ERAS news

NO 26 March 1988

This issue of the Newsletter sees a change of editor: many of you will know that Peter Armstrong has decided to resign as Newsletter Editor and Vice-Chairman of ERAS, so my first responsibility as the new editor must be to express the thanks of the Society to Peter for his hard work and expertise over the years as Committee member, Secretary, Newsletter Editor, archaeologist - the list goes on and on! Even after only one issue (and that with the able assistance of Susan Gibson on the word-processor) I can appreciate the work that Peter Armstrong has put in on this Newsletter which he started 25 issues ago. His experience and judgement will indeed be missed but he has certainly earned a respite and we wish him well.

For all the ways in which you have promoted the interests of the Society over the years: thank you, Peter.

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There is a new face at the Humberside Archaeology Unit - Dave Evans, who comes to this area via Aberdeen, Norwich and Cardiff, so he should know his way around. His particular archaeological interests are in the medieval and post-medieval periods.

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It is now the time of the year to remind members

that ERAS subscriptions fall due on 1 January, so should there be anyone out there who failed to make a New Year's Resolution to pay up in good time, please send your cheque, coin of the realm, promisory notes etc. to the Treasurer, Nicola Hope, 29 Highgate, Cherry Burton, HU17 7RR. Though this is a change of address for the Treasurer she assures me that anything sent to her old address will have been forwarded to her. The individual subscription remains at £8, for family membership it is £12, and the reduced rate of £5 applies to anyone under 21 years or in full time education.

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We have been busily distributing the latest volume of The East Riding Archaeologist to members over the past couple of months. If you have not yet received your free copy and live within the Hull area, please contact one of the committtee members. We hope to save ERAS the financial burden of posting large numbers of this weighty volume by making other arrangements for distribution where possible. Those members living outside Hull will receive their copies by post in a short while.

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WE'VE GOT A LITTLE LIST

Many of you will have guessed from the style of our address labels that ERAS has computerised its membership list. This makes it easier to keep a list of some 200 members up to date and greatly speeds up addressing envelopes for our mailings.

The Society is not required by law to be registered under the Data Protection Act, but we are required to ask if any member wishes their name to be omitted from the file. If you object to your name and address being held on a computerised address file, please contact Susan Gibson, 6 Fitzroy Street, Beverley Road, Hull, HU5 1LL.

New members joining before the AGM will still receive a free copy of the journal, so if you know anyone who is thinking of joining the society, now is the time to do it.

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ERAS EXCURSION TO MALTON AND WEST HESLERTON

On Saturday 26th September, 1987 some of the more 'energetic' of our members headed NORTH.

First stop Malton where we scrambled through the busy open market to visit the museum. Malton Museum (whose curator is Richard Kilburn, the District Curator for Ryedale District Council), has an excellent layout with easy to follow and informative displays. The ground floor display covers local prehistoric sites and continues to the end of the Roman period with, principally, the Roman sites at Malton and Norton; it concludes with the production of Crambeck Ware pottery which was supplied to the Roman Army throughout the North of England.

On the first floor was the West Heslerton Dig Exhibition: 'Rescuing Ryedale's past and the quest for the roots of Anglo Saxon England', (including a by then very worn out video of the Channel 4 series 'So we bought a Computer' which had been televised earlier in the year). A wide range of artefacts was shown including a brooch with preserved textiles and one of the earliest examples of runic writing on the back. This exhibition gave us all a helpful insight into the afternoon's visit.

Following a 'hearty' lunch, which many of our group partook at the 'Green Man', we continued our journey to Heslerton.

After crossing a field of Lucerne (which I believe

is now being grown increasingly for cattle feed), we were met on this now cold, wet and blustery afternoon by Dominic Powlesland, the Site Director, who conducted our tour around the recent excavations of the Heslerton Anglo Saxon settlement. He explained that two types of structures had been identified - rectangular timber-framed halls and the much to be mentioned Grubenhauser. The large pits of the Grubenhauser, measuring up to 3m x 4m and up to 1/2 metre deep, act as 'time capsules' as they later became filled with rubbish. This rubbish gives a good insight into diet, craft, industry and trade. Finds include spindle whorls, weaving combs, thread beaters, needles and loom weights. In the past it was thought that these structures were small workshops and weaving sheds and this is still a possibility, but at Heslerton a number have been found incorporated in the much larger timber-framed structures, and this could mean a re-evaluation of the views on how these buildings were built and functioned.

Huge amounts of animal bones have also been found which are important for what they can tell us about the diet and agriculture of these early settlers. We were also shown the complete skeleton of a horse (nicknamed Herman), about the same size as a Dartmoor Pony, and a dog (Norman), which Dominic explained was a type of greyhound and had probably been the family pet and had been trained to hunt animals.

The whole site was littered with marker labels and it was pointed out that the position of each find was marked prior to being recorded three dimensionally, to within one centimetre, using an Electronic Distance Meter. Members were then invited into the display cabin which contained details of all the up to date scientific techniques being used for excavation, recording and analysis, [illegible] which the project has gained an international reputation and we were able to examine some of the finds and given the opportunity to ask questions.

Before returning to the welcome warmth of the coach, thanks were expressed to Dominic Powlesland on behalf of ERAS by Peter Halkon who had organised the day trip, which had proved to be very interesting and enjoyable.

Many thanks Peter. Jean Kitchen

THE EXCAVATIONS OF A ROMANO-BRITISH DITCH AT RUFFHANFIELD, SOUTH CAVE

Peter Didsbury

In July 1987 Ian Chorlton, who farms at South Cave and is an active member of the Field Studies Group of this Society, discovered exposed in the side of a newly cleaned drainage channel near his farm an area of dark silty organic material which, upon further examination, proved to contain Romano-British pottery and to be the lower fill of a ditch cut by the modern watercourse. The find was of especial interest because of its position (at SE 90832969) in low-lying former carrland south-west of the present village and close to the edge of the Walling Fen depression, which was probably an arm of the Humber during the Roman period. The names of the fields on either side of the modern channel are indeed eloquent of the ancient topography of the area: Carrdales, to the south, suggests a seasonal marsh apportioned for summer grazing, while Ruffhamfield, to the north, may have a similar etymology to "Ruffhams" in Wheldrake, which Smith (1937,271) derives from Scandinavian **rud**, a clearing, and **holmr**, an island. Both fields are bounded on the west by The Outgangs (now Common Road), at the end of which is Cow Bridge, over which cattle were once turned out to graze on the common pasture of Walling Fen (Neave, 1984,7). Roman and Iron Age material was previously known in the Market Place area in the

higher northern part of the village, and it was felt that here was a valuable opportunity to investigate land-management and settlement in a marginal low-lying area of the parish. An excavation was accordingly undertaken by the writer and members of the Field Studies Group on a Sunday in August which, uniquely in the annals of ERAS, was warm enough to make working with one's feet in running water a pleasure rather than an archaeological piety. The primary objectives of the excavation were to obtain a measured section of the ditch to establish its height in relation to Ordance Datum, and - with luck - to obtain material which would date or otherwise elucidate the feature. The main results of the excavation may be summarised briefly as follows:

1. Present ground surface at the site is +4.06m OD, established by levelling from the bench mark at Cow Bridge. The bottom of the Roman ditch was at +2.62m OD, almost exactly the same as the bed of the modern channel. It had been cut into the natural chalk and flint gravel, and was overlain and partially filled by apparently Aeolian sand. The precise level from which the ditch had been cut was difficult to establish, but the upper surface of the chalk gravel had evidently been exposed in Roman times since deliberately placed and stacked limestone slabs ran up to its edge on the east, presumably to act as some kind of hard-standing for ditch-side operations. Pottery from the bank horizon was of a similar date to that obtained from the lowest fill of the ditch (see below).

2. The ditch, of a broad shallow V-shaped profile, was investigated on both sides of the modern channel, though only fully excavated on the north. It was draining almost due south from Ruffhamfield into Carrdales. It may be noted, in view of the often postulated late Roman marine transgression in the area, that there was no indication in any part of the section of estuarine silting, and it would appear that land surfaces of the order of +3 to +3.5m OD would have remained above maximum tide level in this vicinity in the third and fourth centuries. The ditch appears to have filled naturally with wind-blown sand after going out of use some time in the fourth century.

3. The reduced silty organic fill at the bottom of the ditch contained pottery, animal bone, and a thin ferruginous layer which followed the contour of the cut and which is interpreted as iron-pan leached from the overlying deposits, since it had concreted around small chips of bone, charcoal and potsherds. The most common pottery was shell-tempered Dalesware, although the Home-upon-Spalding Moor repertoire was also represented, as well as a Central Gaulish samian cup (Dr. 33) of second-century profile. The Dalesware suggests a third- or early fourth-century **floruit** for the ditch, and a regular **antoninianus** of Victorinus (268-270) which was found by Ian Chorlton while washing a sample of the iron-pan goes some way to refining this. Animal bone so far identified includes the lower jaw of a sheep/goat, suggesting primary butchery nearby, perhaps at an establishment on the higher land of Ruffhamfield whose Romanised buildings may be inferred from the presence of roof-tile (**tegula**) fragments among the limestone "paving" of the bank-side.

It is intended to publish a more detailed account of this excavation in the future. The material and paper archive will be deposited in Hull Museums (site-code SCA 87). Thanks are due to Mr Wilson, Clerk to the Market Weighton Drainage Board, Mr Brown, the tenant of 57 West End, and to Humberside County Council for permission to excavate; to Ben Whitwell and John Dent for their interest and

advice; to Gareth Walkins for arranging the loan of an Archaeology Unit level; to all the members of the Field Studies Group, especially Ian Chorlton, whose discovery this was; and, last but not least, to the anonymous member of Durham University who identified and conserved the coin and who is known to me only, I'm afraid to say, as one "who knows his Roman Aes".

Bibliography:

Smith, A H — The Place Names of the East Riding of Yorkshire and York, EPNS Vol. XIV, Cambridge, 1931

Neave, D (ed.) — South Cave - a market village community in the eighteenth and nineteenth centuries, Howden, 1984

HULL MUSEUM REPORT

Excavation and Survey at Redcliff, 1987

David Crowther

A second season of survey and excavation work was conducted at Redcliff between 28 August and 4 October 1987 by Hull City Museums and Art Galleries.

Work focused on an area in the immediate vicinity of the 1986 Trench One excavation where features and finds in abundance required further investigation to refine the tentative interpretations offered on the basis of initial results.

1. Survey Work

The close interval contour survey with theodolite, begun in 1986 was completed, covering the whole of the arable field between Lond Plantation and Brickyard Lane, behind the

Redcliff. The survey was this year extended beyond the cliff edge and onto the foreshore below to provide a general profile of the eroding cliff face and beach.

2. Pre-excavation topsoil studies

A systematic programme of ploughsoil survey and sampling was conducted across the area of the proposed extension to Trench One and areas of intended spoil dumping.

Conventional fieldwalking had proved unproductive in the vicinity. A series of sample pits, hand excavated, were cut through the ploughzone at 5m intervals, with a fixed volume of spoil passed through 1/4" dry sieves for each sample. Results showed a very low population of archaeologically significant material in the ploughzone, even though certain sample points were above archaeological deposits which, on subsequent excavation proved to contain high sherd and bone counts.

Across the study area defined for the ploughsoil sampling exercise, a metal detector survey was conducted, generating around a hundred finds heavily biased towards small ferrous fragments.

Samples were taken for phosphate analysis at one metre intervals along transects 5m apart, to act as a control for samples taken from subsoil contexts during the course of excavation.

3. Excavation

The excavation covered the area immediately to the north of Trench 1, and included the south-east corner of the 1986 trench to provide a datum against which the 1987 extension could be excavated.

A metalled surface excavated in 1986 was shown to extend in a north westerly direction, running along the base of a cutting or hollow in the natural subsoil, consistant with a road surface.

Following some backfilling over this surface with domestic and burnt debris a second 'roadway' phase was defined contemporary with structural features including steep-sided (? wall) slots, and a surface with trampled pottery, burnt bone and a hearth.
Excavation again yielded important stratified metalwork and ceramic groups dating from the middle decades of the 1st Century AD, and a large bone assemblage was also recovered.

4. Acknowledgements

Financial and logistical support was again generously provided by the Society of Antiquaries of London, the Royal Archaeological Institue, Capper Pass and Sons Ltd (the landowners), Hull City Museums and Art Galleries, Armstrong-Massey Ltd, and the University of Durham. Work on site was supervised by Stephen Willis and John Creighton.

Ed: David Crowther tells me that the continuation of the Redcliff excavation for a further 3 seasons has been ensured by the generous grant of £7,500 spread over 3 years from Capper Pass and Sons Ltd. Volunteers helping on the site in 1987 included ERAS members and anyone wishing to assist in 1988 should contact the excavation director, David Crowther, at Hull Museums.

SOUTH BANK LETTER

This "South Bank Letter" is wrongly described as it deals with a North Humberside subject. In the latest volume of the Antiquaries Journal (Vol, LXVII part i, 1987 pp 11-28) is a paper by myself, Steve Briggs and Stuart Needham on a hoard of Prehistoric Bronzes from Brough on Humber. In publishing this hoard we must have set something of a dubious record for what is likely to be the slowest ever publication of an archaeological find: the discovery was made in October, 1719! Why, you might well ask, did it take 269 years to get this important hoard into print? Isn't this taking thoroughness a little too far? Some of you may have realised by now that I was not around in 1719 so how come I can claim to have discovered the Brough hoard? Well, everyone needs some sort of hobby for relaxation and mine is the study of archaeo-metallurgy. One day, while engaged in the pursuit of this harmless pastime, it dawned on me that some Bronze Age moulds in the British Museum were not, as the label claimed, from Somerset but were actually from the lost Brough on Humber hoard. I told Stuart Needham of the British Museum of this discovery. A few weeks later I had a telephone call from Steve Briggs; it seemed that we had done a Darwin and Wallace act having simultaneously discovered the same thing. We agreed, along with Stuart, to produce a joint publication of the hoard.

Steve did an amazing piece of detective work on the complicated history of the hoard following its discovery. Our first record of it is in the Society of Antiquaries minute book for 1719/20 which showed crude sketches of the bronzes with the following note:

A Bushel of these Antiquities cast
In Brass with each their respective
Matrixes in Brass in which they were
cast, were found in October 1719
at Brough near the Humber in-

Yorkshire near the Roman Road there.
The man who dug 'em up sold 'em to a
Brazier who melted most of them
2 or 3 were redeemed by Mr Warburton
who communicated this to the Society
Jan, 1719/20.

Following this the bronzes changed hands many times before finding their way into the British Museum around 1800 and acquiring new, incorrect, findspots.

Stuart Needham and I did the archaeology and technology of the hoard. The Brough find must have been a very large hoard (how many Bronze Age axes are there in a bushel?) and it is a great pity that more did not survive the brazier's furnace. There are few instances where we have both bronze axes and the metal moulds in which they were cast but in the Brough hoard we have two moulds together with the axes cast in them. The Brough on Humber hoard is a most important find which at long last has found its true place in Bronze Age Studies.

Kevin Leahy

THE FIRST ROYAL COIN OF ENGLAND - David Haldenby

In March 1980 I was using my metal detector on Ferriby beach when I found a tiny Anglo-Saxon silver coin. At first I did not recognise the importance of my find but when I started to research it, and its background, a remarkable picture emerged of a time when East Yorkshire led Northern Europe in producing a coin with their king's name on it.

The Aldfrith coin x 3
D Haldenby

The coin is only 9mm in diameter and has on its face the inscription +ALDRIDUS and on its reverse a fantastic animal with a triple tail which might represent the mythical 'Fenrir' wolf.

The numismatic world was unsure if the name referred to the Northumbrian King Aldfrith (reigned 685-704) or the more obscure King Aldfrith who ruled over the Kingdom of Lindsey a century later in c790. The riddle was solved by an archaeologist who found an Aldfrith coin in a dated layer on a dig in Southampton. And what was the date? - about 700, thus firmly placing those coins within the reign of the Northumbrian King Aldfrith.

Aldfrith was a remarkable man. He was the illegitimate son of King Oswiu of Northumbria, his mother having been an Irish princess. During his youth he was educated for the priesthood at Malmesbury in Wiltshire, in Ireland, and on Iona. Following the devastating defeat of his half-brother Ecgfrith's army by the Picti near Forfar, Aldfrith became king and managed to rally his countrymen and re-establish his ruined kingdom, laying the foundation for what historians call the 'Golden Age of Northumbria'.

Aldfrith was famed for his learning and Stenton in his standard work on Anglo-Saxon England wrote that 'he stands beside Alfred of Wessex among the few Old English Kings who combined a skill in warfare with a desire for knowledge'.

The Ferriby coin is only the sixth Aldfrith coin to be found and its discovery in Northumbria is very significant. Had I not found it with my metal detector it would now be lost forever in the Humber.

I believe that metal detector users are making discoveries of considerable historical importance and most of us have a real desire to have our finds recorded and our contribution to the study of the

past recognised.

LECTURE SUMMARIES

16 September 1987: REPORTS MEETING

Three speakers reported on archaeological work in the area in 1987.

North Cave Excavations - John Dent

The spring of 1987 saw a second period of recording and excavation at the quarry site at North Cave, just ahead of the rapidly advancing quarry face. The removal of topsoil during the extension of the sand and gravel pit in 1986 had revealed the ditch systems of a hamlet or small village in Iron Age and Roman times. This site on the eastern edge of the vale of York lies in a region where the wide range of geological deposits compressed into a small area - the change in geology seen here across only 5 kilometres is eqiuvalent to the distance further south from the Vale of Evesham to the Chiltern escarpment - provides a rare opportunity to study land use against a wide variety of subsoils.

The artefacts found on site representing the Neolithic period include an arrowhead, a scraper for cleaning animal skins, a chisel or drilling tool, and a fine axe with the blade sharpened by rubbing with sandstone.

In the Iron Age the settlement consisted of a number of roundhouses, mostly with an opening to the south-east. There were also palisade ditches and pits of this period, the pits providing valuable environmental evidence in the form of small mammal bones, snails, beetles and pollen and plant remains. The waterlogged condition of these pits is particularly fortunate as such environmental evidence is not found on the drier Wolds. Two of the most impressive pits obviously had specific uses:

one pit contained two wooden steps to enable people to climb in and out, while another had a lining of basketwork woven from willow wands. Both pits were probably shallow wells and were only filled in with brushwood and rubbish when they had ceased to function properly.

Extensive scatters of slag over the site were apparently the dispersed by-product of an iron smelting furnace, or series of furnaces, situated downwind from the roundhouses. Only the bowl-shaped bases of those survived, in one case covered by the collapsed clay walls of the superstructure. The characteristic slags which trace the various stages in the iron smelting process were found around the remains of the furnace, and one waste deposit of more than 1 metric tonne had been used to fill in a disused pit.

The site continued in use in the Roman period and ditched enclosures grouped along trackways and boundaries developed, with the pattern continuing to change through to the late Roman period in the 4th century AD. One of the animals reared as part of this farming system, a cow, was found buried on the site of a demolished roundhouse.

Roman buildings on the site have left few traces (because of long term ploughing) except for domestic refuse in pit and ditch fillings, a few stone scatters which may represent the remains of a floor or of stone walls and some parallel settings of stone which probably represent the timber uprights of a building. 4th century Huntcliff ware was found associated with the floor areas.

That there was pottery production on the site is apparent from the large number of wasters found, and in 1987 3 simple kilns were identified associated with a large amount of Dalesware pottery. Mineral analysis suggests that the clay for this pottery came from the Jurassic rocks of Lincolnshire.

A piece of green glass shows that glass was being worked, although its manufacture from the local sands is less certain. Limestone-like pieces found on the site could have been quarried locally both for their iron content and also to manufacture querns. Such querns have been found at Wetwang on the eastern side of the Wolds where suitable rocks do not exist, and this suggests that they were brought from the North Cave area.

A pottery sequence is being built up from the overlapping ditches and from some of the pits. The Dendrochronology of a tree trunk, preserved by the waterlogged conditions, may add to the dating evidence. The North Cave excavations are proving to be a valuable part of a long term project by the Humberside Archaeology Unit to examine the use of the landscape in the past.

Fieldwork and excavation around Home-upon-Spalding Moor, 1987 - Peter Halkon

The primary emphasis of work in 1987 was the analysis of the results of field survey and a continuation of the excavation on the Romano-British small town at Shiptonthorpe.

A trench 20m by 15m was excavated around that opened in 1986 (Trench B). This area revealed a well preserved sequence of the 2nd to 4th centuries AD. The deposits excavated were comparatively rich and produced good assemblages of finds, including useful groups of animal bones. A botanical sampling programme produced material which augmented that found in 1986.

The stratigraphic sequence revealed 3 principal phases:

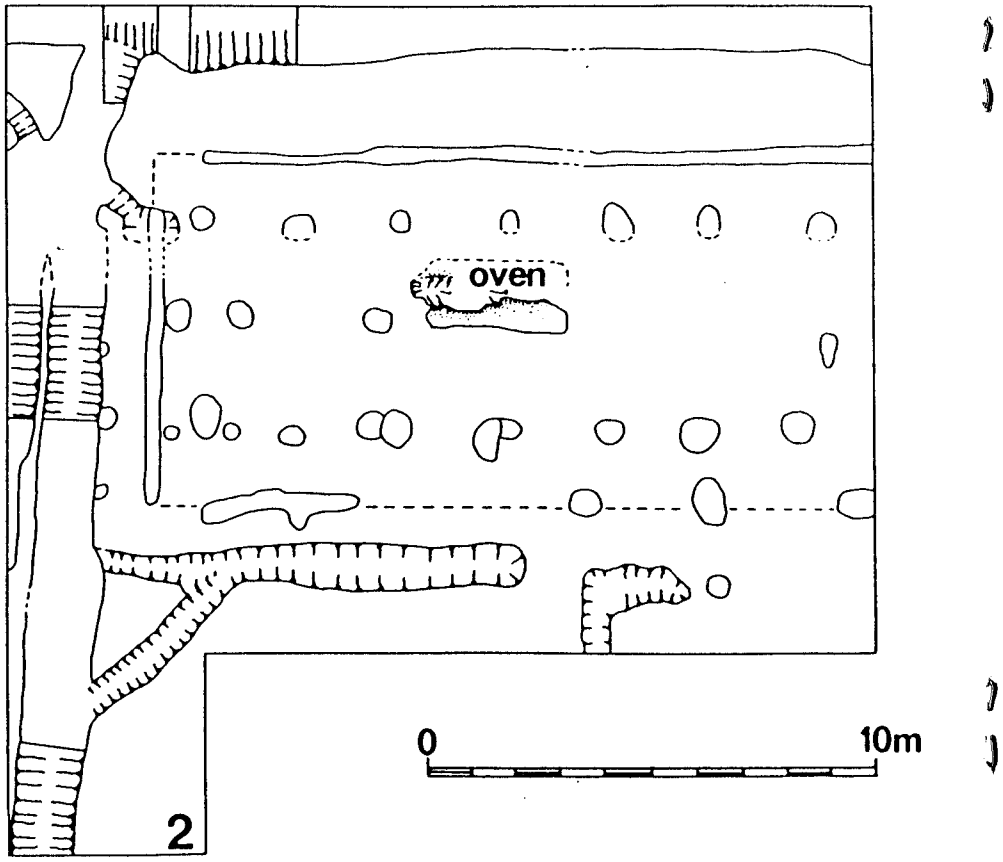
1. Horse-shoe shaped gully, c. 6m across by 10m long. This is presumably the eaves drip gully for a structure which faced on to the Roman road

which lay c. 30m to the east. This feature had been identified as a roundhouse in 1986, but this interpretation can no longer by sustained. The evidence suggests a date in the 2nd century AD.

2. The gully was replaced on the same site and alignment by a structure with substantial posts and wall trenches. The structure was c. 8m wide by more than 16m long. The north and west sides were formed by narrow foundation trenches presumably to hold vertical planks. In the southern wall a similar foundation was visible near the western end, but this was replaced by post holes topwards the eastern edge of the trench. These posts holes coincided with a gravel deposit to the south of the building, which may indicate the presence of a door. Several post holes to the south of the building in this area hint at the presence of a porch. The interior of the building revealed two lines of large post holes c. 1.6m in from the walls, which are paired across the structure. A few of these posts had been replaced during the life of the building. In addition, four post holes lay along the axis, three at the western end, the other near the eastern edge of the trench. In the northern half of the building, c. 7m from its western end, lay a small oven, truncated at its eastern end by a later cut. The function of this oven is uncertain, although it is narrower than usual for domestic ovens.Although not fully excavated, this substantial building is structurally of great interest as it combines ridge and 'aisle' post construction in a form not typical of Romano-British aisled buildings. The length of the building and its constructional techniques invites general comparison with continental Iron Age long houses which do sometimes combine ridge and 'aisle' posts. In view of the unusual character of this building it is hoped to excavate the remaining

half at a future date.

The building lay within the north-west corner of a broadly contemporary ditched enclosure which showed several phases of recutting. A shallow gully, recut once and parallel with the southern wall of the building also drained into this ditch. Some evidence was found for a fence along the ditch edge on the western side of the enclosure.



The phase 2 building had been destroyed by fire and was overlain by a destruction deposit which contained a valuable assemblage of pottery and metal artefacts, provisionally dated to the 3rd century.

3. Above the destruction deposit was a series of substantial stone blocks which are probably pad stones to support another timber building. Too few survive for the plan to be understood. The deposit surrounding these blocks produced coins to the end of the 4th century.

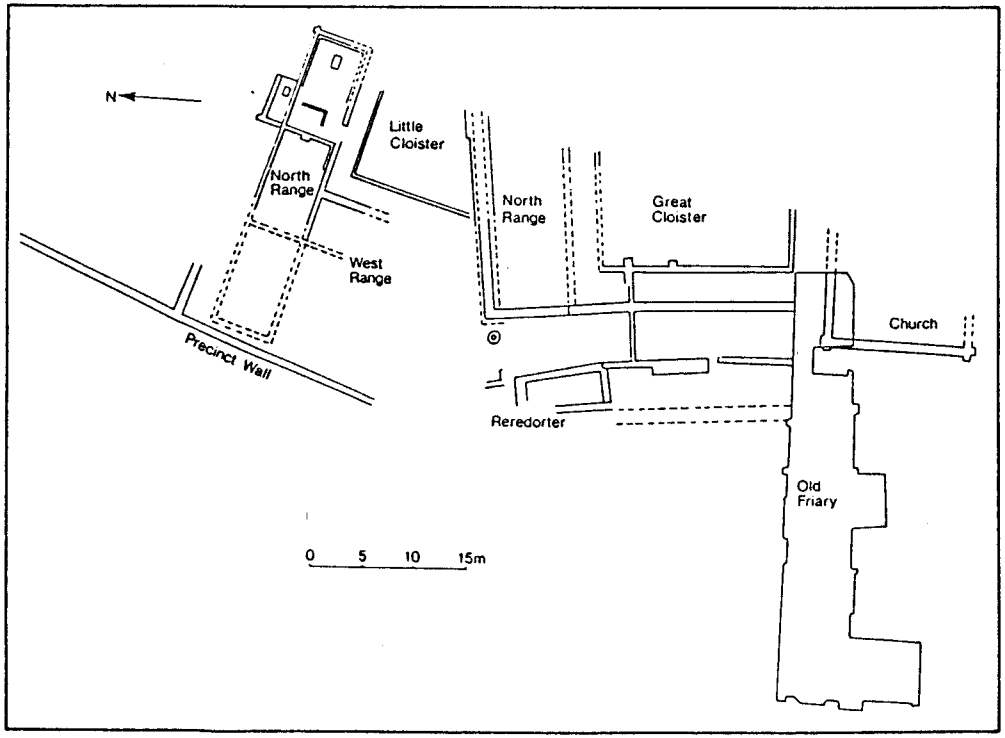
The Priory Precinct, Beverley - Martin Foreman

Martin Foreman described work carried out in 1986-7 in response to building development planned within the Scheduled area of the Priory. These excavations revealed a hitherto unsuspected feature - a second Cloister lying to the north of the Great Cloister. Like the Great Cloister this is flanked by ranges of buildings resting on heavy chalk foundations with an alley or walkway running round a central garth, or garden area. The best view has been obtained of the north range, with clay and gravel floors, benches built of brick against the walls, and a series of fireplaces made by setting tiles on edge. Many small bones found on the floor of this building suggest it served as a refectory for at least part of its life.

A large structure to the south of the Cloister-Garth is a chalk foundation for a massive building forming a range on the north side of the Great Cloister. This was almost certainly the Main Refectory or Dining Room for the Priory. The widest part of the footing marks the position of the pulpit, whence the scriptures could be read out to the friars during meals.

Beneath the soil of the Cloister-Garth evidence has been recovered of timber buildings pre-dating the layout of the second Cloister. Timber posts, slots and a hearth relate to this early occupation of the site. These wooden structures may form part of wooden buildings erected to house the Friars while the stone buildings of the Great Cloister were under construction - a rare example of 'temporary'

Plan of the Dominican Priory Excavations 1960-87



monastic accommodation.

Work on the Priory excavation was carried out by the Humberside Archaeology Unit and Beverley Workbridge, with funding from English Heritage, Beverley Borough Council and The Manpower Services Commission.

Hull Citadel - Martin Foreman

A two-week investigation on the east side of the river Hull produced evidence for significant survival of the Hull Citadel, a 30 acre artillery fort built 1681-1685. Though the upstanding ramparts were levelled in the 1850s the 'sea wall' of limestone remains, together with footings for about 180 embrasures and possibly other features, such as magazines and sally-ports. The ground investigation

revealed the scale and quality of survival.

Since the south-east half of the Citadel lies within an area on Victoria Dock Side which is earmarked for a large housing development, efforts are being made to persuade the developers to allow for a partially reconstructed and wholly protected monument as a feature within the development. Initially insensitive and destructive plans of building layout have been subsequently modified and it is hoped that this modifed plan will secure the necessary support from government sources. Bellway, the effetive developers, have displayed a commendable willingness to co-operate in the preservation and presentation of the massive monument.

14 October: LOCAL VERNACULAR ARCHITECTURE - K Miller

In his lecture Keith Miller described some of the functional buildings of ordinary people which were surveyed during the relisting of buildings for English Heritage. The area which he had covered included South Humberside and the part of North Humberside towards Howden and South Holderness. The list descriptions are written under the following headings: Buildings, Date, Architect, Materials, Plan Form, Facade, Interior, Sources (eg Pevsner, Victoria County History), Historical details, Extra details and Special features.

Paull Holme Tower: this mid-15th century building, a first floor Tower House with kiln undercroft, was part of a manorial complex. It was partially restored in 1871 and in good condition in the late 19th century but is now in bad disrepair. The moulded brick of the paired windows at the top and the blue vitrified brick in alternate courses are fine examples of brickwork which appeared early in this part of the country. Other features include a portcullis slot and a crenellated walkway, defensive features showing the influence of northern England.

There were many buildings in the North Riding and some in the East Riding of cruck construction, but no known example survives in any completeness in the East Riding: the survivors are of box-frame construction, where the main elements are vertical and horizontal with somewhat random braces infilled with brick.

One way of increasing the size of a timber-frame building was to add an aisle, as in Easington Tithe Barn, the date of which, however, is uncertain: it may be medieval or post-medieval. Timber framing is often hidden by later covering as in the case of Beverley Guildhall, where the incorporation of part of a late medieval house in the Guildhall was not suspected until it was revealed by the removal of plaster.

Halsham school, built in 1584, shows a confident use of brick with a crow-stepped gable rare in this area (though common in East Anglia). Since there is timber framing inside, this building belongs to a transition phase between timber framing and brick. None of the humbler buildings in the village survive.

The survey moved into the 17th century with a large house in Elmswell near Driffield, built in the 1630s for Henry Best (known for his farming diaries). The three chimney stacks would have incurred three lots of hearth tax. An original mullioned window, now blocked up, would have had small leaded panes; the brick mullions were plastered over to look like stone. Inside the building the Jacobean panelling is painted over and the building is in very poor repair overall. Keith Miller explained that the only mechanism for enforcing repairs operates through the Local Authority, giving 6 months or 3 months for the repairs to be carried out. In theory, a listed building can be compulsorily purchased, but in practice this very rarely happens.

Booth Farm was cited as an example of lobby entrance plan, one room deep, with a projecting porch stack behind which is the chimney stack. External features include moulded brickwork and a pediment, the latter exemplifying the appearance in this period of details from classical architecture. Carrick Hall, built for Sir John Dornay, has more classical details, with pediments over the doorways and windows, and pilasters (flattened columns) with capitals; this is not vernacular architecture but shows the route taken by classical fashion. A building in Monks Walk, Beverley, with triangular pediments, segmental pediments, and non-functional pilasters develops this use of classical detail into an 'artisan mannerism' style.

Worlaby Almshouses, built in 1663, has the chimneys at the back with lateral stacks as at Elmswell. This one-room-deep building with carved stone 'jewels' - lozenges etc - was almost certainly built by William Cathlyn, who also built Brigg Grammar School, Crowle House and probably Wilberforce House.

The speaker then continued by showing some cottages from the area. The example from Bishop Burton dated probably from the early 1700s with a tall, steeply pitched roof and chimneys within the building, not on the walls. In Lockington there was a lobby-entry cottage, raised to two stories in the Victorian period but retaining the original chimney.

By comparison with the majority of English counties, the East Riding was always short of suitable building stone, so the preponderant building material has for centuries been brick though there is some limestone from the narrow belt of Jurassic limestone, the extension northwards of the 'Cliff' of Lincolnshire. Chalk is a poorer building material but was used in the Burton Agnes and Bridlington area. In Holderness beach cobbles were sometimes used - in some cases laid herring-bone fashion with small pieces of broken brick in between

as decoration. In Holderness, South Humberside and Lincolnshire mud was used as a walling material for some small cottages. Where mud is laid on lathes of split oak these are termed 'Mud and Stud' cottages: none of these survive north of the river but at Beeford there is a cottage built largely of mud, in brick-sized chunks.

In the 18th century classical design and proportion were taking over from the idiosyncratic. By the 1720s, the date of Hedon Old Hall, the plan form is no longer lobby-entry. At Boreas Hill a double-gabled brick house of the 1730s or 1740s illustrates how internal panelling has become bigger and bolder by this period. The internal doors are 6-panelled and there are dado rails. At Winestead the Hall has been demolished but the stable block remains and the layout of the Hall can be identified in the parch marks on the lawn. Near Marsh Farm, Keyingham,is a pattern book farmhouse (with a few extra details). By the time of Haverfield House, Welwick, staircase balusters have become slender (compared with the fat balusters of a 1680-90 house at Little Humber) and by time of Magdalene Farm, Hedon, they have disappeared. White Hall, Winestead, built in 1814-15 for Col. Maister, has a porch of pairs of Doric columns, a ground-floor screen of two Doric columns, and a first-floor screen of Ionic columns. The spacious staircase has a wrought iron balustrade.

In the 1850s the Queen's Hotel, Withernsea (soon converted into a hospital) was built by Cuthbert Brodick, who also designed public buildings in Leeds and Hull. Another architect of this period was S. S. Teulon who was responsible for a number of farms and cottages in Sunk Island, including East Bank Farmhouse. He used Tudor and Jacobean motifs in playful brick patterns.

It was around this period that the use of local materials in local styles more or less died out as

vernacular architecture gave way to the national style. Canals and railways made possible the transport of building materials over a wide area - for example, the use of Welsh slate as a roofing material became widespread.

11 November, 1987: THE ARCHAEOLOGY OF DISEASE - Frances Lee and Charlotte Roberts

In the first half of this lecture Frances Lee described some aspects of the study of human bones - the estimation of age and sex, and the incidence of disease. Bone is a living tissue, growing with the individual, and thus may be affected by various internal and external factors.

In the estimation of age the teeth are important indicators, based on the sequence of replacement of milk teeth by the permanent teeth, and the degree of dental attrition or wear. Other indicators are the degree of bone ossification and state of fusion of the epiphyses. Before birth a human skeleton is made up of soft tissue. At specific places in such a skeleton appear primary centres of ossification from which the bone tissue spreads and gradually replaces the cartilage and membrane. The process of ossification continues until at least 25 years of age. The long bones are made up diaphyses, or shafts, and epiphyses, or ends, between which there is a cartilagenous ring which is last to ossify for it determines the length of the bone. The junction of the diaphysis with the epiphysis develops between 12 and 25 years of age. Ossification of other bones, eg of the hand, occurs at different ages and may also help establish the age of the individual on death. Many factors, however, can affect the rate and order of ossification.

Connected with the estimation of age at death is the determination of sex. This is based on certain differences in male and female skeletons. A male skeleton tends to be larger and heavier and the

larger skull has heavier brow ridges. The pelvic girdle in men and women differs considerably because of its function in supporting the foetus and the process of birth. The male has a deeper and narrower pelvis.

Disease: bone tissue is sensitive to many disorders of the organism but most acute infection (eg the Black Death, which caused the death of 10-20 percent of the population of London) is not expressed in bone - it is the result of chronic disease which is seen. Leprosy is one disease causing destruction of bone tissue, characterised by changes in the upper jaw region, in particular inflammatory changes of the nasal cavity and perforation of the hard palate. There is usually damage to the feet and/or hands, which may include secondary infection as the victim may well lose nervous sensation and thus be unaware of injury to the affected tissue. The disease was prevalent in medieval Europe, reaching a peak at the end of the 13th century and then declining. Robert the Bruce may have been a victim of leprosy.

Another disease affecting the bone is tuberculosis, which, unlike leprosy, did not decline until the beginning of the 20th century and the introduction of antibiotics. Tuberculous osteitis may begin to develop in the end of a long-bone, or in one of the short bones (such as a vertebra). There is destruction of bone and in the spine a hump-backed condition may be produced. Some degree of repair may set in, resulting in the fusion of 2 or more vertebrae. There seems to be some antagonism between leprosy and tuberculosis - sufferers of tuberculosis may have some resistance to leprosy. In the various forms of arthritis the joints are affected. There is not much evidence for rheumatoid arthritis before the 18th century. The changes associated with this disease include narrowing of the joint space, bony 'lipping' and, more occasionally, ankylosis (fusion). The joints of the hands and feet are most commonly affected, but the other joints can be

involved. Osteoarthritis seems to have been more common, usually affecting middle-aged or older individuals. With the destruction of cartilage, bone rubs on bone at the affected joint, which is frequently the hip joint and frequently the spinal column. Bony 'lipping' (known also as 'osteophytosis') occurs in every case, and in the spine there may be vertebral fusion.

Another disease affecting the joints is gout, in which, as a result of a metabolic error, salts of uric acid are deposited in all tissues and gout nodes form in the vicinity of the joints, particularly those of the fingers and feet. The disease was particularly common in England and it is postulated that a contributing factor could be that lead was added to sweeten wine, causing lead poisoning which affected the kidneys.

Bone growth and size may be influenced either by a completely inadequate diet or by deficiency of the 'calcifying' vitamin D. As well as being particulary concentrated in fish liver oil, vitamin D is produced in the superficial layers of the skin by the ultra-violet rays of the sun. A deficiency of vitimin D leads to ricketts, in which there is a general retardation of skeletal growth and a curving or twisting of the bones, and which became particularly common in industrial parts of Europe during the 18th and 19th century when the children did not enjoy sufficient exposure to sunlight to compensate for a deficiency of vitamin D in a poor diet.

A poor diet (or an illness) may show up as dental hypoplasia - underdevelopment of tooth enamel or deficient calcification. But the most common dental disease is caries, the incidence of which increased during the Roman period, fell, and then increased sharply in the medieval period, probably as a result of an increase in sugar consumption. In 1854 the relaxation of the tax on sugar led to a further

increase in the frequency of caries.

The second part of the lecture involved a consideration of trauma (bodily injury or wound) by Charlotte Roberts. She identified 6 sources of evidence: skeletal, modern clinical, archaeological, documentary, iconographic and ethnographic.

Amongst skeletal evidence she cited the example of a drilled neolithic tooth from Denmark. With injuries, sometimes the actual weapon has been found, as in an Iron Age skeleton at Maiden Castle where an arrowhead lay buried in the bone. Most injuries would be to the soft tissue, leaving no evidence, but various types of fractures may yield information. Fractures may be due to injury, or to stress, (this type is difficult to identify from archaeological remains) or may be pathological fractures, where a bone becomes weakened through disease and breaks. Sometimes the type of injury can be deduced from the type of fracture, eg the oblique fracture caused by an indirect blow or the crushed vertebrae resulting from a fall from a height. In the Eskimo population compression fractures are more common in females than males as a result of travelling by sleigh and carrying babies.

From modern clinical evidence the morphological and physiological changes taking place after a fracture are known: bleeding and traumatic inflammation, reorganization of the tissue, the formation of scar tissue and callus. For healing to take place an absence of infection and pathogenicity is required, together with immobilization of the bone and an adequate content of vitamins in the diet.

In the archaeological record there are examples of survival after bone injuries, including those to the skull. A skull from the York Minster excavation has a healed blade injury, though the individual would have been rendered blind. Evidence for treatment of fractures, in the form of splints, is sometimes

found, though not in this country: the example cited was of an Egyptian mummified body. From Sweden there is an example of a bone fracture 'mended' by a copper plate, the insertion of which would have involved considerable surgery.

A particular form of injury to the skull, and one which is deliberate, is trepanning. There are numerous instances of this, including from prehistoric sites, and in an least some of the cases the patient survived.

Ethnographic parallels suggest the use of herbs in wound treatment, as also does documentary evidence. An early 14th century manuscript shows stitching a wound, and another illustration from the medieval period demonstrates cauterization with hot irons. Knowledge of anatomy was hindered in the Renaissance by a ban on the dissection of bodies, and the lack of chemicals for preserving bodies resulted in their rapid decay.

There is some evidence for the past use of anaesthetics: the Romans used drugs such as mandrake and opium, and also employed compression of nerves. The medieval anaesthetist might use sponges soaked in narcotic which were rehydrated when needed, to release the anaesthetic vapours.

9 December, 1987: ROMAN COINS - John Casey

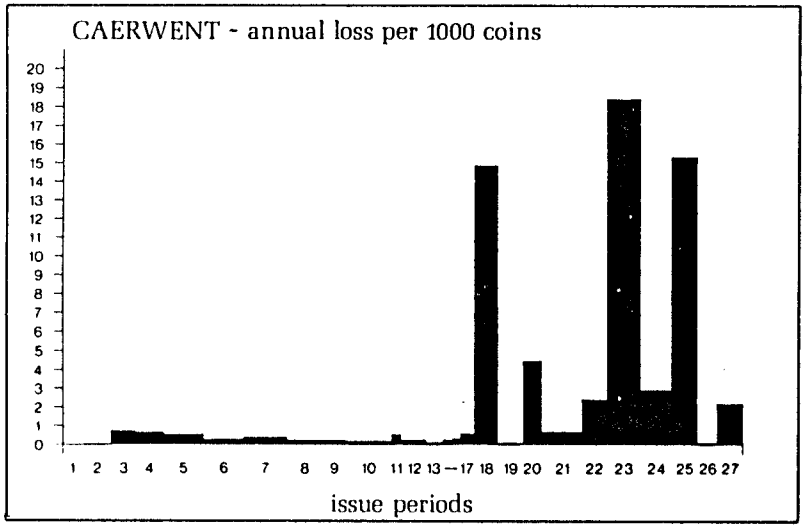
Reverse of a medallion of Tacitus, AD 276
actual size
B Sitch

John Casey discussed some of the factors which determine the coins most frequently found by archaeological excavation and metal-detecting. An awareness of these factors is very important when interpreting coin finds. Numismatic evidence, if handled intelligently, can supplement historical evidence and sometimes contradict it entirely.

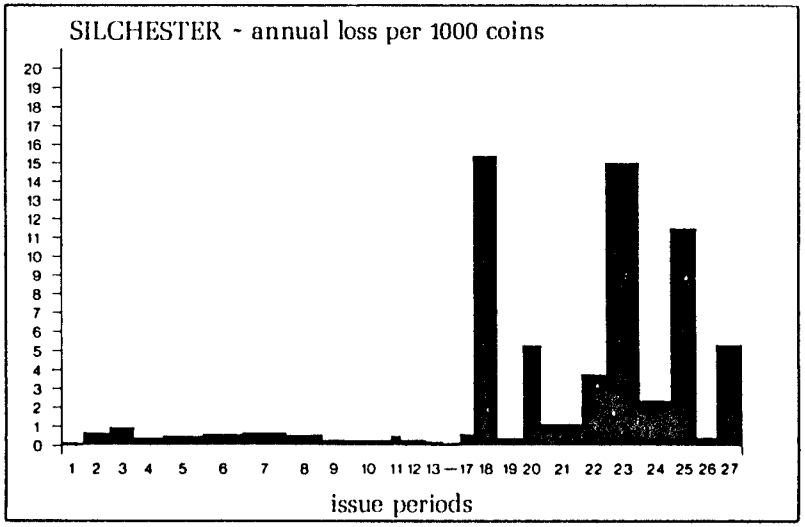
One of the key factors governing the variety and quantity of Roman coins found today is that of the original volume of production. The greater the volume of production of a particular low-denomination coin in antiquity, the greater the probability of such a coin being found today. This simple point can be illustrated using a sample of two pence pieces. A random sample of five pounds' worth of modern two pence pices was obtained from a bank and sorted by year of issue. The number of two pence pieces for each year corresponded very closely to the volume of production at the Royal mint for that particular year. The largest number of coins in the sample was minted in the years 1971, 1979 and 1980, when production was particularly high. In the archaeologial digs of the future two pence coins from these years will be more likely to be found.

The same reasoning holds good for coins produced in antiquity. Unfortunately, information about the annual rate of production of the Roman mint has not survived but coin production in antiquity is known to have varied from year to year. The extremely large Reka Devnia hoard from Bulgaria contained over 100,000 silver coins of the reign of Antonius Pius. It is fairly certain that all the silver coinage in current usage when the hoard was being collected is represented in the coin list. Just as in the example of the two pence pieces the Reka Devnia hoard was sorted by year of issue. This revealed peaks for certain years which could be correlated with known instances of high expenditure, such as wars or the distribution of cash gifts to the Roman populace.

The coins which turn up most frequently are those which were struck in the greatest quantity in antiquity. This simple point helps to evaluate the coin lists of Romano-British sites. For convenience and ease of comparison, the total number of coins from a site is represented as a histogram. This



Coin losses: Caerwent (Venta Silurum).



Coin losses: Silchester (Calleva Atrebatum).

shows the number of coins lost for every period of the Roman occupation of Britain, ie from the reign of Claudius (Period 1) to that of Theodosius, Honorius and Arcadius (Period 27). In the past archaeologists frequently misinterpreted such histograms. For example it was thought that the peaks and troughs corresponded to specific events in the history of a particular site so that more coins meant greater prosperity and fewer coins meant recession and even site abandonment. In fact most of the sites of Roman Britian which have large coin lists, such as Caerwent, Silchester and Corbridge, have the same characteristic pattern of peaks and troughs. The profile of the coin histograms is, therefore, not site specific, but corresponds to the vicissitudes of the Roman currency in the province of Britain: for example, coins are always present in profusion in Period 18 (AD 258-273), a time when the Roman government, beset by political, military and economic problems, resorted to a drastic debasement of the silver currency. The standard of purity of the 'antoninianus' fell from 60% to just 2% with the result that much of this coinage was lost from circulation, to be recovered nowadays by excavation and detecting.

Given the existence of a standard coin histogram profile, deviations from the pattern can be very informative. The site at Chesterholm (Vindolanda) just behind Hadrian's Wall, has yielded sufficient coins for a coin histogram both of the fort and its civilian settlement or vicus. As expected, plenty of coins were present in Period 18 in the fort but the vicus had surprisingly little coinage at this time. The comparison of the two histograms strongly suggested that the vicus was abandoned about AD 268. Why did the civilians go? Where did they go? Were they allowed to live in the fort? Was Vindolanda's position, in the extreme north of the province, becoming precarious? Such questions must be resolved by further excavation and study but this example shows how coins can raise interesting questions

about poorly documented periods of the Roman occupation.

Archaeologists frequently use coins to date archaeological features. The discovery of stratified coins in a tower added to the town walls of Caerwent (Venta Silurum) has prompted a re-evaluation of one aspect of the history of Roman Britain. During a dig in one of the towers a purse containing a coin hoard was discovered. The purse was probably accidently buried by rubbish during the construction of the tower. Some of the coins were new issues of the emperor Constans' coin reform. Since only the first coins of the reform were present, the tower must have been built before the last coin of the reform was issued, ie about AD 348-9. This gives a much earlier date for the building of the Caerwent towers which conflicts with the orthodox date of AD 369-70. In this way coins help to re-evaluate historical evidence.

A salutory warning about the misuse of numismatic evidence is seen in the finds of Roman coins in Scotland. Over the last 60 years finds of Roman coins in Scotland have been comprehensively collated and published. They have been cited as evidence of continued diplomatic and commercial contacts with the Roman world in the third and fourth centuries AD. However when the Scottish finds are sorted according to the mints where they were struck an interesting fact emerges: many of these coins were struck in the mints furthest away from Britain, whereas the general pattern is for Arles, Trier and Lyons to provide the bulk of Britain's coinage. It is preferable to regard these Scottish finds as modern imports, perhaps brought back as souvenirs by crusaders or, more recently, by soldiers involved in the eastern campaigns of Allenby and Montgomery.

Sometimes numismatic evidence can call into question historical evidence. For example, the Byzantine historian Procopius wrote a number of official

histories eulogizing the reign of the emporor Justinian (AD 527-565) but the deeply critical 'Secret History' was thought to be more accurate. Procopius alleges that Justinian undermined the security of the Empire's frontiers by depriving the limitanei or frontier guards of their pay. If Justinian really had cancelled the pay of the limitanei, causing them to abandon their posts, one would expect there to be little Justinian coinage in the frontier forts at this time. By comparing the coin lists of forts on the Danube and the Euphrates with those of the great cities of the Empire, one can refute Procopius' allegations. Almost all the frontier forts received Justinian coinage at this time. In Palestine, however, the soldiers were no longer paid. Since Procopius himself came from Palestine it would appear that he had a personal grievance. Procopius probably exaggerated an event of local significance until it became an imperial scandal.

Roman coins can also supplement the often woefully inadequate historical record. The iconography of a particular reverse can reveal events which were hitherto unsuspected. For instance, the issue of Adventus coins (to celebrate an imperial vist to a town) shows that Constantine the Great visted Britain three times, in AD 307, 312 and 314, whereas only one of these visits was recorded by the Bishop Eusebius. Eusebius says that after campaigning in Germany, Constantine came to Britain to raise an army to fight the rival claimant to the imperial throne, Maxentius. The coin list of the outpost fort at High Rochester suggests that the garrison, a unit of mobile scouts, was incorporated in Constantine's army. It is often said that the outpost forts north of Hadrian's Wall were abandoned as part of the Theodosian reorganisation of Britain's defences but the High Rochester coin list stops in Period 20 (AD 286-296), ie 80 years before Count Theodusius' expedition! There is no mention of the High Rochester scouts in the account of

Constantine's lightning campaign against Maxentius in AD 312, but another light unit, the Divitensian scouts from Divitia (Deutz) on the opposite bank of the Rhine from Cologne, was part of Constantine's army. The evidence of the High Rochester coin list, Constantine the Great's visit to Britain and the analogy of the Diveitnsian scouts, suggests that the outpost fort of High Rochester was abandoned when its garrison joined Constantine's field army. In this way coins can be used to eke out the details of a slender historical narrative.

When at the beginning of his lecture John Casey announced that he did not intend to show slides of the Roman coins, it might have been understandable if some members felt a momentary disappointment; in the event we were rewarded with both an entertaining and enlightening lecture, which was much appreciated by the audience.

John Casey is Senior Lecturer in the Department of Archaeology at the University of Durham.

Bryan Sitch

FORTHCOMING EVENTS

The AGM this year is on Wednesday 13 April, and the papers for it will be included with this newsletter. The necessary business matters will not cause any sacrifice of the archaeological entertainment since they will be followed by a lecture entitled 'Rock Art of Australia'.

There is scarcely time after the AGM to dust off your crinoline for the ERAS Annual Dinner. Like last year this is to be held at Thwaite Hall, Cottingham, but with an additional feature: we hope as many people as possible will come in Victorian dress. Members of the committee have already promised to dress appropriately, and there will be a prize for the best costume.

Day Schools

I have details of the University of Hull's day schools, and one which is of particular interest is 'Hadrian's Wall from End to End', on Saturday 14 May, 10.00 - 4.45 in Lecture Theatre C, Arts Building, University of Hull. The full fee is £14.10. Further details from myself or the School of Adult and Continuing Education, University of Hull, 49 Salmon Grove, Hull, HU6 7SZ. Tel: 465524.

I also have some information on day schools and residential weekends run by the University of Leeds.

Saturday 12 March:	Samian Pottery
Saturday 19 March:	Listed Buildings and Conservation Areas
8-10 April:	Castles
23 April:	Food History
7 and 14 May:	Castle Howard

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Letters and contributions for inclusion in the Newsletter should be addressed to:
Valerie Fairhurst, Editor, 10 Etherington Drive, Hull, HU6 7JU