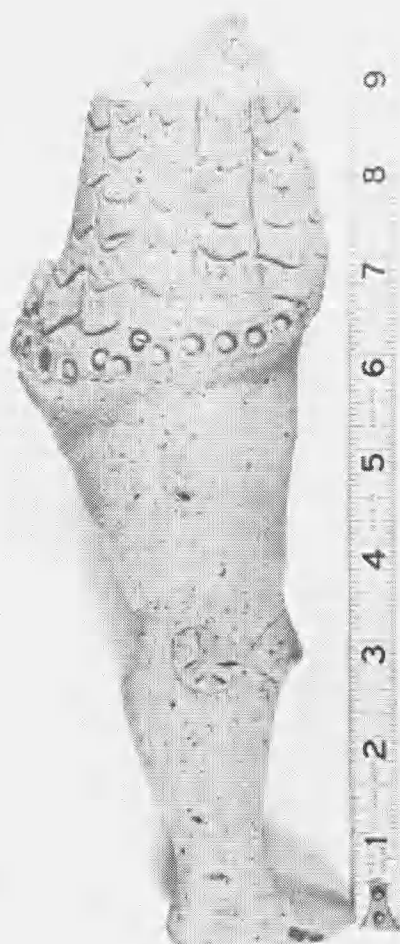
MILL STREET, BEDFORD



a

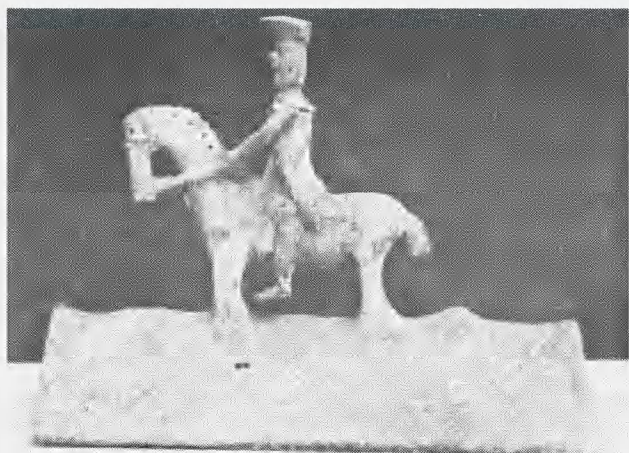


b



c

Plate 13 a Finial of musician. Sainte-Marie-les-Anvers, Antwerp (Scale about $\frac{1}{3}$)
 b Horse and rider finial. Hitchin (Scale $\frac{1}{4}$)
 c Leg of knight finial. Eresby, Lincolnshire (Scale $\frac{1}{2}$)



a



b



c



d

Plate 14 Horse and rider finials.

- a Totnes, Devon (Scale $\frac{1}{6}$)
- b Polperro, Cornwall (Scale $\frac{1}{6}$)
- c Bridport, Dorset (Scale $\frac{1}{6}$)
- d Plymouth, Devon (Scale $\frac{1}{6}$)

MILL STREET, BEDFORD



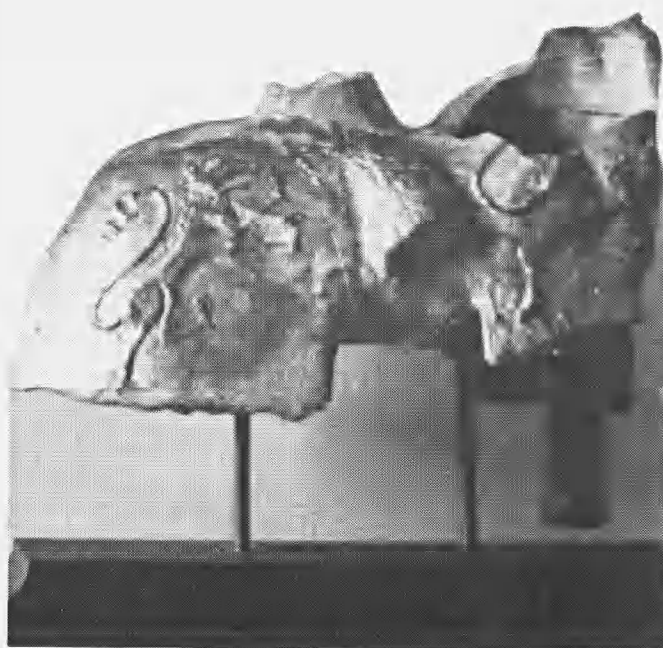
a



b

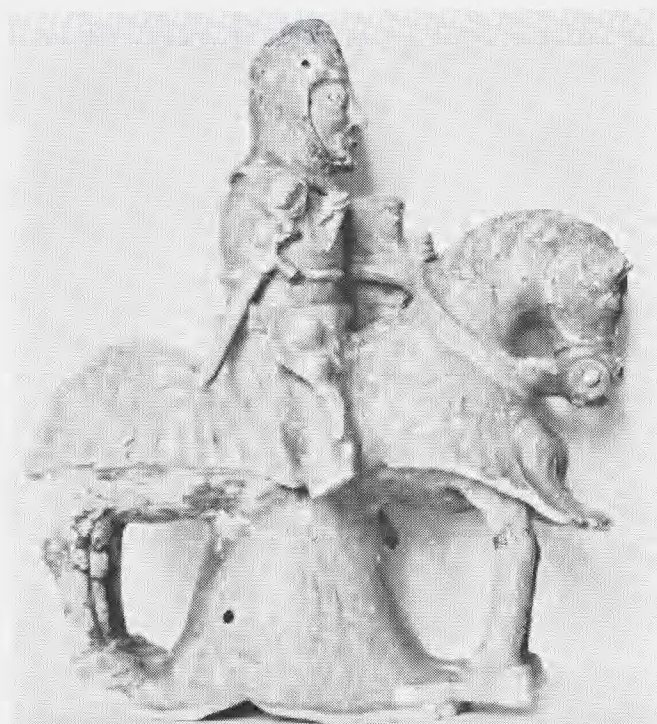


c



d

Plate 15 Knight finials. Belgium
a-b Bruges (Scale $\frac{1}{4}$)
c Ghent (Scale $\frac{1}{4}$)
d Ghent (Scale $\frac{1}{4}$)



a



b



c

Plate 16 Knight finial. France
a-c Château de Sarcus (Oise). (Scale $\frac{1}{6}$)

MILL STREET, BEDFORD

21-23 MILL STREET (‘X’ on Fig 1)

In 1970, Mr. G.J. Dring kindly drew my attention to a series of features cut into natural sub-soil, exposed by foundation trenches for building construction. These appeared to be mostly large pits of medieval date, and few sherds of St Neots – type pottery were recovered. Such features are to be generally expected to the rear of street frontage sites.

THE FINDS

The table below provides a key for significant features of layers and their contents as published below.

Arabic numerals refer to pottery drawings, Italic numerals to small finds, and Arabic numerals prefixed by C to coins.

THE POTTERY (FIGS 5-8)

These four sites produced a range of material mainly dating from the Saxo-Norman period onwards. Residual sherds from earlier dates consisted of one Romano-British rim from 43 Mill Street and five small body sherds in the local Saxon tradition from Howard Street.

I am grateful to the various people who have commented on the pottery: J.G. Hurst and S. Moorhouse saw it soon after excavation, and Denis Myrard gave extensive guidance, especially on the large late and post-medieval deposits. G.C. Dunning has written in detail on two pieces.

Excavations in Bedford, upon sites in the Castle and in the Town, have continued since 1967, with the exception of 1968. A large amount of pottery has been recovered, probably enough to draft a ceramic history for the town. Yet this is only the second large report to be published on excavated sites.³ Thus, in order not to prejudice a future summary, the pottery report for the Mill Street area sites has been kept as simple as possible. Pit groups and other deposits showing a narrow date range are published, as are any individual pieces of special interest. Early medieval shell-filled pottery has been published fairly extensively, but larger later deposits, particularly those extending over several centuries into the later post-medieval period, have been briefly described in text alone: the occurrence within them of types and fabrics is better discussed together with similar deposits from other sites in a later report.

In the Saxo-Norman period, shell-filled wares

<i>Number</i>	<i>Significance</i>	<i>Illustrated Finds</i>
19 1	Demolition rubble	C8
6		II C5
7	19th century garden soil	95, 22
9		18 C2
15		C3, C4, C6
20		C1
21		Decorated tiles in Hearth
27		5
31		3
32	Contemporary with Building 1	35,44,57-59,61-77, 80-93, 1, 2, 10, 12, 13, 19
32a		60
34	Contemporary with Building 1 construction	43,78,79,4,9,20,21
35	Predates Building 1	6,16,27,40,41,43
36		
38	Destruction of Building 1	94
39		36,45
41		14-16
42	Early marshy build-up	3,18
43	Pit D: Late 11th – early 12th century	2,4,7,8,11,12,19, 21,24
46		
54		30,39
55	Pit 1	
56	Predates buildings: 13th century	9,17,20,37,53
57	Pit II: Late 13th century	13,14,57
59	Predates buildings	22,25,28,32
61	Predates buildings: lower silty layer	10,15,23,29
62		26,34
63		7
68	Pit J	6
69		8
20 1		23
22 2		1 C7
11	Silt above natural sub-soil	38,39
29 2		33
3		5,28,31
5		17

of St Neots type predominated over sand-filled wares of Early Medieval type. In the best pit group (Pit D, Trench 19, 43 Mill Street) the proportion was 57 shell to 1 sand. In shell-filled fabric were represented many cooking pots (8-33), some bowls (3-7) and a few jugs (36-41): it has not seemed worthwhile to attempt the working out of an overall proportion between fabrics for the sites.

There is no independent dating evidence for the St Neots type sherds, though the reconstructed

diameters of vessels may suggest that there is little from the earlier part of the period. Comparisons with the pottery from the St John's Street and Cauldwell Street sites ⁴ show different examples of bowl rim form but closer similarities in the more anonymous cooking pot rims. The shelly tradition continues into the thirteenth and fourteenth centuries with examples of glazed and unglazed Lyveden ware jugs (37-39).

Sand-filled fabrics of Early Medieval ware are present in developed forms (42-46) for cooking pots and jugs though the lamp bowl (42) and jar (43) are residual finds dating from the twelfth century. Residual fourteenth century jug or cooking pot sherds (47-50, 55, 56), were also present in the main fifteenth century deposit.

A good group of late medieval pottery came from layer 32, associated with the use of the first stone-footing building at 43 Mill Street. It includes local and non-local wares, and one import, a small Siegburg mug (91). It, and five small sherds of Tudor Green type, are the only glazed fine wares.

This group includes both oxidised and reduced local coarse wares, with the latter in a greater proportion. There are three kinds of bowl with large flanged rims (57-60), smaller flanges (61-64) and thickened rims (65). These and Jugs (66, 67) are paralleled by finds at Hall Place, St Neots. ⁵ Bases with finger printed frilling (73-77) belong to cisterns, though (74-76) could be jugs. At least one (72), possibly two, sherds, probably from jugs, have slip-trailed decoration. There are cooking pots from the Potterspurys area (78-79) and some are probably included in a number of body sherds from the Great Brickhill kilns. Cooking pots (80-82) are probably more local products. 87 and 88 are plain bases in reduced fabric with heavy knife trimming. Other forms represented in this deposit are chafing dishes (89-90), a small cup handle which may be non-local (92) a possible pipkin (93) and a fish dish (94).

The dating for this group has to rely on internal evidence and parallels from outside Bedford. The absence of fine ware of the types and in quantities associated with the sixteenth century suggest an earlier date: the Siegburg and Tudor Green will allow the fifteenth century. There are many coarse wares of late medieval form, and the dominant fabric is still hard and sandy. Parallels from St Neots (the Priory and Hall Place ⁶) are ascribed to the sixteenth century. At this stage of knowledge, this group gives a general impression of having been laid down in the middle or later fifteenth century.

Four other deposits with pottery deserve mention here, though publication of examples is reserved for a future occasion. Layer 32a was slightly later in date than the main group discussed above, but was contaminated. Layer 38 had a range of wares going into the seventeenth century, including the dish (95) which might be an import. Layer 31 contained a wide range of pottery from about 1500 to the early eighteenth century, though the bulk could be ascribed to the seventeenth century. In addition to a considerable range of coarse ware, there were examples of Cologne stoneware, Midland purple and Metropolitan slipware.

Layer 7 contained the widest range, from the late sixteenth century to the nineteenth century. One example, an early eighteenth century Delft plate (96) is published. Stonewares included Cistercian ware, Nottingham salt-glazed stoneware, German imports from Cologne, Frechen and West-erwald. There was a variety of slipwares and some Staffordshire examples. Other Delft ware sherds included Manganese speckled examples. Seventeenth century tygs were present, and brown lead-glazed vessels from Staffordshire. There were also eighteenth century and nineteenth century cream wares and yellow glazed vessels.

1. PRE SAXO-NORMAN WARES

Rim sherd of cooking pot, with flange below rim level. Grey shelly fabric with leached out inclusions: residual Roman. (not drawn) Five small body sherds from Howard Street: (not drawn). Fabrics are:

- (a) Hard grey sandy fabric with black surfaces (5, 6, 11mm thick).
- (b) Lighter grey, more gritty fabric with brown orange buff surfaces (7, 8mm thick).

A mid-late Saxon date is likely.

2. SHELL-FILLED WARES OF ST NEOTS TYPE AND DEVELOPED ST NEOTS TYPE:

(Fig 5, 1-33, Fig 6, 34-41)

1-2 Dishes or Shallow Bowls.

3-7 Bowls

8-33 Cooking Pots

The fabric is normally dark grey and shell-filled, quite hard, with surface colours varying in the pink/buff/brown/grey range: some sherds have been blackened in use. Descriptions of fabric, colour and form are omitted from Nos 1-33: there is a strong element of subjectivity in comparisons of the first two, and the third can be seen from the drawings. In view of the large amount of comparable material from Bedford excavations

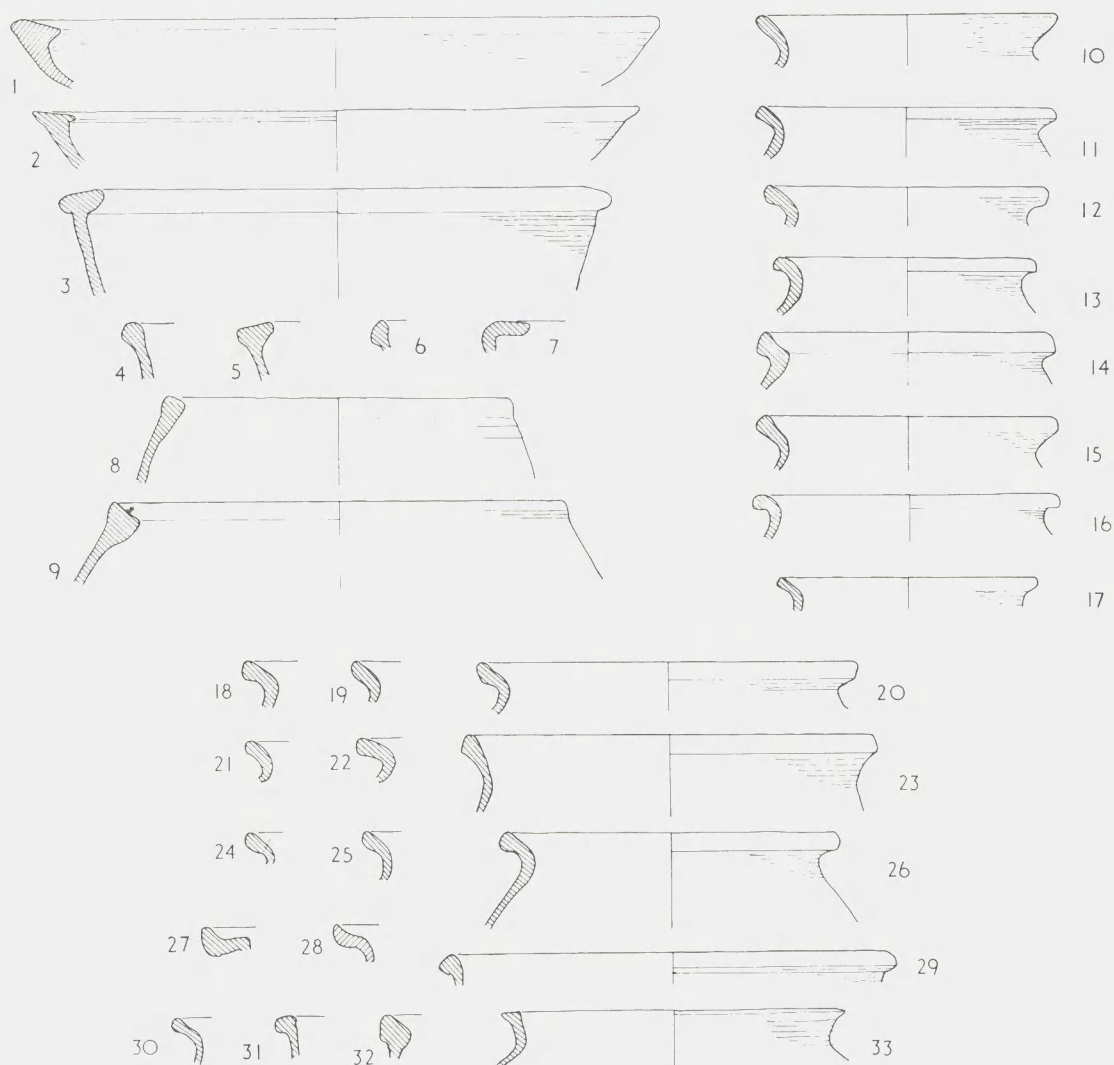


Fig 5 Pottery: Nos 1-33 (Scale 1/4)

1967-74 currently in publication preparation, it is felt desirable to avoid the appearance of creating categories on the basis of a small proportion of the material.

34. Bowl with part of bar lug; dark grey shelly fabric with pink exterior and some burning.

35. Lid or base of jug, dark grey shelly fabric; brown/buff exterior; cut out before firing, residual.

36. Jug; rim and upper part of strap handle; dark grey shelly core, light grey/buff smooth exterior.

37. Jug rim; unglazed; olive green and yellow (stippled on drawing) glaze. Grey shell-filled fabric

with light pink orange surface, Lyveden ware.

38. Jug with small part of spout; external light and middle (stippled on drawing) yellow/green glaze; vertical ridges of yellow slip starting below shoulder; Lyveden ware.

39. Jug rim and twisted rod handle; external light (stippled on drawing) and dark olive green glaze, with part of small rosette; Lyveden ware.

40. ? Jug rim; hard shelly fabric.

41. Jug strap handle; hard shelly fabric with grey core and orange surface; single vertical groove. Lyveden Ware.

3. SAND-FILLED WARES PRE-DATING FIFTEENTH CENTURY. (Fig 6 42-56).

42. Bowl of lamp; re-used. by *G.C. Dunning*.

The bowl from Mill Street is made of black ware; the fractured edges show a laminated structure and the impressions of grass-tempering. The outside surface is light reddish-brown, uneven, and pitted where the grass-tempering has fired out. The distinctive fabric is unusual on pottery at Bedford, and does not belong to any of the main groups of Saxo-Norman wares. It is identified as one of the two varieties of the so-called 'Early Medieval Ware', recently recognised in the south and south/eastern counties, in East Anglia, and in the Midlands as far north as Nottingham.⁷ One of the fabrics of this group is usually sand-filled, while the other is grass-tempered.

The inside surface of the Mill Street bowl is stained grey to black, mostly on the upper part near the rim. This discolouration shows that it was used as a cresset lamp, on which the staining in this position is present almost invariably. In its existing form, the slightly convex base is not in the same plane as the level of the rim. Moreover, the reddish brown colour of the outside stops at the margin of the base, which itself is black like the core of the pot. These irregularities and differences strongly suggest that originally the bowl stood on a stem or a pedestal base. Evidently the lower part of the lamp was broken after it had been in use for some time, and the stump was trimmed roughly flat so that the lamp could still continue to be used.

In the Saxo-Norman period there are three types of lamps, all provided with bowls which differ slightly in shape. The forms comprise: lamps with a pointed spike foot; lamps with a low pedestal base and moulded foot; and lamps with a tall stem, sometimes with prominent ridges, and also ending in a moulded foot.⁸ The three forms of lamps continued into the medieval period, until the thirteenth century or later.⁹

The restoration of the lamp from Bedford is achieved by a process of elimination. The spiked lamp can be ruled out, since its bowl is conical and the lower part of the Mill Street example is too wide for this type. In deciding between the two types of lamps, both with pedestal bases, the selection is less easy to determine. However, on lamps with a low pedestal base the profile of the bowl is usually more conical and deeper than those on lamps with a tall stem, which have a bowl more rounded in shape. For these reasons, the

Mill Street bowl is identified as belonging to a lamp with a tall pedestal stem. In the drawing it has been restored accordingly, making the lamp about 7" in height; it was thus one of the larger of this type. In the shape of its bowl the Bedford lamp is very closely matched on tall stemmed lamps from Thetford and Cambridge,¹⁰ which have therefore been used as the basis for details of the complete vessel.

It may be added that cresset lamps of the types described above are known from the major towns of the later Saxon and early Medieval periods over most of England. The principal sites are: London,¹¹ Winchester,¹² Oxford,¹³ Bristol,¹⁴ Cambridge,¹⁵ Norwich,¹⁶ Northampton,¹⁷ Leicester¹⁸ and York.¹⁹ The lamp found on the Mill Street site is the first example of any of the Saxo-Norman type of lamps to be recorded at Bedford. Its discovery is thus an event of some significance in the medieval archaeology of the town.

The finding of this lamp as a survival in a later deposit is compatible with its re-use at a later time. An initial date for it, in its complete state, early in the 12th century, would be consistent with the available evidence elsewhere.

43. Base of small jar hard dark grey fabric similar to 42 with a few shelly inclusions; sharply cut base; rough eroded external surfaces.

44. Jug with thick stabbed strap handle with part of attachment; dark grey sandy fabric; residual.

45. Jug with upper attachment for strap handle; dark grey sandy fabric with black exterior.

46. Jug with strap handle; dark grey sandy fabric with stabbing on two surfaces; residual.

47. Cooking pot; hard grey sandy fabric; residual.

48. Small cooking pot; hard buff/orange fabric.

49. ? Jug; hard dark grey fabric with dull orange exterior.

50. Jug strap handle; dark grey sandy fabric.

51. Cooking pot; hard dark grey sandy fabric; slightly frilled top.

52. Cooking pot; hard black sandy fabric.

53. Cooking pot; hard sandy grey core, pink/orange surfaces, some black burning on outside.

54. Cooking pot; hard sandy fabric with medium grey core, light grey outer fabric and dark grey surfaces; sharply cut rim.

55, 56. Cooking pot; hard dark grey sandy fabric; residual.

4. LOCAL AND IMPORTED WARES OF MID TO LATE FIFTEENTH CENTURY DATE 57-65. Bowls.²⁰

57. Large flanged rim; hard grey sandy fabric with

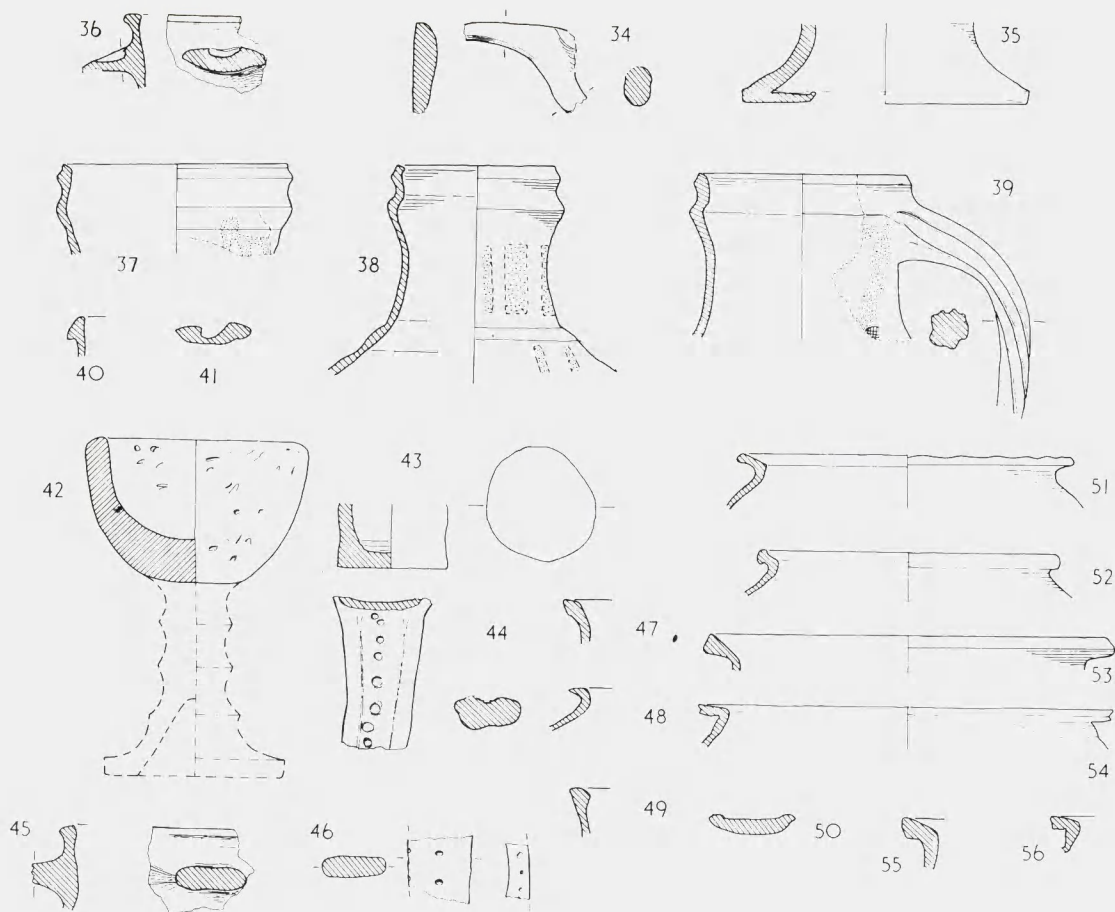


Fig 6 Pottery: Nos 34-56 (Scale $\frac{1}{4}$)

thumb print on rim top.

58-60. Large flanged rim; hard grey sandy fabric with red outer core and black exterior.

61, 62. Flanged rim; hard grey sandy fabric with black surfaces.

63. Flanged rim; Hard grey sandy fabric; brown-buff surfaces with some burning.

64. Thickened rim; Hard grey sandy fabric with reddish outer core and black surfaces.

65. As 64; rim slightly flanged.

66-67. Jugs, cisterns or jars.²¹

66. Jug with strap handle (missing); hard orange sandy fabric, dull orange surfaces.

67. Possibly a cistern; fabric as 66 with small specks of glaze on outer surfaces.

68, 69. Jug or jar rim; hard sandy grey and red fabric with dark grey exterior.

70. Jug or jar rim; hard sandy grey fabric.

71. Jug body sherd with applied strap handle attach-

ment with thumb print; grey fabric with pink/buff exterior.

72. Jug body sherd; sandy fabric with grey core, red outer core and grey surfaces; yellow, wavy slip - trailed decoration, of type occurring on late medieval East Anglian jugs.

73. Cistern base with frilled rim and bung hole; sandy fabric with grey core, reddish outer core and black surfaces.

74. Base of cistern with slightly frilled rim; hard grey sandy fabric with orange surfaces.

75. Cistern base with frilled rim; light grey fabric and dark grey exterior.

76. As 74.

77. Cistern bung hole sherd, applied to body with heavy thumbing; fabric as 73.²²

78. Cooking pot with small pourer; smooth salmon pink/buff fabric with grey reduced core. Potters-pury type.

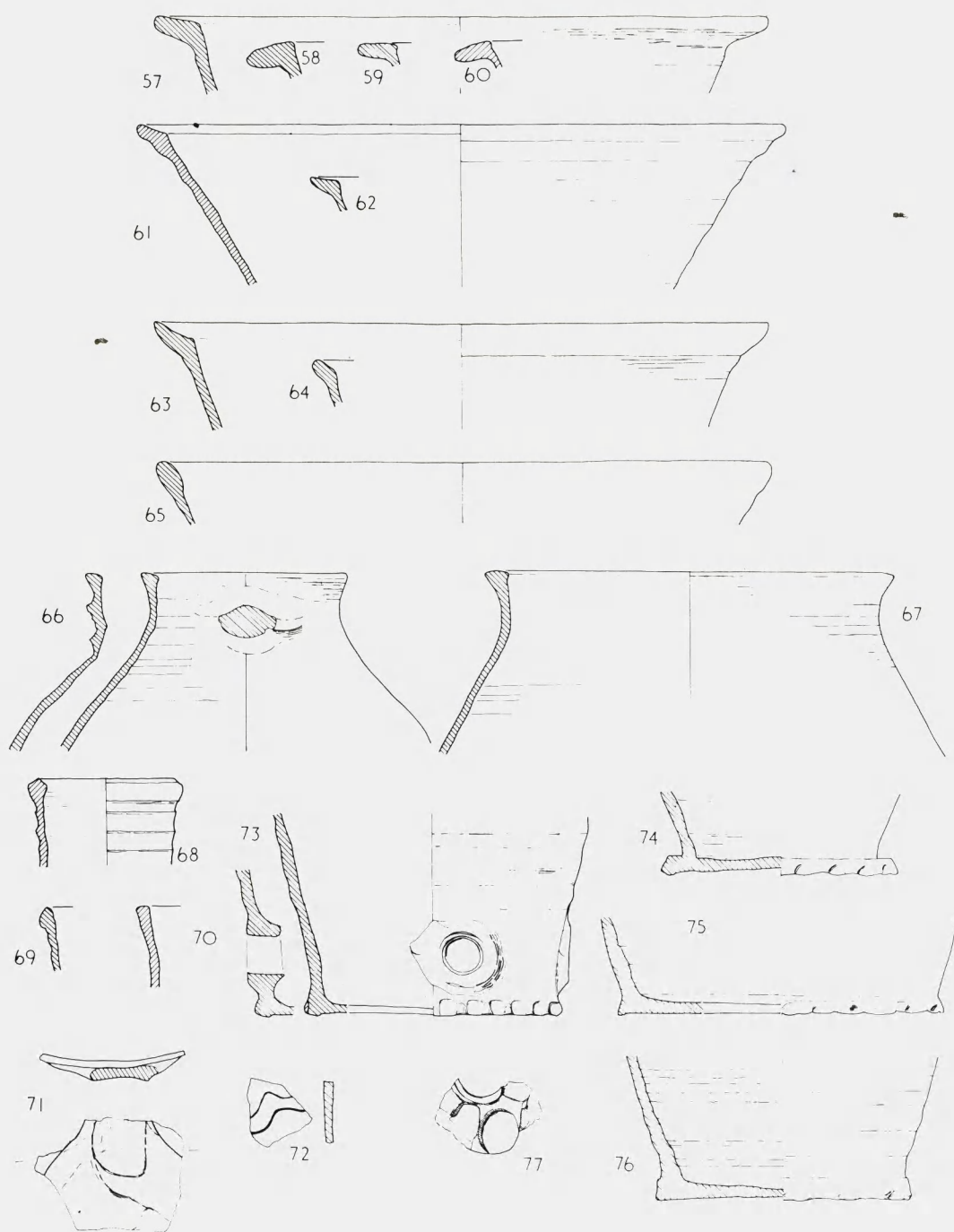


Fig 7 Pottery: Nos 57-77 (Scale $\frac{1}{4}$)

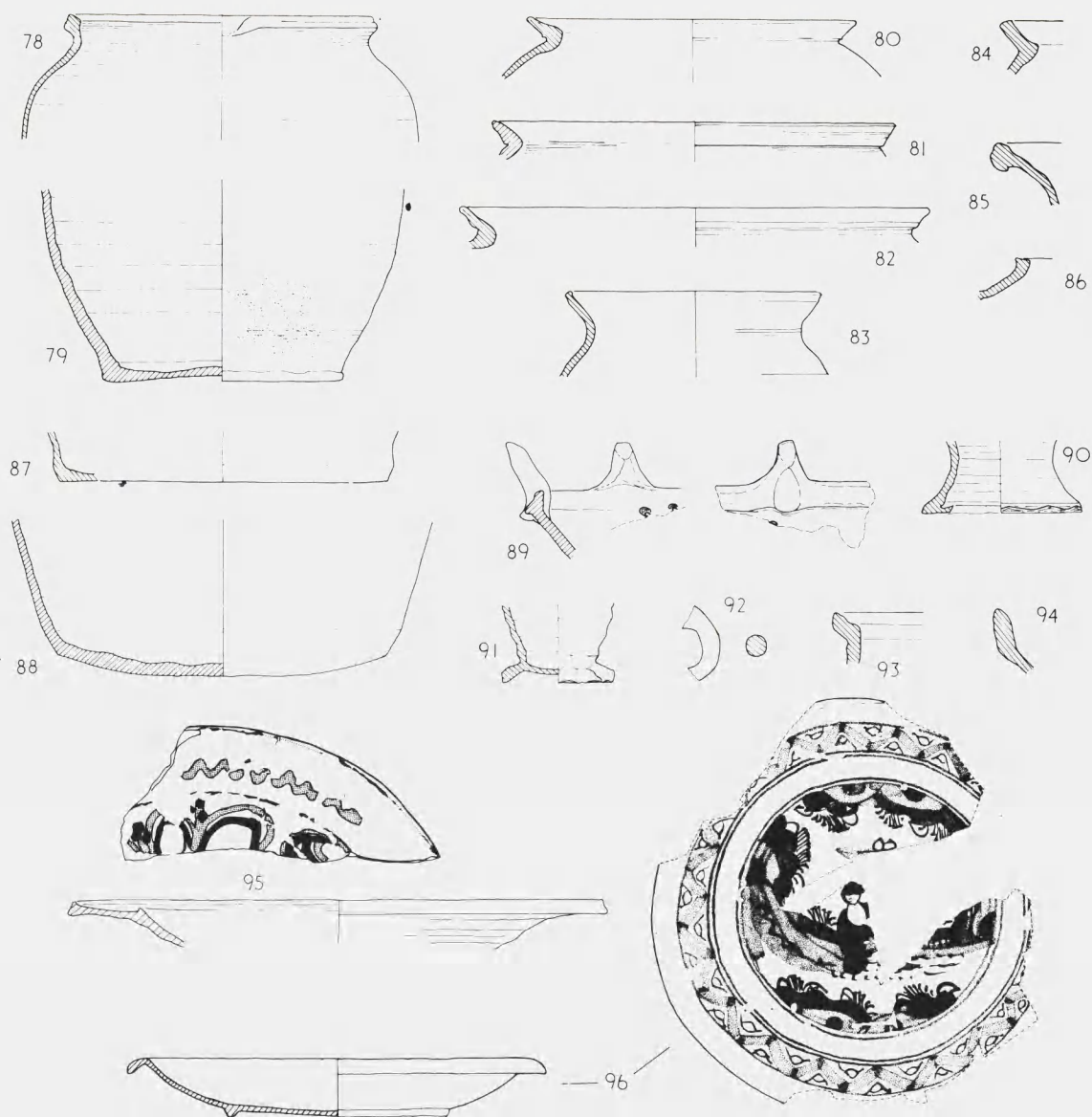


Fig 8 Pottery: Nos 78-96 (Scale $\frac{1}{4}$)

79. Cooking pot base; fabric as 78 but slightly coarser; splashes of glaze under base and on side; Potterspur type.²³

80-82. Cooking pots; hard grey sandy fabric; dark grey core: outer core dark brown, dark grey surfaces; trimming under rim.

83. Cooking pot; hard grey sandy fabric with orange surfaces; external splashes of grey slip.

84. Cooking pot with internal seating for lid; hard dark grey sandy fabric.

85. ? Cooking pot (or lid?) dark grey sandy core and orange exterior.

86. Cooking pot with inturned rim; brown/dark grey/brown sandwich sandy fabric with dark grey surfaces.²⁴

87. Cooking pot; fabric as 88.

88. Cooking pot with sagging base; hard grey sandy fabric with black surfaces; thumb prints on inside base.

89. Chafing dish; upper part with stub handle; hard

orange fabric.

90. Chafing dish base; hard fine red fabric.

91. Small mug with flrilled base; grey stoneware with some brown external glaze; Siegburg.

92. Rod handle of cup; fine orange fabric with specks of brown glaze.

93. Rim of ? pipkin; dark hard grey fabric.

94. Fish dish; dark grey sandy fabric with burnt exterior.

95. Plate; fine pink fabric with orange exterior surface, glazed yellow slip with orange and brown trailed decoration; not English ?

5. LATE SEVENTEENTH OR EARLY EIGHTEENTH CENTURY

96. Plate; Delft.

THE HORSE AND KNIGHT ROOF-FINIAL, WITH A DISCUSSION OF KNIGHT FINIALS AND RIDER FINIALS IN ENGLAND AND ON THE CONTINENT

By G.C. Dunning

The finial came from a large deposit which accumulated to the rear of Building 1 at 43 Mill Street. The associated pottery is referred to the middle or second half of the fifteenth century; the character of the finial is consistent with this period, and it is therefore dated c. 1450.

DESCRIPTION

(Pl. 12 fig 9)

The thirteen large sherds, of which eleven conjoin, comprise the greater part of the body of the animal with the two back legs and between them the male genitals. At the front, only the right side is present in front of the saddle, which is complete, as far as the right front leg. The three legs are broken off at roughly the same level, not far above their attachment to the summit of the ridge-tile. Of the rider only the lower part of the body remains inside the saddle, together with both legs complete down each side of the animal's body. A few separate sherds belong to the animal. The largest comprises part of the tail and the adjacent portion of the hind-quarters. The tail was made separately and secured by a dowel passing through a hole in the rump.

The finial is made of sandy ware, dull red in colour in section and on the surface. It has a greenish brown glaze applied over the upper part and sides of the animal and on the legs. On the underside of the animal's body are streaks of the same

glaze, which has hardened to darker brown due to thickening in this position. The saddle is glazed similarly, and also the extant parts of the rider; probably the figure was glazed all over.

The basic construction of the animal is a wheel-thrown cylinder, with separate hand-made additions for the posterior and for the neck and head, and the legs applied separately. The rider's body was made separately and wheel-thrown. Other parts such as the rider's legs, his sword, and the saddle, were also made separately and then applied before firing and glazing.

The cylinder is 7.65in. (19.4cm.) in length; internally the vertical diameter is 1.3in. (3.1cm.) at the middle, widening at each end to about 2.25in. (5.7cm.). At the front it is open, where a separate portion for the neck was attached. A structural break in front of the saddle shows that the animal's mane was also made separately. In the longitudinal section (Fig 9, B), the cylinder and posterior are shown in solid black, and the other additions at both ends are hatched.

Four circular holes, from 0.5. to 0.8in. in diameter, were cut through the cylinder. One of these is on the top, below the body of the rider, the second is in the rump beneath the tail, and the other two are on the underside, at mid length and near the front legs. The position of the holes is shown in the longitudinal and cross sections (Fig 9, B and C). The purpose of the holes was functional, in order to allow the free escape of steam from inside the finial during firing. Incidentally, the presence of these holes confirms that the object is a finial and not a container, such as an aquamanile.

The legs are solid and simply luted on to the body, and not secured by a dowel. At both ends the inside surface of the body is marked by pressing with the fingers. The marks are deeper at the front end, where they form long channels and secure a large pad of clay added to strengthen the junction between the body and the neck. The outer part of each leg is connected to the flanks of the body by an applied strip running obliquely. These strips emphasize the anatomical structure of the horse, and also form a strong brace between the legs and the body. All the legs have deep stab-marks on the outside. Finally the genitals, three separate pads of clay, were applied to the surface between the back legs, and shaped by the fingers.

The rider is a separately thrown cylinder joined to the body of his mount, and supported by the saddle. His legs are broad strips passing down the

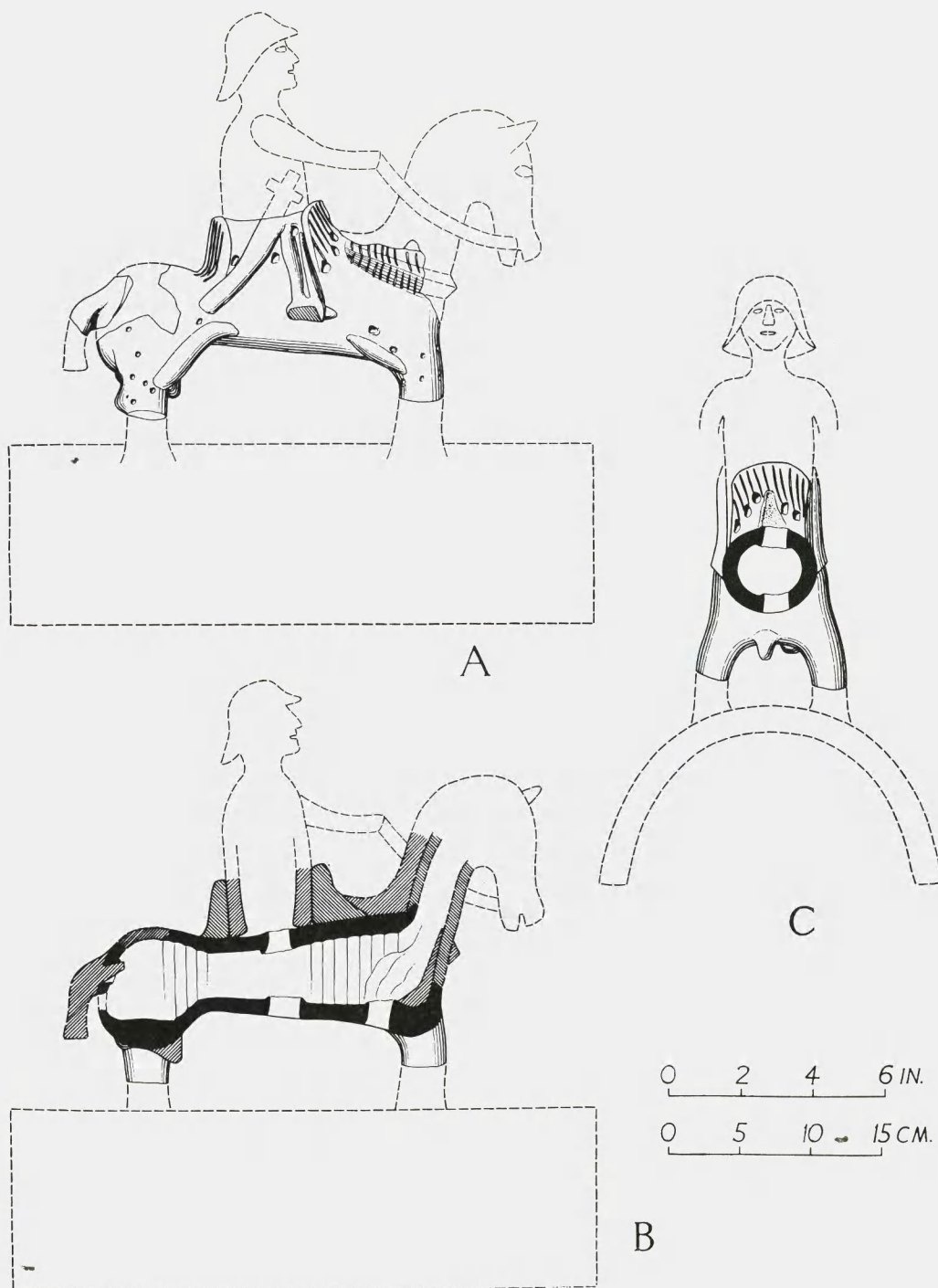


Fig 9 Knight finial. 43 Mill Street, Bedford. A, side view; B, longitudinal section; C, front view and cross-section at middle (Scale $\frac{1}{5}$)

flanks of the horse. In front of each leg is a narrower strip for a leather strap, ending in a thicker transverse piece, chamfered below, for the stirrup; the rider's toe projects in front of the stirrup.

On the right side of the figure is a heavier applied strip, crossing the thigh and passing obliquely backwards to end in a blunt point. This is identified as a sword in its scabbard, by comparison with this feature on the aquamanile in the form of a mounted knight found at Mere, Wiltshire,²⁵ and also, more relevantly, the knight finial from the Château de Sarcus (Oise), illustrated on pl 16, a. On both the Bedford and the Sarcus figures, the sword is on the right side of the body and not as usual on the left, but no significance can be given to this transposition of the weapon. On the basis of these comparisons, the rider on the Bedford finial is identified definitely as a knight.

The saddle has tall bows, curved along the top, in front and behind the rider. The bows are 1.6in. (4.1cm.) high, but that in front (the arçon) appears higher than the other (the cantle) due to the slope of the horse's back. Each bow is a separately made piece applied above the join of the knight's figure and the body of the horse. Both bows are decorated with a series of vertical incised lines, ending below in a line of deep stab-marks.

In front of the knight is an applied ridge, decorated with incised lines in a herringbone pattern. The ridge passes from the saddle obliquely towards the horse's neck. It represents a laminated crinet of leather round the neck for the protection of the horse.²⁶

Lastly, there is an unglazed scar along the top of the horse's body behind the neck and overlapping the base of the saddle. This must be where the lower part of the horse's mane was attached, and extending up the back of its neck and neck, as restored in Fig 9 A and B.

It remains to explain the basis for the reconstruction of the knight's figure and the ridge-tile, shown in Fig 9, A-C. The closest analogy for the Bedford example is the complete horse and rider finial found at Hitchin (pl 13, b). This figure wears a sallet, the helmet typical of the 15th century, and is thus contemporary with the Bedford finial. The Hitchin finial surmounts a ridge-tile of the inverted semicircular form of the late medieval period. The Bedford finial and tile have been restored accordingly, and the knight's arms and the horse's reins added on the drawings. The total height of the finial was thus about 12in. (30.5cm.), and the ridge-tile about 16.2in. (41 cm.) in length.

HORSE AND RIDER FINIALS IN ENGLAND

Roof-finials in the form of mounted human figures are first known in England in the thirteenth century, and continued to be made for three centuries. The figures of knights, identified as such by their armour are, however, distinctly uncommon; the evidence is both archaeological and documentary.

In the thirteenth century, the earliest examples of knights are two figures clad in chain mail, both found in Cambridge, one at St John's College and the other in Petty Cury.²⁷ Pieces of another knight finial were found in excavations at Packesham manor house, near Leatherhead; the fragments, dated c. 1290, comprise the right foot in a stirrup, parts of his body, one leg of the horse, and the attachment of the finial to the ridge-tile.²⁸

The manufacture of knight finials in Surrey is given by a documentary reference to the supply by John Pottere of Cheyham (Cheam) of two crests made in the fashion of mounted knights, bought for the hall of Banstead manor house in 1373.²⁹ This record is valuable as showing that knight finials were placed in pairs on the roof, probably one at each gable end of the hall, in the late fourteenth century. Moreover, the source of the finials is stated to be Cheam, where pottery kilns of this period have been found and excavated.

Next in the series is the Bedford finial, which demonstrates that knight finials continued to be made during the fifteenth century; as yet, no finial in this style is known of later date. The range in date of knight finials in England is thus from the thirteenth down to the fifteenth century.

The few knight finials should be considered in the wider context of horse and rider finials in general in England. The material varies greatly in character in different regions, and most of it, in the south-western counties, is later in date.

The only finials, datable on style to the same century as the Bedford finial, are two formerly on the roof of the Brotherhood House in Bancroft, the main street of Hitchin. The surviving finial is in the Hitchin Museum, and a cast, made in a two-piece mould, is in the Cecil Higgins Art Gallery at Bedford. The Brotherhood House is a structure of the late fifteenth century, with an upper hall on the first floor. The building has been much altered subsequently, though the date 1588 is in plaster outside and a staircase is of this date. It is recorded that the finials were fixed on the gable ends of the building, though as often happens, they were pro-

bably replaced on a roof of later date.³⁰

The finial in the Hitchin Museum (pl. 13, b) is complete. It is made of light red ware, with yellow glaze on the figures and the ridge-tile. The tile is semi-circular in section, 12.5in. (31.8cm.) in length, 10in. (25.4cm.) wide at the base, and 4.5in. (11.5cm.) high. The total height is 14.25in. (36.2cm.), and the horse is 9in. (23cm.) long.

The rider wears a close-fitting jacket with short sleeves and a prominent collar at the neck. His helmet, without a vizor, has a rounded skull with a low crest; the brim is pointed in front, and at the back it covers the whole of the neck. The seven large bosses round the base of the skull are the heads of rivets fastening the leather lining. The helmet is a sallet, typical of the fifteenth century.³¹ The Hitchin figure has neither sword nor shield, so that it represents a horse-soldier or squire rather than a knight.

Only one leg survives of what was an exceptionally large knight finial. It was found in dredging the moat of the manor house of the Bec and Willoughby families at Eresby, near Spilsby, Lincolnshire, in 1966. I am greatly indebted to Mrs E.H. Rudkin for information and the photograph reproduced on pl. 13, c.

This right leg is made of red ware, and is 9in. (23cm.) long. It is slightly bowed, with the scar mark of the saddle at the top of the thigh; the figure was therefore mounted. A padded doublet, with incised lines for the quilting and a row of stamped circles along the lower border, extends to just below the hip. Armour is indicated by a poleyn with a circular side-wing on the knee.³² The figure was thus a mounted knight in armour, and it may be dated late fourteenth or early fifteenth century. In size and details of the armour, the Eresby figure is the only find in England at all comparable with the Sire of Sarcus (pl. 16).

The only other horse and rider finials known in eastern England are the body of a horse, 12in. (30.5cm.) long, with the lower part of the rider, found in Leicester (Leicester Museum, no. 64/1951); and a complete finial and ridge-tile at Bury St Edmunds, recorded by a drawing in the Buckler collection (no 1686) in the British Museum. In neither instance are the details sufficient for the status of the rider to be determined.

In southern England the current excavations of the manor house at Netherton, north Hampshire, have produced horse and rider finials in a dated context.³³ One nearly complete example and pieces of several others, numerous roof-tiles, and a

much clipped penny of Edward I, lost c. 1350-60, were in a pit dating from the first phase of the fourteenth-century manor. The rider is a male figure, not a knight, wearing a close-fitting garment and a hood covering the head and neck; no details of the dress are shown. The horse is about 12in. (30cm.) long and the total height of finial and ridge-tile 15in. (38cm.).

Elsewhere, horse and rider finials occur only in south-west England. With one exception, the figures are rather lacking in distinctive features and difficult to date closely; none of them is likely to be medieval. However, the finial in the Totnes Museum, formerly on the roof of 9 Fore Street, Totnes,³⁴ merits detailed description.

The Totnes finial and ridge-tile are complete (pl. 14, a), and made of light red ware with traces of green glaze on the figures. The ridge-tile, an inverted V in section, is 21.75in. (55.3cm.) long, 10in. (25.4cm.) wide at the base, and 5in. (12.7cm.) high. Along the top are low peaked crests, a devolved form of the tall crests, moulded by hand, current in the extreme south-west during the medieval period and later.³⁵

The horse wears a cloth trapper, coloured red, and the reins are held at each side by both of the rider's hands. Details of the horse's head are shown with care, and the mane is a crest pierced by holes, extending the whole length of the neck.

The rider has a dignified poise. He wears a three-cornered or cocked hat, coloured black, with a large peak in front, and a frock-coat with a broad turned-down collar. Slung over his right shoulder is a shoulder-belt or baldric, from which is suspended a sword on the left side. The total height to the crown of the rider's hat is 17.25in. (43.8cm.).

The style of the rider's dress is that worn by gentlemen for riding in 1680-90, though the cocked hat continued in fashion until about 1750.³⁶ The wearing of a sword, 'the grand distinguishing mark of a fine gentleman,' was the fashion during the seventeenth century and continued in the next century until about 1730, after which it ceased to be the symbol of gentility.³⁷ The rider's dress and accessories thus date the Totnes finial to the late seventeenth or early eighteenth century.

The Totnes finial closes the series which depict the upper levels of English society; knights, squires and gentlemen. The range in date, from the thirteenth century down to the late seventeenth century, is reflected in the styles of dress, from military suits of armour to civilian dress with only a sword.

OTHER FINIALS IN SOUTH-WEST ENGLAND

Compared with the finials considered above, the other examples of horse and rider finials in south-west England are crude and lacking in character. However, a few of them, in Dorset, Devon and Cornwall, can be dated by the style of the rider's dress and head wear. This applies to the finials at Polperro, East Looe, Bridport and Plymouth, which will be briefly described in chronological order. For the rest, the figures are too generalised for close dating to be possible; though two finials are as late as the nineteenth century.

The four datable finials belong to the seventeenth and eighteenth centuries. The rider at Polperro, called the Devil on Horseback (pl. 14, b), wears a close-fitting doublet and baggy knee breeches, fashionable in the first half of the seventeenth century.³⁸ Slightly later is the figure from East Looe, wearing a hat with a round crown and a wide brim.³⁹ To the end of this century belongs the finial at 9 East Street, Bridport, formerly the George Inn built in the seventeenth century,⁴⁰ with more detail (pl. 14, c). The rider wears a frock-coat with turned-up collar and a flared skirt reaching to the knees. Vertical slashes on the coat and skirt represent pleats or vents. His cocked hat has the brim up-turned at the sides. The dress was worn for riding in the period 1680-90.⁴¹ The horse's body is a wheel-thrown cylinder, apparently a bottle, to which the head, modelled by hand, has been added. The horse's legs have been repaired and lengthened by metal rods inserted in lead plugs, which are fixed into a re-used ridge-tile with shallow cresting. The Plymouth finial (pl. 14, d) was formerly on the roof of an inn in High Street, opposite the Old Guildhall. The rider wears a round hat with flat brim, and a frock-coat with wide turned-down collar; the coat is fastened from neck to waist by buttons. A shoulder-belt passes from the right side down to the left hip. The style of dress is that introduced for sport and riding about 1770,⁴² so that the finial is late eighteenth century or soon after.

Reference to the distribution map (Fig 10) shows that in extreme south-west England horse and rider finials are known from the astonishing number of 18 sites; one in Dorset, 11 in Devon, and 6 in Cornwall. Four of the more interesting examples have been described above.

This abundance of finials attracted attention in the nineteenth century and since; they have been discussed with more or less relevance, and much speculation.⁴³ Many of the finials were

still on the roofs in the late 19th century but have been removed since, and are only recorded by outline sketches. Two factors make the evaluation of the finials difficult; lack of datable characteristics, and the fact that finials were replaced after drastic alterations to the original building, or even removed to another site. It may be noted that at three places, Okehampton, Tavistock and Padstow, the finials were in pairs and set up at both ends of the roof, thus continuing a practice derived ultimately from medieval times. The majority, however, were placed on the gable end of the building fronting the street.

The range in date of the finials in Devon and Cornwall is from the early seventeenth century down to the late nineteenth century. It is unlikely, then, that a single explanation will account for all of them. Those of the seventeenth and eighteenth centuries have been mentioned already. For the rest, with three exceptions, it can only be said that they represent horses and riders. A finial at Truro, now lost, differed from all the others in depicting a horse with a load of skins on its back; this has a special local significance, because pack-horses formed the chief means of transporting goods in Cornwall, even into the eighteenth century.

The most recent figure of the series is on Mayflower House, West Street, Ashburton. It was placed on the roof by J.S. Amery in 1896, as recorded by a tablet below the gable. The ridge-tile and figure are made of brick-red terracotta. The rider wears a tall hat with rounded crown, a close-fitting coat, and gaiters buttoned up on the outside. A shoulder-belt is slung over the right shoulder, and from it hangs a satchel on the left hip. A bird is perched on the right hand, with straps attached to it hanging below. The horse has a bridle and reins, and wears a saddle cloth. The figure represents a squire or country gentleman dressed for riding and sport, and here shown as hawking. The hat is a 'high bowler,' fashionable in the decade 1880-90, and the long gaiters or 'spatterdashes' are also typical of the nineteenth century.⁴⁴

A finial of the same character was on one gable of the Chevalier House, 78-80 Fore Street, Exeter, a half-timbered sixteenth-century building, destroyed by enemy action in 1942. To judge from the small woodcut published by Baring-Gould, the figure was more finely modelled than most of the finials in Devon and Cornwall. The horse has pricked-up ears, a bushy tail and slender legs; the

rider wears a tall hat with rounded crown, but no other details of the dress are shown. These features invite comparison with the Ashburton finial, and suggest a mid or late nineteenth-century date for the Exeter figure.

Among the various theories put forward to explain the finials only two need be considered here. It is supposed that they marked houses which sheltered Charles II in his flight after the Battle of Worcester in 1651, or were secret signs to indicate hospitality for fleeing Royalists. If either of these theories was correct, it might be expected that more finials of late seventeenth-century date would exist than is the case. The negation of these romantic theories lies in the fact that some finials are earlier, while several others are considerably later than this time. Moreover, the evidence is of the slightest that even in the medieval period, the heyday of such things in England, finials were put on roofs for any purpose than as ornaments, still less that a secret meaning was given to them.

Another theory which has gained some credence

in the West Country is that the finials were a kind of inn sign, denoting that the rider and his mount could be accommodated or that the inn carried a livery stable, or possibly that it was a house supplying post-horses. This explanation is worth more serious consideration, to see if it is supported by the development of the road system in Devon and Cornwall.

A striking feature of the distribution map (Fig 10) is that about three-quarters of the sites are strung out along the coastal and southern parts of Devon and Cornwall, while the remainder also form a group across the central part of Devon, radiating from Exeter. The pattern at once suggests that the sites may be related in some way to communications, and invites comparison with the lay-out of the road system. For this purpose the road system of these counties, as it existed in the sixteenth century and was developed in the seventeenth century, must be examined.

In the 16th century, as previously, only one through road formed a connexion between Lon-

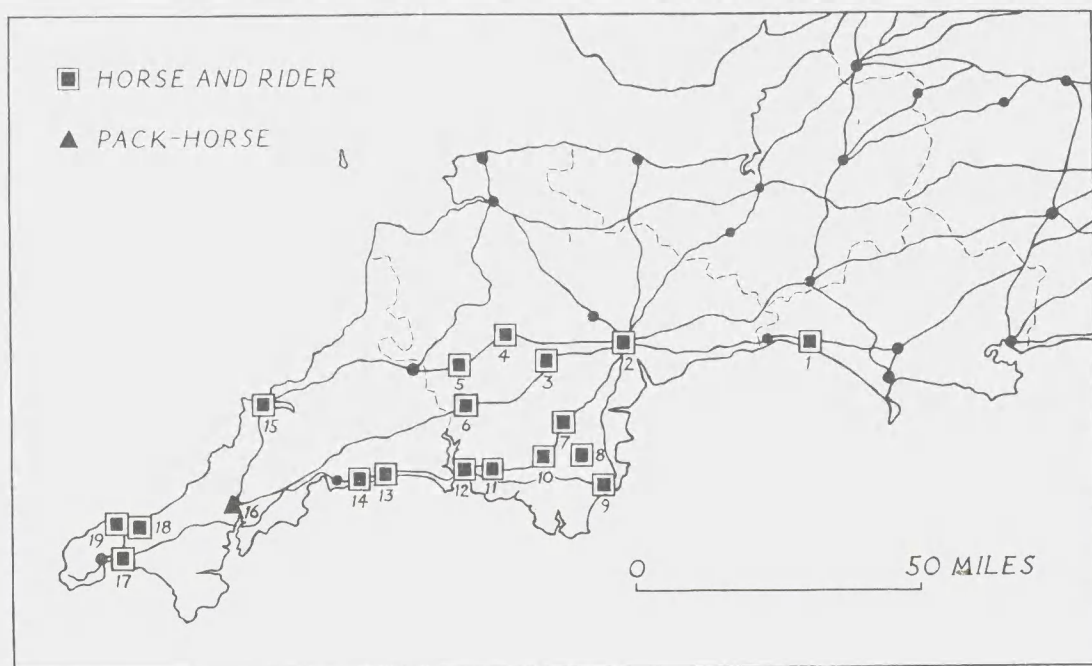


Fig 10 Distribution map of post-medieval horse and rider finials in south-west England.

Dorset

1 Bridport

Devon

2 Exeter

3 Chagford

4 Okehampton

5 Lewtrenchard

6 Tavistock

7 Ashburton

8 Totnes

9 Dartmouth

10 South Brent

11 Plympton

12 Plymouth

Cornwall

13 East and West Looe

14 Polperro

15 Padstow

16 Truro

17 Marazion

18 Hayle

19 St Ives

don and the extreme south-west.⁴⁵ It entered the region with which we are concerned in a fairly straight course from Salisbury to Exeter. Thence it continued westwards to Okehampton, and skirted the north side of Dartmoor to enter Cornwall by Polston Bridge over the river Tamar, and reached Launceston. The road then crossed Bodmin Moor to Bodmin, and kept to the lower ground north of St. Austell Moor on to Truro, where it curved to avoid Wendron Moors, and so reached the south coast at Penzance. The road thus followed a fairly central line through Devon and the Cornish peninsula.

The road system of the late 17th century is known in detail from the survey made by John Ogilvy, which forms the basis of the roads shown on *The Map of XVII Century England* (Ordnance Survey, 1930). By this time, three main roads ran westwards from Exeter through Devon and Cornwall, and a network of minor roads linked the lesser towns (Fig 10).

The central road still connected Exeter, Okehampton and Launceston, where it diverged to pass over Davidstow Moor, and thence to Rock for the ferry across the river Camel to Padstow. The peninsula was now crossed by a road between Padstow and Truro.

The second road ran from Exeter to Chagford, and then crossed the middle of Dartmoor to Tavistock. It then continued round the south side of Bodmin Moor in a direct line through Lostwithiel to Truro.

The third and most southerly route ran south-west from Exeter to Ashburton, then skirted the southern end of Dartmoor to South Brent and on to Plympton and Plymouth.⁴⁶ The mouth of the Tamar was crossed by a ferry to Torpoint, whence the road kept near to the south coast of Cornwall as far as Looe, crossing the river by a late medieval bridge, and again kept to the coast to cross the Fal at Bodinnick ferry.

In South Devon another road ran south from Exeter to Dartmouth, and connected Dartmouth to Plymouth.

In general, the expansion of industries and trade in the seventeenth century, and the consequent increase in traffic led to the development of better roads. The numerous minor roads between the inland towns of Cornwall were co-ordinated with the main roads, and their condition improved for stage-coach traffic. By the end of the century, Cornwall had three direct roads connecting the county with Devon and the rest of England. The

importance of the medieval and later bridges of Cornwall, and the ferries, should be stressed as the means of maintaining through traffic across the rivers and their estuaries.⁴⁷

We may now return from the road system to the horse and rider finials plotted on the same map (Fig 10). It is at once apparent that in Devon the finials are located at the larger and smaller towns along the three main routes from Exeter across and around Dartmoor, to enter Cornwall at Launceston, Tavistock and Plymouth. In Cornwall the finials are also located at the major ports and towns such as Padstow, Truro, Marazion and St Ives. Along and close to the southern coastal route there are finials at both East and West Looe, marking the crossing of the river, and at Polperro. There is, in fact, a remarkably close correlation between the pattern of the main roads and the distribution of the finials.

The theory that in origin the finials in south-west England denoted inns or hostelrys along the stage-coach routes is thus fully supported by their occurrence and spacing along the roads. In detail this explanation receives further support from the location of finials at the sites of former inns; the George at Bridport, an inn in the High Street at Plymouth, and the Ship Inn at Padstow. The Truro finial, which differs from the others in representing a horse with a load of skins, commemorates the pack-horses which played a leading role in carrying goods in Cornwall.

It would, however, be misleading to regard the inn-sign theory as the sole explanation, which is certainly not the case, either in Devon and Cornwall. Some of the finials are much later in date than the seventeenth century; for instance, late eighteenth century at Plymouth, late nineteenth century at Ashburton, and probably about this date at Exeter. Moreover, while the finials at Bridport, Plymouth and Padstow are associated with inns, and that at Polperro was placed on an inn from another house, the latest members of the group are on buildings very different in character and use; a private house at Ashburton, Noall's Manor House and the Manor House at Ayr, St Ives, and finally several placed on private houses at St Ives in modern times. These more recent examples show quite clearly that by the 19th century the original purpose of the horse and rider finials was long obsolete, and they had then become simply ornaments on the roof.

The custom of preserving old finials on roofs is stronger in Cornwall than anywhere else in

England. Indeed, it has been reinforced there in the 20th century by the skill of Mr Bernard Leach, who has reproduced the old style of finial and these have been set up on modern houses.

ANALOGIES ON THE CONTINENT

In the regions of the Continent nearest to England, roof-finials in pottery of the medieval and later periods are frequent.⁴⁸ The finds extend in a broad zone from southern Holland and Flanders as far west as Normandy. The finials comprise many of the types known in England, including knights on horseback.

The earliest knight finials abroad are thirteenth-century in date, and form a small group in East Flanders and in extreme northern France. Although fragmentary, the finials are remarkable for their large size, the attention given to detail, and vigour.

The most informative is the finial in the Gruuthuse Museum at Bruges (pl. 15, a-b). It is made of grey sandy ware with light red surface, covered overall by dark green glaze. The lower part of the knight's body remains, the right arm and part of the right leg. The horse's head and neck are complete. The knight wears a long shirt of chain mail, covering the arms, with skirts down to the knee.⁴⁹ The mail is shown conventionally by lines of square rouletting. The horse's head and neck are also protected by trapping of mail; a feature well shown on ivory chessmen, a mural in the Painted Chamber at Westminster Abbey, and in north French and English miniatures.⁵⁰

The lower part of a shield remains on the knight's left side. His right arm is extended, and the hand grasps the horse's reins. The forearm is pierced by a hole about 1 in. across to hold a lance, probably of metal; its lower end was secured by a socket in his right thigh.

The knight's armour is well shown by a figure found in the *Marché du Vendredi* at Ghent, now in the Bijloke Museum at Ghent (pl. 15, c).⁵¹ The fabric is similar to that of the Bruges finial, and the overall glaze is dark green and streaky. The knight also has a mail shirt, indicated by lines of square rouletting. On his head is a flat-topped helmet with two slits for the eyes.⁵² His left side is protected by a long heater-shaped shield curved to fit the body, and charged with three bars of notched lines. The shield is suspended from the knight's neck by a looped strap (guige). The figure is broken off at the waist, but even in its incomplete state is 15 in. (38 cm.) high.

The Ghent knight has recently been illustrated and discussed in relation to parts of similar figures in East Flanders. Documentary evidence shows that statuettes, presumably made of pottery, were used as ornaments on the bridges of Ghent in the fourteenth century.^{52a} This usage broadens the application of the term 'finial,' at least in Belgium, but does not exclude the placing of mounted knights on the roofs of medieval houses and buildings on the Continent.

The last finial of this group is the head and neck of a horse in the Musée Municipal at St Omer (Pas-de-Calais), also of grey ware with dark green glaze (fig. 11). It is about twice the size of the horse's head on the Bruges finial. Notched lines on the neck indicate a mail trapper, and strips in high relief show the straps of the headstall, with a decorative knob on the brow in front of the ears.

Also to be associated with the group is the figure of a knight formerly on the roof of the Cloth Hall at Ypres. The only record of it states that it was similar to the Ghent knight, but no details are available. The Cloth Hall was begun in 1201 and not completed until 1304; these date brackets confirm the stylistic dating of all the finials to the thirteenth century.

These knight finials form a concise group in Flanders and the adjacent part of France; they have many features in common. In fabric, and in the quality and colour of the glaze they are remarkably uniform. Moreover, the use of rouletting for mail armour on the knight and his mount is consistent on the three extant figures. Everything points to a common source for the finials, probably somewhere in Flanders.

In Belgium and northern France, knight finials of large size continued to be made during the fourteenth and fifteenth centuries. The finials are outstanding for the attention paid to details of the arms and armour of both rider and horse. Four examples are known, two in Belgium and two in France.

Both the Belgian finials are in the Bijloke Museum at Ghent. The first, found in Ghent, is referred to the fourteenth century (pl. 15, d). It is made of red ware, with dark green glaze shading off to light green or yellow at the margins. The knight wears mail, shown by elongated notches of rouletting on the body and legs. The horse has a cloth trapper extending to the legs, emblazoned twice on the sides with the lion rampart of Flanders. The horse's body is 14 in. (34.5 cm.) long; the

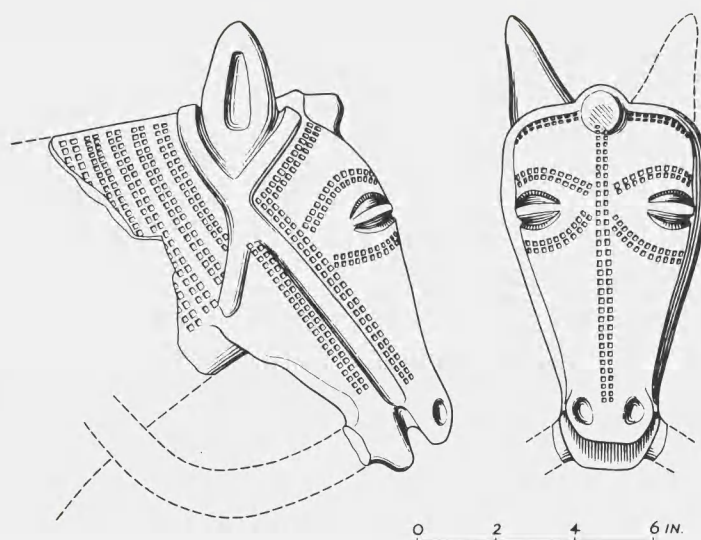


Fig 11 Horse's head of finial. St Omer (Pas-de-Calais). ($\frac{1}{8}$)

rather slender legs are broken off above the attachment to the ridge-tile.

The other finial, found at Tournai, is only the body of the knight. Circular stamps represent mail, under a mottled green glaze. On the left side is a large heater-shaped shield, charged with three fleurs-de-lys, suspended by a strap. It is labelled as fifteenth century.

Turning to France, in the Musée des Beaux-Arts at Lille is a nearly complete finial found in Lille. Only the knight's body remains, lacking a shield, but the horse is complete, 10.5in. (26.7cm.) long. Both figures have stamped decoration for mail, under a green glaze.

The most splendid of the knight finials on the Continent is in the Musée Départemental de l'Oise at Beauvais. It is known as the Sire of Sarcus, and was originally on one of the towers of the Château de Sarcus, near Granvilliers (Oise), a medieval castle largely reconstructed in the sixteenth century and destroyed in 1834.⁵³

The finial is complete (pl. 16, a-c), made of whitish ware with overall yellow glaze. It is 18.5in. (47cm.) long, and 22in. (56cm.) high. The finial was secured to the tower by a hollow conical pedestal under the horse, to which the horse's hoofs are attached in front and behind. It is identified as a product of the pottery industry at Savignies, near Beauvais, which operated in the fifteenth and sixteenth centuries.⁵⁴

The armour of both knight and mount are shown in some detail, and in fact are a remarkable

record of late fourteenth or early fifteenth century accoutrements. The rider wears a bascinet helmet with a mail aventail covering the neck.⁵⁵ His left forearm bears a small, almost triangular shield (*petit écu*). It is charged with a saltire and rosettes, within an indented border; the device is not correct heraldically. On his right side is a sword, but its hilt is too high up on the body for use. As noted above, the sword is on the same side as on the Bedford finial, not as usual on the left side, but this does not seem to be significant. The legs are protected by long, curved rectangular plates with three bosses, probably made of moulded leather.

The horse's body is protected in front by a peytral with three large bosses, and on the flanks and behind by flanchards, curved to the shape of the body, fluted vertically, and standing out stiff to protect the legs. These defences were probably made of cuir-bouilli or moulded leather.⁵⁶

In addition, the horse's head is completely enclosed by a chanfron, as shown by holes for the ears, eyes and nostrils; this was probably also made of moulded leather. Apparently a chanfron is also on the horse's head at St Omer (fig 11), which has rouletted lines round the eyes. This rare form of horse armour is known mainly by an extant fourteenth-century chanfron of iron at Warwick Castle.⁵⁷ The straps of the headstall on the Sarcus horse are shown by applied strips across the brow and the nose-band.

The only medieval finial other than those with

knights is a figure from Sainte-Marie-les-Anvers, Antwerp, in the Cinquantenaire Museum at Brussels.⁵⁸ It is rather smaller than the other finials and depicts a musician playing a violin, seated on a horse; the legs of the horse are broken off above the attachment to the ridge-tile.

DISTRIBUTION AND SUMMARY

On the distribution map (fig 12) are plotted the knight finials and horse and rider finials in England and on the adjacent regions of the Continent. The incidence, as far as known from the comparatively few examples, is limited to Flanders in Belgium and to northern France as far west as Picardy; and in England to the south Midlands, East Anglia,

and the southern counties. Both abroad and in England the range in date is about the same, from the thirteenth century down to the fifteenth century. This correspondence is not restricted to the knight and rider finials, but applies to various types of roof finials in pottery on both sides of the English Channel.

On the Continent the knight finials are divided into two groups according to style. The majority from 5 sites, Bruges, Ghent, Ypres, St Omer and Lille, are the earlier in the series. The knight and his mount are clad in chain mail. On the later finials, at Ghent and the Château de Sarcus, the armour is more elaborate and the heraldry is shown in some detail.

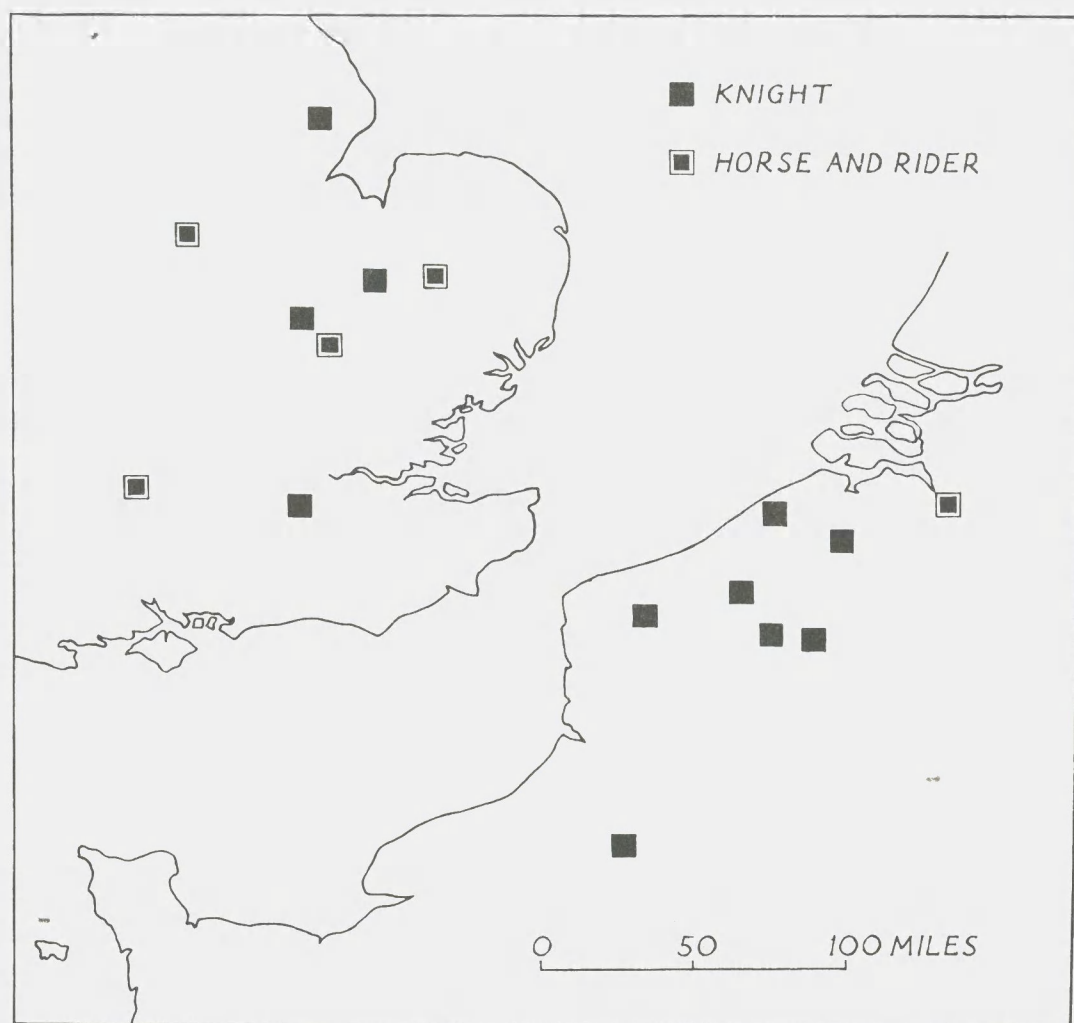


Fig 12 Distribution map of medieval knight finials and horse and rider finials in England, Belgium and France.

In both groups abroad, some of the figures are more imposing and larger than the counterparts in England. The fragment from Eresby, Lincolnshire, is an exception to this statement, since the complete figure must in size have equalled any of those on the Continent.

Although knight finials were placed on the roofs of at least one castle, in France, and on manor houses in England, and some of them bear heraldic devices, the evidence is slight that the figures can be related to the distinguished occupants of these places.

In post-medieval times, horse and rider finials continued to be made in France down to the early nineteenth century. Several in eastern France, notably at Reims and Troyes, represent soldiers of Napoleonic times and convivial scenes of figures astride barrels of wine. In Normandy and Brittany the figures depict huntsmen blowing horns.⁵⁹

In England the custom of placing horse and rider finials on roofs also persisted in and after the seventeenth century. The figures are particularly numerous in Devon and Cornwall, where their character and distribution (fig 10) point to their use as inn-signs related to the road system.

In England the pottery finials thus demonstrate a long-lived tradition in this form of roof ornament, starting with knights in armour and ending with bowler-hatted gentlemen.

ACKNOWLEDGEMENTS

This paper owes much to a preliminary description and drawings of the Bedford finial by Mr David H. Kennett, which were of great assistance in the final study of the finial.

My grateful thanks are due to the curators of museums in England, Belgium and France, mentioned in the text, for permission to study and photograph the material in their charge. Mrs E.H. Rudkin kindly brought the Eresby knight to my notice, and supplied the illustration. It is a pleasure to record my thanks to Mrs E.M. Minter for information and details about the finials in Devon and Cornwall, and for hospitality during visits to take photographs.

I am also greatly indebted to Mr Claude Blair, Keeper of the Department of Metalwork, Victoria and Albert Museum, for discussing the armour on the knight finials, helpful comments and references.

OTHER ROOFING MATERIALS

In addition to the roof finial, a number of roof tiles were found, reused in the hearth 21. These were made in buff yellow fabric and were about 1.8cms thick. Four types were represented.

- (a) Two end peg holes: 33cm by 20cm.
- (b) Three end peg holes: 21.5cm wide.
- (c) Two end peg holes and ridge: 21.5cm wide.
- (d) One end peg hole: 21.5cm wide.

THE DECORATED TILES

by Elizabeth S. Eames

Five decorated tiles are of great interest. All were broken and have been repaired. They measure about 19 x 18.8 x 2.3cm. The sides are slightly bevelled. There are no keys in the back.

Two of the tiles form part of a larger composition, which was probably complete on four tiles. They show the rear of a lion with a foliate tail. A small part of the mane is present. (fig 13a). The lion is outlined by a V-shaped channel 2 – 8mm wide. The irregularity of this channel suggests that it was cut by hand with a V-shaped gouge. It may have been cut after an outline had been scored on the surface of the tile round a template or through a stencil, or possibly it was stamped on. The same V-shaped channel is used to indicate internal detail in the mane and tail. Two colours were obtained by coating the area of the lion with a red slip and the rest of the surface with a white slip. The whole surface was glazed with a lead glaze, which, after firing, produced a brown lion on a yellow ground. It was necessary to use a red slip to obtain a good brown because the clay used for the body of these tiles fired to a pale grey, buff or pink, colours which look olive green or greenish brown when glazed. An area of red slip has fallen away at the top left corner of the lower tile revealing the smooth surface of the tile body beneath it. At this point the red slip is less than 1mm thick. The white slip covers both sides of most of the V-shaped channels that outline the lion.

Tiles decorated with linear designs are known from a number of places in Bedfordshire and the neighbouring counties, but all are a single colour: yellow, green, black or very occasionally brown. The only tiles, which I know, with comparable decoration, in two colours, outlined by a V-shaped channel, have been found in Kent: on the site of Faversham Abbey, at Blackfriars and St Augustine's in Canterbury, and with other wasters at a possible kiln site exposed during drainage operations and investigated by Louise Millard in Clowes Wood, about two miles north of the important tile and pottery making centre at Tyler Hill.⁶⁰ Some of the designs from Faversham range over a number of tiles and at least two depict parts of animals which might be lions.⁶¹ Brian Philp kindly allowed me to inspect some of the tiles from Faversham. The designs are outlined by a deep, V-shaped channel in the same manner as the lion from Bedford. At Faversham also the background was covered in white slip, but it had not

been necessary to cover the design with red slip because the body clay of the tiles fired to a good red. It is possible that these tiles from Bedford were made by the same craftsmen as the tiles in Kent because the same decorative techniques were used, but the decorative designs were not the same and the marked difference in the body clay indicates that the Bedford tiles were not made in Kent, while the discovery of the wasters in Clowes Wood indicates that some at least of the Kentish examples were made there. The pale body colour of the Bedford tiles is typical of the fourteenth-century tiles known in Bedfordshire, Cambridgeshire, Huntingdonshire and Northamptonshire (decorated with linear designs) and the Bedford tiles are likely to have been made somewhere in that region.

Both of the lion tiles from Bedford have been damaged by contact with fire, possibly during secondary use. The upper tile retains very little of its original surface colour, the lower one retains its chestnut brown and deep yellow over about half of the surface.

Two of the three other tiles found, placed one above the other, form a panel decorated with the figure of a lady. She is standing, holding a fleur-de-lis in her raised right hand. Her hair is in a net. (fig 13c) The upper tile of the pair has been in contact with fire and the surface is badly damaged. Only the top left corner retains its original colour. The surface of the lower tile is very well preserved and its glaze is still present. At first one has the impression that the whole of the surface of the lower tile was covered in white slip and that it is a yellow tile with a few brown patches where the slip has given imperfect cover to the body, but a closer examination shows that these brown areas are on the clothing and that the tile body is not red and would not look deep brown if it showed through the slip. It seems therefore that areas of red slip were introduced to differentiate the clothing from the rest of the surface, but this was not done very systematically. The only part of the design on the upper tile that has not been damaged and retains its colour is the top petal of the fleur-de-lis. This is brown on a yellow ground so we may assume that this tile also was treated to give a two-colour effect.

Tiles of fourteenth-century date, decorated with linear designs, already known in this part of the country, have been mentioned above. They are normally a single colour and the linear decoration was stamped on to them; the various examples of one design show the same idiosyncracies, indicat-

ing that they were mechanically reproduced. It is possible that the design of the lady was stamped on to these tiles from Bedford, but if it was, some of the lines were recut by hand. There is evidence of this in the raised right hand, where two different lines were cut one outside the other. The outer line ends outside the main cavity. The bottom of the unusually wide space created by the two lines has been pecked out, probably with the point of the gouge with which the lines were cut. On the lower part of the lower tile the principal lines are wider and deeper than those usually made with a stamp and the bottom left corner of the drapery shows a double line that is likely to have been made by hand. No other examples of either of these tiles are known to me so it is not possible to compare the detail of more than one example.

The remaining tile is the upper one of a pair, comparable to the last, decorated with the figure of a king. He holds a flower in his raised right hand. (fig 13b) I do not know of any example of the lower tile of this pair, although it may be assumed that a lower tile existed at Bedford, but other examples of the upper tile are known. Part of one was found during excavations of the site of Elstow Priory in 1968; a tracing of a small piece of another, then in Elstow church, was made by Lord Aylwyn Compton in 1848; and a tracing of a complete but worn example at Old Warden Abbey was made by Lord Aylwyn Compton in 1854.

The tile from Old Warden is shown as about 14.5cm square. The piece from Elstow Abbey is complete at the left edge, which is about 14.2cm long. Because they are smaller both of these tiles lack the lower part of the design present on the tile from Bedford. The tile from Old Warden apparently lacked part of the right side and it is probable that the tile from Elstow Priory also lacked part of the right side because, although the design is placed closer to the left edge, the tile is even smaller. Neither could be used with one other tile to make the complete panel and it is probable that only the upper tile was produced in the smaller size.

A comparison of the designs on the tiles from Elstow church and Elstow Abbey with that from Bedford demonstrates that there are only very minor variations such as would be due to varying amounts of shrinkage during firing. It is probable that all were decorated with the same stamp. The tile at Old Warden, from which the tracing was made, was obviously very worn because parts of the design are missing. A comparison of this with

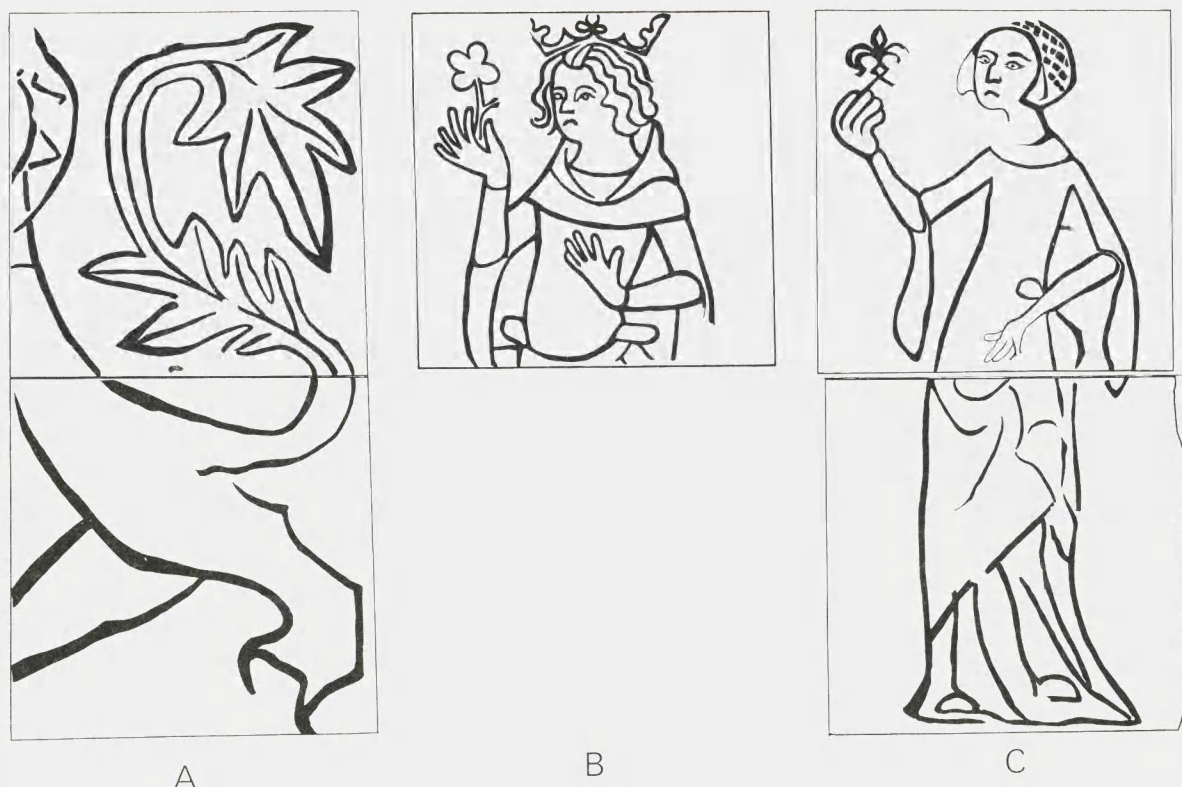


Fig 13 Decorated tiles. A lion, B King, C Lady

the others suggests that it was decorated with the same stamp but that the tile had shrunk more than the others from top to bottom during firing.

Most of the lines on this tile from Bedford look as if they were stamped on, but the line at the back of the hood and cape shows the V-shaped cavity that I associate with a gouge. The similarity of the different examples of this design suggests the existence of a stamp, but at Bedford at least some hand finishing was undertaken. This applies not only to the lines but also to the colour. As on the tiles decorated with the lady, so here, some treatment was given to the clothing by the insertion of areas of red slip, but again here this was rather scantily applied and the result is quite different from the clear two-colour effect of the lion tiles.

Ridges of glaze at one edge indicate that the three tiles decorated with the lady and the king were set upright on their lower edges to be fired. There is no clear indication of the way in which the lion tiles were set.

The similarity of the tiles with the king and the lady to the well-known series of tiles with linear

decoration including human figures referred to above, suggests that these tiles from Bedford were made in the earlier part of the fourteenth century. The clothing depicted would be compatible with such a date. There is no reason to suppose that the lion tiles are not contemporary. The similarity of technique between the lion tiles and the Kentish series referred to above suggests that the Kentish tiles should also be dated to the first half of the fourteenth century, later than I originally thought probable.

I interpret the method of decoration of the Kentish tiles and the lion tiles from Bedford as an attempt by the tile maker to obtain the appearance of a mosaic, while avoiding the difficulties of making a true *opus sectile* in tile. In *opus sectile* the tiles are cut to shape before they are fired; special kiln furniture is needed to support them in the oven and extra skill and care is needed to lay them correctly. Square tiles can be stacked in the oven and laid on the floor with far less trouble. I think that the deep V-shaped channels were intended to look like the mortar joints between

the pieces of a tile mosaic. The true mortar joints between the square tiles would of course also be present, but it is possible that the carrying on of colour over these true joints would make them less conspicuous than the false joints of the V-shaped channels. Thus the appearance of an *opus sectile* pavement could be obtained without the trouble and expense involved in actually making one. Although the tiles decorated with the king and the lady have received some hand treatment, particularly in the addition of the patches of red slip, distinguishing them from the general run of tiles with linear decoration, no effect of mosaic was achieved by it.

It is not possible at present to say exactly where these tiles were made, or whether they were made at the same place as the comparable tiles from Elstow and Old Warden, but the fact that the tiles with the king from Elstow and Old Warden are smaller and do not have the complete design, suggests that they were later than the Bedford examples. It is to be hoped that before long a kiln site where such tiles were fired will be found.

OTHER FLOOR TILES

In addition to the line-impressed floor tiles discussed above from hearth 21, this feature also included fragments of large plain floor tiles. A typical example was 23cms x 23cms x 3cms, made in a reduced sandy fabric. Though mainly laid on end as edging tiles, these were originally intended for use as flat hearth floor tiles.

CLAY PIPES

Fragments of clay pipes, including parts of stems and bowls, were found at 43 Mill Street. None however occurred in contexts where associated pottery gave the deposit a close date. Apart from one bowl in layer 31, all were plain, as were stems. The decorated bowl showed the "Mulberry" pattern.

SMALL FINDS (Fig 14)

Copper Alloy

- 1 Spur rowel with six points.
- 2 Part of spur: rowel attachment and one side of straight-sided shank, with double-eyed attachment to boot.
- 3 Rectangular double buckle.
- 4 Strap end with shallow engraved decoration on upper plate.
- 5 ? Belt fitting.
- 6 ? Belt fitting.

- 7,8 Stud covers.
- 9 Fragments of stud cover.
- 10 Nail with decorated square head.
- 11 Plain ring.
- 12-16 Pins.
- 17 Bent square sectioned rod with flattened end and 7 concentric circle decorations: ? spoon handle.

Iron

- 18 Rectangular buckle with grooved decoration on top side.
- 19 Ring: inscribed copper alloy on iron.
- 20 Pins.
- 21 Knife blade with tang.

Bone

- 22 Domino with copper alloy spots inlaid, and central copper alloy rivet.
- 23 Handle ringed decoration.

Stone

- 24 Whetstones. Mr P. Woodard, Minerals Officer in Bedfordshire County Council Planning Department reports that they were made out of phyllites, a metamorphic rock which is generally found bordering granite intrusions. Their origin is probably non-local, unless they had been found as erratics in the boulder clay.

COINS

- 1 Henry III short cross halfpenny 1242-47.
- 2 Charles I farthing, after 1636.
- 3 Commonwealth token
Obv FRM ROBERT FITTZHUGH
Rev 1654 IN BEDFORD
Robert FitzHugh was Mayor of Bedford in 1656.
- 4 William and Mary bronze, 1693.
- 5 William and Mary sixpence, debased silver: Scottish issue 1693/4.
- 6 Louis XIV denier.
- 7 George III penny.
- 8 Medallion with small hole pierced at rim.
Obv THE "TAIL-WAGGERS" CLUB. I help my PALS. *Rev* 313324 PERKINS SOUTHLANDS, GUILDFORD AVE, GUILDFORD S7, TEMPLE CHRS. E.C.4. TEL CITY 2429.

I am grateful to Mr F.W. Kulicke for reporting upon 1-2, 4-7 and to Mr D.J. Gaunt, Secretary of the Bedford Numismatic Society, for advising on 3.

SLAG

Metal working slag was recovered from most of

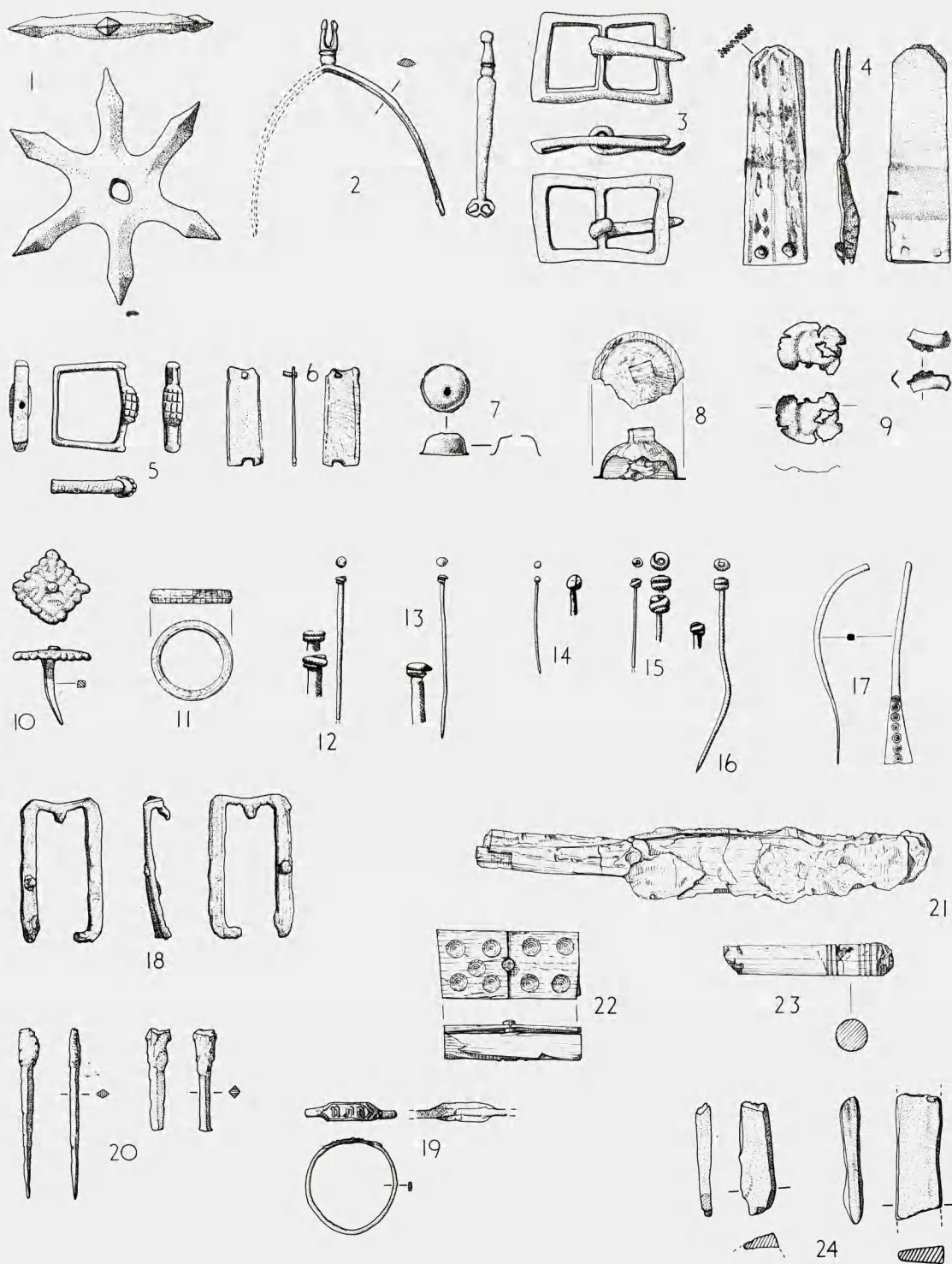


Fig 14 Small Finds (Scales: All $\frac{2}{3}$ except Nos 2,3,7,9,17,18,24 which are $\frac{1}{3}$).

the medieval and late medieval layers in Trench 19 at 43 Mill Street. Since only samples were kept, and since few layers lay totally within the area of excavation, detailed analyses by weight are not presented here. No features directly connected with metal-working were recognised in excavation. A variety of slag-with-ore and dross with residual ore was present. All pieces except one, which was copper ore, related to iron-working.

ANIMAL BONES

By Annie Grant

The only group of animal bones submitted for study was that recovered from the occupation layer 32 at 43 Mill Street, dated by its pottery to the middle or later 15th century. Some 300 bones were recovered and their identification indicated the presence of cattle, sheep, pigs, birds, horses and rabbits. Approximately half the bones recovered were from cattle, and sheep and pig bones each formed nearly a quarter of the total. Bird bones accounted for approximately 5% while horse and rabbit were each represented by just two bones.

Almost all parts of the carcasses of cattle, sheep and pigs were represented, but there were no horn cores of either cattle or sheep. This could indicate the presence of a horn working industry in a neighbouring area, but the small size of the samples does not allow any firm conclusions to be made.

Most of the bones were from apparently mature animals, but there were three cattle bones from a very young animal, and there was some evidence to suggest that the majority of the pigs had been killed at about two years of age.

Chop marks resulting from the butchery of the carcasses were seen on the bones of cattle, sheep and pigs. The tool used seemed to have been a sharp, heavy chopping tool.

Although no dog bones were found, some of the bones have been gnawed by a dog or another similar animal, and this may show that dogs were in fact kept at the site. The bones were from apparently healthy animals, with the exception of a pig bone, a calcaneum, which had a tumour on the anterior surface of the tuber calcanei. This bone collection would appear to represent the domestic refuse of a society with a mixed economy based on cattle, with sheep and pigs also of considerable importance. The bones recovered from the 15th farmer's toft at the deserted medieval village at Lyveden in Northamptonshire⁶⁵ indicated a similar type of mixed economy, although

there are slight differences in the exact proportions of the three main feed animals at the two sites. At Lyveden there is evidence for a small amount of hunting in the presence of deer bones, but we have no evidence for this at Bedford Mill Street except possibly in the bird bones.

NOTES

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- 4 Baker, 1970, 78-79.
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- 10 Thetford, *Op. cit.* in note 8; Cambridge, *Op. cit.* in note 15.
- 11 *Op. cit.* in note 9. Other examples are in the Guildhall Museum.
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- 13 *Oxoniensis*, 15 (1950), 57-60, fig 21, 1-3; see also *ibid.*, 17-18 (1952-53), 105, fig 35, 54-56.
- 14 *Trans. Bristol and Gloucestershire Archaeol. Soc.*, 48 (1926), 266-7, pl VII. The illustration is upside down.
- 15 *Proc. Cambridge Antiq. Soc.*, 58 (1965), 110, fig 15, A1/1 and A1/2.
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- 20 vide Note 5 supra.
- 21 *ibid.*
- 22 vide Note 6 supra.
- 23 D.C. Mynard 'Medieval Pottery of Potterpurty type' *Bull Northants Fed of Arch Soes* 4 (1970) 49-55
- 24 Hurst *B.N.F.A.S.* 4 (1970), 65, fig 13 no 112.
- 25 *Arch Journ.*, 59 (1902), 5-6, fig 2.
- 26 Cf. horse-armour in the Tower of London, illustrated by Sir James Mann, *An Outline of Arms and Armour in England* (1960), 20, pl 12.

- 27 For the first see *Studies in Building History* (ed. E.M. Jope, 1961), 79, fig 5, no. 2. For the other see *Proc Cambridge Antiq Soc.* 8 (1892), 41, pl V, 34.
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- 30 R.C.H.M., *Hertfordshire* (1910), 123 (25). I am indebted to Mr. O.J. Weaver, Inspector of Ancient Monuments, for further information.
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- 32 Blair, *Op. cit.*, 76, fig 27 and figs 217 ff.
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- 37 Cunnington, *Op. cit.*, *Seventeenth Century*, 22, 168; *Eighteenth Century*, 100.
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- 43 S. Baring-Gould, *Strange Survivals: some Chapters in the History of Man* (1892), Chap. II, 'On Gables,' 55-6. Frontis-piece and figs 9-10 (Totnes), fig 11 (West Looe), and fig 12 (Exeter).
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- 57 Nickel, *Op. cit.*, in note 25, p 180, fig 18.
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The Bedfordshire Archaeological Council is indebted to the Department of the Environment for a grant towards the costs of the publication of this paper.

A Palimpsest Brass at Dunstable

H.K. CAMERON

SUMMARY

A consideration of the Fynche brass in Dunstable Priory Church and the earlier brass from which it was made. A reconstruction of the under brass is offered.

One of my earliest treasures was a small scrap-book with pictures of European cathedrals and abbeys. I already had some acquaintance with church architecture in England; this gift in early youth introduced me to a wider interest in ecclesiastical art and the desire for foreign travel. Although alas I can no longer find the scrapbook I remember it well and have always been grateful to Will Kuhlicke for it. He may not remember the gift for it was many years ago that he, or perhaps his parents, passed it on to me when he no longer had use for it. The care and enthusiasm he showed at an early age to collect and assemble so many architectural pictures has remained with him and, despite a very busy life, he has made frequent learned contributions to historical and antiquarian knowledge.

It is not long since he wrote a note on the discovery that the Launcelyn brass in Cople church is palimpsest.¹ Repair work on brasses is bringing to light an increasing number of examples of metal re-used in this way. Much plate came into the hands of engravers following the spoliation of monastic churches from 1538 and brasses laid in the 1540's and even 1550's are often on re-used metal. A further supply came from the Low Countries following the iconoclasm in 1566, so that more examples are found on the reverse of brasses laid in the 1570's and early 1580's. Though occurring most frequently at these two periods palimpsests are found at all dates when brasses flourished, i.e. from c.1300 to c.1650. At times an error in the first engraving led to almost immediate re-use. It is less easy to explain the gap in date of the Cople example described by Mr Kuhlicke; the obverse commemorates John Launcelyn who died in 1435, a hundred years or more later than the military figure engraved on the reverse.



Fig 1 The Fynche Brass in Dunstable Priory Church. The brass shows the figures of Thomas Fynche, *ob* 1586 on the left, Elizabeth Fynche, *ob* 1607 in the centre, and Richard Fynche, *ob* 1640 on the right. The six sons of Thomas and Elizabeth Fynche are shown in the left-hand plate and their two daughters in that on the right-hand. The shield in each corner is that of the Merchant Tailors Company.



Fig 2 Obverses and Reverses of Figures on the Fynche Brass
a Thomas Fynche, ob 1586

During restoration work on the brasses of Dunstable a year or two ago I had occasion to lift the excellent and almost complete brass to Richard Fynche and his parents. Although still in its original stone, this had been moved to a position in the south aisle where it was much walked upon. The metal being of late date, it is thin and showing signs of wear, and it was therefore decided to mount the brass on a wooden panel on the wall to avoid further damage. It was a surprise to find that this brass also was palimpsest, one of the latest in date that has been found.

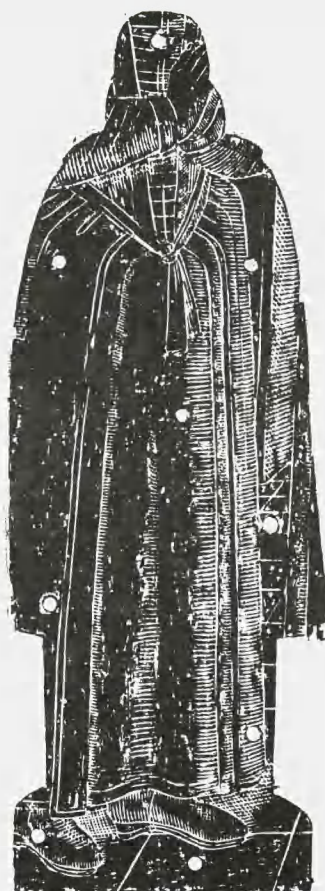
Richard Fynche is shown wearing a cloak reaching to the knees, open in front to show his doublet. He holds in his right hand a book and in his left, held over his chest, a pair of gloves. On his right and the central of three figures is his mother, wearing a broad-brimmed high hat. The third, dexter figure is of his father in a long gown holding a book in his left hand and a staff in his

right hand. These three figures are about 18 in high. Beneath them is a rectangular indent, $6\frac{1}{4}$ in by $19\frac{1}{4}$ in where earlier was an inscription plate. This was recorded in *Bibliotheca Topographica Britannica* and quoted by H.K. St. J. Sanderson,² being in seven lines of Roman capitals:

HERE LYETH THE BODY OF RICHARD
FYNCH, CITIZEN AND
MARSHAUNT TAYLOR OF LONDON, BEING
A BACHILER OF THE
AGE OF 81 YEARS OR THERE ABOUTS,
WHO DECEASED THE
12 DAY OF JANUARY A^o Dⁿⁱ 1640. THE
SONNE OF THOMAS FYNCH
AND ELIZABETH HIS WIFE: WHICH ELIZ-
AB: DEPARTED THIS
SECONDE DAY OF AUGVSTE A^o Dⁿⁱ 1607
AND THE SAID
THOMAS DECEASED THE 26th OF DEC-
EMBER A^o Dⁿⁱ 1586.



b Elizabeth Fynche, ob 1607



c Richard Fynche, ob 1640



Beneath this are two rectangular plates, that on the dexter side having engraved on it six sons in doublets while on the other are two daughters.

Around the whole composition is a fillet of brass with a further inscription in Roman capitals.

The two male figures are almost touching the inside of this fillet, and within the four corners, also nearly touching the marginal inscription are four shields, each with the arms of the Merchant Tailors Company, *argent, a tent royal garnished or between 2 mantles imperial purple lined ermine, on a chief azure a lion passant guardant or.*

The outer edge of the marginal inscription measures $62\frac{1}{2}$ in by $29\frac{1}{2}$ in. Starting at the top the inscription reads:—

WE KNOW THOV ART NOT LOST BVT
SENT BE FORE/
THY FRENDES ALL LEFTE THY ABSENCE
TO DEPLOARE,

NOR CAN THY VERTYES EVER BE FOR
GOTTEN/
THOUGHT IN THE GRAVE (THY CORPES
BE DED AND ROTEN)
FOR YEL TONGED ENVYE TO THE WORLD
MUST TELL
THAT AS THOV LIVEST THOV DYEST AND
THAT WAS WELL

Part of the strip at the bottom is missing; the words, shown in parenthesis, are quoted from the same record. This record quotes that line as starting with 'THOUGH', but there is no doubt that the final T is there. It may be an error for 'THOU ART'.

The reverse side of this brass has engraving on all three principal figures, both plates of children and three of the four shields. There is no engraving on the reverse of the upper dexter shield, nor on the marginal inscription.

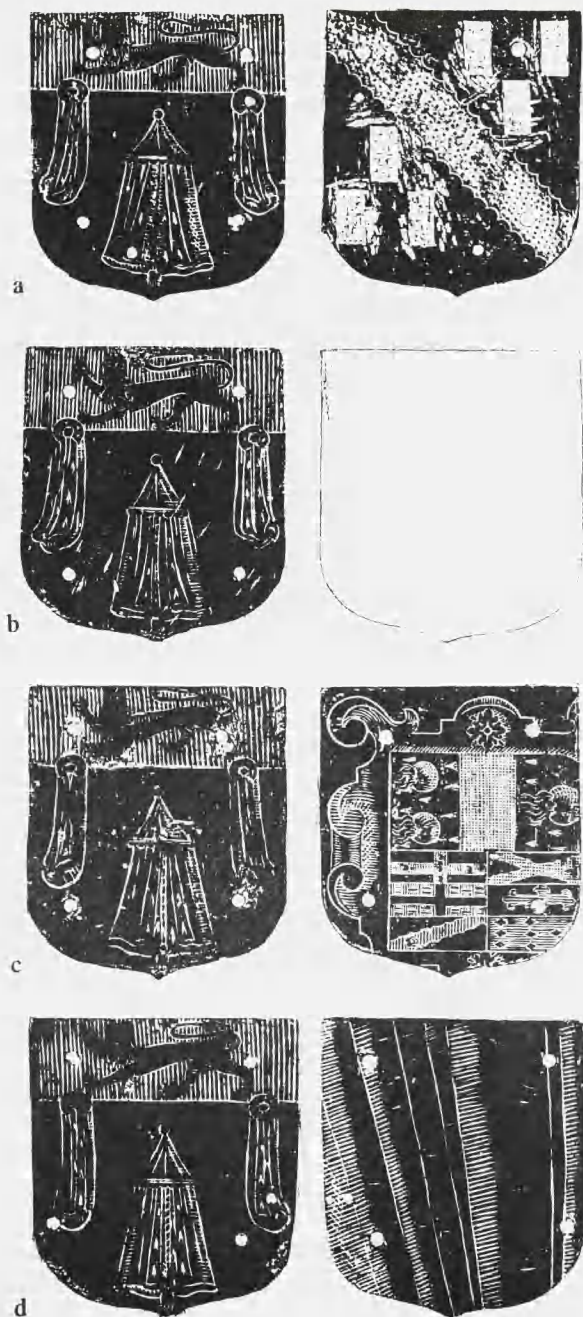


Fig 3 Obverse and Reverse of Shields of Brass to Richard Fynche and his parents in Dunstable Priory Church

- a Upper Sinister
- b Upper Dexter
- c Lower Sinister
- d Lower Dexter

Much of this palimpsest is from one earlier memorial and it is particularly interesting that the date of this could not be more than about 50 years earlier than Richard Fynche's death. Whether the earlier brass was ever laid down or was in some way a reject is not evident.

On the back of Mrs Fynche is the lower part of a lady in farthingale and stomacher, turning towards her right. This figure must have been at least as big again as that of Mrs Fynche. On the reverse of Richard Fynche is the lower part of another lady dressed in similar style but turning to her left, while on the back of Thomas Fynche is the lower part of the effigy of a man, whose stance is forward. This piece is partially obliterated by two large patches of solder evidently covering weaknesses in the brass.

This man's head is on the back of the rectangular plate with two daughters, while on the reverse of the sons is the man's right shoulder and the head of the lady turning to her left. These pieces fit together convincingly as in Fig 0 and all belong to one brass to a civilian and two wives of date c.1600 or a little earlier. The man's right hand is holding the right hand of the wife on the sinister side, whilst the hands of the wife on the dexter side, presumably the dead first wife, are shown together in the attitude of prayer.

On the back of the lower dexter shield is late, cross-hatched costume, probably female, which might well be contemporary with the rest of this interesting palimpsest, but does not seem to belong. The engraved lines of the folds of the dress are too divergent from parallel to correspond with any of the three figures described above. The other two shields have on their reverse other coats of arms. One, which appears to be complete, shows a bend engrailed between 6 billets. The date of this is uncertain but probably too late to deduce the tinctures or metals of the blazon. Up to the middle of the sixteenth century a brass surface could be interpreted as *or* or gold. The most likely interpretation, if the field is gold would be Barker of co. Suffolk—*or a bend between 6 billets sable*. In the late 16th century the blazoning was engraved on a brass shield but without guide or reference to colour. The field of this shield is brass, but if it need not be interpreted as *or* then a more likely attribution, the bend being engrailed on the brass, is:—*Sable a bend engrailed between 6 billets argent* for Alington.

The shield in the lower sinister corner of the Fynche brass has on the reverse a more complex

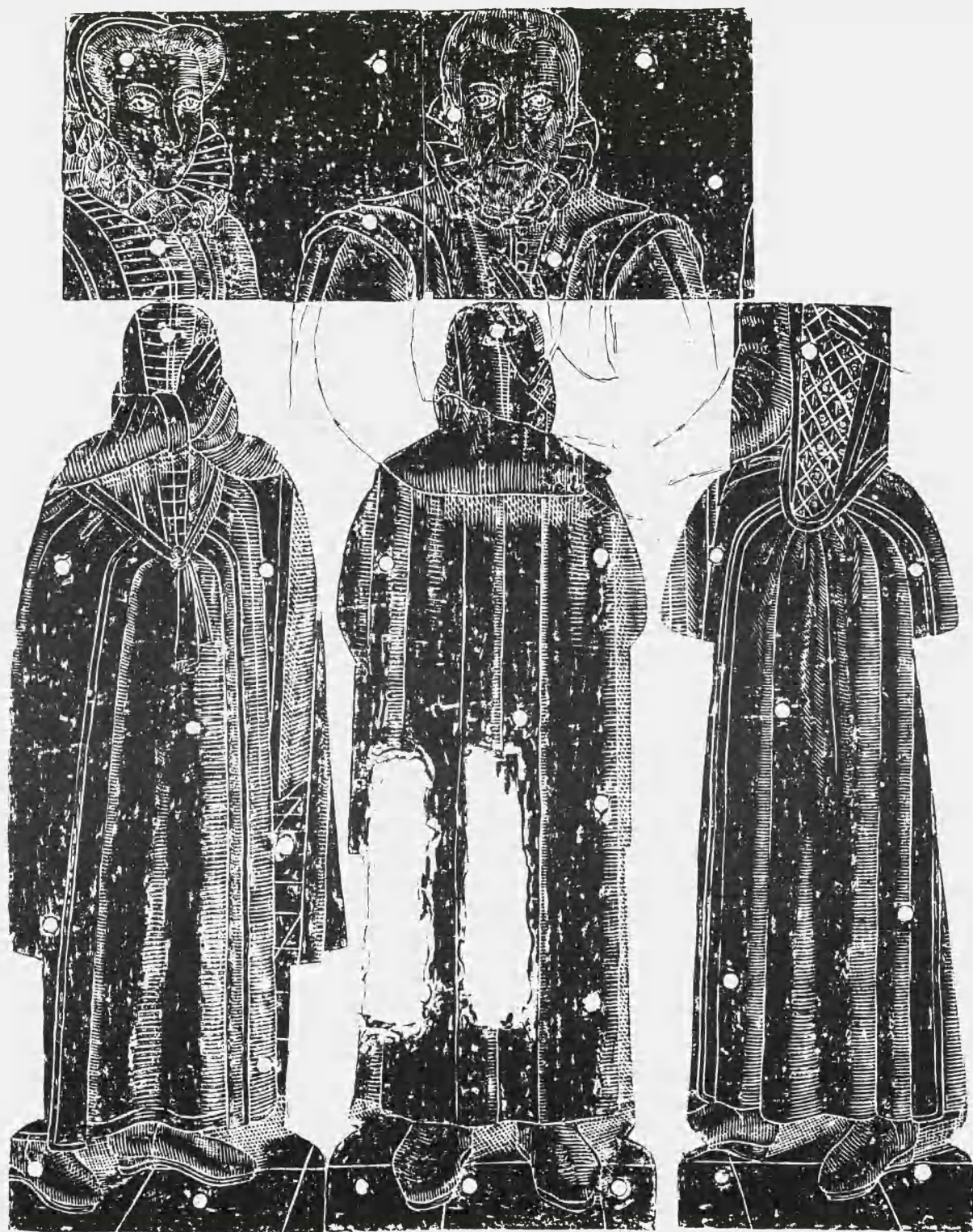


Fig 4 Reconstruction of the engravings on the reverse of the brass to Richard Fynche and his parents in Dunstable Priory Church

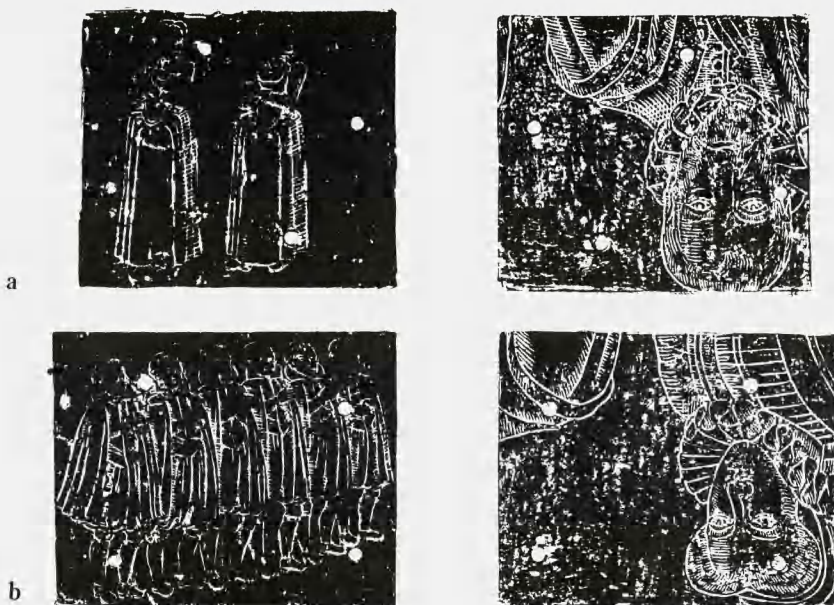


Fig 5 Obverse and Reverse of the plates to the children of Thomas and Elizabeth Fynche on the Fynche brass in Dunstable Priory Church

a The two daughters

b The six sons

shield of arms surrounded by scroll work, a form of decoration which appears during the last quarter of the 16th century. However the method of hatching the metal suggests the system of representing tinctures said to have been invented by Sylvester Petra-Sancta, an Italian Herald and first used in this country on the impression of a seal to the death warrant of Charles I. This poses a problem. If these hatchings conform to this system, and interpretation of the arms can certainly be made on this basis, then either the date of this shield must be too late for the plate to have been re-used in 1640, or the system must have been in use here at an earlier date than has been hitherto stated.³

Accepting the Petra-Sancta system, the coats displayed on this shield would appear to be

- 1 *Or on a bend engrailed azure a cinquefoil or for difference*, for Clerk of Forde, Wrotham (Kent).
- 2 *Azure billety a cross argent*, for Totesham of Totesham (Kent).
- 3 *Or on a cross sable 5 crescents argent* for Ellis or Thomas co. Sussex.
- 4 *Gules seven lozenges or, 3, 3 and 1* for Ferrers.

5 *Argent a cross bottony gules* (for Brereghly or Holme?)

6 *Argent a saltire engrailed sable* for Bafford and many other families.

These six coats are on the dexter half of the shield. The impalement on the sinister half is *ermine a fess sable between three fireballs issuing flames proper*, for Cartwright.

I am indebted to Mr John Goodall, F.S.A., and to Mr Colin Cole F.S.A., for help in identifying some of these coats. In particular I must thank Mr Colin Cole, Windsor Herald, for his help in identifying the shield as representing the marriage between William Clerk of Forde, in Kent, and Anne daughter of Edmund Cartwright of Ossington, co Notts., which alliance is shown in a pedigree recorded at the time of the Visitation of Kent in 1619.

NOTES

- 1 F.W. Kuhlicke, 'A Palimpsest Brass at Cople', *Beds Arch J* 7 (1972), 87-88 with pl 7.
- 2 H.K. St J. Sanderson, 'The Brasses of Bedfordshire', *Trans Mon Brass Soc.* 2 (1894), 130.
- 3 The latter alteinatur is favoured by Windsor Herald.

Frederick William Kuhlicke and Heraldry; a tribute

A. COLIN COLE

As the *Bedfordshire Magazine* stated in 1965: Hardly an issue . . . has appeared without a contribution from F.W. Kuhlicke, FSA, Director of the Bedford Museum.

That record has been maintained for almost a decade since and the number of F.W. Kuhlicke's contributions, if book reviews and the like be included, is more than one hundred.

He began his notable heraldic discourses – for these form the bulk of his writings in the Magazine – with a typical article entitled *The Beauchamps of Bedford*, boldly illustrated with their Arms, the first of a series which under the heading of “*A Bedfordshire Armorial*” has enhanced the knowledge of the county's past by the way in which Kuhlicke has made use of the handmaiden of history, heraldry, to bring home to his readers that all about them is still to be seen and appreciated this telling symbolism of Shield and Crest and Badge, which reflects the history of their county and brings it into the immediate present – does not the field of the Shield of Bedfordshire County Council, granted Arms in 1951, repeat the pattern and tinctures of that of the ancient house of Beauchamp, Quarterly Or and Gules, with escallops added, for the more recent Dukes of Bedford? Did not the Kings of Arms as granting authorities under the Crown, agree Kuhlicke's design for the Arms of the South Bedfordshire College with the same quarterly field of gold and red, thereon the Whitbread hind's head, the bugle horn of Bagshawe of Dunstable, and the chevron of ermine ascribed to the mediaeval musician who took his name from that town?

It is in his designs for local Armorial Bearings that Kuhlicke's practical heraldic skill is demonstrated, evolving from his deep knowledge of the theory and system of armory as applied in its springtime, in the 13th and 14th centuries, and his understanding, which not all heraldists have, of the shorthand methods which must be employed if a modern Coat of Arms is to give out its message as well as its older precursors, in this sense, that if one device can have a twofold or threefold meaning, or be interpreted in more than one way, so that

simplicity and significance are in combine, so much the better. This Kuhlicke achieved in for example, his design for the Arms of North Bedfordshire College (Mander College) granted in 1962 “*Azure three bars wavy. Argent in Chief . . . an Estoile on the sinister side a cogwheel and in base an Escallop all Gold*”, and his reasons for choosing an estoile, a cogwheel and an escallop as charges explain his success: “The estoile or golden star has a treble significance: the College was once known as the North Beds. College and this is the North Star; it is also a symbol of astronomy and so represents pure science and also as a star fish, natural history. The cogwheel represents mechanical engineering and also reminds us that North Bedfordshire was the home of one of England's most famous clockmakers, Thomas Tompion, whilst the escallop shell refers back again to natural history and . . . is the emblem of the pilgrim and reminds us of John Bunyan.”

Mention of this famous Bedfordshire man prompts realization of another of Kuhlicke's qualities, his local “*nous*” backed by a long view of the county's history and familiarity with its early names which enables him with compelling soundness to suggest that Bunyan is a surname of long derivation in the county going back if the evidence be read aright, to feudal times, Buignon of Pulloxhill.

Indeed it is not only as an armorist that F.W. Kuhlicke is reputed, but as an antiquarian of broad interest, an archaeologist, a biographer, an ecclesiologist, topographer and ancient historian. His skills as such run through his writings, he uses one to illumine another, and it is against the background of his wide experience as represented by his Fellowship of the Society of Antiquaries of London, to which he was elected in 1947 that he began shortly afterwards and coincidentally has developed ever since his predisposition to indigenous heraldic studies for the benefit of all in the county, through the medium of his *Bedfordshire Armorial*, and has succeeded admirably in his object, to explain the Coats of Arms of the principal armigerous families and bodies of Bedfordshire and

comment upon them for the ordinary reader.

If the richness of the store of Bedford heraldry was not known or open to many notwithstanding their interest in the general history of their county, before Kuhlicke started his series, there cannot be many now who are not aware of the language of heraldry and the ordered and systematic practice of the science in the county in the past eight hundred years.

Kuhlicke's expertise is to distill the sources which the antiquarian has at his command, abstracting the facts of date, place and name from their time-grown repositories, and in a vivacious literary style to blend them into a whole so that the individuals concerned largely through the medium of their heraldic devices and family alliances are resuscitated and are seen no longer dimly through their shrouds but leading their busy lives, in hall and field, church and town, wracked by war (and sometimes profiting by it) contriving to prosper in peace, enhancing by the memorials of their doings which Kuhlicke adduces a realisation in the present of the local continuity which is necessary for the advance of the community.

In drawing attention to the heraldic heritage of the county, Kuhlicke's own appreciation of its value and significance as an interpreter of the past has been engendered, there is reason to think, by its visual appeal, and this explains the fascination for the subject with which he manages to imbue his readers, for they too have become aware (if a blazon in Norman French or a cracked armorial seal might not much impress them) that "there is something in all this heraldry that from the beginning has touched us with a charm not easily to be explained: something in the simple souls of men is pleased by these bright reds and blues and gold, those beasts and birds, and bars and bends and crosses, each bright in the glass of a chapel window or faded on an ancient skin of parchment. Not a hundred years from the beginning of England was pined with armories, a garden of gay heraldry. Men had the sharp eyes and long memories that belong to men whose minds do not run upon books."

Thus wrote Oswald Barron, a devotee of mediæval armory, in 1914, and it is possible to detect something in his approach eschewing the complexities of official heraldry or its mysterious jargon which is shared by Kuhlicke in his own affection for the art and science which has lasted so long in this country and in its representation as an art a similar viewpoint with and feeling for the style

of the Reverend E.E. Dorling (who illustrated many volumes of the *Victoria County History*) or that of Father Anselm whose work adorns many of the pages of Foster's *Peerage and Baronetage*, 1882.

Certainly, the Shields of Arms which ornament Kuhlicke's *Armorial* are responsible in their simplicity of execution and balanced proportions, in unison with the text, for much of the appeal which the series has. Who would not succumb to the pull of an article headed by a sketch of a Shield captioned for Wenlock of Luton: "*Argent a chevron between three blackamoors' heads Sable*" and an opening sentence: "The beautiful Wenlock chapel with its exquisite stone screen in Luton Parish Church is an outstanding monument of the short and meteoric association of the Wenlock family with Bedfordshire."

At once one goes to see it! And that I am sure has been the happy outcome of many of Kuhlicke's contributions to the Magazine, so that the churches and other places in the county with monuments or other relics of its native or adoptive families have invited the visitor and thereby a deeper understanding of the county, its way of life and particular atmosphere has been gained.

The late A.C. Fox-Davies was a fervent advocate of the modern official heraldry which Barron condemned, but if not Fox-Davies' "junior" in this respect Kuhlicke has never been so anti-College of Arms as was Barron in his hey-day and understands, as Barron never did, that there is a Law of Arms which is part of the law of the land and that *Armorial Bearings* if they are to have validity must lie in the grant of those empowered so to bring them into being, who today and for the past five hundred years have been the Kings of Arms. It is as an Officer of Arms therefore knowing and valuing Mr Kuhlicke's contribution to the better appreciation of proper heraldic practice, and the encouragement of the study and application of heraldry which he has fostered in the county, that I am most glad to have this opportunity of expressing my respect for him and his work in a sphere where interest has widened in the past quarter of a century.

It has widened nationally but it is due to Mr Kuhlicke and the forum which *The Bedfordshire Magazine*, a model of what such publications should be, has given him that Bedfordshire's heraldic awareness is so prominent and his fellow heraldists throughout the country are in his debt to a proportionate degree.

The Bedfordshire Archaeological Council have copies of the following of their publications:

Bedfordshire Archaeological Journal 6 1971

- G. Fisher: Archaeology in the *Bedford Times*, 1845-1850
J. Dyer: Excavations at Sandy Lodge
D.N. Hall: Pre-Roman Iron Age Sites at Bozeat and Strixton
R.K. Hagen: Anglo-Saxon Burials from Biscot Mill, Luton
J. Moss-Eccardt: An Anglo-Saxon cemetery at Blackhorse Road, Letchworth
M.J. Hare: Anglo-Saxon work in Bedfordshire Churches
D.N. Hall, J.B. Hutchings, G.J. Dring: Excavations inside Ravensden Church
D.B. Baker: Excavations at Elstow Abbey, 1968-1970
with shorter notes, vi + 90 pp., price £2.80, plus postage.

Bedfordshire Archaeological Journal 7 1972

- D.N. Hall and J.B. Hutchings: The distribution of archaeological sites between the Nene and Ouse valleys.
D.N. Hall: An Early Iron Age site at Irthlingborough
C.L. Matthews and J.B. Hutchings: A Roman Well at Dunstable
R.K. Hagen: A Roman Ditch in Dunstable Priory Meadow
D.H. Kennett: An Urn from Moggerhanger and Panel Style at Kempston
D.H. Kennett: Seventh Century Finds from Astwick
D.N. Hall: Modern Surveys of Medieval Field Systems
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Bedfordshire Archaeological Journal 8 1973

- R.K. Hagen: Three Bronze Age Spearheads in Luton Museum
A.H. Simco: The Iron Age in the Bedford Region
P.G. Tilson: A Belgic and Romano-British site at Bromham
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D.H. Kennett: Some Anglo-Saxon Pottery from Luton
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Bedfordshire Archaeological Journal 2 1964, 4 1969 and 5 1970 are also available, each price £2.80, plus postage. Sets of back issues, comprising volumes 2 and 4-8 are sold at a set-price of £12.60, plus postage.

Bedfordshire Archaeological Journal 1 1962 and 3 1966

are currently out of print, but when sufficient orders have been received arrangements will be made to reprint them. Further details from the Hon. Treasurer, the Bedfordshire Archaeological Council, 63 Ampthill Road, Maulden, Bedford, from whom back numbers may be purchased at the prices stated.

Bedfordshire Archaeology: Essays Presented to Frederick William Kuhlicke

being

Bedfordshire Archaeological Journal

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