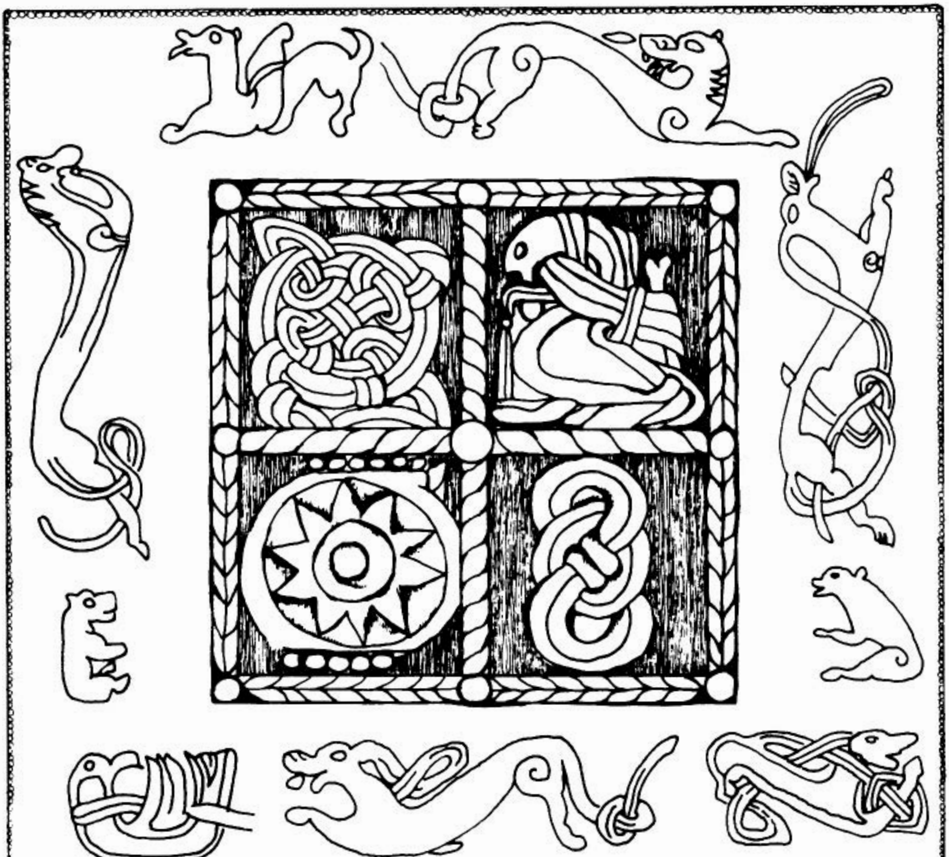
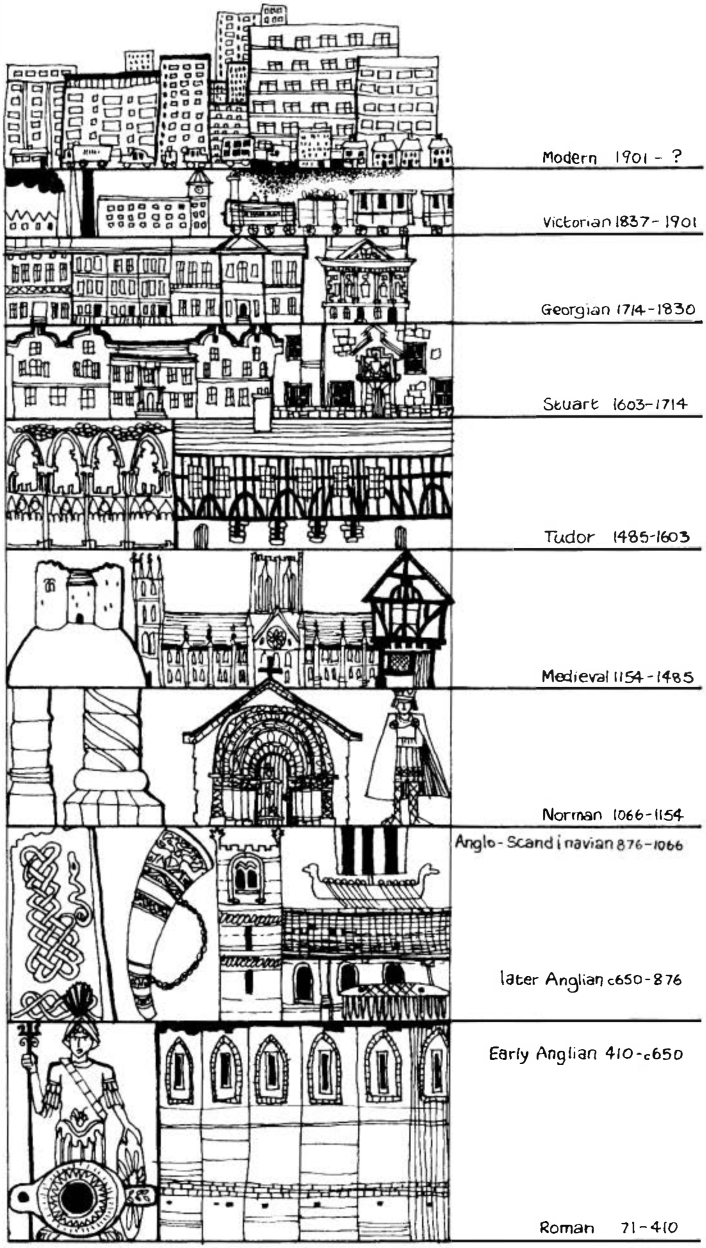
interim

BULLETIN OF THE YORK ARCHAEOLOGICAL TRUST



VOLUME 3 NUMBER 1


Modern 1901 - ?
Victorian 1837 - 1901
Georgian 1714 - 1830
Stuart 1603 - 1714
Tudor 1485 - 1603
Medieval 1154 - 1485
Norman 1066 - 1154
Anglo - Scandinavian 876 - 1066
later Anglian c650 - 876
Early Anglian 410 - c650
Roman 71 - 410

interim

EDITORIAL COMMITTEE

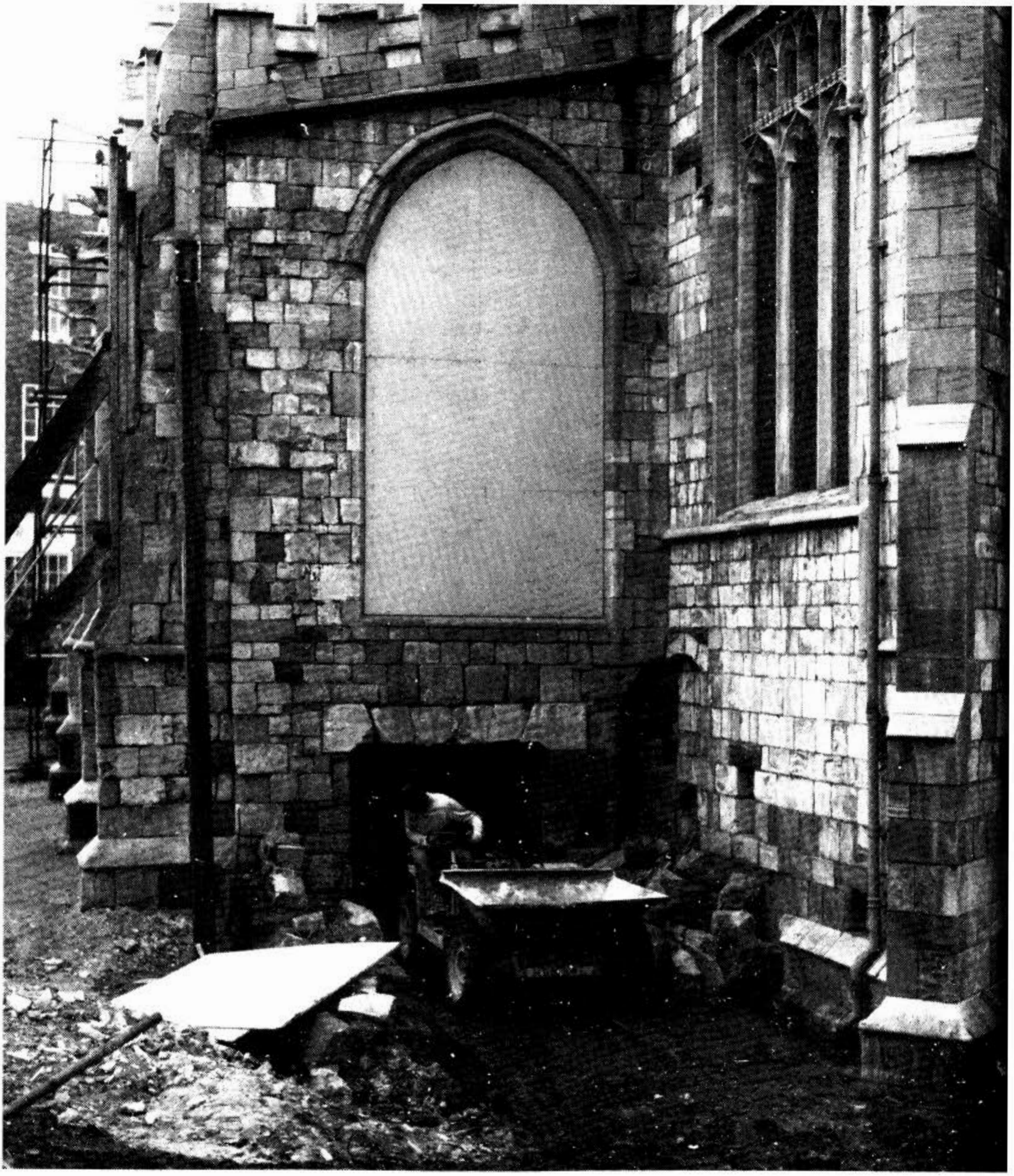
Editors - A.G.MacGregor, R.A.Hall, S.A.J.Bradley (on sabbatical)
Editorial Assistance - S.Bishop
Design and production - E.Shurter
Photography - J.Bailey
Copy - V.Kennedy
Business Management - M.Bradley, S.Goater
Printing Advisor - P.Winskill

INTERIM is published by the York Archaeological Trust, at 47 Aldwark, York YO12BX. It is issued four times yearly. Price £1 per volume. Cheques, etc payable to ' York Archaeological Trust (INTERIM a/c)'. Subscribers from abroad should use International Money Order or add bank clearance charge to cheque. Ideas or articles for publication in INTERIM welcomed. Editorial and contributors' views are independent and do not necessarily reflect the official view of the Trust.

Front cover : Elizabeth Shurter Inside back cover: Rob Oldfield
All finds drawings by Sheena Howarth, pp 14-16 Jane Holdsworth
Photo p.43 by Elizabeth Shurter

In the interests of economy this booklet has been reproduced by small offset lithography. The charge made is purely to cover production costs.

REPRODUCED BY THE UNIVERSITY OF YORK PRINTING UNIT



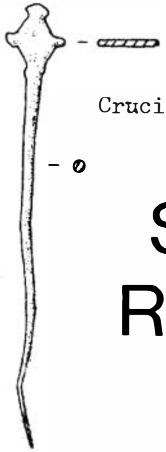
St Mary, Castlegate, renovation work in progress for the Architectural Heritage Centre (p.18). Lowering of the floor necessitated the removal of soil and rubble, taken out by dumper through an exit from the southeast chapel. Note the arch of a blocked doorway to the right of the dumper

Even in 1975, European Architectural Heritage Year, national complacency over the irresponsible destruction of standing buildings and archaeological remains alike runs at an extraordinarily high level. With few exceptions, developers in York have proved sympathetic to requests for permission to excavate some part of their property in advance of rebuilding, and cooperation from the city's Planning Department could hardly have been better. In certain other parts of the country the situation has not always been so satisfactory, and every week brings new press reports of archaeologists or conservationists locked in battle with property speculators or local authorities intent on archaeologically disastrous development plans. There seems to be no precedent for the current struggle over Wallingford Castle, however, in which it is the Ancient Monuments Board which finds itself accused of insensibility towards the destruction of a major monument.

The site itself has an impeccable pedigree, for we know that Wallingford was one of a whole chain of towns fortified by Alfred the Great in an attempt to contain the mounting Danish threat in the ninth century; some have claimed that the origins of the defences are even earlier. Part of this thriving late Saxon town was subsequently buried under a series of massive new earthworks associated with an early Norman Castle, later enlarged and extended in the thirteenth century. The effect was to produce what Tom Hassall, Director of the Oxfordshire Archaeological Unit, has described as 'an English Pompeii', with many of the Saxon buildings and streets sealed intact under the earthen banks. Situations of this kind are rarely encountered in this country, where we are mercifully not greatly afflicted with Pompeian-style disasters: indeed, in a letter to the South Oxfordshire District Council, the Department of the Environment itself declared that it knew of 'no other similar site which survives in this detail. It is of national importance and should if possible be preserved. The alternative - complete excavation - would not only be unsatisfactory but also too expensive'. Subsequently, in February of this year, the whole site of Wallingford Castle was scheduled by the Department as an ancient monument.

This letter was written in response to a planning application by the Architects Benevolent Society, which was reapplying for permission to build a combined residential and nursing home within the area of the outer bailey of the castle, having already been granted planning permission for a similar scheme in 1972 which had later proved beyond their financial resources. The Society's relief can be imagined when the Department announced in June that, on the advice of the Ancient Monuments Board, they now felt the physical preservation of the site could not be held of national importance and that subject to proper excavation (which they hoped could be completed by the autumn) its development should not be opposed. Whatever the reasoning behind the Board's decision, it was widely condemned as a betrayal, both of the site and of the Department of the Environment's inspectors who had tried to save it: appeals were immediately made by local archaeologists, by the Chairman of the County Council and by the Mayor of Wallingford. Letters to the national press included several which observed that the decision was likely to make the Department of the Environment's most memorable contribution to European Architectural Heritage Year the sanctioning of the destruction of what was, by its own admission, a unique site.

Surely what is called for at Wallingford is neither destruction nor excavation, but preservation. There can be no doubt that a more appropriate site could be found for the new home, intended for (of all people) retired architects. Although the rate of increase in archaeological expenditure over the past few years has been impressive, it should not be allowed to obscure the fact that the destruction of historic sites has risen even more steeply; until the necessary resources are available to deal with all threats from redevelopment, can there be any justification for allowing (or even promoting) development in areas of key archaeological importance? It must be said that the Department has arranged for a three-month excavation to be carried out at Wallingford, but this brings little solace to the many archaeologists who feel that it would take many years to do justice to the complexities of the site; too often in the past token excavation has been accepted as a fitting prelude to large-scale destruction, and while this attitude is regrettable under any circumstances it must be considered inexcusable on sites of outstanding significance. Furthermore, the techniques employed in archaeology are themselves developing so quickly that the methods employed today will inevitably be considered quite unsatisfactory by future workers: since excavation involves the destruction of at least part of the evidence, it is vital that certain sites are preserved intact for future investigation. Otherwise, Heritage Years still to come are likely to become increasingly reminiscent in character as less and less survives, and archaeological debate a matter of academic disputation rather than active research.



Cruciform headed pin, Bedern

SITES REVIEW

Excavation has been carried on at the Bedern site in both the open area first investigated in 1973 (INTERIM vol 1 no 3) and in the deep trench dug to obtain just a glimpse of the lower stratigraphy which will not be seriously damaged by the proposed re-development (INTERIM vol 2 no 4). With the departure of the Trust's Deputy Director, Ben Whitwell, who supervised the Bedern site thus far, details of the recent work have been gleaned from Bryan Morgan and Brian Ayers, who are jointly *in loco parentis*.

The constructional phases of the Roman legionary fortress rampart as seen in the Bedern's deep section have now been tentatively unravelled. The earliest phase is represented by a grey clay dump, which forms the basis for all the later developments and which is interpreted as a turf rampart of first-century date. Immediately on top of the clay there is evidence of a serious fire, which in places baked the grey clay to an orange colour. The rear of this dump is cut through by a complex series of features consisting of packed clay and cobbles aligned at ninety degrees to the fortress wall. In the small area visible their function is difficult to pin-point: they may represent the foundations of an intrusive building or be the footings for uprights whose purpose was to stop lateral spreading of the clay rampart; alternatively, they may even represent the remains of an interval watch-tower. They in turn are cut through by a further series of clay and cobble footings which ran parallel to the fortress wall.

At the rear of all these complexities a timber-lined well has now been excavated to a depth of five metres below the Roman ground surface. Its backfilling of characteristically black, foul-smelling material has been totally removed, and produced as its most notable find a hob-nailed shoe sole (cf. INTERIM vol 2 no 3, p 9). Below this was a layer of clay incorporating large cobbles and rubble, probably marking the end of the well's original usefulness, from which there came a large fragment of *amphora* (wine-jar) bearing the stamp of the maker.

Below this layer, the primary silts which accumulated during the period in which the well was in use are still being excavated.

Behind the Roman well, in the deep trench, layers of medieval and Anglo-Scandinavian date are currently being removed. A wattle wall of probable thirteenth-century date, running parallel to the Roman fortress wall, has been found in association with a series of floor levels, although these have been badly disturbed by later medieval pits.

Under the wattle wall ran the first of a further series of three superimposed clay floors, dated to the tenth and eleventh centuries, whilst a lower alignment of rubble is interpreted as being the wall-footings for another structure of tenth-century date. Other clay spreads and rubble features, none of which is thought to predate the ninth century, also testify to intense activity and occupation in this area at the edge of the Roman fortress in the Anglo-Scandinavian period, and to this period belongs the small bronze pin illustrated here.

Meanwhile open area excavation has been resumed beside the deep trench, and an extremely complex multiplicity of walls and floors is slowly being disentangled and set in a chronological framework. This area defies simple explanation in these pages, but one of the most hopeful signs is that what was previously seen as a series of adjacent rooms are now seen to result from the subdivision of a substantial earlier medieval structure, and the isolation of this from all later features will be one of the major objectives of the continuing programme of excavation on Bedern throughout the summer.

Work started at the end of March on a site inside the City Garage in Blake Street, the potential of which was briefly outlined in INTERIM vol 2 no 4. With a deadline in October for the completion of excavation, a decision was taken to sacrifice the medieval and post-medieval levels, where documentary sources indicate that nothing of especial significance could be expected, and to concentrate attention on the pre-Norman occupation. The main hopes were to trace a succession of Roman structures, and to determine their fate through the Anglian and Anglo-Scandinavian periods.

To this end a mechanical excavator and a fleet of lorries moved in and accounted for the top two metres or so, the depth to which medieval levels were found to descend. A stone-lined pit encountered in one corner of the site was excavated by hand, revealing a large dump of glazier's waste debris of late-fifteenth or early sixteenth century date which is described in a separate article, but no other substantial medieval features appeared to be present.

A build-up of soil which characterised the medieval levels gave way dramatically to a yellow sandy clay, and mechanical excavation proceeded to this point over most of the site; a small area of the lower medieval deposits was retained at one end for detailed investigation.

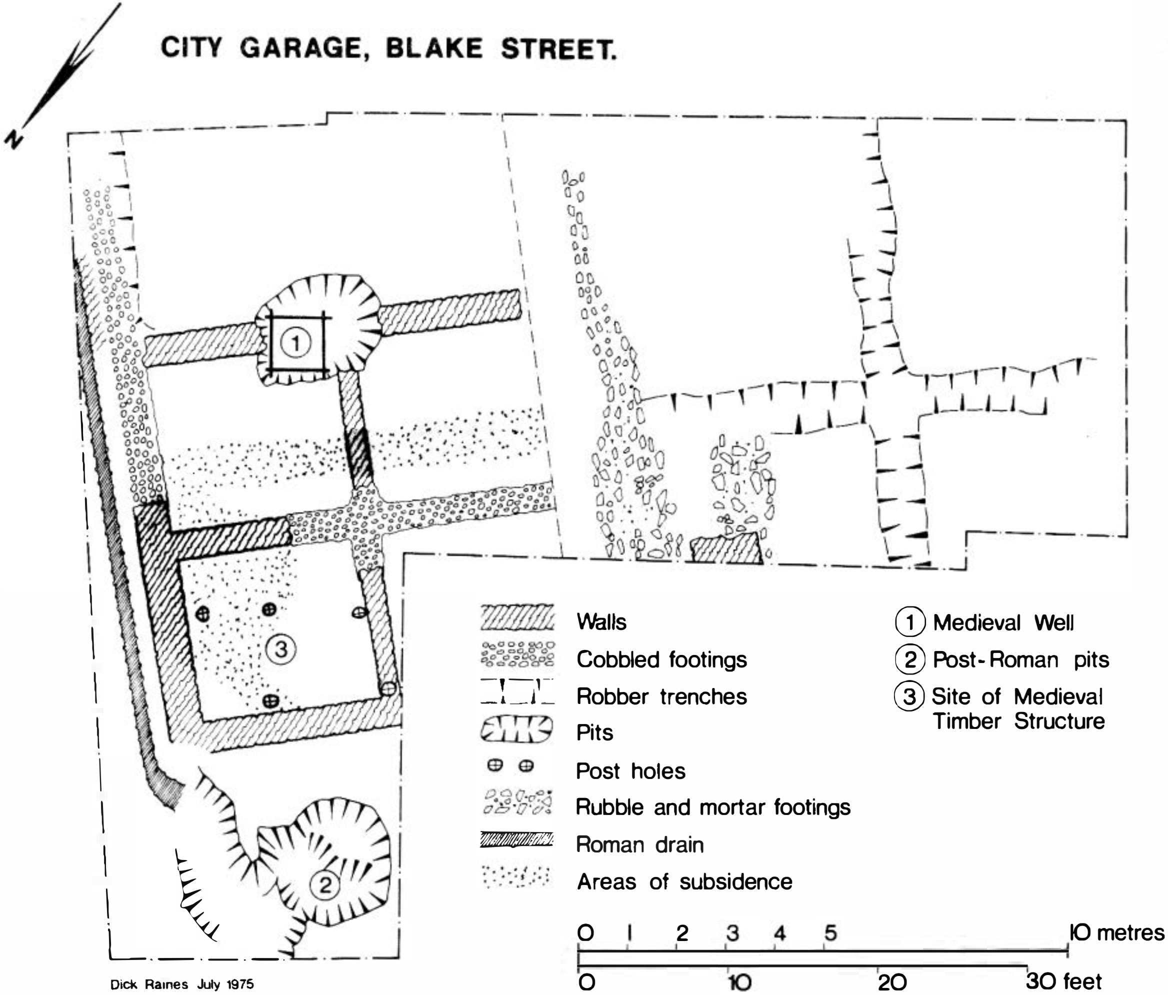
The finds of pottery and the other objects recovered during both the mechanical clearance and excavation of the medieval deposits indicate that a major levelling of the site, perhaps in the early thirteenth century, removed virtually all traces of occupation between that date and immediate post-Roman period. The only objects which survive from the intervening centuries are a small quantity of Saxo-Norman pottery sherds, which occurred as residual material in later medieval contexts, and a fragment from a bone comb of Scandinavian type which also turned up out of context. Thus one of the major objectives of the excavation was virtually nullified.

However, layers of mortar and small rubble, representing the destruction debris from Roman buildings, survived in some areas. In one corner of the site a large pit, sealed by twelfth-thirteenth century material, but cut from above the Roman destruction levels, was excavated and found to contain no Saxo-Norman or medieval pottery but only Roman wares; therefore, it is likely to date from the Anglian period when there was apparently little use of pottery vessels for domestic purposes. Beside it another pit had removed part of the wall of a Roman building. It had a fill similar to the first, but also contained a coin of the Northumbrian king Eanred (810-c.841).

The third and most interesting constituent of this group of features consisted of two parallel rows of post-holes, approximately 2m apart. One 'row' consisted of just two posts, the other was an alignment of three. Like the pits, the post-holes were cut from above the Roman destruction levels, but were sealed by medieval deposits. They are interpreted as representing a small timber building, and for stratigraphical reasons and because their alignments are not impinged upon by the two probably Anglian period pits, it may be that the pits and the structure are contemporary. Unfortunately no floor levels which could be associated with the building remained for excavation, as they had been removed in the medieval period.

A massive dump of yellow sandy clay has already been referred to - in the excavation's sides and in the sides of features cut into it, the clay was seen to average 60 cm in depth. It contained large quantities of Roman pottery, animal bones, glass fragments and other small finds, as well as some rubble and wall plaster. It was cut by a series of trenches dug at various periods, but principally in the twelfth-thirteenth centuries, to allow the removal of masonry of Roman date for re-use elsewhere. However, the dump did not represent a single stage of the site's development, for within it, over at least a part of the Roman building, a pebble surface has come to light. Since the Roman building seems, on the evidence now available, to have been at least partially demolished before the clay dump was initiated, this pebble surface is not thought to be a late Roman floor level, but

CITY GARAGE, BLAKE STREET.



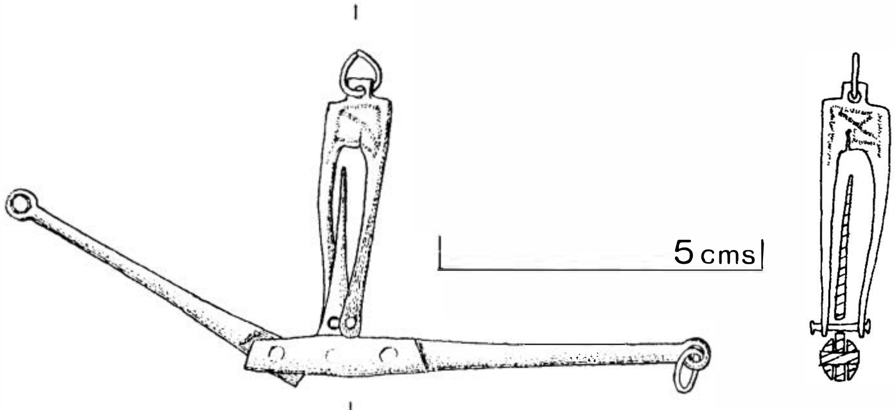
may rather be the surface of a court-yard or even a roadway. These hypotheses are of course tentative in the extreme, and more definite conclusions will only be possible when further excavation has taken place. The feature's date is equally problematic, but as yet only Roman material has been recovered from its surface.

Only short lengths of Roman walling had survived the medieval robbing. Fragments of painted wall plaster still adhere to them, but they only stand up to three courses high, flush with the surface of the yellow clay. The floor of the building has been partially exposed, and found to consist of a 12 cm thick layer of mortar mixed with pebbles to form a tough cement, with a red surface gained by mixing crushed tile and mortar.

At the time of writing, parts of four rooms within the building have been excavated, but its function is still uncertain. However, its position near the centre of the fortress, coupled with the nature of its construction, suggest that it may have been the house of a tribune, a senior officer in the legion. In the hope of tracing the ground plan further it is hoped to dig a small extension trench in the area behind Stonegate.

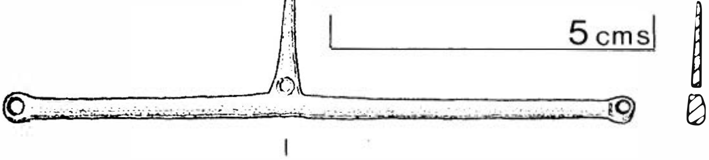
Nearly all of the most exciting of the small finds uncovered so far have come from the area of medieval deposits - the exception is a bone comb of unusual type, from what is at present thought to be another robbing trench for the Roman building, and which is also the subject of a separate article.

Two pocket balances, of varying design, have also been found. One is a bronze folding balance, with pivots on either side of the fulcrum so that the arms can be folded up when not in use and thus carried more easily. From each arm a pan would have been suspended on three fine chains, and each silver coin offered in a transaction could have been speedily checked to ensure that it had not been clipped, nor that it was counterfeit. Scales of this type are found in Roman con-



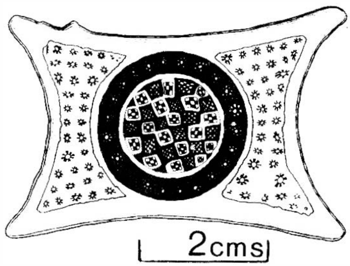
Folding balance

Balance beam



texts, Viking graves, and also, as here, in late medieval contexts. The other balance is now represented by a bronze beam with a single suspension point set off-centre.

Certainly the most elaborate, and technically the most exquisite piece, is a bronze plaque with two studs at the rear which could have secured it to a leather belt or baldric, for example. Despite its appearance in a medieval context, the plaque is thought to be of Roman date. Its function seems to have been purely decorative, and several techniques from the jeweller's repertoire have been combined in its workmanship. The two outer panels in the design are of white enamel, embellished with glass inlays in the form of open flowers. The ring encompassing the central roundel is of deep blue enamel with similar insets, and the roundel itself is composed of pieces cut from a glass rod made in a blue and white chequer pattern. The minute size of the individual squares is made possible by fusing together coloured glass rods of considerably larger size, and then heating them and drawing them out so that the whole effect becomes more delicate. The technique, called millefiori, is comparable in principle to that used in the production of seaside rock.



Enamel and millefiori plaque

Regular readers (and especially that group best beloved of the INTERIM team, our subscribers) may be hoping for news of the excavation on the King's Square/ St Andrewgate corner, whose inception was announced in INTERIM vol 2 no 4. Mechanical clearance of the rubble filled cellars duly took place, but at this point the services of an independant consultant structural engineer were called upon by the Trust's insurers, to report on the stability of adjacent buildings. His report imposed a further series of restrictions upon the proposed excavation which effectively rendered it impractical, and consequently the decision was taken to backfill the cellars and abandon the project. Unfortunate: but these are the facts of urban archaeological life.

DEBRIS FROM A MEDIEVAL GLAZIER'S WORKSHOP

The discovery of fragments of medieval window glass during excavations within the City Garage in Blake Street comes as no surprise. York is famous for its medieval glass, and those interested in this aspect of its history have been hoping for great things from the archaeologist. Our earliest reference to its use in the city dates back to the end of the seventh century. Eddius, in his Life of St Wilfrid, tells us that the bishop restored the Minster and 'prevented the entry of birds and rain through the windows by means of glass, through which, however, the light shone within'; a singularly sensible explanation of the functional value of glass, and an idea to be developed by twelfth century theologians into a vivid image of the spiritual enlightenment of the soul pierced by the rays of the True Light. This idea found its fullest expression in the mysterious luminosity of St Denis and Chartres, an aesthetic which also pervaded the Late Norman Minster of Archbishop Roger, some of the glass from which has survived, reused in the present building. Wilfrid's glass is yet to be found, - indeed the church itself still awaits discovery - but what we might expect is glass similar to that excavated in recent years at Jarrow and Monkwearmouth, unpainted but in a wide range of most beautiful colours. Less sensational than the discovery of Wilfrid's glass the City Garage find may be, but it is nevertheless of tremendous interest and importance in throwing yet more light on the medieval glasspainters of York.

About 2,500 fragments of glass were found together in a pit, filled with rubbish in the late fifteenth or early sixteenth century. Many of them are smashed into very small pieces, but considering its long burial underground, the glass appears to be in remarkably good condition. Some of it is very corroded, with an accretion on the surfaces which renders it almost opaque. The majority, however, appears - to the eye at least - to be in a reasonably stable condition.

Glass, even when fixed in a window, is peculiarly vulnerable to moisture, which reacts on the alkaline content (potash was usually mixed with the sand in the Middle Ages) and causes the corrosion so often seen on ancient glass.

Over 90 per cent of the glass is white, mostly flat, and varying in thickness from about 1mm to 2mm. The colour varies between very clear and a green tinted "white" glass, due to the iron content. Yellow stain, from which our rather misleading modern term 'Stained Glass' derives, occurs on a few painted pieces. This technique, not discovered until the early fourteenth century, enabled white glass to be coloured yellow. A silver compound was applied, usually to the exterior surface of the glass, which turned yellow when fired, enabling the glasspainter to colour a figure's hair, beard or crown yellow, on the same white piece of glass used for the face. This gave much greater freedom to the glasspainter, who would previously have had to lead in separately any yellow colour he wanted. It makes its first appearance in York in some of the nave aisle windows of the Minster and its potential is perhaps most fully exploited in the three west windows, commissioned in 1338, in which white and yellow reign supreme.

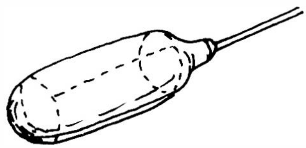
About 4 per cent of the glass is ruby, not made out of precious gems, as its name might imply (though as late as the French Revolution windows were being melted down in the vain hope of extracting valuable material). The colours (apart from yellow stain) were imparted to the glass in its molten state at the glasshouse, by the addition of different metallic oxides. This means that medieval glass, called potmetal because the metallic oxides were added in the melting-pot, is coloured right through its thickness, as opposed to the post-medieval practice of painting on white glass with coloured enamels, a method used in York from the last quarter of the sixteenth century right through to William Peckitt's attempts to revive the art in the late eighteenth century, a kind of Gothick phase of the later ecclesiological and archaeological revival, when the pot-metal system was fully revived. If a pot-metal ruby, coloured through the thickness of the glass is made, it lets in virtually no light and appears black. The glass-blowers overcame this by making a flashed-ruby; that is by adding a thin coat of ruby to white glass. The ruby from Blake Street is flat and even in colour. Different pieces vary in shade from a dark red to a thin pink. One piece is spoiled with a blue discoloration, due to contamination with blue glass during manufacture.

Blue glass accounts for a further 4 per cent. It varies in intensity from a beautiful deep tone to a very pale shade. Two pieces are splashed with stain, which when used on blue glass, gives a greenish-yellow tint.

There are a dozen pieces of purple, again varying in tone, and one solitary piece of pot-yellow (coloured through the glass), which was much less commonly used after the discovery of yellow stain.

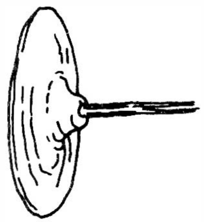
The proportion of the colours reflects standard practice in fifteenth century England, to be seen in the choir of the Minster and many of the parish churches of York. White glass, much cheaper than coloured, was used in much larger quantities. Often highlighted with yellow stain, it was used mainly for the figures and the delicate canopies which frame them, for borders, and for pattern-glazing in diamond shaped quarries - a cheap way to fill up a light. Red and blue were the other main colours. They were much used for robes and in heraldic shields, but they feature most as dark backgrounds on which the figures could be set off. Red glass could be used for fiery dragons, and pieces like the spoiled ruby could even be used for special effects. A particularly fine example of this is the superb dragon on which St George tramples in a memorial window to Sir Richard Yorke (d. 1498) originally in St John's, Micklegate, but now in the north transept of the Minster. Unfortunately the saint is a sadly truncated figure, due not to any power of the monster at his feet, but to the loss of the upper panel. Some idea of his original appearance can be obtained from the east window of Holy Trinity, Goodramgate (1470), which exhibits an earlier use of the same cartoon.

One of the most unusual features of the glass is the presence of a large number of edge-pieces from sheets of muff glass. These have a straight edge which is much thicker than the main body of the glass. The muff process was one of two methods used to manufacture window glass in the medieval period. The glass was blown into a cylindrical form



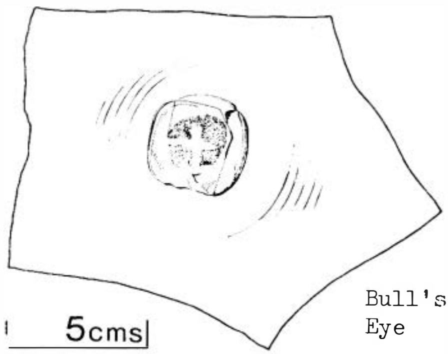
Cylinder for muff process

(hence 'muff process'), which was then cut down one side and flattened out. This method is described by the twelfth century German monk Theophilus in his treatise 'De Diversis Artibus'. Over 300 white edge-pieces, along with similar pieces from red, blue and purple cylinders, suggest that the fragments are almost certainly refuse from a glazier's workshop. Medieval craftsmen did use such pieces on occasions. Glass was a costly commodity, far too precious to be tossed away indiscriminately after the modern fashion. However, the presence of such a high percentage of edge-pieces is significant. It is dramatically reinforced by a superb bull's eye in greenish-white glass. This shows that the glazier also bought in crown glass, made by the second process. This was produced by spinning the molten glass round on



Crown glass

the end of an iron implement called a pontil, so that by centrifugal force it became a circular, crown-shaped sheet of glass, thicker in the centre or bull's eye, where it was attached to the pontil, than at the edge. This bull's eye is the most impressive piece of glass in the collection. Measuring 155mm by 105mm, it increases from a thickness of 8mm at the edge to a solid 20mm at the centre, where a cross-shaped



Bull's Eye

impression left by the pontil can clearly be seen. Such pieces were used during the Middle Ages for both domestic and ecclesiastical glazing, especially in Germany and Italy, but they are very rare in England. In post-medieval times they were popular here as a cheap form of domestic glazing, and are much in demand again with the present vogue of the pseudo-Georgian bow-window.

As far as we know, virtually no coloured glass was manufactured in England in the Middle Ages. It had to be imported from the Continent. White glass, however, was produced in several areas; the Weald area of Sussex and Surrey, with Chiddingfold as a major centre, was the most important, but a Shropshire-Staffordshire area was better placed to supply York, and we know that in 1417 the Minster authorities bought glass from a John Glasman, at Rugeley in Staffordshire. The Fabric Rolls of the Minster and the wills of the glaziers themselves show that most of the white glass used in York was of English origin ('vitri Anglicani'), and that the coloured glass came mainly from the Rhineland areas of Hesse, Burgundy and Lorraine ('Hass' glas', 'vitri Borgandie', and 'Rennyshe' are for example referred to), and was brought into Hull or Bridlington by Hanse merchants and others. Some glass also came from the great glass producing area in Normandy, centred on the port of Rouen, (John Petty, in 1508, bequeathed white glass from Normandy to the Minster, as well as Rhenish glass to St Mary's Abbey). This area had considerable stylistic influence on York glasspainting. The two types of glass present in the City Garage find, may well reflect different areas of origin. We could perhaps attribute the muff produced white glass to England and the coloured to the Rhineland, while the crown glass could be seen as the work of Normandy glassmakers, who seem to have been the major exponents of this technique. Chemical analysis will yield information on the constituent of the glass, and will enable us to make comparisons with glass in York and areas further afield.

Only eleven of the white fragments are painted. The paint is brown, usually consisting of copper or iron oxide mixed with molten glass and a binder; gumarabic, urine or wine. It should become firmly attached to the glass when fired in a kiln.

One piece, 30mm by 28mm (Fig 1), is part of a woman's head. Her right eye and eyebrow remain, with a kerchief with folds across the forehead and down the sides.

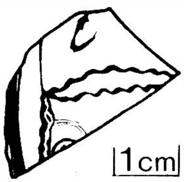
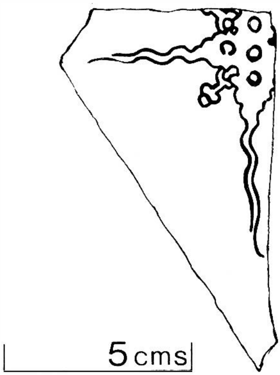


Fig. 1

The painting is very delicate, a very thin brush being used for the eyebrows and a thicker one for the outlines. The folds on the left side have been scratched through the paint with a needle to show white, and a wash has been applied to both sides of the glass to shade the kerchief. The head was designed for a figure panel with small-scale figures, and may even represent a donor. Another piece may be part of an animal, while a third looks like a drapery fragment.

The largest painted piece is a 'quarry', a diamond shaped pane, (Fig 2) 190mm by 55mm. It has a wavy-armed cross design, with trefoils between the arms and circular ornament in the centre. The

Fig. 2



trefoils and circles are stained yellow. This type of quarry is common in the fifteenth century in York and elsewhere. A similar type occurs as a background in the windows of the east aisles of the transepts in the Minster. These date from a reglazing of c.1433, when there are payments (recorded in the Fabric Rolls) for iron saddle bars to support two of the 'newly glazed' windows. They seem to have been popular, however, to the end of the century. The quarry was no doubt rejected because of the inordinate thickness of 10mm at one end, which made it difficult to lead. Four other pieces look like quarry fragments. One, (Fig 3) shows contiguous quarries painted on the same piece of glass instead of being leaded separately.

Part of a fleur-de-lys is painted on one piece measuring 45mm by 35mm. Here the paint is used for a background on which the white fleur-de-lys is reserved. The edges of the piece are squared, so it was probably destined for a border, where such heraldic motifs were popular. (Fig. 5)

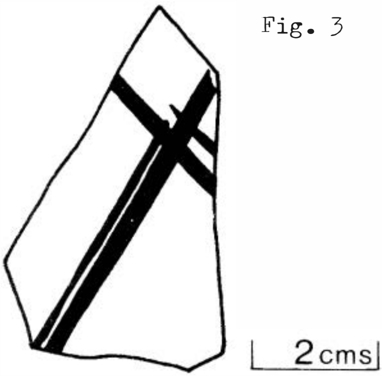
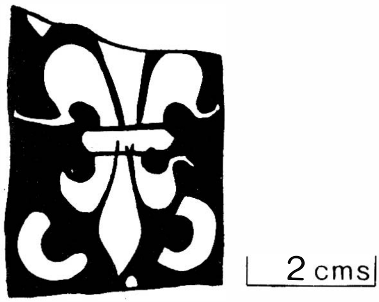


Fig. 3

Fig. 5



Another piece, 35mm by 29mm, has circular ornament, a very common motif, often used in heraldry for example, to relieve the boredom of large areas of unpainted glass. (Fig. 4)

Finally, one ruby piece (Fig 6) is painted, again with the ornament reserved on a painted ground. It may be a piece from a background.

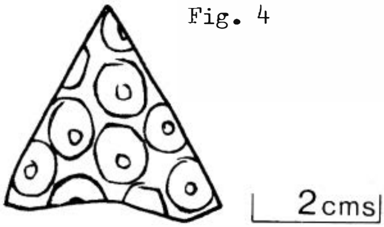


Fig. 4

Fig. 6

Unfortunately there is insufficient detail to make a close dating on stylistic parallels with existing windows possible. A dating to the second half of the fifteenth century, probably the last quarter, seems reasonable, and agrees with the date of the pottery found in the pit.

The raw-material nature of the glass, the meagreness of painted pieces (which in any case do not belong to the same window), and the absence of lead, all suggest that we are dealing with workshop rejects. The find was made in exactly that part of the city where, if any archaeological evidence of the medieval glass-painter survives, we would expect to find it. A few yards further down Blake Street and we are in Stonegate, which in medieval times stretched through the present St Helen's Square: this street, particularly the lower half around St Helen's Church, was where the York glaziers lived and worked. Many of them were buried in the church, where there still survives in one of the windows a patched sixteenth century shield with the arms of their guild, showing the grozing-iron used to cut the glass before the introduction of the diamond. It seems that our glass was dumped by someone working on the west side of the street, perhaps in his backyard, where he no doubt had a small kiln at a safe distance from his house. Amongst those buried in St Helen's, in the second half of the fifteenth century, were members of the Inglish, Petty and Preston families who dominated the York glasspainting scene at this period.

As far as I am aware, a find of this type is unique in this country. With the present opportunities for excavation in the centre of the city, one can hope for further discoveries of this nature, as well as glass from churches and houses. This will help to widen our knowledge of an art form, which played such an important part in the life of the medieval city, and still today attracts worshippers, artlovers and tourists from all over the world. Who knows, perhaps one day Wilfrid's glass may yet see the light of day again!

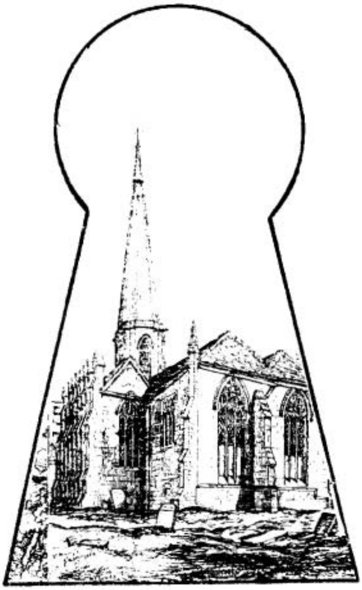
David O'Connor

David O'Connor is Radcliffe Research Fellow in Medieval Stained Glass Studies in the Centre for Medieval Studies, University of York.

Further reading:

J. A. Knowles, 'The York School of Glass-Painting' (1936).
L. F. Salzman, 'Building in England down to 1540' (1952).

KEYHOLE ARCHAEOLOGY:



ST MARY CASTLEGATE

In view of the comparatively infrequent opportunities for the Trust to involve itself in the archaeology of churches, it is an intriguing coincidence that editorial discussion of this topic (INTERIM vol 2 no 3) should have been followed directly by the investigation of the Saxon crypt at Ripon Cathedral (INTERIM vol 2 no 4) and since then by a further watching brief, at St Mary's in Castlegate, York. The latter excavation has brought to light finds of exceptional interest, and has high-lighted once again the desirability of undertaking archaeological work in churches which are being converted to secular use, as well as in those being altered whilst still in ecclesiastical ownership.

The architecture of St Mary's bears witness to a complex building history whose full subtleties are not yet unravelled. Its most striking feature is the Perpendicular style west tower, crowned by a majestic spire. The windows testify to alteration at several earlier periods, and include work in the Decorated and Early English styles. Inside, the capitals in the arcades attest enlargements in the mid-twelfth - early-thirteenth centuries, whilst the chancel arch is Perpendicular.

The stonework at the east ends of the nave arcades is coarser than the rest of the masonry, and may perhaps have formed part of the wall of a still earlier church. It is certain that there was a church here at about the time of the Norman conquest, since there is the unusual survival of a dedication stone, bearing the names of the founders in a style of lettering which has been assigned to the mid-eleventh century.

A fragment of a wheel-headed cross was found in the last century, further evidence of a pre-conquest church on the site; this may or may not have been the one to which the dedication stone refers. The earlier history of the site is not known, but a single *tessera*, a stone cube from a Roman mosaic pavement, supposedly found during the restoration work done in 1870, hints at a substantial Roman building in the vicinity.

The church has been disused for over a decade and has been closed to the public; meanwhile the fabric has slowly decayed. Recently, however, a plan to turn the building into an Architectural Heritage Centre was mooted, and won acceptance and substantial financial support to the tune of £131,000 from York Corporation. 1975 is of course Architectural Heritage Year, and in order to fit in with the schedule for opening the new centre during the year, the Trust was suddenly faced with the prospect of having to undertake an excavation here.

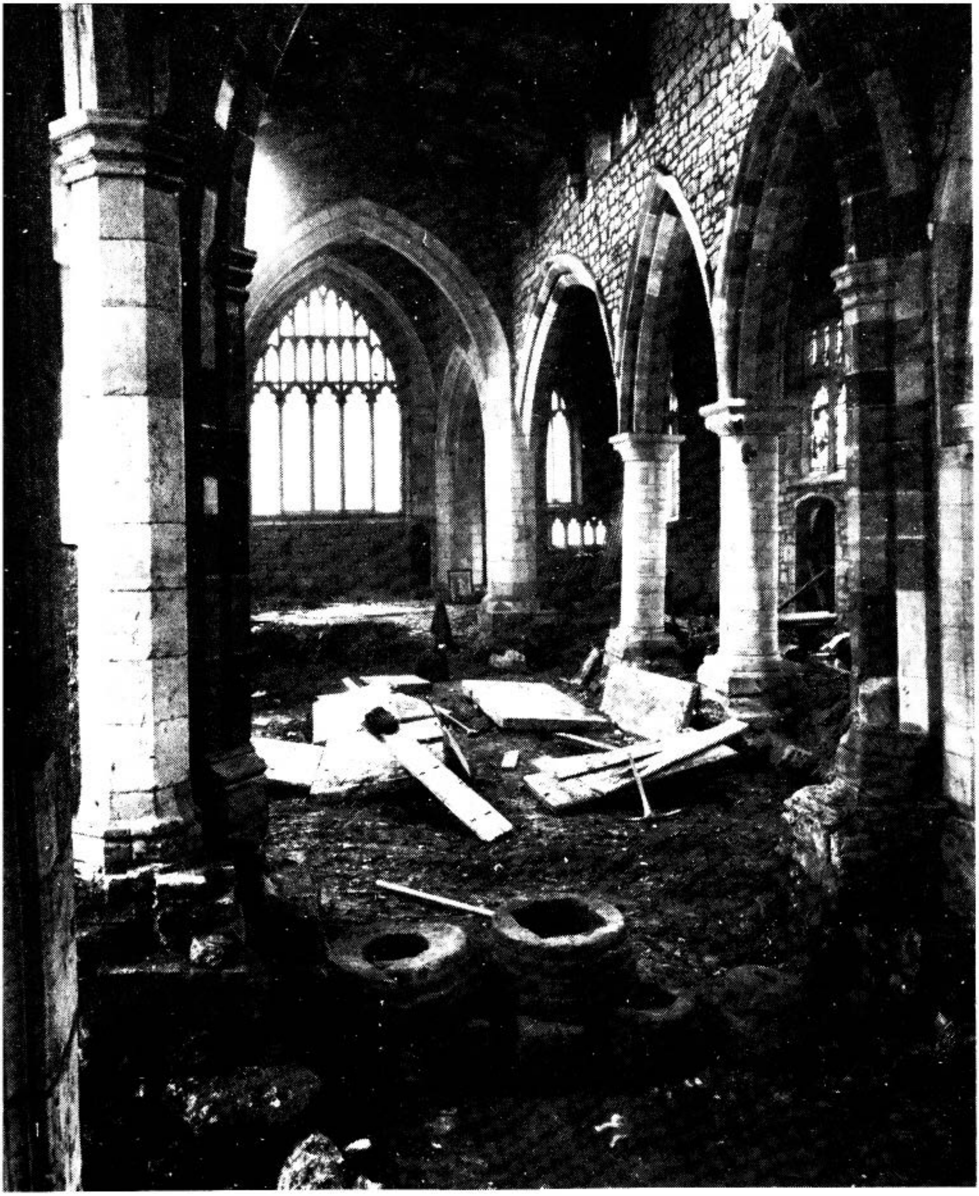
To fully understand the evolution of a building as complex as St Mary's would have required expensive, large-scale investigation, and the Trust, stretched to its financial limits and already committed to other major projects, viewed this prospect with some trepidation. Thankfully, the threat to the archaeological deposits appeared to be largely averted when the architects changed their original plan, which had involved a sunken display area, to one which incorporated a raised viewing platform. Consequently, the Trust decided not to excavate but to confine itself to a watching brief, the expenses of which York Corporation kindly offered to underwrite.

The restoration began with work on the roofs, on the external stonework, and also inside, with the stripping of modern plaster from the walls to reveal the masonry below. Even at this stage a fund of information about the church's development became available, with the uncovering of an earlier roof-line to the chancel and a blocked Romanesque window in the chancel's south wall.

As work continued, the time came to remove the nineteenth century floor, and when the workmen dug directly below the chancel arch they came upon a row of large stone blocks, apparently column drums. Trust staff spent an evening cleaning these for photography at first light, in case the renovation demanded their speedy removal, but a slight alteration to the order of work allowed two days for a rapid investigation of their immediate surroundings.

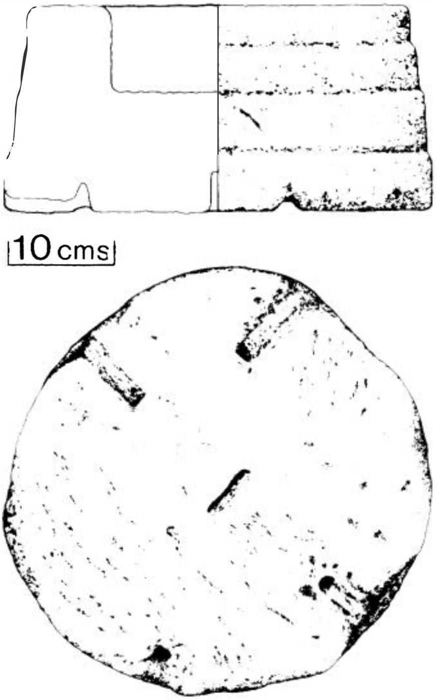
At the east end of the south aisle a stone setting was uncovered below intensively disturbed soil, and has been provisionally interpreted as the footings for an arch into a south-east chapel. The footings of the walls through which the north and south chancel arcades had been pierced were also excavated below the westernmost bays of the chancel.

Excavation immediately north-



A view westwards down the nave of St Mary, Castlegate taken from just east of the chancel arch. In the foreground between the arch piers are the column drums in situ (p.21). The rubble seating of the nineteenth century floor has been removed, exposing the bases of all columns.

east of the northern pier of the chancel arch revealed another column drum, and in contrast to those exposed earlier, it was in this case possible to record its stratigraphical relationships. The drum seems to have been incorporated in the chancel footings referred to above, and was covered by a spread of mortar which may have been deposited when the Norman church was built. The drums between the chancel piers could also belong to this phase of the church's evolution. However, there was also clear evidence that another drum, resting at a higher level, had been inserted at a later period, probably when the Perpendicular chancel arch was erected. Thus the drums seem to have been utilized at two distinct periods.



A column drum, plan and section, showing Lewis holes

Some of the drums were clearly re-used Roman stones, as they had Lewis holes for the insertion of lifting tackle in their bases. The form of some of the others, though, may indicate either a re-cutting of Roman stones or an origin in the Anglian or Anglo-Scandinavian period. The large recesses cut into some of the stones have been tentatively interpreted by some as sockets for pre-conquest crosses, although others contend that these too demonstrate a Roman origin, and were used to secure the individual drums together in a column.

Theory apart, there certainly were stone crosses in or around the pre-conquest church of St Mary's. One fragment found in the last century has already been mentioned, but during the removal of rubble from below the modern floor and below the drums between the chancel piers, several additional fragments came to light, as well as almost half of a coped tomb slab.

The cross fragments are quite small, and are mostly decorated with simple abstract motifs such as cable or pellet borders. Two pieces belong to the wheel-headed cross mentioned above.

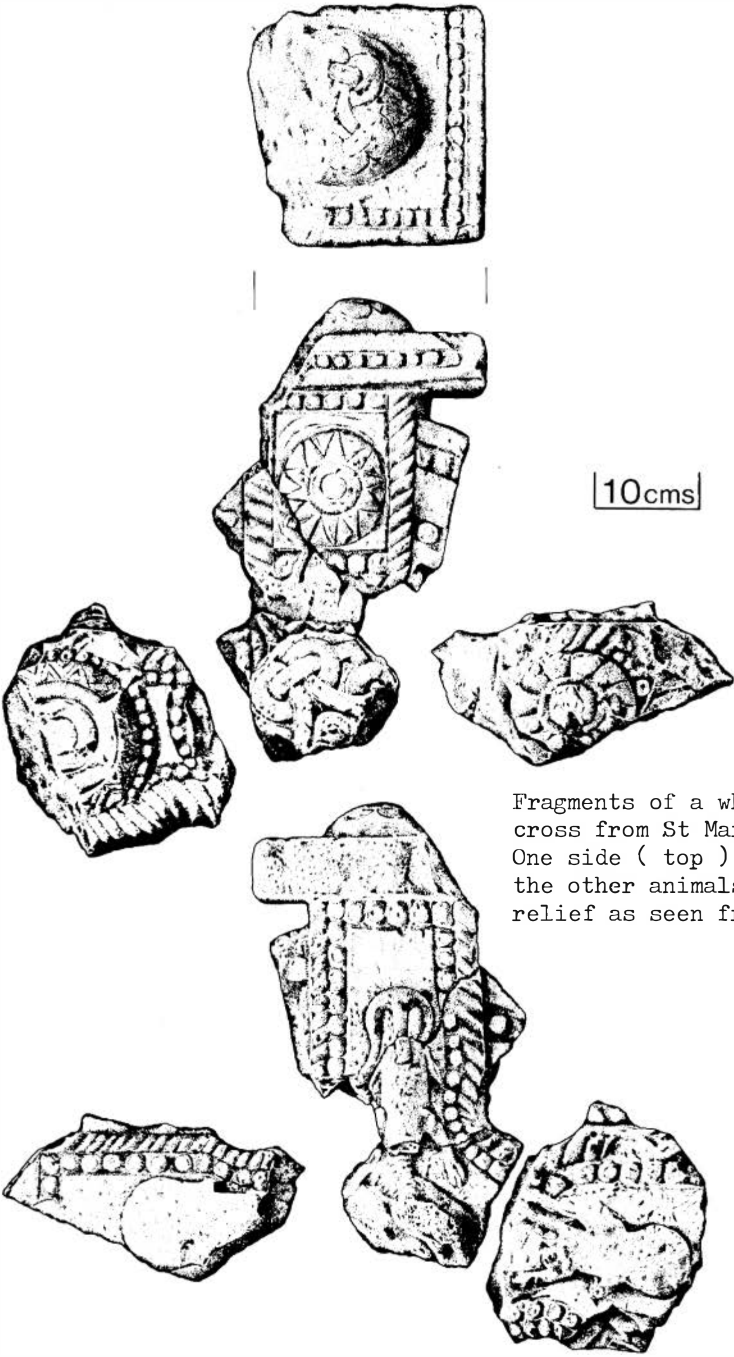
A wheel-head is a cross whose arms are joined by arcs near their extremities: in the present case only the stubs of the arcs survive, but there seem to be traces of pellet decoration on them. The upper arm fragment found last century still gives the best indication of the cross-head's decorative scheme. One side has the remains of a dog-like animal modelled in high relief and viewed from directly above. The animal's head is missing, but both front and hind legs are shown, with what is presumably a tail arched over the beast's hind quarters. The animal is confined within a double border of cable and pellets. The two new fragments, representing the cross's lateral arms, confirm that a symmetrical disposition of motifs was employed, as W. G. Collingwood hypothesised nearly fifty years ago (Northumbrian Crosses, 1927, fig. 148).

The other face of this cross-head had a boss in the panels at the end of each arm, and a central roundel delimited by a cable border, encircling a simple interlaced-knot motif. The new fragments make it clear that whilst the end panels were similar in layout, they were not identical, for although the bosses incorporate ring, chevron and pellet devices, each displays slight deviations from the others.

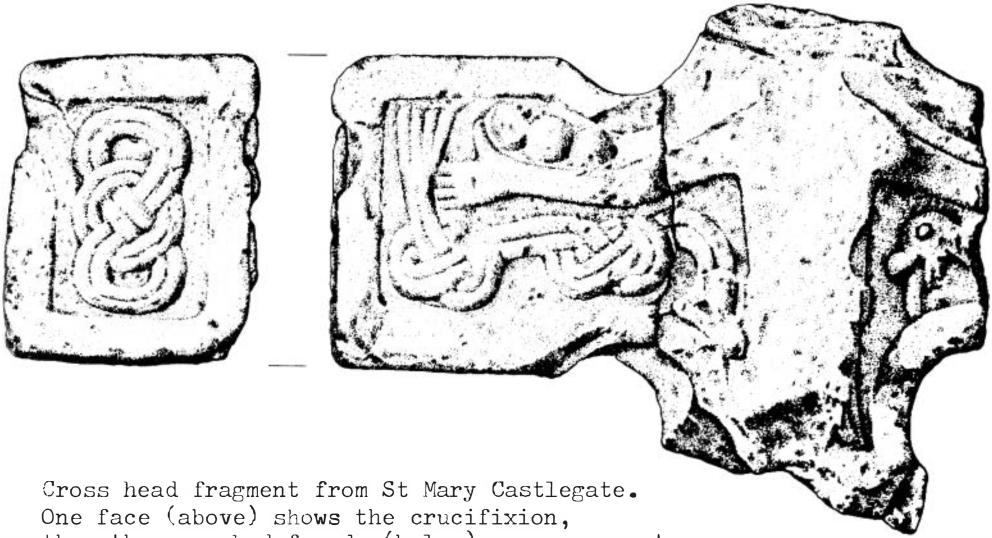
The cross-head has an additional interest in that it is the only one in the group upon which traces of pigment survive - in this case, red. Such colouring was probably commonly applied as an embellishment to sculpture of the period, but very few instances have survived to the present day, and it is hoped that careful conservation and analysis of the St Mary's example will provide an additional insight into the techniques employed by pre-conquest craftsmen.

The human figure occurs on only one cross-head, an incomplete sandstone piece now split into two, found below the drums under the chancel arch. The better preserved side bears a portrayal of the crucifixion within a plain border. No cross is depicted, but the stone cross-head itself serves as the background against which Christ's body is portrayed. On the surviving fragments, only Christ's torso and one arm can be seen, and virtually all the detailing of the body has been lost due to mutilation of the fragment. Nevertheless, there is a suggestion of drapery surviving between waist and knee level.

The carving survives best on the cross-arm, where Christ's arm is shown slightly bent at the elbow, His hand is clearly visible, palm out and thumb uppermost, but there is no indication of any nail or thong holding Christ to the cross. Above the forearm there are three pellets, possibly serving merely to fill up unused space as, for example, on a cross at Kirkdale. Below the arm writhes a serpentine animal

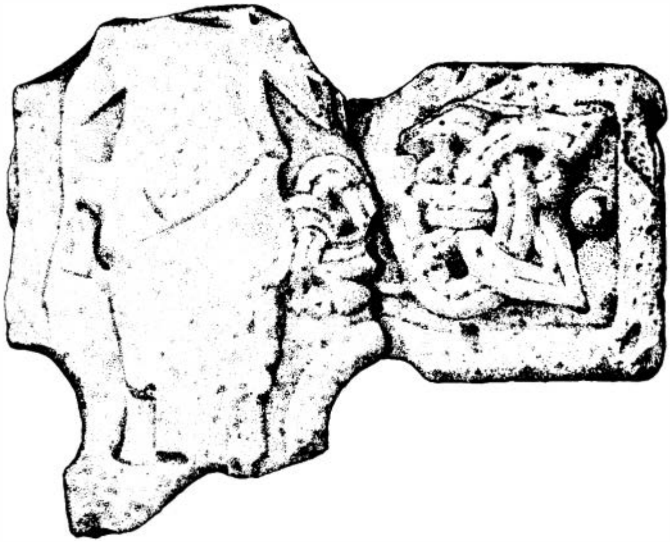


Fragments of a wheel-headed cross from St Mary Castlegate. One side (top) has boss motifs, the other animals modelled in relief as seen from above. (bottom)



Cross head fragment from St Mary Castlegate.
One face (above) shows the crucifixion,
the other, much defaced, (below) may represent
Christ in Majesty.

10 cms



THE ST MARY CASTLEGATE DEDICATION STONE

(...): MINSTER SETTON ... ARD / GRIM / AESE : ON NAMAN DRIHTNES HAELGES CRISTES / SANCTA MARI / SANCTE : MARTINI : / SANCTE C(...)TI / OMNIVM SANCTORVM CONSECRATA : EST : AN(...)VIS IN : VITA : ET(...) *

"--- (...)ard and Grim and AEse raised (this) church in the name of the holy Lord Christ, and to (or 'of') St Mary and St Martin and All Saints. It was consecrated in the (...) year in the life of --- "

The remainder cannot be reconstructed with certainty. Grim and Æse are recorded names of Old Norse origin. The text is unique in that it begins in Old English, changes to Latin, but with the use of þ ("thorn") may revert to Old English at the end.

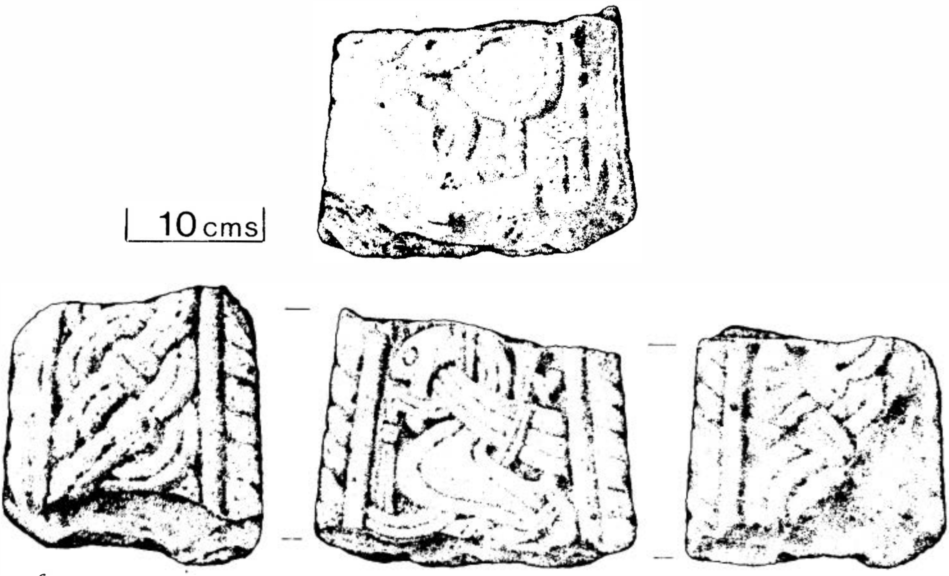
* After ET(...) the illegible /unreconstructable part is: (.)AERIOþEM (. ...) (..AE)R(Æ)TSI (. ...)

whose body, divided by a shallow medial groove, knots into a figure-of-eight near its centre and just above its lower extremity, which enlarges into a fish-like tail. The head, though mutilated, appears to have gaping jaws and two sharp teeth. The head of another, different, animal, can be seen on the other side of Christ's body.

Figure sculpture is also found on the reverse face, although here again mutilation is severe. A standing figure is portrayed in a central position, with the head and one foot missing. Vestigial traces of drapery may be recognised in a diagonal swathe crossing the body. It may be surmised that the figure represents Christ in Majesty, such an antithesis of crucifixion and glorious resurrection frequently occurring on approximately contemporary Irish crosses, although the device is not commonly found in England. Beyond the figure is a knot motif with a pellet in the open angle at the end, and another knot, this time a figure-of-eight with a roundel at the point of intersection, occurs on the end face of the arm.

A gritstone fragment, part of a cross-shaft, has on one side a bird-like beast portrayed in a sweeping S-profile with its neck curved and the head turned downwards. It has a pronounced forehead, a prominent circular eye, and a curved bill. The body is slightly swollen, and the whole figure is wound around by both two- and three-strand interlacing tendrils. The border to this panel is composed of a cable motif and a simple moulding within.

The opposite face is fragmentary,

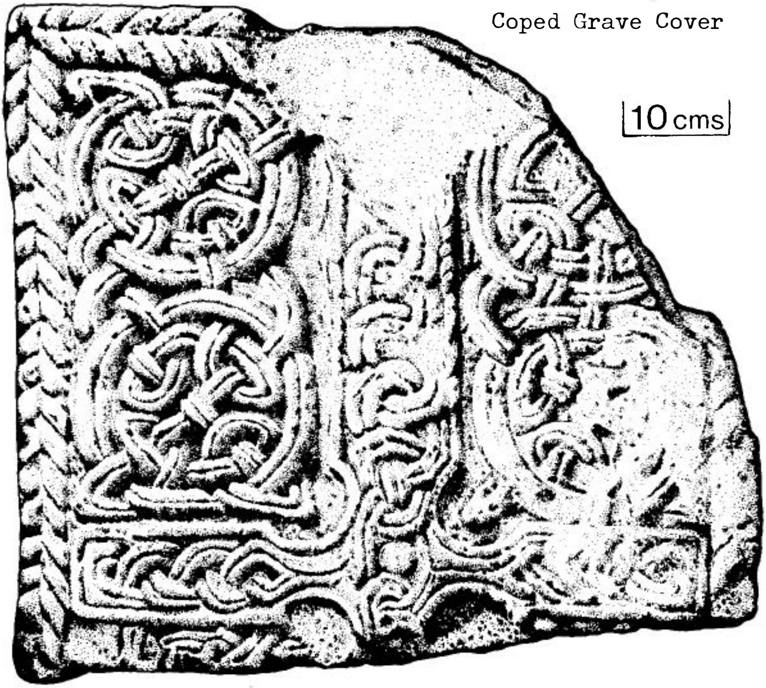


and the scene portrayed has not been identified. The side faces bear running figure-of-eight knots within borders identical to those on the bird face.

In addition to the fragments of the various crosses, approximately half of a coped grave cover was also recovered. As its name implies, a slight ridge runs along the centre of the stone; the decoration is contained within a double cable border which gives a chevron effect. However, the basic subdivision of the field was achieved by a simple, narrow-armed cross, of which three arms and a small central boss survive. The arms are decorated with interlace patterns, that on the upper arm differing from that on both lateral arms. The panels are covered with a dense but orderly series of interlaced knots, the two roundels and their accompanying knots combining to produce a design which is virtually bilaterally symmetrical.

The group of sculptural fragments is profoundly important in the context of the development of St Mary's church. Furthermore, with the contemporary groups from St Mary Bishophill Senior, recovered during demolition in 1963 (and now, sadly, built into the fabric of the Church of the Holy Redeemer, Boroughbridge Road) and from below York Minster, now displayed in the Minster Undercroft, it will allow scholars the opportunity to re-assess sculptural tradition, influences,

Coped Grave Cover



and standards of achievement.

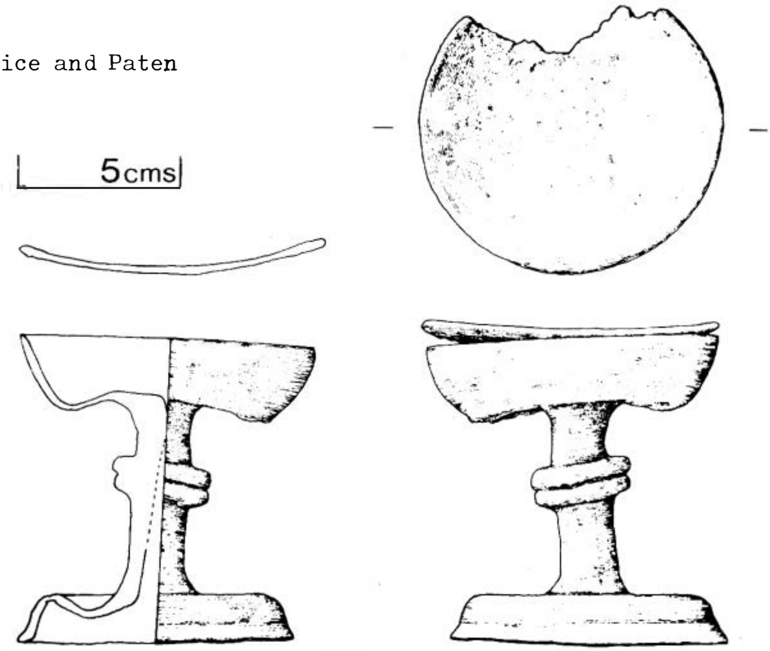
The sculptural fragments were not the only objects found - of later medieval date is a pewter chalice, originally no doubt interred in a priest's grave (Christian grave-goods!), but found in tiny fragments, disturbed from its true context, amongst a pile of rubble near the west end of the nave. Its shape is reminiscent of that carved on the ampulla mould recently discovered in Shambles (INTERIM vol 2 no 3 p35).

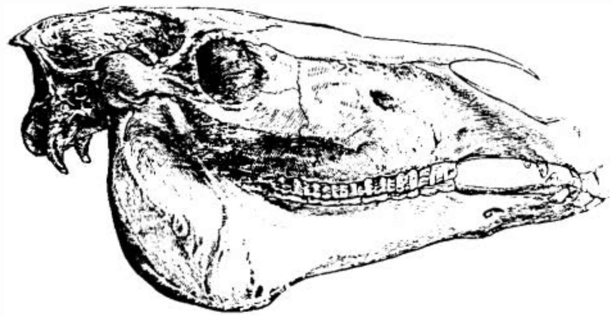
At the time of writing, work on the Architectural Heritage Centre is nearing completion, and it is unlikely that a further opportunity for archaeological investigation will arise for many years. The results of the Trust's recent work in St Mary's surely indicate the necessity of taking now the chances being offered by similar works in churches throughout Britain, since the newly recovered information has illuminated the early, shadowy phases of this fine church's development. The opportunity must not be lost elsewhere.

For permission to undertake this watching brief, and for help during its execution, the York Archaeological Trust is much indebted to the owners of the building, York Corporation; to the architects, G. G. Pace and Co.; and to the initial contractors, the Ebor Stone Company.

Richard Hall

Chalice and Paten





THE STUDY OF ANIMAL BONES

Bones, remnants of the vertebrate animals are perhaps the most common and ubiquitous finds recovered on archaeological sites. Unfortunately there have been and still are times when this component of the archaeological evidence has not been collected, but discarded as being of little importance. My personal attitude is that anything remaining from the activities of ancient man is important to his study, and since often the remnants of his hunting, pastoral, and manufacturing activities are so abundant, their study will inevitably produce conclusions of value to the study of past societies. The study of the bones found in archaeological sites is an extension of the palaeontological study of Pleistocene fossils, often associated with palaeolithic man, to those remains grouped with more recent cultures in post-glacial times. They have been studied with varying degrees of intensity for more than a century, the work generally being concentrated upon the prehistoric periods, often in company with the study of early agriculture and the pastoral activities of man. More importance is being attached and more work carried out in this field today as archaeologists are converted from the "treasure hunting" of the past to the more responsible research into the lives of our ancestors.

Bone itself is composed of an organic and inorganic fraction and although in some cases the organic fraction (collagen, which is resistant to decay) is completely broken down and leached out, it is rarely the case that the inorganic fraction (Calcium phosphates and carbonates) is destroyed except under very acid conditions or due to extreme erosion. This means that on most archaeological sites the majority if not all the bone is preserved in a recognisable and identifiable state.

The vertebrate skeleton consists of a number of paired (appendicular) and medial (axial) elements which within each class of animals (fish, amphibia, reptiles, birds and mammals), show a remarkable uniformity of basic design, varying to a greater or lesser extent dependent upon the function of the bone. Rarely are these characters masked by adaptive changes to the extent that the bone is unrecognisable and it is therefore possible to identify all complete bones and a large proportion of the fragmented bones as to element. This is the first stage in the treatment of animal bone, since no attempt can be made to identify the species of the specimen without first establishing the bone type.

The five classes of animal mentioned above may generally be fairly readily separated upon either the structure or design of the bones. Bird bones are very thin walled with large (pneumatic) cavities that in life are filled with air and lighten the animal; fish bones tend to be very transparent except when stained and have a polished appearance and no cancellous tissue (the spongy bone found within the ends of the long bones and other parts of the skeleton).

Having established the class of animal and the identity of the bone to which the specimen belongs, it is then necessary, by use of known comparative material, to identify its species. The majority of bones on archaeological sites are mammalian and generally domestic, except on the earlier prehistoric sites. Although the basic design of the bones in any one class is similar, the changes in function of the bones produces variations in adaptive design resulting in recognisable features by which the bones can be distinguished as to species: these variations will depend upon whether the animal (in mammals) is a long legged grazer which needs to be fast on its feet over long distances to escape predators, or a carnivore which actively hunts by springing on animals and running them down over short distances, a mole which burrows vigorously through the earth, and so on. Some closely related species are so similar that a species identification is not possible for many of the bones of the body and in some cases skulls are often the only certain method of separating the species; this is true of sheep and goats, and also of numbers of the small mammal species of mice, voles and shrews.

Animals grow continually until they reach maturity, and it is necessary that their bones can also grow in size. At either end of the major long bones of the skeleton, a layer of cartilage separates the ends (epiphyses) from the shaft and forms growth points where the bone increases in length until the definitive size is reached; at this time the cartilage becomes ossified (turned to bone) and growth is then complete. This fusion at the ends does not occur at the same age for all bones, some fusing before others. In archaeological deposits, the bones from young individuals lose their ends and depending upon the bone represented, it is possible to estimate the age of the animal from which it was derived. Also, the age at which certain teeth erupt is known in modern animals and the eruption and wear of the teeth recovered can also be used to age specimens.

A further piece of information which can be gathered from some bones and teeth is the sex of the animal. The presence of a spur on the tarso-metatarsus of a fowl, indicates that the bird was a cock; the very large canines of the boar can be distinguished from those of the sow, and in some other animals such as cattle, the cows and bulls can be separated on the basis of the proportions of the skull. There is another method of establishing the sex of the animals from which a bone is derived and the presence of any castrated animals: this is done by a metrical analysis and can only be carried out when sufficient numbers of certain bones have been recovered. Some of the bones of the skeleton vary in proportions between the sexes and the collection of a single measurement from a number of bones (or an index of two measurements) when plotted graphically or in the form of a histogram will produce two peaks if both the sexes are present, and some times three if a percentage of the animals are castrated.

The above discussion outlines the information that can be gathered concerning the type and condition of the animals usually represented on an archaeological site. This, in conjunction with further features, can now be used to demonstrate man's control and use of them, thus giving an insight into their former importance.

The extent to which the information gathered can be used in an interpretative way is largely dependant upon the situation and type of site from which the material was recovered. The complete excavation of a Bronze Age village, for example, gives an insight into the major domestic species, their mode of husbandry, the significance of hunting and the relative economic importance of the various species. But a collection from an excavation of a more limited area, for example a single tenement spanning only some three hundred years in the centre of Viking York, may represent only part of the dietary remains of four or so generations of a single family who would probably have bought their meat from the butcher. In this case no reliable information on availability, animal husbandry or even economic use, apart from diet, can be concluded, since the bones may reflect personal vagaries rather than aspects of the community as a whole; in other words, it may represent a biased sample, and there is no way of telling this without reference to other sites in the vicinity.

However, if the whole city is treated as a single archaeological site and the various excavations as individual social units, the potential is immense. The results from any one site can only be assessed when material from a number can be used for comparison, and only then can the similarities and differences be used to identify the effects of animal husbandry, social and economic factors.

Interpretation of the material is based upon the secondary use of the information gathered direct from the bones themselves. The species of animals represented can be listed in the proportions in which they have been recovered. This allows consideration of which animals were most important to the community and the extent to which each was either available or utilised. The minimum number of individuals of each species can then be calculated from the most common single skeletal element represented. This figure can be used in some cases to calculate the amount of meat represented: modern estimates of dressed carcass weights are used to calculate how much meat the bones indicate and it is often found that the dietary importance of animals is substantially different from their relative occurrence in the deposits. For instance, cattle are considered as having approximately ten times the weight of sheep when dressed and this would mean that sheep would have to be ten times more abundant than cattle to represent an equality in dietary importance. If the sex characters of the group can now be calculated either by metrical or morphological methods, and the age proportions estimated, an indication of the selection of animals for butchering can be gathered which in turn indicates which groups were most valued alive, and some conclusion drawn as to why. This is important where animals have a number of economic uses: for example, sheep may be prized for wool, milk, food and breeding, while cattle may provide draught, milk, hide and food. Some indications of these various uses may be preserved in the skeletal material, notably in oxen used for draught, where the increased loading on the shoulders sometimes results in enlargement of the metacarpal bones to spread the stress more widely.

This approach, as has already been noted, cannot be used for individual sites in York, since economic or even racial and religious factors may govern the selection of meat. But animal remains other than from food are found on sites and these are particularly interesting from an archaeological point of view. A recent watching brief under the new Habitat shop in Coppergate (INTERIM vol 2 no 2) produced a small group of bones 20% of which were tines, parts of tines and parts of the beam of red deer antlers. There were no other red deer bones in the whole group, possibly suggesting that the meat itself was hard to come by or too expensive. The antler was presumably being brought in for manufacturing purposes to make a number of objects, none of which were recovered, and only the off cuts and unwanted fragments were found. Associated with these were also a number of sawn horn cores, although there was an absence of any significant number of other parts of the skull, suggesting that horn was also being utilised for manufacturing purposes either in the same workshop or nearby.

Another minor site in York on Leadmill Lane (INTERIM vol 1 no 2 p36) also produced an interesting group from a rubbish pit. Besides incorporating some food debris, the pit contained an unusually large number of ungulate rib fragments, a number of which had been split and smoothed, and also large quantities of very small fragments and shavings of antler. Several fragments from bone comb cases were found associated with this group and it is evident that the antler fragments were derived from the manufacture of the combs themselves.

Although successful treatment of individual urban sites is at present only possible in cases where these show manufacturing activities as in the two examples above, it is anticipated that consideration of a number of sites in York within each period will produce information on general agricultural economics as well as the social and economic status of each individual site. One aspect of the long-term study of this material that extends beyond the immediate interests of the archaeologists is the opportunity it creates for the study of the evolution and selection of man's domestic animals, and his effect upon the wild fauna over the last 2000 years, the period during which the most intensive selection and the greatest changes have occurred.

One final and interesting aspect of the study of animal bones in archaeology, is the insight we get into the history of our wild vertebrate fauna. This country is populated by a large number of species of wild animals, many of which are found in archaeological deposits if assiduously searched for. These animals, be they mammals, birds, etc., are commonly found nowadays in particular habitats such as marsh, heath or woodland, or may even have more specific preferences as to the type of woodland, etc., and finds of these species in archaeological contexts can be used for environmental interpretation in conjunction with the botanical and entomological work carried out on site. This is illustrated by finds from the Roman sewer in Church Street, York (INTERIM vol 1 no 1: vol 2 no 1) where a number of small mammal species and other vertebrate animals were recovered, among them, House, Wood,

House mouse

and Harvest Mouse, Short-tailed vole and Water vole, Common Shrew and Pygmy Shrew and a mole, a variety that suggests areas of

Water vole

local grassland and low shrub such as that now associated with hedgerows or railway embankments. These finds give us interesting and early records of our modern fauna and can be used to illustrate the extent and abundance of these species in former times. This is particularly important where a number of our now extinct or recently introduced vertebrates are concerned, notably species such as the wolf, wild boar and beaver, all of which became extinct in the Medieval or Post-Medieval periods, and fallow deer, rabbit, black rat and house mouse, the last being introduced at least by the Iron Age and the fallow deer, rabbit and black rat in the Norman period. It is a recent find in York which sug-

Black rat

gests that the latter species was a Roman introduction into this country and this may well prove to be a find of some economic and historical importance, the black rat being the carrier of the bubonic plague vector.

The scope of the studies illustrate that they can and I hope will prove a valuable and necessary addition to the present archaeological evidence from the city of York, enabling a deeper investigation into the development of the city and its social, economic and environmental conditions.

James Rackham

POT SPOT

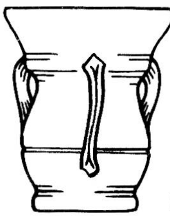
CISTERCIAN WARES

Once more in convivial mood, Potspot turns its attentions to Cistercian Ware, which is most often found in the form of mugs or cups in a fine red fabric with a treacle-coloured glaze. The type was first singled out by J. T. Micklethwaite amongst the destruction levels associated with the Dissolution in the Cistercian monasteries of Yorkshire. In 1893, he published a paper on the subject in the Proceedings of the Society of Antiquaries and for some time the opinion was held that this pottery was made specifically for the wealthy religious houses. However, the increase of excavation and research in recent years has shown that it was in use on a wide variety of sites, though the monastic name survives as a convenient label.

Cistercian ware appears to have been introduced some time in the late fifteenth century, yet its origins are still mystifying. Excavated kiln sites have produced no evidence of its development, though the manufacture of these vessels requires an expertise in throwing, glazing and firing, which was far beyond that of the average Medieval potter. The smooth red clay was thrown in a variety of shapes, and glazed both inside and out with a rich brown or black glaze made from raw galena (lead sulphide) Decoration was occasionally applied under the glaze in the form of strips or pellets but sometimes with moulded or stamped figures, executed in contrasting cream clay. Often pots were thrown in cream clay with red

1

2



3

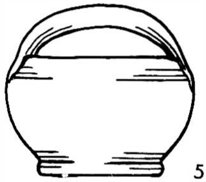
4

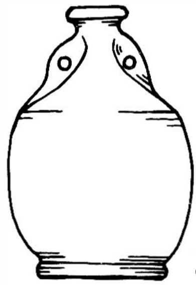
clay applique designs, and are referred to as 'reversed' Cistercian ware. In the kiln these fine wares had to be treated with special care. They were placed in 'saggars', large pottery buckets which acted as a protection from the direct heat of the fire. Inside these, quartz sand or small sherds used as props prevented the pot from sticking should the glaze run.

It has been suggested that it was the influence of products from the Rhineland stoneware factories (see Potspot, INTERIM vol 2 no 4) which led to this turning point in the English ceramics industry. Immigrant potters from the Netherlands have also been postulated as the innovators. Nevertheless, the widest range of forms has been found in large numbers in Yorkshire and it may be that it was first made here. Kiln sites have been uncovered in the Leeds and Wakefield areas which specialised in these wares, though it is feasible that other workshops could have produced limited quantities. There were other production sites elsewhere, notably at Nuneaton in Warwickshire and Ticknall in Derbyshire. Cistercian ware is distributed mainly north of a line from Bristol to London: it is interesting to note that only one sherd was recovered from the medieval excavations in Southampton.

The shapes most commonly found are cylindrical beakers with two handles (1), and cups also with two handles but with a belled rim and a squat spherical body

(2). There are several variations on this theme, the number of handles, for example, ranging from three (3) to eight. Another frequently occurring type is the posset pot, equipped with a close fitting lid (4). Posset itself was a popular beverage in the sixteenth and seventeenth centuries, consisting basically of hot milk or cream, eggs and Sack. When freshly made it was possible to drink this concoction, but as the eggs slowly solidified the imbiber had to resort to a spoon to scoop up the last of this extremely intoxicating snack. Basket pots (5) were another novelty, but their use is somewhat obscure. The flasks (6) were most probably used to hold liquor, the two lugs on either side used as anchor points when tying down the stopper. They were stored buried up to their necks in sand: a vigorously fermenting bottle of home-brew could be as lethal as a hand grenade! The last illustration (7) is the upper portion (side view) of a figurine of a lady in contemporary costume. She wears a Tudor bonnet and ruff and no doubt a high-waisted dress with ruched sleeves. She is modelled in cream clay with dark brown dots of slip for her features and to embellish her headgear. This particular example is in the Yorkshire Museum, yet only Ticknall was known to have made them.


5


6


7

Acknowledgement is due to P.C.D. Brears who unwittingly provided most of the information for this article.

Jane Holdsworth

The Friends of York Archaeological Trust

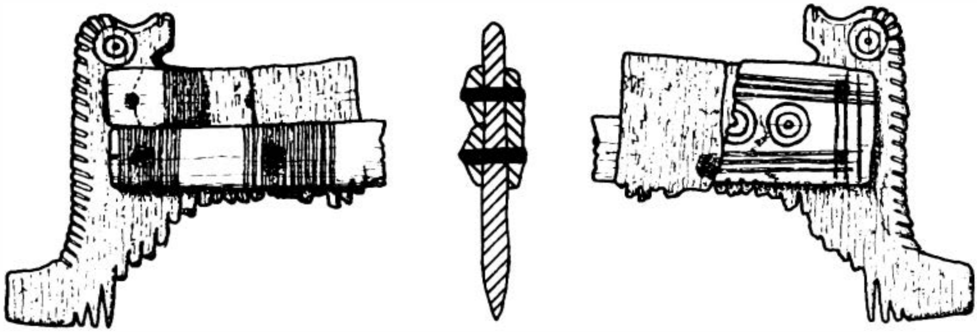
Regular readers of INTERIM will appreciate that new development within York is making possible archaeological excavation on an unprecedented scale. To carry out the digging and the attendant essential research, the York Archaeological Trust needs a continual and reliable flow of funds, and it is to augment the Trust's resources, and to support and further the work of archaeological research that a new organization called the Friends of York Archaeological Trust has been formed.

The large regular readership of INTERIM and the widespread interest and support which is invariably attracted by the Trust's activities in the field as well as in education and in fund raising, clearly demonstrated a good deal of public sympathy. The new society, which will provide an opportunity for our supporters to become more directly involved with the Trust, held its inaugural meeting on 15 May and its first general meeting on 18 June. A council was duly elected and is now preparing a programme of events for the coming months. It is gratifying to report that already we can count on the support of over a hundred 'official' Friends.

The Trust is delighted that support for the Friends has come from near and far, and is especially pleased by the response from INTERIM readers. We look forward to the growth of a vigorous society promoting support for the Trust, spreading knowledge and understanding of its work in York, and in return gaining the opportunity of getting to know more closely the everyday workings of the Trust and the people responsible for its smooth operation.

New members are always welcome, amd details of membership may be obtained from the Hon. Treasurer, 47 Aldwark, York YO1 2BX. (Please enclose a stamped, addressed foolscap envelope.)

Sheila Goater



TOOTHLESS WONDER

Amongst the bone objects from all periods in York's history few have had care and attention lavished on them more consistently than composite combs. The usual method of manufacture was for several thin, rectangular plates of bone or antler to be riveted between two cross bars, the teeth then being cut *in situ* with a fine saw. Many variations on this basic theme were developed before composite combs eventually fell from fashion in the medieval period, after enjoying a last burst of very widespread popularity from the tenth to the twelfth centuries (INTERIM vol 1 no 1, vol 2 no 3).

A new find from the Blake Street excavations, as well as being one of the more attractive pieces so far found, is also one of the most intriguing. Several features mark it out as being unusual: the surviving end plate terminates in an animal head, the edge is marked by oblique saw cuts in the form of a mane and instead of the usual single bar on either side to keep the teeth in place this example has two bars on one side and a flat plate equal in width to the two bars together on the other. This curious constructional technique immediately links it to another comb found in York in the middle of the last century and now in the Yorkshire Museum's Cook Collection; the zoomorphic terminals on both combs form a further link.

As a general type, combs of this kind can be defined with unusual precision: in England their distribution is generally restricted to East Anglia, those from York being the only representatives found outside this area, and wherever independent dating evidence exists all of them can be shown to be of AD fifth-century date. The principal group so far published is that from Caistor-by-Norwich in Norfolk, an important site founded under the Romans as Venta Icenorum and continuing in use for a time as an Anglo-Saxon settlement after the collapse of the Empire. The presence of an Anglo-Saxon element in the late Roman garrison at Caistor-by-Norwich and the continuity of occupation after the departure of the Legions from Britain are phenomena which would once have been thought quite extraordinary but which are now more commonly recognised: occasionally, hand-made Anglo-Saxon pottery appears in Late Roman contexts to demonstrate this process, as in The Mount cemetery at York, but more common are characteristic pieces of metalwork, bronze belt-fittings and the like, of a type found most frequently in the Rhineland, the north-eastern frontier zone of the Roman Empire. Their occurrence there is generally equated with the presence of laeti or foederati, native militia men or 'military farmers' who were granted agricultural land in the frontier zone in return for certain military obligations, so forming a useful back-up force to augment the increasingly hard-pressed regular garrisons in the later fourth and early fifth centuries. The presence in England of metalwork of this type suggests that Germanic federated troops may have been drafted into this country on a much wider scale than was previously imagined. Although some of these pieces showing Germanic influence are comparatively plain (INTERIM vol 2 no 2) many are more elaborate, often featuring some sort of zoomorphic treatment.

This brings us back to the Blake Street comb, for the animal-headed terminal and saw-cut mane are features which link it immediately with many of these late-Roman pieces. The few examples of this type of comb known on the continent are not widely distributed along the Rhineland, however, but are concentrated in the former Frisian territory in the Netherlands. The presence of Frisian troops in England is already well documented (one unit is known to have been stationed on Hadrian's Wall, for example), but since the coastal regions of their homeland formed a transit area for many Anglo-Saxon migrants on their way to England in the fifth century, and indeed many immigrants originated in Frisia itself, we would be rash to jump to too many conclusions too quickly. Whether it belongs to the Late Roman military or the immediately post-Roman civil milieu, however, this new comb is an important piece of new evidence to demonstrate the theme of continuity in a period which was once thought to be marked by a major break, for if it does not demonstrate the presence of a Germanic element in the city before the end of Roman rule then it suggests that the settlement of new peoples in Eboracum had begun well within the fifth century.

Arthur MacGregor

TO THE YOUNG RESCUE!

As a reader of Young INTERIM you must often wish you could take a more practical part in archaeological activities than you are normally allowed to, since the age limit set on most excavations is 16. Those who live in and around York are now going to have the chance to make up for this, especially as many will have recently become family members of the Friends of the York Archaeological Trust. It is for you that we are launching a local branch of Young Rescue.

Its parent is that well-known and vocal watchdog of British archaeology, Rescue, which, since 1971 has been ceaselessly growling and barking at government officials, big-businessmen, planners and men-in-the-street: and when Rescue cries 'Wolf!' you can be sure that there really is one, if not a whole pack of them to get worried about. Rallying behind the horrendous image of a mechanical grabber demolishing Stonehenge, the energetic members of this movement have fought alongside other conservation groups to stem the relentless tide of ancient monuments, historic town cores and whole landscapes being thoughtlessly pulped into oblivion for the sake of commercial exploitation and short-term progress. While the castles, churches, halls and barrows continue to bite the dust without archaeological record, some fragments at least are being rescued.

Young people are just as concerned about this sort of destruction as their elders, but there's nothing so frustrating as not being able to do anything about it. Of course, they can't hope to change the world overnight, and in any case, their interests and passions tend to switch quite rapidly at times, but they're not going to lose by learning something about practical archaeology and its problems; the survival of tomorrow's archaeology depends on how well this is done today. It was therefore natural that Rescue should want to enlist the support and interest of young people by giving them their own organisation, complete with magazine, competitions, projects and archaeological holidays, models and with-it T-shirts. There are branches all over the country where people can do practical things: they see slide-shows on archaeology and on Rescue, they visit ancient monuments and sites and sometimes help on digs; they draw, mend and even make pottery, they keep watch and help record ancient buildings threatened with destruction.

So back to our opening question: has Young INTERIM a future? In his recent remarks (INTERIM vol 2 no 3) Sid Bradley referred to activities like the above as possibilities for a Young INTERIM group, but also stressed that IT DEPENDS ON YOU. Are you aged between 9 and 16 and interested in ancient York(shire)? Have you seen all our working sites? Do you know what happens behind the scenes after the dig and in the museum? Could you build a Stone Age house, are you an expert flint knapper, can you make models or prehistoric pots, or would you just like to have a go at any of these or similar things? If so, then watch this space in Young INTERIM for news of events arranged for the York Young Rescue branch, or write to Chris Clarke, c/o Y.A.T., 47 Aldwark, York YO12BX. AND, don't miss our first meeting, on Saturday 29 November at 2 pm on the Museum Chambers site. It will be a sort of guided treasure hunt (not the destructive metal-detector kind), looking for Roman and medieval York, using the Trust's main sites as clues; we would like you to bring as many extra clues as possible from similar York sites. The prize (should we happen not to find the embalmed body of the Emperor Constantius within marble sarcophagus anywhere) will be refreshments at the Trust offices in Aldwark, where you will be able to see (but not eat) some of the best finds from the sites. PUT IT IN YOUR DIARY NOW! Bring you own ideas, but remember that Young Interim still wants YOUR articles, questions,letters etc. To start with, we shall be holding meetings once a month, unless demand (and helpers) allows more. Our next meeting will be a slide show etc. entitled 'We fired a Roman Pottery Kiln - After 1800 Years' (but we had to excavate it first).

Chris Clarke

MEET THE ARCHAEOLOGISTS

We have already met one of the scientists employed in our environmental laboratory (INTERIM vol 2 no 3), and this issue introduces another of the team. James Rackham's work is primarily concerned with the study of the skeletal material which excavations in York produce in such vast quantity. To give an example of this, the excavation at Bishophill I is estimated to have produced over 40,000 bone fragments, the study of which is indeed a daunting task.

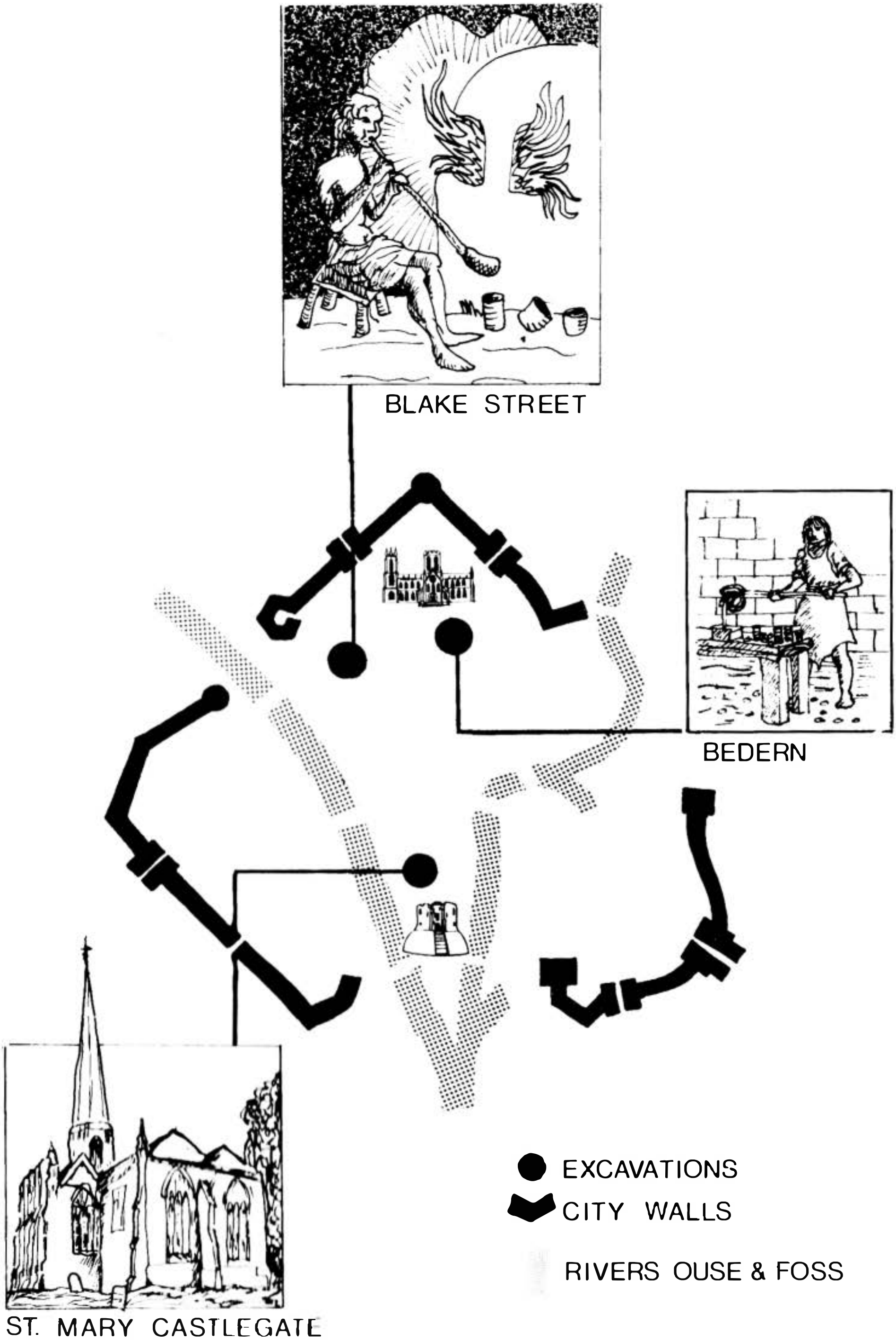
James was born at Farnham, Surrey, and spent his early formative years at Wycliffe College and Bedford School; the regimes of cold baths for seven years at the latter public school providing some measure of influence on his future, although quite what this influence was, I was unable to ascertain! From there, James moved to Coventry Technical College where he took his A-levels, followed by a period of three years at Portsmouth Polytechnic where he read for an external London degree in zoology. He further extended his zoological studies while working as a technician in the Department of Quaternary Entomology at Birmingham University, and finally joined the Trust in 1975. His task was to aid in the establishment, organisation and administration of an environmental laboratory in York; at that time, a relatively new departure in archaeology but nevertheless one long overdue, and nowhere more vital than in York with its massive accumulation of environmental material from past and current excavations.

James has been mainly concerned with the study of vertebrate remains, and resulting from this, the reconstruction of a 'skeletal history' represented in the shape, size, etc. of the animal bones, which will yield evidence of evolution, husbandry and domestication. This work counters one of the criticisms most frequently levelled against archaeologists - that their discipline bears little relevance to the present - for by showing the development of species, James is hopeful that this will provide an aid to modern genetic studies. Archaeology shows the effects of selection, as certain chosen types show specific evolutionary trends. The result: improved breeding types for the future. Not all archaeologists are ostriches with their heads buried in the sands of antiquity!

But first of all, the several hundred thousand bone fragments - the backlog resulting from the Trust's excavations in just the two and a half years it has been in operation - must be processed. And mere quantity is not the only problem, for while there is more than enough material for certain periods, eg the Medieval, others, eg the Anglo-Scandinavian, are sparsely represented. This underlines an important factor in environmental work; the need for comparative analysis of material of different periods and from different sites both within the city of York and on a wider scale from sites throughout Great Britain; the study of single sites in a vacuum is misleading and even potentially dangerous.

Among the recent achievements of James' work is his identification of a rat skull (Rattus rattus) from the fourth century AD rubble filling of the Roman well on the Bishophill I site (INTERIM vol 2 no 3). This is the first archaeological evidence for the existence of the black rat in this period, as it was thought to have been introduced into England as late as the twelfth century, and the earliest stratified archaeological example prior to this that he knows of was from Doncaster in a fourteenth century context.

While able to outline the scope of his work with enthusiasm, James seemed rather vague when questioned on his outside interests and activities, coming to the conclusion that he spent more time thinking of all the things he might be doing, rather than doing them. However, I can vouch for the fact that he is a keen and agile squash and tennis player and an impressive swimmer. He inhabits a tastefully furnished garret or 'penthouse', where he spends his time in intermittent reading of 'Exchange and Mart' (to acquire spare parts for his sports car 'before the present parts fall off'!), and study for his MSc - 'A Comparative anatomical and environmental study of fossil vertebrate assemblages in the last Glaciation'. An ardent naturalist, James professed a longing for the countryside which he is seldom able to indulge.


BLAKE STREET
BEDERN
ST. MARY CASTLEGATE
EXCAVATIONS
CITY WALLS
RIVERS OUSE & FOSS

interiminteriminteriminti

VOLUME 3 NUMBER 1