

The COLCHESTER ARCHAEOLOGIST

**GOSBECKS
ARCHAEOLOGICAL
PARK MINI-GUIDE**

**BIG DIG
AT HEYBRIDGE**

ROMAN GLASS

**THE BEETLES
ARE BACK**

**ARCHAEOLOGY
FOR YOUNG
PEOPLE**



Roman glass at Colchester.	1
<i>the basics explained</i>	
Gosbecks Archaeological Park	7
<i>'pull-out' mini-guide</i>	
Roman town unearthed.	15
<i>big dig at Heybridge</i>	
The Friends of the Colchester Archaeological Trust.	20
<i>recent and forthcoming activities and events</i>	
Archaeology for young people.	21
<i>buildings with uniforms</i>	
In brief.	22
<i>notes and news</i>	

Cover: Roman actors at Gosbecks theatre. Simon Terry, Adrian Watson, Rebecca Dowling, Polly Robertson, Gina Reid, Penney Reynolds, Mark Martin and Zane Green.

Picture by courtesy of the Essex County Newspapers Ltd.

The Colchester Archaeologist,
Issue Number 8 (1994-5)

Published by the
Colchester Archaeological Trust Ltd,
12 Lexden Road,
Colchester CO3 3NF

Produced by
Philip Crummy

Printed by Witley Press Ltd,
Hunstanton, Norfolk

© 1995 Colchester Archaeological
Trust Ltd

ISSN 0952-0988



THE FRIENDS OF THE COLCHESTER ARCHAEOLOGICAL TRUST

If you would like future issues of **The Colchester Archaeologist** posted to you direct, then why not consider joining the Friends of the Colchester Archaeological Trust?

The Friends of the Colchester Archaeological Trust exists to keep interested members of the public in touch with the archaeological work in the historic town of Colchester. Members receive **The Colchester Archaeologist**, attend an annual lecture about the previous year's work, are given conducted tours of current sites, and can take part in a programme of visits to archaeological sites and monuments in the area. Publication of **The Colchester Archaeologist** is helped by funds provided by the Friends.

The annual subscription rates are as follows: Adults and Institutions £3.00, Family membership £4.00, Children and Students £2.00. Subscriptions should be sent to Maureen Jones, Honorary Treasurer, Friends of the Colchester Archaeological Trust, 5 Ashwin Avenue, Copford, Essex CO6 1BS.



Roman glass at Colchester

A major study of the Roman glass from Colchester has just been published. Hilary Cool, one of the authors, explains the basics...

It is hard to think of a modern world existing without glass. Even in this plastic age, glass continues to be used for many purposes. It contains everything from perfume to pickled onions. It glazes our windows and keeps the worst of the British weather at bay. We drink from glass vessels and check our appearance in glass mirrors. We may well store our fruit in a glass dish on the sideboard and serve puddings from glass bowls. What is frequently not realised is that our ancestors 2,000 years ago were using this most versatile of materials for exactly the same purposes. Colchester is an ideal place to study this phenomenon as it has one of the best collections of glass in Britain, and a visit to the Castle Museum is always a worthwhile experience for anyone interested in the subject.

The chemistry

Roman glass frequently survives in very good condition, unlike medieval glass which normally decays in the ground into a dark mass frequently of the appearance and consistency of compacted granulated sugar. This is because the two are of different chemical compositions. To make glass one needs something to make the body of the glass, which in the case of ancient glass was silica derived from the raw material sand. Silica, however, has a very high melting temperature, and therefore an alkali acting as a flux had to be added to the mix. This had the effect of lowering the temperature at which the silica melted. Calcium also had to be added to the mix as without it the resulting material was not stable when it cooled down.

Soda was used as alkali in Roman glasses, often in an inorganic form like natron. Towards the end of the first millennium AD, however, this or the ready-made glass using it were difficult to obtain in northern Europe. The glass-makers looked for a substitute and discovered that wood ash could be used. Wood ash contains potassium and the resulting glass is often called 'potash glass' or 'forest glass'. Unfortunately the use of wood ash results in a less stable glass than if soda had been used. The potash glass decays, and if buried it eventually results in the unedifying mass we find in excavations. Roman glass by contrast can look so clear and in such good condition after 2,000 years in the ground that it has sometimes been taken to be Victorian.

Bottle banks

Despite Roman glass surviving so well, we never find it in as large a quantity as the pottery on Roman sites. This is not because glass vessels were particularly rare, but because they were recycled. Broken glass had a value which broken pottery never had. The glass could be collected and returned to the glass-blowers who could then melt it down and make it into new vessels. Many glass-houses probably never made glass from the raw materials but survived entirely on remelting broken glass. The recycling probably did not work in the same way as bottle banks do today. We need not imagine Romano-British shoppers dropping their bottles into large receptacles in the chariot-park outside the market. It was more likely that you saved your broken glass at home until a pedlar came to collect it. The phenomenon of pedlars collecting glass was well established enough in 1st-century Rome for Martial to mention it in a slighting epigram.

*Yours is the kind that every gutter hatches,
Across the Tiber it is bred in batches
And trades in broken glass and peddles matches.*

As most people have always been loath to throw something away if they

could exchange it for something else, the recycling factor makes life difficult for archaeologists. Instead of the nice large pieces often with cross-joints that the pottery specialist can expect, the glass specialist deals with little pieces, and it is rare to recover several fragments from the same vessel.

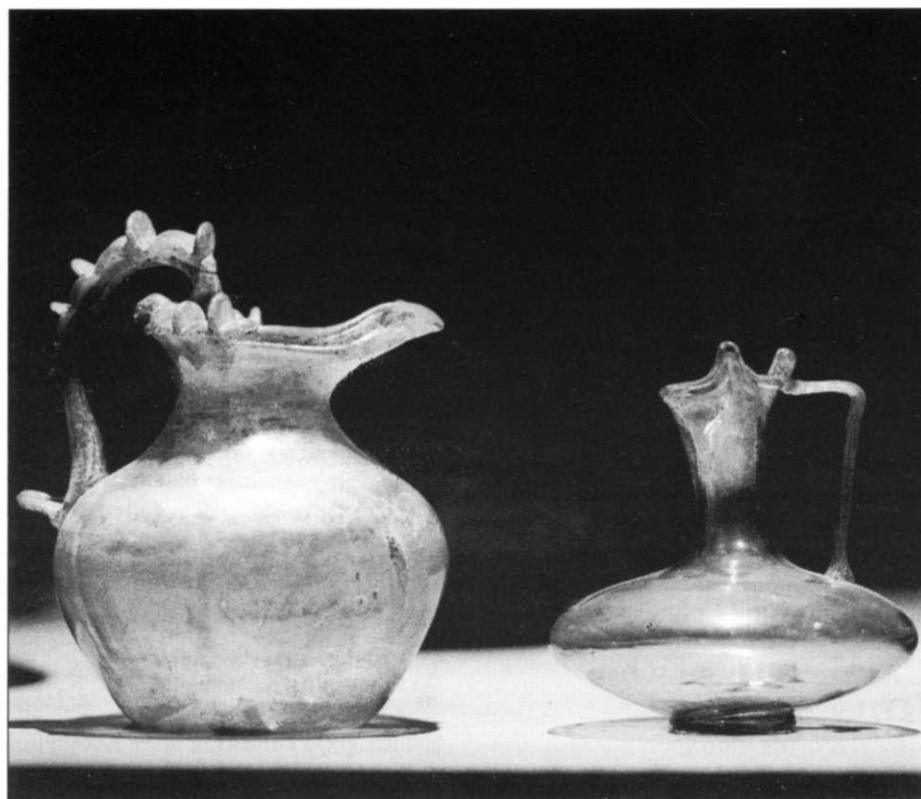
A short history

It is generally thought that the first man-made glasses appeared in Mesopotamia about the end of the third millennium BC. The material was first used to make beads and other trinkets. Until the 1st century BC, however, glass vessels were luxury items because of the time and effort that had to go into their manufacture. They had either to be ground out of blocks of glass or they had to be cast in some way. One way of doing this was to form canes of glass with a pattern running through them like the name of a resort runs through a stick of seaside rock. Sometimes these canes were wound around a former to produce a bowl. More frequently, however, the cane was sliced into discs which were then arranged in a pattern on a flat tool. This would be heated in the mouth of the furnace until the

glass had softened a little and the discs could adhere to each other to form a sheet of patterned glass. This sheet could then be moulded to form a bowl or dish. In most cases after the vessels were formed by the casting techniques, they were ground and polished using a rotary wheel and abrasives to remove any irregularities in the surface.

About the middle of the 1st century BC, however, a discovery was made that revolutionised the production of glass vessels. This was the technique of blowing vessels, whereby air is blown into a mass of molten glass via a hollow iron tube. The glass expands into a bubble that can then be manipulated to form vessels. The advantages of this method are twofold. In the first case the production of vessels is speeded up immeasurably. In the second a much wider range of forms can be made taking advantages of the natural elegant curves of blown glass. The new technology did not immediately displace the older methods of making vessels. For about a century the two methods were in use at the same time, but the more cost-effective and versatile method of blowing eventually triumphed, and by the end of the 1st century virtually all vessels in use were blown.

Two spouted jugs showing the typical curved outlines of blown vessels.



Glass in Britain

Glass had been in relatively common use in later prehistory in Britain when it was used to make beads and, in the form of enamel, to decorate copper-alloy objects. It is very difficult, however, to find indisputable archaeological evidence of pre-conquest glass vessels in Britain; and the first widespread use of glass vessels in these islands seems to be a feature of the Roman conquest.

Colchester as a prestige site in a newly-won province appears to have received a wide range of the vessel types available at the time. These included both old-fashioned forms that were no longer being made and which probably arrived amongst the personal possessions of the soldiers and administrators, and new forms for sale. The pottery shop found in the High Street at Colchester in 1927 was clearly selling glass vessels as well as pottery ones, but the intense heat of the Boudican conflagration reduced most to a molten mass. It is the combination of the intensity of early occupation at Colchester with the Boudican rising that makes the glass from Colchester such a useful assemblage to the glass



Vessels from the Butt Road Roman cemetery.

specialist. At Colchester we have a 'snapshot' of the glass in use between AD 43 and 60. This picture is not confused by the problems of recycling because the sudden destruction of the *colonia* would have prevented the normal collection of cullet.

Glass vessels in graves

During the 1st century, the Roman inhabitants of Colchester were regularly placing complete glass vessels in graves, and this practice has enriched the collections of both the Castle Museum in Colchester and the British Museum in London. Glass bottles and jars were sometimes used as containers for the cremation itself. It is clear that oils and perfumes must have played a role in anointing the dead before the cremation and possibly in the rites associated with collecting the calcined bones. These oils and perfumes were stored in small glass bottles and these are fre-

quently found in cremation burials. Sometimes they are melted as if they had been thrown onto the funeral pyre itself. The other common vessel type found in the early graves is the jug. Curiously, glass drinking-vessels are not often recovered from the graves, though the evidence of the domestic sites shows that glass cups and beakers were in common use.

The fashion for regularly depositing glass vessels in graves died out during the 2nd century, and in most places the practice did not become common again until the late Roman period. In contrast to the number of 1st-century graves with glass vessels, relatively few 4th-century graves with such vessels had been found in Colchester before the excavations by the Trust. These have recently been published in *Colchester Archaeological Report 9*. The illustration above shows two bottles, a jug and a drinking-cup from the Butt Road cemetery. This

selection illustrates very well how the way in which the glass vessels were used in the burial rites had changed between the 1st and the 4th centuries. These are vessels exclusively for serving drink, whereas in the 1st-century graves the glass vessels had been used for a wider range of functions.

Changes in the use of glass vessel

The contraction in the number of uses of glass vessels between the 1st and the 4th centuries is not just noticeable amongst those deposited as grave goods. A similar picture emerges from studying the fragments of vessel glass on ordinary domestic sites. The 1st century and the earlier part of the 2nd

appear to have been the period when glass vessels served the widest range of purposes. They were used as tablewares both to drink from and to serve food from, and they were used as containers. We have already noted their use as burial urns and unguent bottles in connection with the early burials at Colchester. In addition to this they were used as containers in the kitchen and storeroom. Columella, in his treatise on how to run a rural estate, has a section in which he tells the wife of the bailiff how to preserve produce and also gives advice on the selection of the glass and earthenware vessels for this.

Great care ought to be taken in the making of these vessels that they have a wide mouth and that they are the same width right down to the bottom and not shaped like wine jars, so that, when the preserved food is removed for use, what remains may be pressed with equal weight to the bottom, since the food is kept fresh when it does not float on the surfaces but is always covered by liquid.

It is very tempting to think that the sort of vessel being described is the square bottle. These come in so many shapes and sizes that they are the all-purpose container of the 1st and 2nd centuries, with some being suitable only for liquids, others for semi-solids, and yet others having mouths large enough for the storage of foodstuffs like pickled eggs.

By the 4th century, apparently, nearly all the vessels were for liquids, either as containers such as jugs and bottles or serving vessels such as cups and beakers. Less frequent finds come from large dishes, sometimes with religious or hunting scenes on them. One sometimes gets the impression when dealing with 4th-century assemblages that by the late Roman period, glass vessels were only thought to be suitable for activities associated with drinking parties and as an ornament to be displayed on the sideboard. This is an over-simplification, but it does emphasise how the role of glass vessels appears to have changed from an all-purpose utilitarian one to possibly one where it was only felt appropriate for certain functions, possibly higher status ones. The world of late antiquity was a very different one from that of the early Empire, and the changes in the glass assemblages seem to be another facet of this.

The CAT logo

One cannot write an article such as this for **The Colchester Archaeologist**



A square bottle containing a cremation.

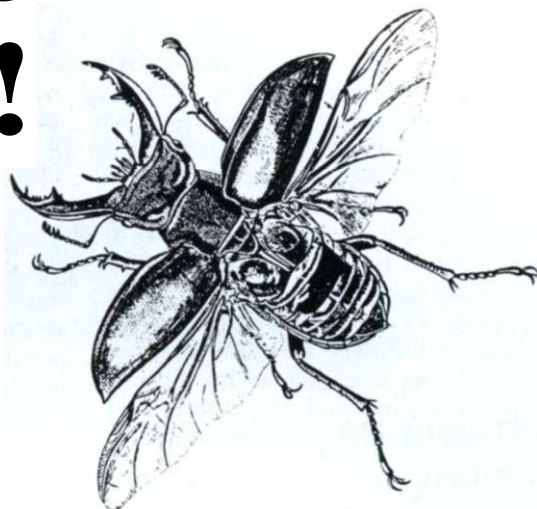
without saying a few words about the CAT logo. It depicts a victorious charioteer and is derived from a fragment of glass found at Balkerne Lane which originally came from a chariot cup. A complete example of a cup of the same type was found in Belgium and on that it is possible to see that the CAT charioteer who was called Olympus had just vanquished Pyramus, Eutycus and Ierax. Cups and beakers depicting scenes from the circus and arena belong to the mid 1st century. The scenes were produced by blowing the glass into a mould into which the figures had already been cut and are an early example of mass production. Such vessels seem to have been very popular with the early inhabitants of Colchester as relatively high numbers

of fragments have been recovered not only from the recent excavations but also by earlier excavators and antiquaries. Such discoveries include a rare example of a complete cup which was found in a grave north of Colchester town-centre. The cup can be seen in the British Museum. •

The glass is published in Roman vessel glass from excavations in Colchester, 1971-85 by H E M Cool and Jennifer Price (*Colchester Archaeological Report 8*). Available from the Colchester Archaeological Trust for £25, including post and packing.

The Beetles are coming!

The setting up of an archaeological park at Gosbecks has given Colchester Borough Council the opportunity to integrate archaeology and nature conservation. Aulay Mackenzie and Simon Newell explain how this is being done.



At Gosbecks it is proposed to re-create some of the habitat types that would have been common in the area before agriculture became so intensive. Through the past summer, extensive work commissioned by Colchester Borough Council has been carried out by Essex University and English Nature to provide essential baseline data on the fauna and flora of the site.

Originally the poor, acid soil of Gosbecks would have supported meadow and dry grass heath. Over the last 18 months arable cropping has ceased on the site, and the process of creating wild-flower meadows and grass heath has started. The habitat management involves gradually increasing the soil acidity from its current level, which has been artificially decreased over the last few decades by agricultural practices. Native grasses and wild-flowers will be introduced in a gradual process, coupled with possible invertebrate introductions in the future.

The Gosbecks site has been in relatively intensive agricultural use for at least the last 200 years, having been pasture until some 30 years ago when it was ploughed and turned to arable use. The main problems behind creating diverse wildlife habitat is to return the soil from the present artificially fertile, neutral pH condition to the original infertile, acid soil conditions.

The work is being funded by a Countryside Stewardship grant, from the Countryside Commission, providing over £150,000 over the next

10 years. Apart from funding the creation of grassland at Gosbecks the grant is also being used to set up long-term monitoring of the changes in flora and fauna.

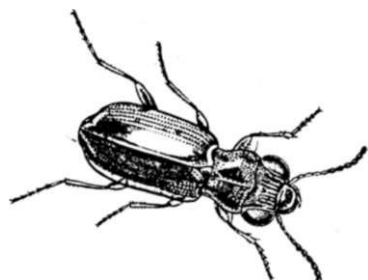
Habitat creation is a relatively new, and hence imperfect, science. It is difficult for ecologists to predict exactly which species will flourish and which will not, and how long it will take for a healthy community to become established on a given site. One particular problem is that often the initial species composition of the community is unknown. The lack of such a 'before' picture makes impossible any comparison after the habitat creation scheme is underway. To make the most of the opportunity provided by the proposed

habitat re-establishment, and to provide a solid baseline with which to compare future community composition, it was decided to undertake a detailed ecological survey of the site. This focused mainly on invertebrate species, as these comprise the bulk of the community biodiversity, but also incorporated the vegetation. Aulay Mackenzie of the University of Essex, in conjunction with two undergraduate students Paul White and Andi Storeck, carried out the invertebrate survey, and Chris Gibson of English Nature assessed the vegetation, with overall co-ordination from Simon Newell, of Colchester Borough Council. Additionally, work on the soil has been carried out by the Agricultural Development and Advisory Service.

Eye to eye with a beetle under the electron-microscope at Essex University.



The invertebrate survey was carried out over the months of July and August 1994. Invertebrates are very diverse in form, size and methods of locomotion, and as such no one trapping method will satisfactorily sample more than a small portion of the community. Therefore a range of sampling methods were adopted, including a light trap (primarily for moths), sweep netting for insects in vegetation, beetle traps on the ground, soil core analysis, and a suction trap (essentially a large dustbin containing a fan, to pull flying insects out of the air). Sampling was conducted on the range of habitats across the site (wheat, wildflower meadow, ryegrass and a young tree plantation). Species were identified and the number of individuals of each species recorded.



A total of 313 species were recorded, which is an unexpectedly high number for a habitat until recently dominated by intensive agriculture. This result is surprising and pleasing, and though many of the species are in low numbers, it can be anticipated that numbers will increase as the habitat is progressively restored. Over 40 per cent of all species recorded were beetles (*Coleoptera*), with butterflies and moths (*Lepidoptera*), bees and wasps (*Hymenoptera*), and bugs (*Hemiptera*) making up 65 per cent of the remainder. Assessment of the species diversity (a theoretical ecological index which incorporates the total number of species and numbers of individuals within each species) showed that the wildflower meadow displayed greater diversity than the other, simpler, habitats. The wildflower area was only sown in March 1993 and it interesting to see how quickly new species can colonise the area.

Apart from the unexpected diversity of the invertebrate fauna, another welcome surprise was that many of the species, particularly beetles, are associated with the dry, sandy conditions found in heathland.

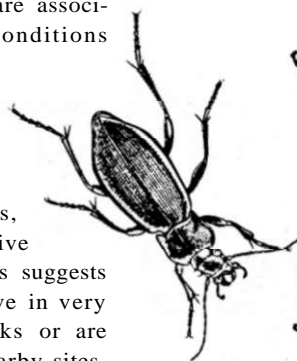
Whilst the vast majority of the individuals caught were those associated with agricultural environments, a few individuals were indicative of more natural habitats. This suggests that these species either survive in very small populations at Gosbecks or are able to disperse from other nearby sites, possibly the sand and gravel workings north of Maldon Road.

This means that it may be easier than expected to create a 'natural' grass heathland in the future, containing appropriate flora and fauna, without resorting to large-scale deliberate introductions.

Many of the invertebrates collected are nationally uncommon or local, a reflection both of the relative lack of similar survey work and the fact that Gosbecks has the potential of developing into a genuinely rich, diverse site.

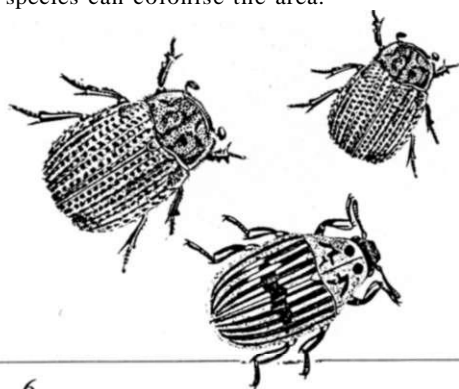
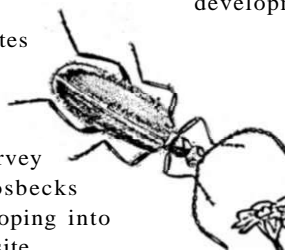
Work on the flora of Gosbecks has been less intensive to date. An extensive survey has provided a baseline of species found both within the fields and around the edges. Quantitative work has been confined to the wildflower grassland around the temple and theatre. This has shown that the species sown have now become established and, rather disconcertingly, that many of the species sown are not wild but either agricultural or continental varieties and species. Obtaining genuine native wild-type flower and grass seed is difficult, particularly in the quantities used at Gosbecks.

In future years we intend to continue monitoring the ecological changes at Gosbecks, a process that will stretch many years into the future. The work should provide us with the information we need to create an attractive site managed so as to conserve the archaeological



features most effectively. It should also provide us with unique information on how to create and manage natural habitats including the flora and the often neglected fauna.

Future years should see the development of an Archaeological Park where historical features are effectively conserved in a setting where they can be fully appreciated by visitors. •



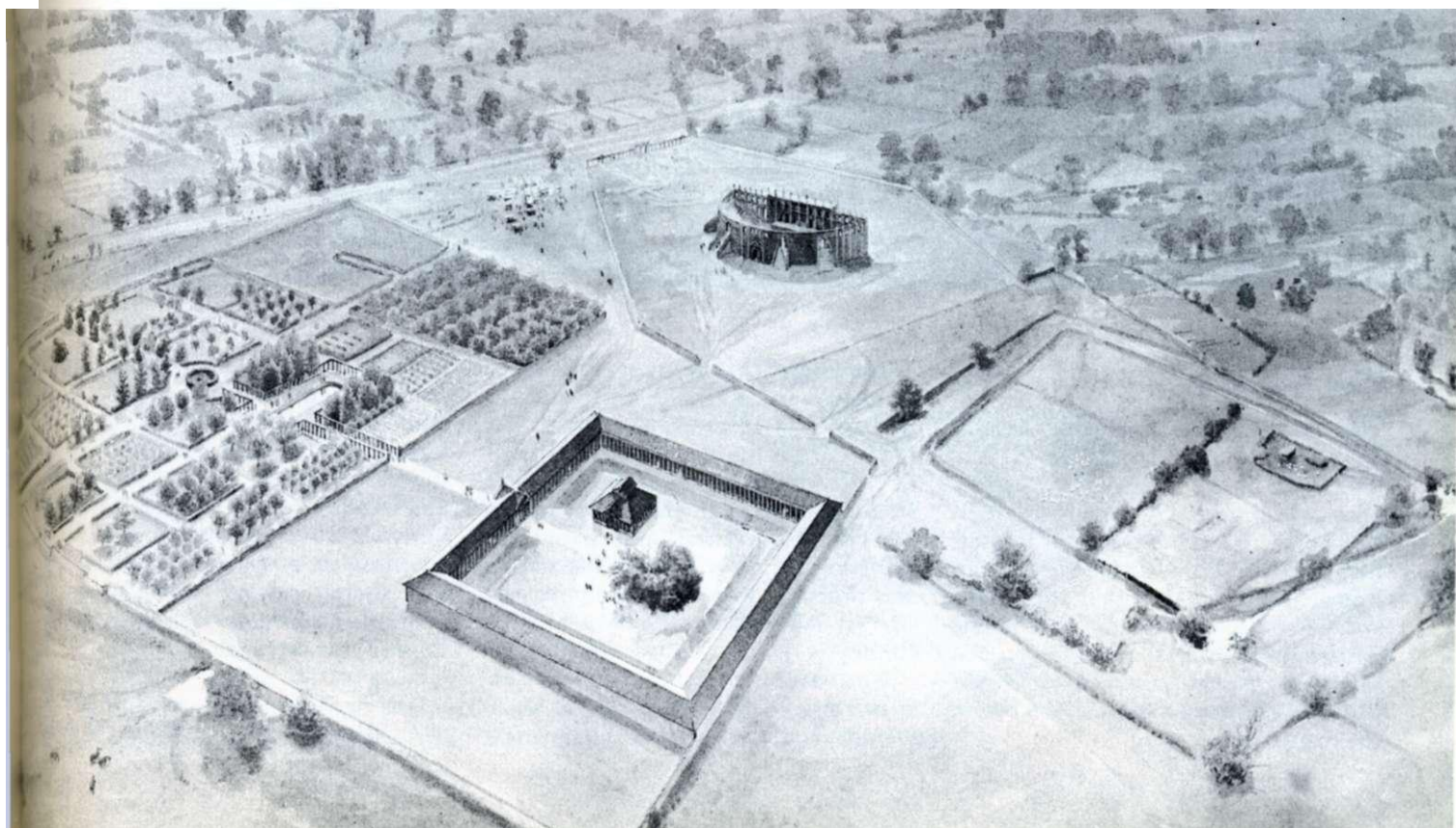
The illustrated beetles are *Lucanus cervus* (the stag-beetle), *Trox sabulosus*, *Notiophilus rufipes*, *Byrrhus Dermii*, *Lagria hirta* and *Carabus exasperatus*, and the flora yarrow, black knapweed, the common carrot and bird's-foot trefoil.



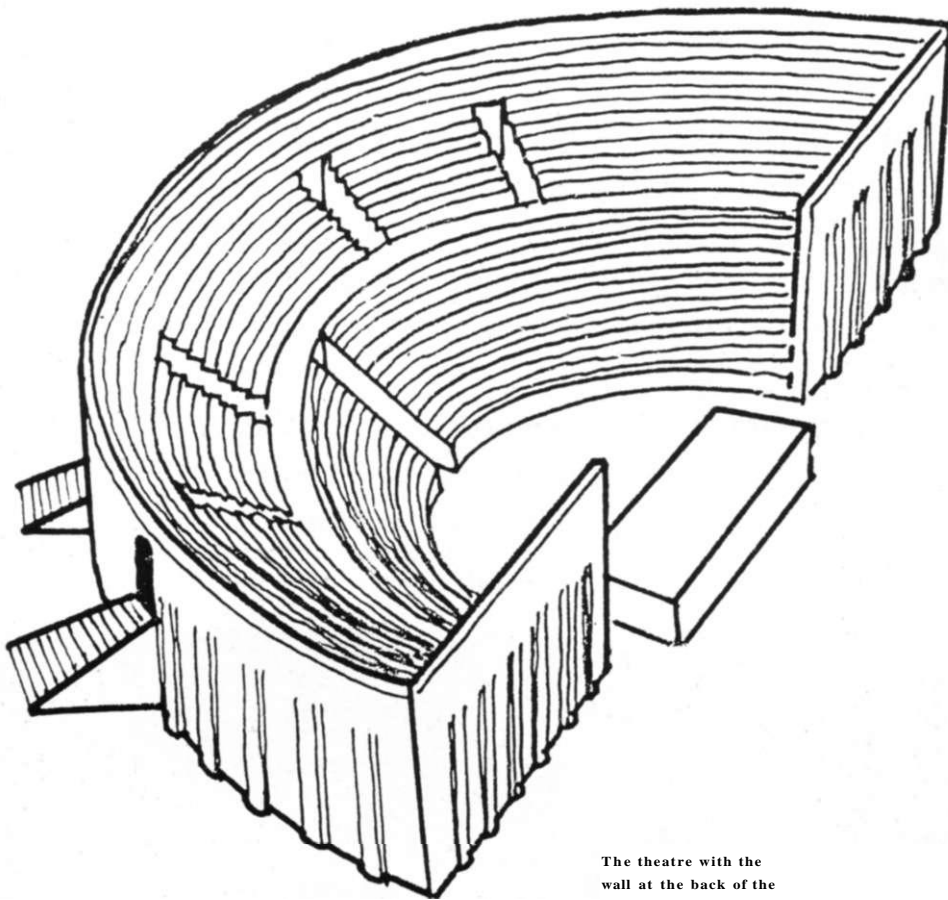
Gosbecks Archaeological Park

GOSBECKS was the home of Cunobelin, the most powerful king in Britain during the years leading up to the Roman invasion. Much of the site is to be turned into an archaeological park, with its official opening expected in 1995. The form of the park and the facilities in it are yet to be decided. But as a first temporary step, two of the major Roman monuments in it have been marked out on the ground with three-and-a-half-miles of white lines.

The pupils, teachers, and some parents of Gosbecks County Primary School (all three hundred of them) visited the site to help bring it alive once more. With Romans on the stage, the first stop was the theatre...



At the theatre...



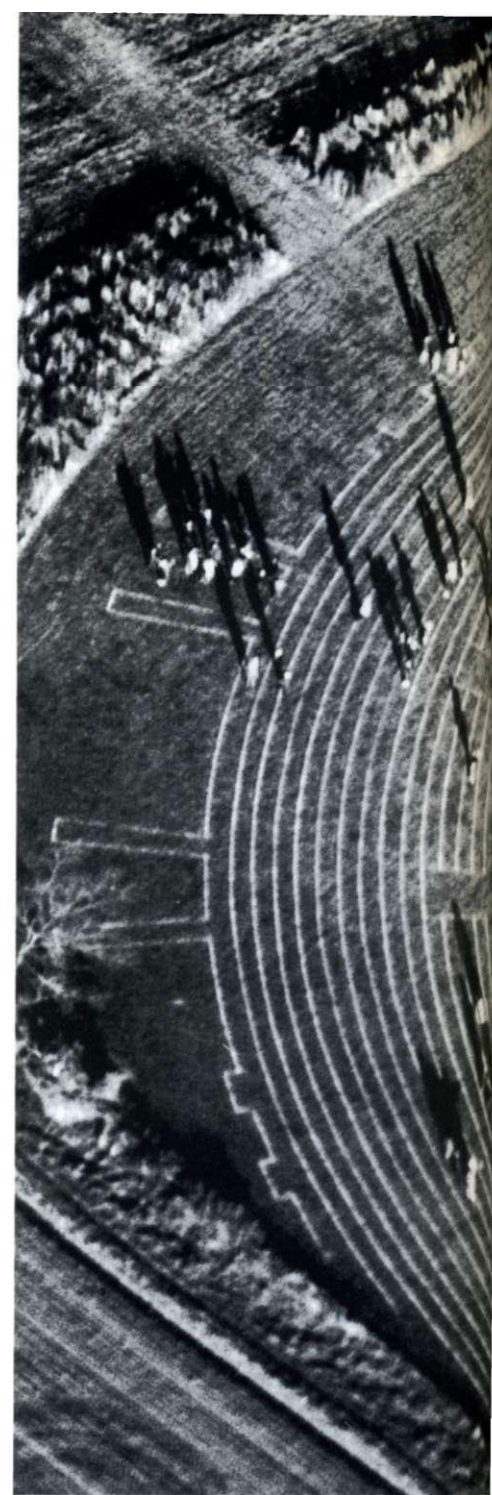
The theatre with the wall at the back of the stage omitted.

The theatre

The theatre at Gosbecks could accommodate up to 5,000 people seated. It is the largest of the four Roman theatres known in Britain. Of these, two are in Colchester, the others being at Canterbury and St Albans. Colchester's other Roman theatre was within the walled area of the Roman town, next to the Temple of Claudius. Surprisingly, the Gosbecks theatre could hold almost half as many people again as the one in the town.

The plan of the theatre as marked out on the ground at Gosbecks is based on the results of an excavation carried out in 1967. Thus the basic shape and design of the building are fairly well established although the layout of the seats is conjectural and based on surviving examples abroad. The seating was probably wooden. The upper part of the theatre may also have been of timber.

The theatre at Gosbecks was unusual in many respects. The seating was set on a solid mound of layered turf and soil



and the whole arrangement was contained by a mortar and stone semicircular outer wall. Most of the seating was accessed via four external staircases placed evenly around the outer wall. The only passages within the body of the theatre were an axial north-south one at ground level and four shorter passages half way up the auditorium. The latter connected the tops of the external staircases with a landing halfway down the seating area.

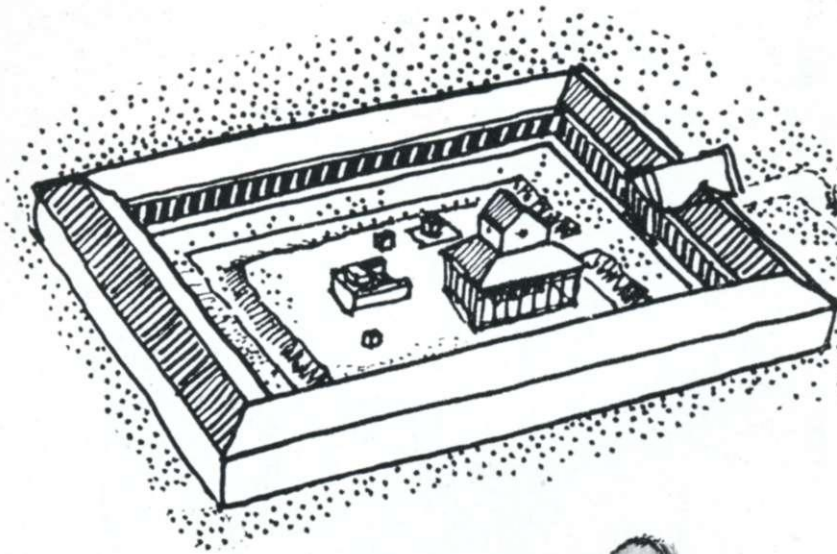
The semicircular area in the middle of the theatre was known as the



Camulodunum

- Camulodunum was the most strongly-defended settlement of its type in Britain.
- The settlement was protected by a series of earthworks ('dykes') which, if placed end to end, would have been over 12 miles long.
- Its name means 'fortified place of Camulos', who was the Celtic god of War.
- The defences were developed piecemeal over at least a century, starting from the Gosbecks area probably in the 1st century BC.
- Gosbecks was the home of a succession of native kings, the most famous and powerful being Cunobelin.
- The Romans invaded Britain in AD 43. The early stages of the campaign were organised so that the Emperor Claudius could capture Camulodunum and return to Rome to take the credit.
- Soon afterwards a legionary fortress was built where the town-centre now stands. In AD 49, this was converted into the Roman town.
- After the conquest, Gosbecks was kept as a major native sanctuary and market. It may also have had an important administrative role in the region.
- Gosbecks remained an important centre until at least the late 3rd century.

In procession...



'orchestra'. It was at ground level and was where seating was provided for local dignitaries, rather than musicians as might be thought from the name. The word 'orchestra' derives from the Greek where it meant 'dancing place' and betrays the Greek origin of theatres as specialised buildings for the performing arts.

The processional route

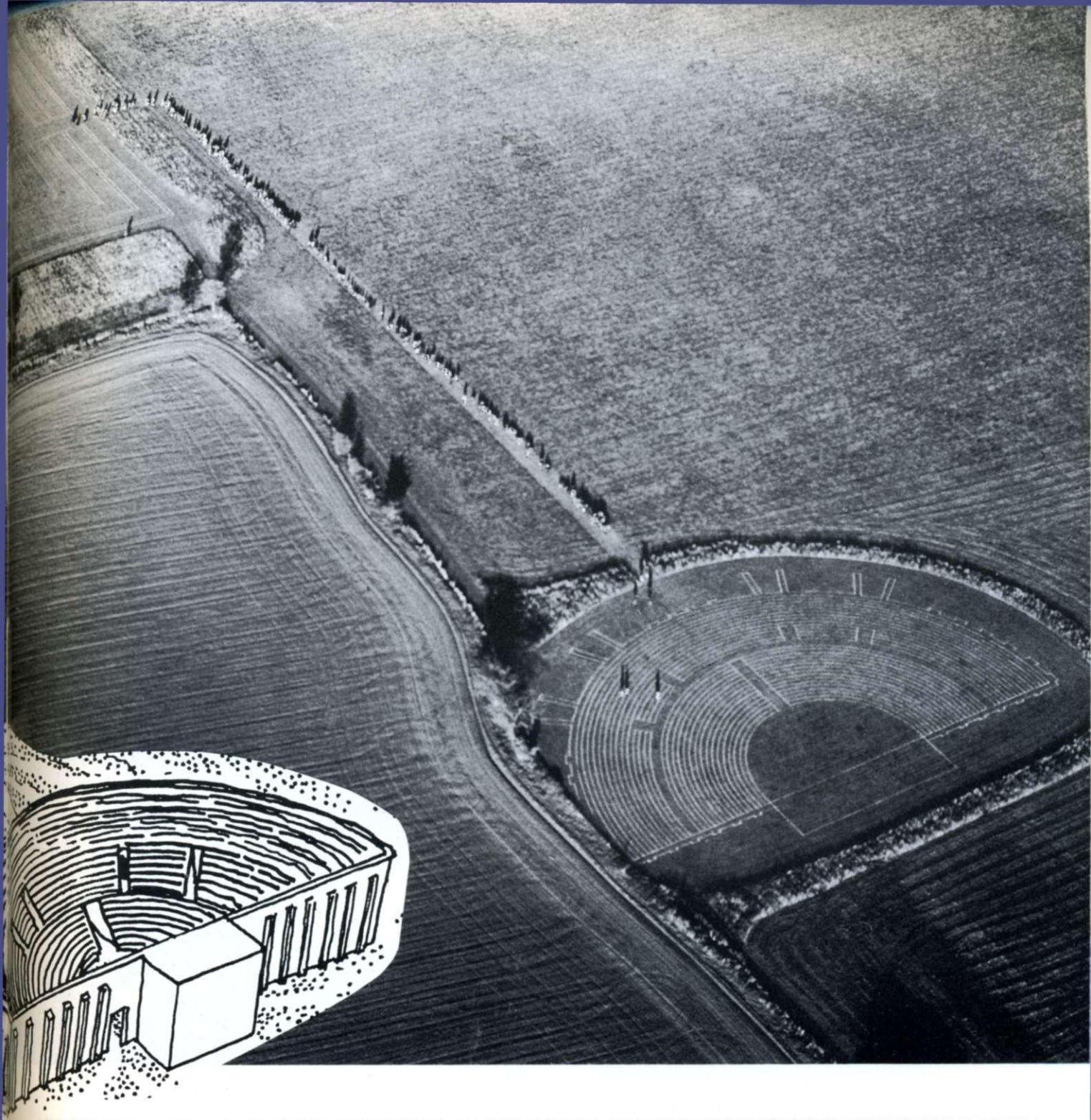
Another unusual feature of the theatre

at Gosbecks is the apparent absence of any rooms behind or to the sides of the stage. Indeed the stage itself seems to have been unorthodox and modest. These factors suggest that the building was not intended primarily for the performing arts but for ritual and ceremony.

The layout and alignments of the theatre and portico indicate that they were probably both linked functionally. Indeed, in general, theatres and temples were often built close to each other in this way (as within the walls at

Colchester). The entrance into the orchestra which, as already mentioned, was where the most important people are likely to have sat, was from the north, through the ground-level passage.

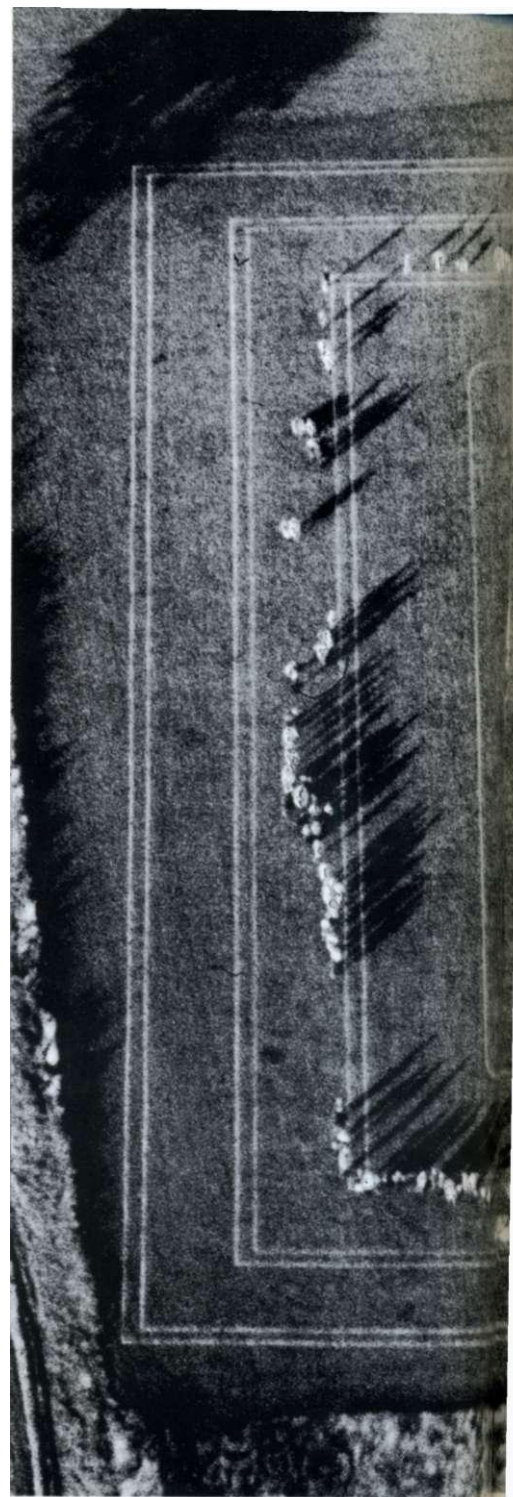
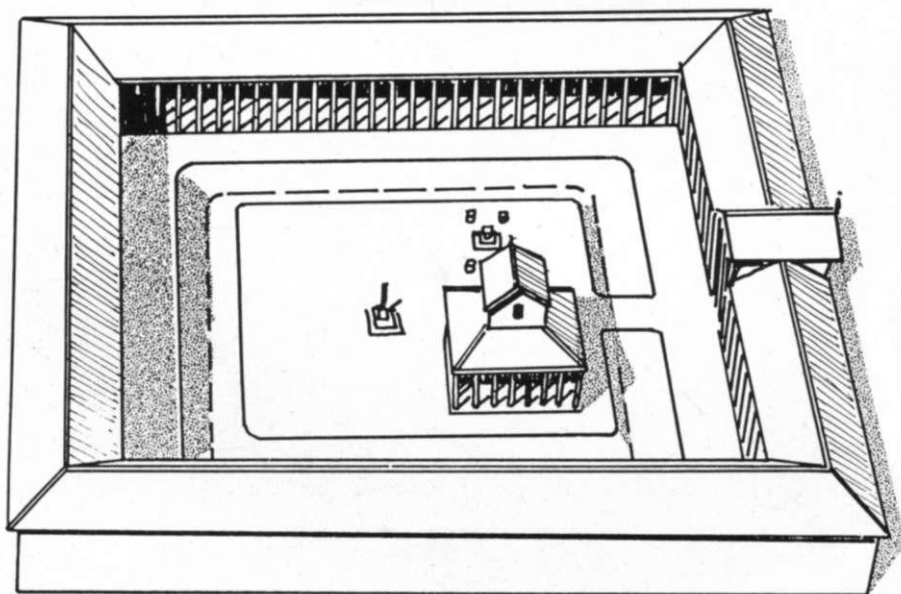
Thus although there is no known physical evidence for it, we can speculate that there would have been a processional route between the theatre and portico/sanctuary. The position of such a route is indicated on the ground by a mown swathe of grass through the wildflower meadow.



Brief history of discoveries at Gosbecks

- In 1842, Rev Henry Jenkins carried out the first excavation. He uncovered the foundations of the portico and temple thinking they belonged to a Roman villa. He also dug into the theatre mound, but did not know what it was.
- Aerial photography in 1932 revealed the true plan of the 'villa', and archaeological trenching by Rex Hull in 1936 led to a better understanding of its nature.
- In the early to mid 1940s, Bert Harold Beales ploughed up the bronze figurine of Mercury.
- Various archaeological explorations were carried out just after the Second World War, the high point being the discovery by Hull of the Roman theatre.
- The theatre was re-excavated in 1967 by Ros Dunnett (now Niblett).
- The dry summers of the mid 1970s provided the best ever cropmark views of the site. It resulted in the discovery of the Roman fort, and made possible the plotting of the site in greater detail than ever before.
- Trenches were dug on the portico and theatre sites in 1977 to examine the effects of plough damage.
- The discovery of part of at least one Roman water-main during excavations in 1994 at the north end of the site hinted at the existence of a Roman bath-house somewhere in the area.

In the sanctuary...



The sanctuary

The sanctuary is a most interesting area which cannot be properly understood without further excavation. It was demarcated by a ditch which was over 11 feet deep (3.3 m) and had no bank. The sacred area thus defined contained an example of a 'Romano-Celtic' temple, so-called because, as a type, it occurs commonly in the Celtic areas of the Roman Empire. The sanctuary probably contained other major features such as altars and statuary.

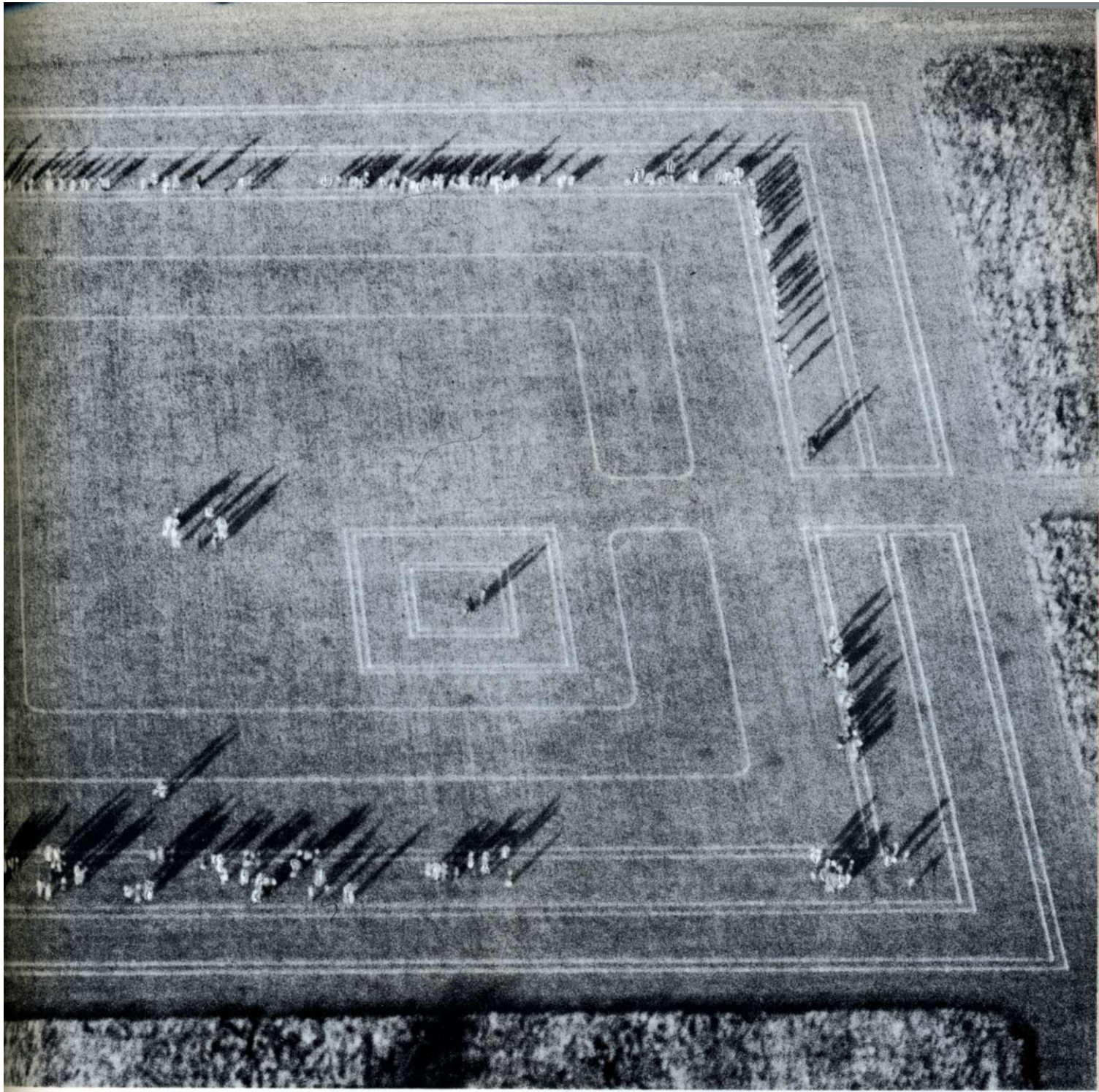
The portico

The sanctuary was enclosed by a grandiose, covered corridor known as a portico. This was about 350 metres (380 yds) long and could accommodate (at a squeeze) the whole of the theatre audience.

The positions of the three foundations forming the portico are shown on the ground by white lines. The central and inner foundations supported continuous rows of columns. This meant that people in the portico

could look into the sacred area although the deep ditch would prevent them from entering it. The outer wall was solid.

Although the widths and spacing of the foundations are known exactly (because of the 1977 excavation), the same is not true of the overall dimensions of the portico. If these were known, it would in theory be possible to work out the exact number of columns forming the colonnades and improve on our reconstruction of the entrance into the complex.



Nature conservation

- Land management is to be geared towards creating wildlife habitats that would have been common in the area before agriculture became so intensive.
- The field with the theatre and the portico has been sown with various grass and wild flower seeds to create a wild flower meadow. The flowers are bird's foot trefoil, yarrow, black knapweed, and wild carrot.
- It is hoped to convert the other field to heathland. It has been sown with rye grass as part of a long-term programme to reduce the acidity of the soil to a suitable level.
- Essex University and English Nature have completed a

statistical survey of the plants and insects. The survey is to be repeated periodically to assess the hoped-for increase in 'biodiversity'. The work is being funded by the Countryside Commission.

- 313 species of insect were recorded, 65% being beetles.
- Pupils from the Philip Morant School planted 1,800 mixed deciduous trees in the north-east part of the park with the aid of a sponsored walk and a Forestry Commission grant.
- The conservation work is being run by Simon Newell, project officer for the Roman River Valley Project (Colchester Borough Council).



Roman town unearthed

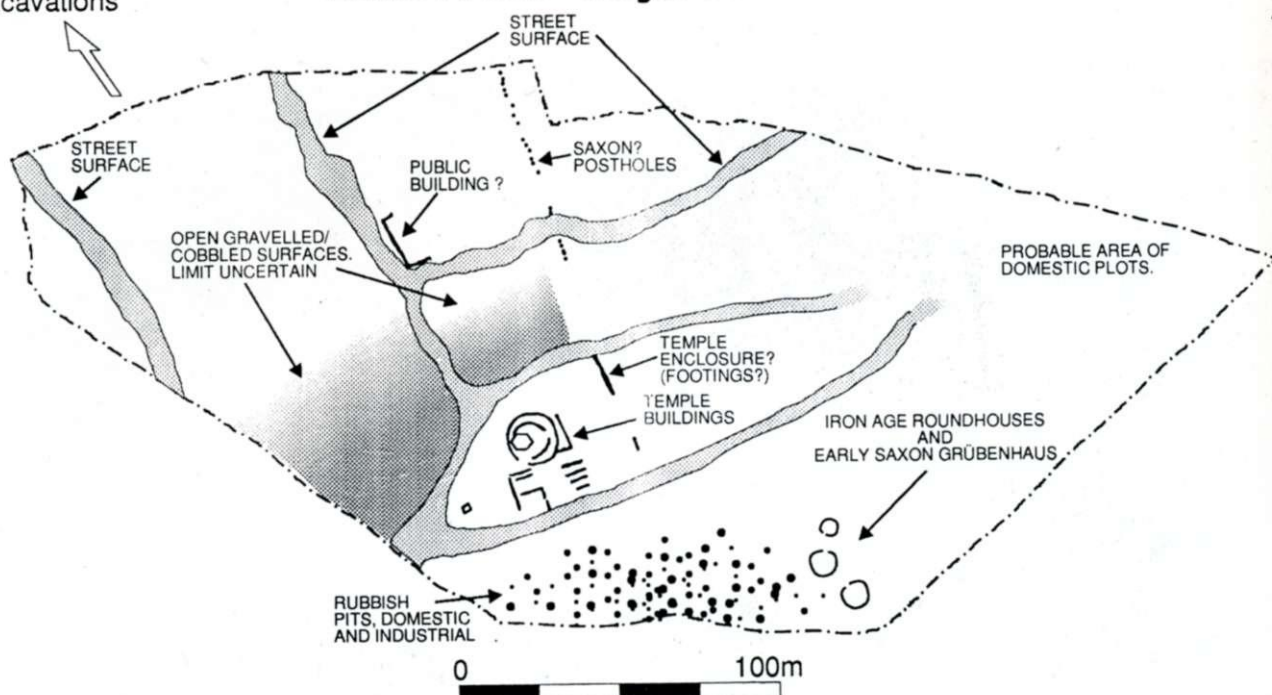
Excavations in progress in 1994. Since practically all of the buildings were of timber, remains take the form of soil marks deriving from wooden uprights or horizontal wooden beams. Here both a circular structure (centre) and parts of an earlier rectangular building (foreground) can be seen.

Essex County Council archaeologists describe some of the results of one of the largest digs to take place recently in Europe. Heybridge as a port is likely to have played an important role in the economy of Colchester, only ten miles to the north.

Thirty-two acres of archaeology at Elms Farm, Heybridge have been the focus of one of the largest excavations in Europe this year. A team of over 100 archaeologists from Essex County Council has revealed a large area of a Roman town, which was the successor to an extensive late Iron Age settlement. There was a network of narrow, gravelled Roman streets, onto which fronted a number of buildings. There is evidence too of the 'zoning' of various activities within the town. Thus an area full of pits with metalworking debris and the remains of workshops point to a 'light industrial' zone. But perhaps most intriguing of all are the

1993
excavations

ELMS FARM - Major features 1994



hints that have emerged that at least some of this zoning began during the late Iron Age.

Traces of much earlier prehistoric activity have also come to light, beginning with Neolithic pits containing plenty of pottery. Evidence of early Saxon (5th to 7th century) settlement was also present, though this seems to have been largely peripheral to the Roman town.

Finds have been prolific with the recovery of over 200,000 sherds of pottery and more than 10,000 metal objects. Well over 1,000 bags of soil have been processed to retrieve things like charred grain and seeds and also fish bones, which provide information about diet and the local economy.

The English Heritage grant for the 1994 excavation was £1,039,000, the largest ever given for a field project in this country. Bovis Homes funded the 1993 excavations. In addition, there has been separate financial assistance for the Visitor's Centre and educational initiative from Essex County Council, English Heritage and Heybridge Parish Council.

Prehistoric people

The earliest features were a number of pits containing large amounts of Early Neolithic pottery (c 3500 BC). There was a series of separate pits containing a type of decorated pottery of the Later Neolithic (c 2500 BC), known as

Peterborough ware. It is unlikely that these pits represent simple disposal of domestic rubbish, and more probable that they have a ritual significance.

Evidence to suggest that the area continued to have ritual significance into the Early Bronze Age (c 2000 BC) came from the discovery of a complete Anglian-type beaker with finger-nail decoration. This was buried on its own in a pit and may originally have contained food or drink.

Close to the pit containing the beaker were the remains of a Middle Bronze Age burial mound (1500-1000 BC). All that survived was the ring ditch which had surrounded it and three disturbed cremation burials. The cremated bone had been put into large pottery vessels, or urns, set into the ground and then covered with a mound of earth.

There were a number of post holes, possibly relating to a Late Bronze Age structure (1000-700 BC).

The Roman town

The first thing to become apparent during the start of the main phase of excavation was a network of Roman streets, oriented roughly north-south and east-west. This network was not a strictly-defined grid such as in other Roman towns like Colchester or Silchester, but a rather more rambling affair. The streets themselves were made of hard-packed gravel and were repaired or resurfaced on many occa-

sions. Sections through them showed considerable variability; some consisted of only a few layers of gravelling perhaps 20 or 30 centimetres thick, whereas others had many layers and were up to 1 metre thick.

Early town planning

The street system defined a number of clearly distinct areas. Across the most southern part of the excavation were many large pits, showing up as much darker patches against the gravel sub-soil. Investigation of these produced much industrial debris in the form of both iron and bronze slags, and domestic rubbish too. The remains of a rectangular timber building were found fronting onto the street here; most of its interior was taken up with the remains of a hearth. Putting this evidence together suggests that this part of the town was much involved with workshop and light industrial activities. What is particularly interesting is that, on the basis of the pottery, this seems to have begun during the 50 or 100 years before the Roman invasion and carried on right through the Roman period as a sort of artisans' quarter.

The temple

One of the first groups of buildings to emerge after removal of topsoil presented a very puzzling appearance.

There were obviously circular elements as well as square and rectangular structures. Excavation has shown that the final element in the sequence was a deep circular slot about 15 metres in diameter and filled with of unbaked clay. Within the clay were the settings for upright stakes and small posts; these uprights were almost certainly too flimsy to have supported a roof and therefore suggest an enclosure fenced with wattle and daub walls. There was an entrance into the enclosure from the east and a 'back door' to the south-west.

Inside the enclosure and aligned on the entrance was a well-defined hexagon of unbaked clay, of maximum dimension 4 metres. Beneath that was an extraordinary feature — a massive rectangular lump of mortared flint masonry, measuring 2 metres by 1.5 metres by 1 metre deep. This was the only fragment of mortared masonry in the whole excavation and it was in excellent condition. It is provisionally interpreted as a plinth for a substantial statue which acted as a focus for ritual activities.

As investigation proceeded, slots corresponding to an earlier, rectangular timber structure were identified. This was slightly larger than the circular structure but had an entrance in a corresponding position to the east. (The mortared flint 'plinth' may in fact belong to this earlier phase rather than the circular structure.) To the south of the rectangular structure was a mass of further slots that may either be more rooms on the main structure or small separate buildings.

This complicated pattern and sequence have been interpreted as a series of temple buildings of a layout which is believed to be unique in Roman Britain, and which has its origins in the late Iron Age. During the Roman period, these buildings were situated in a precinct defined on three sides by streets and on the fourth side (to the east) by a wall with an unmortared footing of septaria (yellowish stone of poor quality from the Harwich area) and tile. There was a gap in this wall which lined up with the entrances into the temple buildings themselves.

Behind the temple were the remains of quite a different building. It was small (3 metres across), square, and had footings of unmortared flint. Within it was a small pit; from this and the surrounding area came much bronze slag and bits of lead waste. This seems

likely to have been another workshop, but, because it lay within what was the temple precinct, is thought to have been associated with the production of votive objects used in the temple rituals.

Open spaces

To the north of the temple, and separated from it by one of the east-west streets, was a square area very largely characterised by a sequence of cobbled areas with little evidence of buildings.

There were also two wells with perfectly preserved timber linings where these had remained water-logged.

This area is interpreted as a marketplace adjacent to the temple. Sections cut through the Roman deposits revealed a complicated network of small late Iron Age ditches which defined a series of enclosures.

Other buildings

Establishing the ground plans of many of the other buildings has been difficult. In areas where there has been occupation over three or four centuries, and much rebuilding, what archaeologists recover is a confusing mass of post holes and beam slots. It may be easier to sort these out at what is called the 'post-excavation' stage, where archaeologists will be able to use the dating evidence provided by pottery and other finds to help disentangle the sequence. This is also the stage at which assistance provided by the computer will be crucial; software is available which can separate out on screen all features of a given date range (say late 1st century/early 2nd century), and thus help in understanding

how the town and its buildings developed over the years.

However, one thing which is already abundantly clear is that many late Iron Age houses were present (these have a characteristic circular shape) and that a large and thriving late Iron Age settlement preceded the Roman town.

Trade and manufacture

The Roman town at Heybridge (and no doubt its late Iron Age predecessor) must have been a bustling market town and port. Location is the crucial factor for a market, and Heybridge, being at the mouth of a major estuary, was well placed. In fact, cross-Channel contacts were already well established before the Roman invasion of AD 43, and a range of new imports appears in southern England from the middle of the 1st century BC. The best known of these are the large pottery vessels known as amphoras, many of which contained wine. Fragments of amphoras imported from Italy at this period have been found at Elms Farm in considerable numbers.

Following the conquest of Britain by the Emperor Claudius, trade between what had now become the Roman province of Britannia and the rest of the empire increased. At Heybridge, this is reflected in the presence of samian ware, a fine ware mass-produced in parts of southern and central Gaul.

Not all the imported pottery came from as far away as Italy or Gaul. From the later 1st century AD, new pottery types appear which were being produced at Colchester. These include mortaria (heavily gritted mixing bowls),

Two reconstructed samian ware bowls. These were manufactured in central Gaul at Lezoux, near Lyons. Dated to the late 1st/early 2nd century, they are decorated with a variety of animal and plant motifs and represented the 'quality' end of the pottery market.



jugs and beakers. From the later 3rd century, imported pottery from the Continent becomes much less common anyway, and large new industries in Britain, such as those in the Nene valley or Oxfordshire, seem to supply the demand for fine pottery at Heybridge.

Trading patterns in other commodities show similar sorts of lively trade networks. If we look at items like the humble quern stones, which were used for grinding grain on a daily basis to produce flour, these can be classified into four types of stone, none of them local. First, there are puddingstone querns, which don't have too far to come, since they derive from Hertfordshire. Then there are examples of millstone grit, from Derbyshire. Thirdly, there are many quern fragments made of greensand, which may come either from Lincolnshire or from the Weald in Kent or Sussex. These probably came by sea rather than overland. Finally, and most distantly, are lava querns which came from quarries in the Rhineland region of north Germany.

These are all imported goods, but what was being exported from Roman Heybridge? This has been less easy to demonstrate archaeologically. Much of what has been found could best be interpreted as being for local consumption. For example, a pair of pottery kilns discovered during the excavation almost certainly produced coarse pottery for use by the inhabitants of the town and its immediately surrounding area. Likewise the many spindle whorls and loomweights are more likely to represent production on a household scale rather small-scale industry.

Neither is the evidence conclusive when it comes to the traces of metalworking which have been found. There are clear signs of iron smithing and of the production of bronze objects. Some poorly-baked clay fragments have been tentatively classified as mould fragments for the production of bronze items. From preliminary examination of these, it has been possible to identify only two types of bronze object that were definitely being manufactured at Heybridge: a small stud of a type that could be used to decorate wooden boxes and a small round boss. Nevertheless, all of this activity could all be interpreted as incidental to town life,

rather than production on an entrepreneurial scale.

The evidence of the lead objects, however, is rather more compelling. For one thing, they are extremely plentiful and very widespread. Secondly, many of them are either lead weights or seals, the latter being of a sort that could have been used to seal items like sacks of grain, bundles of hides or bales of wool. This points to a great deal of regulatory activity, which is only to be expected of a busy market town, but more significantly it also forces us to look around at the hinterland of the town. On the north side of the estuary, apart from modern Heybridge, most of the land is farmland and has a long and continuous tradition of agricultural use. It is also the richest area in Essex for cropmarks, with almost every field exhibiting these signs

of buried archaeological remains. Many of the cropmarks are Roman and strongly suggest that the fertile farmland around Heybridge supported many flourishing farms during this period (and probably earlier). It now seems highly likely that it was the surplus from these farms which was being channelled out through Roman Heybridge in exchange for the imports from the rest of the Empire, and it was the handling of this surplus, in the form of grain, wool and hides, which then left its trace in the archaeological record as lead seals and weights.

Death and burial

A number of burials have been uncovered, some in groups, others single. All were cremations, with the exception of a single inhumation.



Assistant supervisor Toby Driver cleaning up a Roman cremation.

The gold coin found during the 1993 excavations. This Gallo-Belgic stater is of a rare type thought to have been minted in northern France or Belgium by a tribe called the Caletes around 125-100 BC. It is particularly interesting in that the die for the reverse side of the coin (on the right) has been defaced with a series of chisel marks. The reason for this is not known, but it seems to have become accepted over time as the norm for this type of coin. The distribution of such staters in this country is almost entirely confined to the Thames estuary region, and may be accounted for by the arrival of continental settlers or by cross-Channel trade around 100 BC.



A group of five pewter bowls from a Roman well. They date to the 3rd century and were manufactured in Britain, the pewter being of tin from Cornwall and lead from the Mendips.



The earliest cremation belonged to the late Iron Age and consisted of a group of three pottery vessels in a pit. The cremated bone has been placed in the largest pot; the other two probably originally contained offerings of food or drink.

There have been a number of small groups of Romano-British cremation burials on various parts of the excavation, in locations peripheral to the town, thus conforming to a well-established pattern. Most of these date to the 2nd century AD, at which time burial practice involved cremating the body, placing the remains in a container (normally of pottery) and then burying it, often with other grave goods, outside the boundary of the town.

One cremation had grave goods including samian pottery imported from Roman Gaul, pottery flagons and glass ware, all of which seem to have been contained in a wooden chest when buried. The wood had decayed away leaving only the metal fittings.

Many of the 2nd-century burials were later covered over by 4th-century dumping at the edge of an ancient watercourse, so the sacred nature of the burial area does not seem to have been respected here.

The single inhumation is something of a mystery. The skeleton was lying

face down in the top of what appeared to be a pit of late Roman date. There was no clear grave cut so it looked as if the body had been unceremoniously dumped with both arms tucked underneath it. The cause of death is not apparent from the skeletal remains — but foul play is suspected!

The coming of the Saxons

By the beginning of the 5th century, Roman Heybridge was largely abandoned. At this time, the first evidence for Saxon settlement appears in the form of small buildings. Two of these have been found in 1994, to add to the one found in 1993, plus the five excavated adjacent to Crescent Road in 1971. Significantly, these largely avoid the centre of the Roman town and cluster on slightly higher ground to the north. There is one exception to this; a building apparently isolated in the middle of the 1994 excavation. Next to it was a well containing early Saxon pottery in its backfill, though whether this means the well was being used at that time or was simply filled in later is not yet clear.

Across the whole of southern England, it was the pattern for Saxon settlements to shun the location of major Roman settlements, so the

evidence from Heybridge fits in well with this. However, there may have been another reason for Saxon settlement being positioned on the higher ground. Roman Heybridge was in a low-lying spot; today, the area floods regularly in winter. In many parts of the Roman town, the evidence points to episodes of dumping to raise levels, and this seems to have occurred on many occasions throughout the life of the town, presumably to combat problems of localised flooding. Saxon settlement may therefore have been sited to avoid this disadvantage.

The finds

The objects recovered from the site this year have been abundant and spectacular. The pottery is being measured in metric tonnes. The metal work is largely in good condition and, as an assemblage, is almost entirely free of 'contamination' by modern items. The animal bones and marine shells will provide information about diet, the local farming economy, and marine resources. Building materials have been rather limited and reflect the fact that Roman Heybridge was a timber town, with most of its buildings having thatched roofs and wattle and daub walls. •

The Friends of Colchester Archaeological Trust

The Friends of CAT is a thriving organisation with several hundred members. Most live in Essex or southern Suffolk, but a few hail from as far afield as Yorkshire, South Wales, Scotland, Denmark, Canada, the USA, Africa, or the Antipodes. All members of the Friends receive a copy of *The Colchester Archaeologist*, and have a chance to attend annual lectures on the previous year's work, go on organised outings to excavation sites, ancient monuments, historic buildings and museums, and to attend events related to the work of the Trust.

Events of 1994

The AGM held in the Castle Museum's lecture hall was packed out as usual. Philip Crummy spoke about medieval Colchester as revealed by excavations from 1970-93, and Oliver Green about the planning of the new galleries, and the strategy adopted for the new galleries (Phase 3) in particular. The new displays opened in the summer and have proved to be very popular with visitors. They cover the period from the end of Roman Britain up to about 1600, and include an audio-visual 'experience' in the prisons.

In March Philip Crummy intended to take Friends on a quiet Sunday walk round Archaeological Colchester, but, thanks to popular demand and the weather, ended up doing it twice in very strong winds. Friends had a rare opportunity to visit three places which are inaccessible without keys, Duncan's Gate, the Roman theatre, and the top of St John's Abbey Gateway. The event was so well attended, and so many more people expressed regret at not being able to come, that it will be repeated, with slight variations, in 1995.

In May the Friends took the train to

London, to be met by John Shepherd, Research Assistant to the late Professor Grimes, now working on the Grimes London Archive. John took us round the north and west sides of the Cripplegate Roman fort, the discovery of which Grimes said gave him more satisfaction than that of the London Mithraeum. The walls of the fort were later incorporated into the Roman City wall. Just as Philip had in Colchester, John gained access for the Friends to the usually inaccessible west gate of the Cripplegate fort, which lies close to the Museum of London beneath the modern street of London Wall. He gave us a tour that managed to be both comprehensive and comprehensible, and one that will be long-remembered by those who went.

The churches tour on a blistering day in July took in, among others, Hatfield Peverel priory, Ulting Wick, and Langford. The latter was originally apsidal at both ends, and the unusual western apse still survives. Friends who did not manage to come on the coach trip would find it well worth visiting if they are in the area.

A morning in September saw a coach-load of Friends out in Maldon in more traditional (wet and windy) weather when they visited the site of the Romano-British town at Elms Farm, Heybridge, then under excavation by the Essex County Council Archaeology Section. The Elms Farm settlement appears to have Iron Age origins, so on the way back into Colchester the coach stopped off at Gosbecks, the administrative and agricultural centre of Iron Age Camulodunum. Philip Crummy described the site, mainly known from aerial photographs, and how it was taken over and transformed by the Romans with the construction of a temple and a theatre (pp 7-16).

In November children and teachers

from Gosbecks County Primary School went out to stand in the theatre and temple while a new set of aerial photographs were taken, and the Friends have provided the funds for copies of the Gosbecks guide (which forms the central part of this edition of *The Colchester Archaeologist*) to be printed and handed out to them all by way of thanks.

The last event of the year, also in November, was 'Hands on early Roman Colchester' in the Castle Museum lecture theatre. Friends were invited by Paul Sealey to take a look at the differences between native British and Roman pottery, and by Nina Crummy to examine early Roman brooches and military equipment. As a bonus, we hope that, once in the Castle, Friends took the opportunity to go round the new displays.

The 1995 AGM

The 1995 AGM will be on January 28th. The business meeting will be held at 10.30 am at 12 Lexden Road, and the afternoon lectures, tea (and raffle) in the Castle Museum lecture theatre at 2.00 pm. The speakers will include Howard Brooks on the excavations at Hythe Hill.

Next year's trips will include a churches outing, a new walk around archaeological Colchester, and a coach trip to see the remains of the Roman town of Caistor by St Edmund in Norfolk which, like Gosbecks, is being opened up for public access and interpretation.

*Nina Crummy
2 Hall Road,
Copford,
Colchester CO6 1BN
Tel. 0206-210255*

Recycling the past

by Mike Corbishley

Did you know that the average family gets rid of 860 kilos of rubbish each year? You probably help recycle some of your family's waste by putting it into those metal containers set up in towns — containers for glass, metal, plastic and paper. Sheffield was the country's first city to set up recycling schemes in 1989. But waste has

been recycled before. During the Second World War people had to collect as much as they could because of shortages of raw materials. But did you know that recycling goes back much further than the 1940s — and that buildings and even streets have been recycled? Here are some examples from Colchester.



You will recognise this famous Colchester landmark. It's the castle. But did you bow that it was originally a Roman temple built to worship the Emperor Claudius? After that it was rebuilt completely to become a Norman castle. Much later it became a prison. Then the ruins were used as a source for building materials in the 17th century. In the 19th century it became a library and meeting place and finally opened as a museum.



A The Norman castle-builders recycled a lot of Roman materials. They dismantled buildings and re-used the stone and tile. Here in the walls of the castle there are even blocks of square Roman tiles taken from the hypocausts of public baths. These little columns of tiles mortared together would have supported the floors of the rooms so that hot air could flow underneath. The builders have simply taken the columns and laid them horizontally as a building course!



The centre of Colchester was originally laid out as a Roman fort, and then a town. You must have seen the walls of the Roman town — perhaps in Castle Park or along Priory Street, for example. But did you know that you can still walk along the lines of Roman streets? This is Head Street — originally one of the main streets of the Roman town. The other main Roman streets to follow are North Hill and the High Street. You can follow the Roman street pattern in displays in the Castle Museum.



Many buildings in Colchester have been recycled — they have been altered and used for something quite different. This is Holy Trinity church — no longer a church but a museum. Can you see the recycled Roman tiles in the tower?



This Indian restaurant in St John's Street was once a workshop or factory. Can you see the crane for hoisting goods to the top floor?

How many other examples can you spot, either in Colchester or in the place where you live? •

In brief

Hythe Hill dig

By the time you read this, the excavation on Hythe Hill will probably be finished. Unfortunately, I cannot tell you much about it yet, as it has not begun at time of going to press. The dig is scheduled to last 28 days, starting around the beginning of December.

The site is almost opposite St Leonard's Church on Hythe Hill, where Colchester Tractors used to be. It is where a roundabout is to be built, at the west end of the first stretch of the new Eastern Approaches road. Work on the road started in November 1994.

Earlier in the year small trenches were dug at points along the route of the new road to see where, if anywhere, construction work would lead to the loss of significant archaeological remains. The most important site turned out to be on the frontage of Hythe Hill, where preliminary

investigations showed that there had been occupation dating back to at least the 13th century, and the well-preserved remains of a presumed house dating from at least c AD 1500.

If the remains prove to be as well preserved as the initial work suggests, then the forthcoming dig should provide plans of a complete medieval house, and some information about life in a part of the town that has not seen archaeological excavation before.

Monday night archaeology

The Colchester Archaeological Group has again put together an interesting series of lectures although, again by the time you read this, half of them will have been given. However, for 1995, subjects are to include Roman blood donors (Michael Wilson), Heybridge (Mark Atkinson), Stonehenge (Philip Pantelis), and place-names (by Margaret Gelling, the well-known authority on the subject). For details, contact Pat Brown, 172 Lexden Road, Colchester CO3 48Z (telephone Colchester 575081).

New books

The end is in sight for the Trust's present series of excavation reports. Eight have been published and the remaining four are due to appear by mid 1996. The first of the remaining reports is about the Roman glass (see pp 1-4) and it should be available early in 1995. This should be followed by three volumes on the Iron Age settlement, Roman pottery, and post-Roman pottery.

'Popular' book

It is intended to publish a 'popular' book in 1996 on the archaeology of Colchester. The idea is that it will mark the completion of the present series of Colchester Archaeological Reports. The book is to be in full colour and cost between fifteen and twenty pounds. The Trust will publish the book but needs to raise the money. It is hoped that members of the Friends will consider ordering a copy in advance to help finance the project. Details of the scheme will be announced sometime in 1995.