

the Colchester archaeologist

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New Roman toy?

the stacking counters

Mick Aston

in conversation

Time Team traveller

2,000-year old medical kit

Monumental Roman buildings

at Gosbecks Archaeological Park

new data in old bones

making Roman glass today

with a special offer



— and news of recent digs in Colchester



the Colchester archaeologist

Cover

front:

Edward Smith with Roman stacking counters from the Mercury Theatre site;

Mick Aston, photo, by permission of Channel 4

back:
the stacking counters

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This issue of *the Colchester Archaeologist* is twice as large as previous issues; there is thus an increase in production costs. For the first time the Trust has introduced advertising; our advertisers are contributing to the cost of the magazine and generously supporting the Trust by advertising in this issue. The Trust is very grateful to the advertisers and hopes to help them promote their services and products, as well as provide a service to our readers. We hope that you will reciprocate by supporting our advertisers.

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With thanks to all the contributors to this issue of the magazine:

Prof Mick Aston of the University of Bristol

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Essex County Council Archaeology Section

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Dr Ralph Jackson of the British Museum

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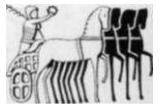
Andrew Phillips

Dr Paul Sealey of Colchester Museum

Dr Patricia Smith of the University of Essex

Dr J P Wild of the Manchester Ancient Textiles Unit

The Colchester Archaeological Trust is a full-time professional unit, providing developers and others with a full range of archaeological services, from consultancies and site evaluation to full excavation. We have 25 years' experience of working in partnership with construction industry professionals and local government planning departments.



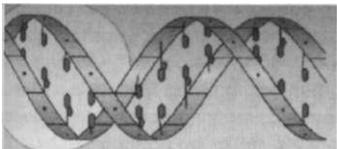
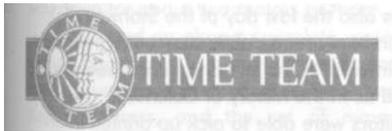
The Trust is a registered charity and a company limited by guarantee. The work is carried out by a team of fully trained and insured archaeologists assisted by paid excavators and volunteers.

The Trust also designs and publishes its own reports, books and magazines in-house.



Trust staff in front of the Trust offices in Lexden Road
(from left: Steve Benfield, Gillian Adams, Carl Crossan,
Philip Crummy, Eleanor Clark and Alison Colchester)

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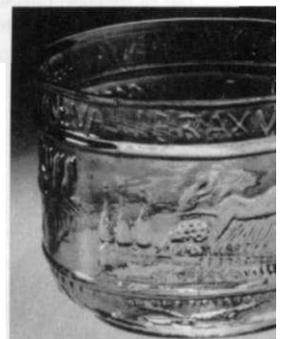
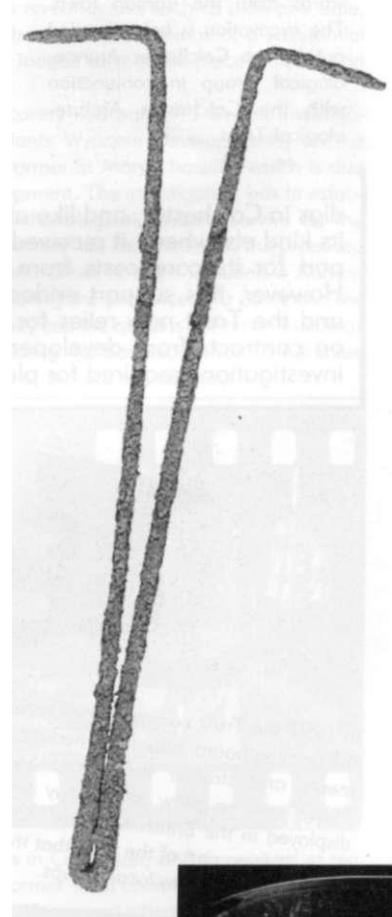
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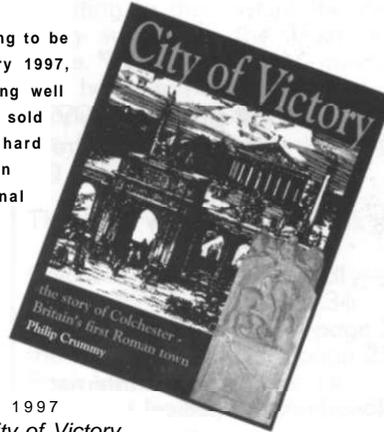
'treasure trove'



(Photo. by James Fown)

City of Victory

Colchester's latest history book is proving to be a local best-seller. Published in February 1997, the Trust's *City of Victory* has been selling well ever since, with more than 2000 copies sold in the first six months, including all the hard back copies. It is even to be published in audio-cassette form by the Royal National Institute for the Blind.



In 1997 *City of Victory* was also awarded a grant by the Friends of Historic Essex, for which the Trust would like to thank the FHE.



Rare find

This very rare brightly-coloured brooch was recently excavated near the Lexden Road. It is a Roman enamelled plate brooch in the form of an amphora. It is in good condition apart from missing one of its handles. It dates to the 2nd century AD. The brooch lay in a pit which had been dug on the south side of the main road leading westwards from the Roman town. The excavation is being carried out by the Colchester Archaeological Group in conjunction with the Colchester Archaeological Trust.

The Trust goes commercial

The Archaeological Trust now has to operate in a wholly commercial way, sometimes competing on a cost basis with other archaeological units. The Trust was founded as the Colchester Excavation Committee over thirty years ago to carry out archaeological

digs in Colchester, and like other organisations of its kind elsewhere, it received some financial support for its core costs from the local authority. However, this support ended on April 1st 1997, and the Trust now relies for most of its finances on contracts from developers for archaeological investigations required for planning consent.

It's a gift
A digger-driver found a complete Roman cremation pot (below) while working at the former Royal Observer Corps premises in Lexden. He kindly handed it in to the Trust in 1997, with its cremated bone still inside.



Open days

The Trust digs at Stanway and Gosbecks were open to the public throughout the summer, and at Stanway the Trust played host to the public on three special days, the August Bank holiday and the two days of National Archaeology weekend (the Sunday was also the last day of the Stanway dig). Members of the public showed a great deal of interest in the site and in archaeology, as well as in the history of Colchester generally. Visitors were able to pick up printed information on how to get involved in archaeology, purchase Trust and other publications, try their hand at pot washing (picture above), and handle actual finds like parts of a Roman column from Gosbecks, or the complete cremation pot (left), tesserae, and pottery, as well as go on a guided tour of the site and see the slide presentation. Roman soldiers were on hand to keep order.

Over the National Archaeology weekend, the centrepiece in the site marquee consisted of two computers, one displaying the live video being transmitted on the internet and the other for the public to explore the Web site and some 3-D modelling, and to find out about the site on-line.

The Trust also had a stall at the Essex History Fair at Harwich in June, where we had a small display about the history of Colchester and sold *City of Victory* and past issues of the magazine. We really enjoyed discussing the work of the Trust and the Stanway site and its finds with visitors. We handed out our Web address slips till there were none left!

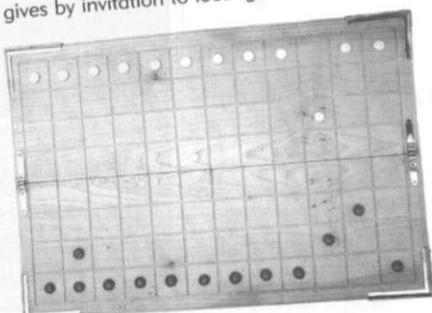


In 1997 the Trust commissioned replicas of the gaming board, counters, medical instruments and strainer bowl from Stanway. These were on show at Stanway and then displayed in the British Museum. After that they will form part of the talks that the Trust gives by invitation to local groups.

See the inside back cover for the craftsmen involved.

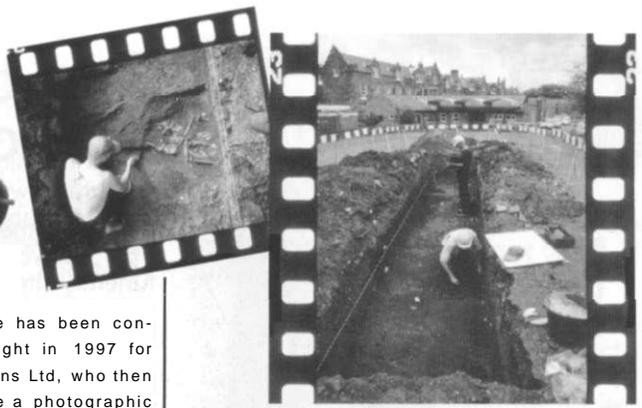
New sites

A 2,000-year old occupation site has been found near North Station in the form of a large complex of ditches and pits. It was discovered as a result of trial trenching along the line of the proposed new northern approach road. Similar operations at the former Maternity Hospital in Lexden uncovered parts of a Roman occupation site, while near Birch, field-walking — which involves systematically searching ploughed fields — has revealed the site of a Roman villa.



small projects

1997



At the theatre

In advance of a major alteration, a small excavation was carried out by the Trust at the

Mercury Theatre. In the shadow of its tower, the team dug out twelve shafts — shoring some up (pictures above) — and worked their way down for about two metres or more.

They found an almost complete vessel containing bone, part of a mosaic pavement, part of the foundation of a barrack block from the Roman fortress, and the set of remarkable stacking counters (see back cover). This excavation was funded by the Mercury Theatre.

Ground radar

Some of the most interesting archaeological remains in Colchester lie under the High Street. This makes them inaccessible yet very vulnerable to damage whenever a new service is laid along the street. The Trust routinely uses geophysical techniques such as resistivity and magnetometry for archaeological survey in Colchester, with the help of Peter Cott, but they are unsuitable for places like the High Street which are covered with hard surfaces and which have a lot of metal in the vicinity.

Instead, an experiment was carried out to test the effectiveness of ground radar by trying to detect the foundations of St Runwald's Church. The church stood in the High Street until its demolition in 1878. Its plan and alignment are of particular interest because of their possible relationships with underlying Roman remains.

The survey had to be carried out across the full width of the High Street and this meant laying tapes across the road and repeatedly crossing it with the radar machine and its trailing cables (picture left). The work had to be done between about five and nine o'clock one Sunday morning in the middle of summer to take advantage of the daylight and the least traffic. In the end, drivers were very understanding and all went well.

The final results of the survey are not yet available but early indications were not encouraging. It looks as if the shovel and trowel are still the archaeologists' only truly effective tools, at least as far as the High Street is concerned.

Ancient tidemill

The ancient mill at Fingringhoe has been converted into homes. It was bought in 1997 for conversion by Lexden Restorations Ltd, who then commissioned the Trust to make a photographic record of the buildings and the surviving machinery before the work began.

There has been a mill at Fingringhoe since at least 1531, when there is a record of a judicial judgement on the 'mill newly built by Richard Whyter and Robert Cooper'. The power of the mill derived not from the wind or the downward flow of a river, but from the ebb and flow of tides reaching up the lower part of the Roman River.

The surviving building is a hotchpotch of additions and alterations (picture below). The oldest part is a timber-framed building which once contained the wheel, whereas the most substantial addition is the brick mill which was built in about 1893 for flour production, powered at first by steam and later by diesel engine. The first of the mill's towering silos dates from about 1933, but it had to be replaced after five years when fuel oil caught fire and the silo was destroyed. The wheel of the tidemill was last used in 1942, by which time the whole operation had gone electric. Despite the successive modernisations inside, the mill was still being serviced by sailing barges as late as 1978.

(Copies of the survey can be consulted in the Colchester branch of the Essex Record Office and at Colchester Museum.)



Roman pottery shop

Jacklin's in the High Street was one of the most colourful shops in Colchester, and the appeal of tea and cakes in the tea-room upstairs ensured long custom from former Trust chairman Hugh Thomson of London. Remarkable remains of a Roman pottery shop were discovered when Jacklin's was being built in 1927. In one small area, trenches cut through the remains of stacks of pottery and glass which had collapsed as the shop went up in flames during the Boudican revolt. Whole glass vessels had fused into shapeless lumps, while molten glass had trickled down over piles of discoloured pottery vessels below. Clearly hundreds of vessels must have been destroyed in the fire. It was an extraordinary discovery, and one which makes this one of the most important sites in Colchester.

Jacklin's closed in 1997 and substantial alterations were carried out to the building for its amalgamation with William's and Griffin's store. The building works were designed to minimise ground disturbance and thus help preserve the surviving below-ground remains of the Roman pottery shop. Some holes were unavoidable, and these were dug under archaeological supervision (picture above right). The holes were not deep enough to reach the remains of the pottery shop, but they produced about thirty pieces of burnt pottery which must come from it.

Long-lost temple

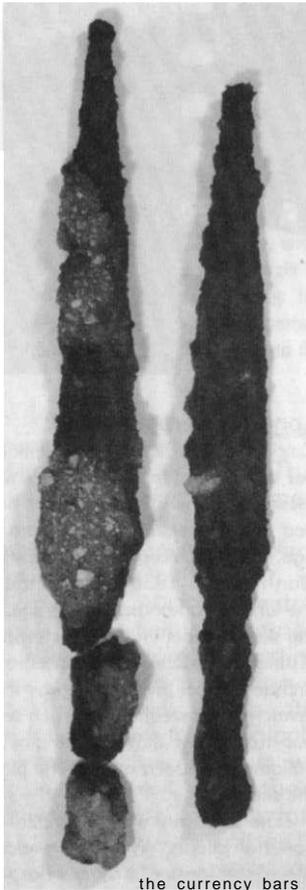
Colchester can boast an exceptionally high number of Roman temples. Our knowledge of one of these — on the site of St Mary's hospital — is limited to a tiny sketch plan, drawn about 80 years ago, and which is possibly a copy of an even older plan made in 1836-7 during the construction of the Union workhouse on this site. The building in the sketch is identifiable as a temple because of its distinctive square-within-a-square plan. A recent archaeological investigation by the Trust was too restricted to reveal details such as plan and date, but it did show that the remains of a substantial building do indeed exist at the place indicated on the sketch.

The discovery was part of a limited investigation (for clients Wyncote Developments) on the site of the former St Mary's hospital which is due for redevelopment. The investigation was to establish what archaeological remains survive on the site, and how they will be affected by the proposed building work. Other remains included a Roman burial (indicating the presence of a cemetery; see pictures above) and the remains of Roman buildings destroyed during the Boudican revolt. A full-scale dig on parts of the site seems likely.





Stanway 1997



the currency bars found in 1996

End of the Stanway dig

Origins of the site

The Stanway site started off, not as a funerary site, but as a farmstead. This would have taken the form of at least one round house inside a farmyard enclosed by a bank and ditch (our Enclosure 2). The ditch was probably not defensive but would have been dug to confine animals and protect them from predators. The farmstead seems to date from the around the 2nd century BC. Unfortunately no traces of any round houses survived because of the effects of modern deep ploughing, but there were some finds and some distinctive features which only occurred inside this enclosure. These show it to have been functionally different to the other enclosures here. The finds include many fragments of loomweights and the features include three large pits. The loomweights show that weaving took place in this area, and the pits are similar to examples found in farmsteads elsewhere which are thought to have been used for the storage of foodstuffs, especially grain.



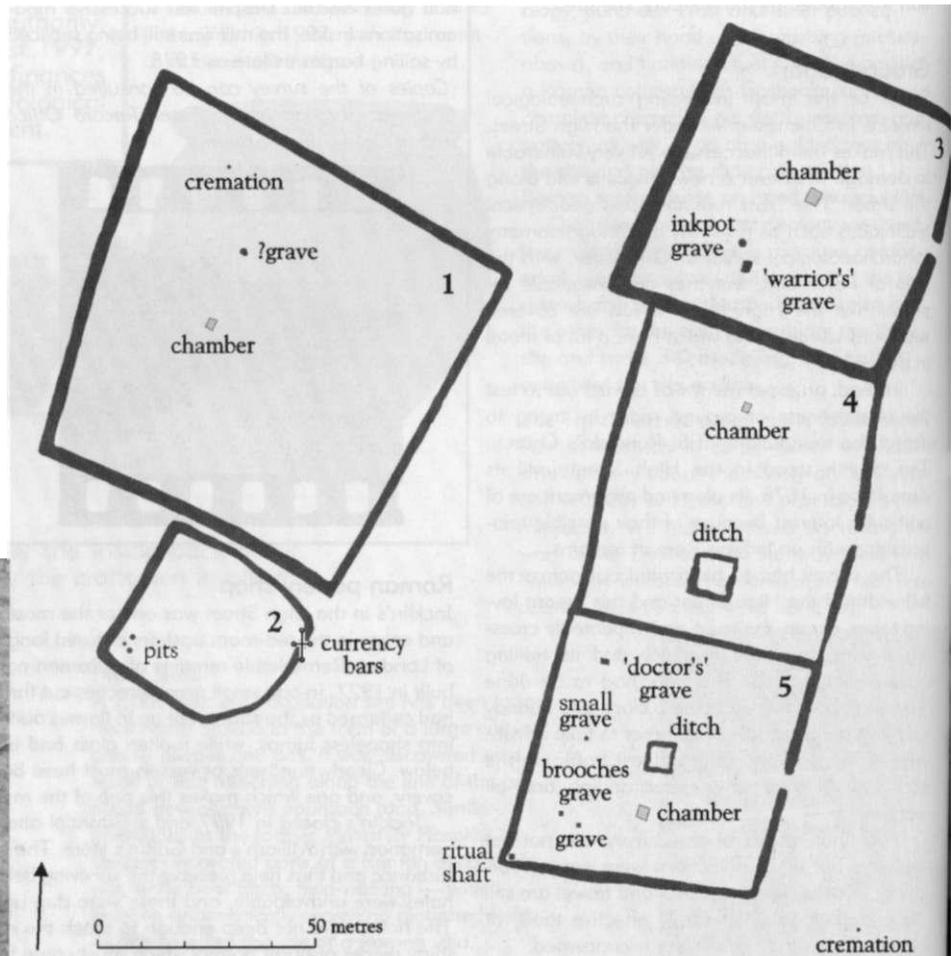
Above: the fragment of saw.

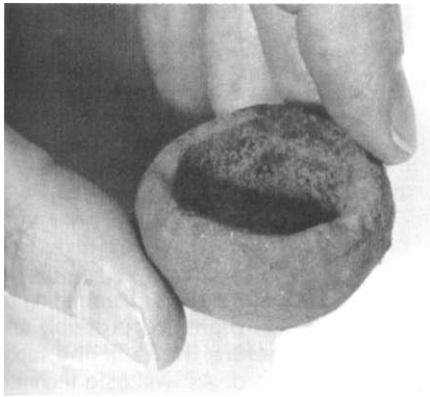
Right: the tiny pot. It is a proper fired ceramic vessel, in miniature.

Another indication of the unusual nature of the site was the 1996 discovery in the enclosure ditch of a pair of 'currency bars'. Over 1,500 objects of this kind have been found in Britain. They occur mainly in a band extending from the southern Midlands, southwards to the south coast. The pair found at Stanway are the only examples known from Essex, so they underline the special nature of the site. Currency bars are made of iron, and occur in three main forms, namely sword-shaped, spit-shaped, and plough-share. The Stanway currency bars are of a rarer type.

Right: plan of the Stanway site — the excavation of Enclosures 2 and 5 was completed in 1997.

Below: the three Pstorage pits. Opposite above: the 'small' grave excavated in September 1997. Opposite below: the deep ritual shaft (with timber shoring) being excavated by Nigel Rayner.





Funerary enclosure

Although Enclosure 5 was the focus of the 1996 excavations, there was still much to be done in 1997. Parts of the interior of Enclosure 5 had to be checked for graves and structural features such as post holes, and both the chamber-pit and the presumed ritual shaft had to be finished off. The 'ritual shaft' was in the extreme south-west corner of the enclosure. Features of this sort have been found on other pre-historic and Roman sites where in some cases they contain gory objects such as human or animal heads and traces of blood. Nothing like this was found in the Stanway shaft, although soil conditions are such that it is not

likely that items like these would survive. Our shaft was comparatively shallow (only about 3.5 m deep). Being dug through soft sand and gravel means that it would collapse if left open for any time. There were strange little indentations in the sides as if they had been lined or supported in some way with wood. The shaft had to be shored up for its excavation.

The summer of 1997 saw the discovery of the last grave from Stanway (the 'small' grave — see the video sequence on the next page). Compared with other graves from the site, its contents were modest, consisting of a bowl and a pot containing cremated bones. Curiously, the bowl lay in two pieces a short distance from the pot. Two explanations are possible. Either the bowl was deliberately broken at the time of the burial as part of the burial rite, or else it had been placed upside down on the top of the pot to make a lid which then got knocked off when the grave was backfilled.

This year, the diggers cleared the site, excavated sections across the enclosure ditches and excavated other features in both Enclosures 5 and 2. When the site was looking its best, at the end of the summer, Edward Clack kindly took some aerial photographs.

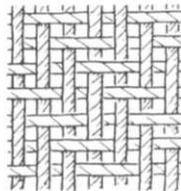
.....and clothing to match

by John Peter Wild
of the Manchester Ancient Textile Unit

Traces of textile were found in the "doctor's" grave — the Trust asked J P Wild to investigate...

In such a well-furnished grave one would expect to find that the 'doctor' had also been provided with appropriately high-quality clothing for his journey into the after-life. So it proved to be: but only the most minute scraps survive, either fossilised ('mineral replaced') by the corrosion products leaching from the iron instruments or as actual textile in contact with bronze implements, the copper from which had poisoned all local bacteria.

The mourners had placed in the great wooden chest, next to the gaming board and surgical kit, an eye-catching wool cloak or blanket. Technically speaking, it was a 2/2 plain (or perhaps diamond) twill of fine to medium weight — a light tweed, in other words. Fabrics of this type are already known from two other graves at Stanway (the 'brooches' grave in Enclosure 5, found in 1996, and the 'warrior's' grave in Enclosure 3, found in 1992).



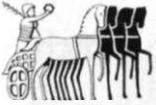
Another fragment of diamond twill, though coarser, was found in the remains of the destroyed early colonial buildings at Lion Walk in Colchester in 1972, part of a wool mattress cover burnt in Boudica's destruction of Colchester in AD 60/1. Indeed, diamond twill was the preferred weave throughout the Roman North, although it was already coming into fashion before the Roman conquest.

To our surprise, under the microscope, the warp (the vertical thread system) in our new Stanway fragment appeared purple, while the weft was buff and apparently undyed. This curious combination suggests that perhaps the textile once had a purple check pattern — with squares or rectangles of solid purple, pure white, and half-and-half, by turns. Such checks (*scutulata*) were regarded by the Romans as being typically Celtic. Too little purple yarn survives for analysis, so we cannot say at present whether the wool was dyed with Tyrian (mollusc) purple or a native lichen or madder-on-woad, a well-known ancient pseudo-purple. Tyrian purple yarn spun from wool dyed with a Mediterranean *murex* whelk is a great rarity in the Roman North, and if the 'doctor's' grave fragments are Tyrian, then this textile would be without known parallel from such an early date this far north in the Roman Empire. What is certain is that purple of whatever sort was a very Roman luxury, and one which highlights the Stanway 'doctor's' high standing in his community.



Inset:

two diagrams of plain 2/2 twill showing its slanting structure.



Live video link Stanway LIVE on the internet



The Trust put more effort than ever before into encouraging members of the public to visit the Stanway excavations this summer. And for those who could not see it in person, there was always the option of a 'virtual' visit, courtesy of BT and the University of Essex, on the Trust's Stanway Web site on the internet. Visitors to the Web site logged on as far afield as Canada, the United States, and Africa.

The Trust's Web site on the internet allowed you to not only follow progress on a daily basis, with the site diary, but also watch discoveries being made as they happened via a live video link with the excavation. Like almost everything else these days, archaeology is getting on to the World Wide Web from all over the world and at a rapidly expanding rate. However, as far as we are aware, this is the first time that an archaeological excavation has been 'live' on the internet.

The Web site includes a site map where you can click on features such as the 'doctor's' grave for further information and pictures of artefacts. With the end of the dig, the live link has been terminated, but you can still access sequences of video frames in a stored video section. The site diary is still available as well as details of the background of the site and sections about the Trust and its publications, and sponsors.

BT generously installed an ISDN telephone line across the field to the site cabin and provided free connection throughout the summer. The University of Essex hosts the Trust Web site, and staff of the Department of Electronic Systems Engineering set it up and installed the camera on site along with all the necessary computer equipment and software (which was funded by Tarmac Quarry Products Ltd).

Video was transmitted in the form of a single frame every 30 seconds or so; more frames could have been sent, so that the sequence was faster, but the rate was set to accommodate the slowest modems that people use. The stored sequences have proved to be very valuable, and also provide an unusual digitised record of the site and dig. Also linked to the Trust Web site is an example of 3-D modelling (the Roman Temple of Claudius at Colchester) by the VASE laboratory at the University of Essex.

The address of the Trust's Web site is <http://peipa.essex.ac.uk/cat/>. The Web site will be maintained indefinitely and also updated to allow visitors to track the progress of the post-excavation analysis, especially the work done by specialists on the finds.

The Trust is greatly indebted to BT for the ISDN line and technical support necessary for setting up and maintaining the live link to the internet, and grateful to Dr Adrian Clark, Dr Christine Clark, Dr Tim Dennis, Graham Sweeney and Eddie Capstick at the University of Essex for making the Web site and the video link happen.

Left: sequence from the live transmission now in the video store — from September 04, 15:53:17-15:58:14; Nicky Lingwood and John Mabbitt excavating the 'small' grave. Right: the same scene recorded on a stills camera (with the video camera in shot!).

The future

Although the excavation at Stanway finished in September 1997, there is still much to do. There is a final excavation report to be written, and before this can be done, more analytical work must be carried out on the finds, such as analysis of organic remains and soil samples. The post-excavation process is likely to be a lengthy one and will involve input from various specialists. Depending on funding, it will therefore probably take some years before the definitive report can be produced. As well as a technical report, the Trust hopes to be able to produce a more 'popular' account that would appeal to a wider readership. Again, it will be some time before this can be published because the specialist and other work must be completed first.

Meanwhile, many of the more interesting finds have already been on public view. Objects from Stanway made a fine temporary display in the Castle Museum over the summer of 1997. The exhibition included the most interesting finds from the whole excavation, not just the latest material. (The 1997 finds included an almost complete pot excavated 'live' on the last day, a tiny pot, part of an iron saw, quernstone fragments, Iron Age pottery sherds, and the two vessels from the 'small' grave.) Later in 1997, the objects from the 'doctor's' grave were exhibited with some of the Trust replicas in the new Weston gallery of Roman Britain at the British Museum. (They are on view there until the end of February 1997.) It is hoped that ultimately the finds will be put on permanent display in Colchester Museum, and that the exhibition will feature reconstructions of the 'doctor's' grave and the 'warrior's' grave. These promise to be a spectacular sight.

An interesting event took place at the site after the end of the dig. Being on an ancient ritual site, an alternative religion group was permitted to hold an informal ceremony there!

The 1997 dig was supervised by Steve Benfield with the help of Simon Garrod.

Colchester Archaeological Trust





Above: aerial view of Enclosure 5 under excavation (photo, by Edward Clack)

Below: the Stanway site on the ground in 1997, with the north-west corner of Enclosure 5, showing sections across the ditch, the entrance and features inside it. (The diggers are on tea break!)



The Trust would like to thank Tarmac Quarry Products Ltd for funding this year's excavations at Stanway, for all their help in kind, and for the warm support provided by the staff based in Colchester and elsewhere.

The Trust is also grateful to Essex County Council for its grant.

The Trust wishes to acknowledge here the contribution of all its volunteer workers at Stanway, in 1997 and in previous years — without them, none of the excavations would have been possible.

The medical instruments

Excavations at Stanway finally finished in the summer of 1997. However, work during the previous winter had been very productive. It was suspected that some objects lying on the gaming board were medical, but it was not until they were lifted, cleaned, and x-rayed that positive identification was possible. This was a very exciting discovery, not only because medical kits are very rare in Britain (in fact there is only the one other example, and that is problematic), but also because the presence of the instruments suggests that the dead person had been a doctor.

Eventually thirteen instruments were identified, including scalpels, hooks, needles, forceps, and a saw. A thirteenth instrument was too corroded to identify, but all the others were well preserved enough for the Trust to have replicas made of them. The instruments had been placed on the gaming board, next to the doctor's cremated remains which had likewise been placed on the board. All the instruments were intact, except for the saw which lay broken in five pieces.

In addition to these thirteen instruments, the kit is likely to have contained items made of organic materials which have not survived. The missing items would have included dressings and bandages, and instruments made of wood, reed, feathers, and textile.

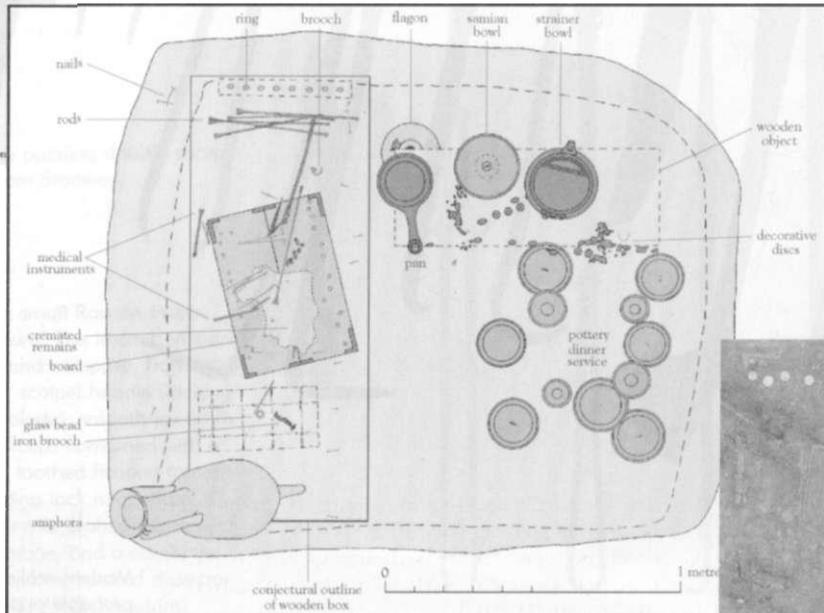
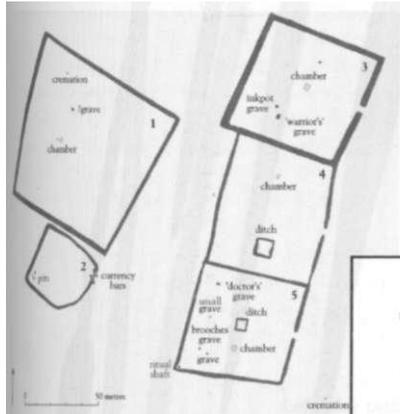
Read on for a detailed look at these extraordinary objects.

Web site

Colchester Archaeological Trust



<http://peipa.essex.ac.uk/cat>



Explore the Stanway site yourself — on the internet!

This is what you can see on the Trust's Web site.

For Stanway, the site plan above will be on screen. You can click your cursor on this, for example on the 'doctor's' grave, and this will take you to a plan of the grave (right). If you click on this, on an object, this will take you to some text and a photo, of the object, eg the gaming board *in situ*.



The Stanway medical kit.

From left to right the instruments are: two scalpels, saw, two combined sharp and blunt hooks, double sharp hook?, smooth-jawed fixation forceps, pointed-jawed tweezers/forceps, three handled needles, scoop probe, and the handle of an incomplete object.



Modern replicas of the Stanway kit showing the probable appearance of the complete instruments.

Early surgical kit from Stanway



..all instruments ought to be well suited for the purpose in hand as regards their size, weight, and delicacy..

[Hippocrates i.58]

— the extraordinary 2,000-year old gaming board had an even more extraordinary set of surgical instruments laid on top of it —

Ralph Jackson reveals all..

Their overall similarity to contemporary sets of instruments from other parts of the Roman empire suggest contact with Roman medical personnel and, presumably, an acquaintance with the precepts of classical medicine. Indeed, one instrument — the slender bronze scoop Drobe or *cyathiscomele* — was probably a Roman import. All the rest, however, differ subtly from Roman types, and their

rather idiosyncratic appearance may be explained in part by the fact that they were made in Britain, and in part, too, by their early date. It was only around the turn of the 1st century BC/1st century AD that Roman instruments began to acquire their relatively standardised form.

The instruments

It is notable that single-piece iron instruments predominate in the Stanway kit, which contrasts with the Roman preference for single-piece bronze instruments or composite bronze and iron instruments. Thus, the blade shapes of the two iron scalpels mirror those of Roman examples, but their integral iron handles are exceptional. Similarly, the jaws of the bronze forceps are Roman in

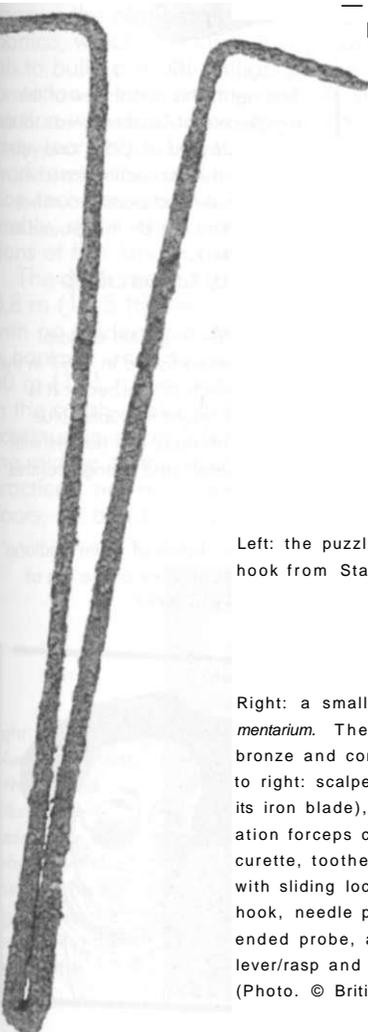
form but the terminal extension loop is not. Moreover, the outplayed form of the double sharp hook (if that is what it is) is at present without parallel.

Nevertheless, the range of instruments is closely similar to that of the basic metal *instrumentaria* or core kits of the Roman world. This version of an *instrumentarium* comprises a complete set of the essential tools of ancient surgery: scalpels, sharp and blunt hooks, spring forceps, handled needles, a scoop probe, and a surgical saw. Whether treating battle wounds, accidental injuries or disease, these instruments would have enabled the Stanway healer to perform a very wide range of surgical interventions, for example, cutting and excising, retracting, seizing, extracting, dissecting,

Important find

The importance of the medical kit from Stanway is already clear. Buried in the AD 50s, it is not only the earliest identifiable set of surgical instruments from Britain but also one of the earliest from anywhere in the ancient world. There is little doubt that the man buried with it had been a medical practitioner, and the location and form of his burial imply that his patients were members of the local tribal nobility.

He, too, was more probably a native Briton than a Roman newcomer, and the surgical instruments shed a little light on his origins.



Left: the puzzling double sharp hook from Stanway.

Right: a small Roman *instrumentarium*. The instruments are bronze and comprise, from left to right: scalpel handle (lacking its iron blade), smooth-jawed fixation forceps combined with a curette, toothed fixation forceps with sliding lock ring, sharp hook, needle probe, double-ended probe, and a combined lever/rasp and hooked dissector. (Photo. © British Museum)



perforating, probing and cauterizing as necessary. The operations could have included bone surgery, tonsillectomy (the removal of tonsils), the treatment of varicose veins, and fine eye operations, perhaps even the couching of a cataractous lens.

Like his Roman contemporaries, the Stanway healer would have had knowledge of medicinal plants. For surgical treatment of the tribal elite he may well have used herbal sedatives and painkillers, such as those decocted from henbane, white mandrake and the opium poppy, all of which were known to the Romans. But these mild anaesthetics are unlikely to have been widely and generally available, and surgery was always a painful experience. It was also life endangering, for the importance of sterile instruments was not appreciated, and such antiseptic substances as were used, such as pitch, turpentine and red wine, lacked the strength of their modern counterparts. Post-operative infection was thus a major hazard and another real disincentive to surgery, especially internal operations, and it must often have been the cause of death or of limb amputations following gangrene. Nevertheless, although recovery must always have been jeopardised by the use of unsterile instruments, a sufficiently successful outcome to surgical treatment was evidently

frequent enough to make it viable. In any case, while surgery might usually be regarded as a last resort, there would have been many occasions when there was no alternative, for example, with battle wounds. On the positive side, the Stanway kit, like Roman *instrumentaria*, comprises tools which are both carefully designed and precisely manufactured. The level of craftsmanship compares favourably with that of instruments of all later periods, so if surgery had to be undertaken then the Stanway healer could at least have had confidence in his equipment.

Ralph Jackson is an expert in ancient medical instruments and practice in the Department of Prehistoric and Romano-British Antiquities at the British Museum, and he is the author of Doctors and diseases in the Roman empire (first published in 1988 and reprinted in 1991).

Monumental Roman buildings



Digging out a ditch may not seem the most enticing of projects, but the great temple ditch in the Gosbecks Archaeological Park is a different matter altogether...



Top right: this aerial view of the temple site at Gosbecks was taken in the summer of 1997, and you can see the excavation trenches (the temple and portico outlines are marked out on the ground in white lines).

(Photo, by Edward Clack)

Above: the fragment of floral mosaic glass found in 1997 in the temple ditch at Gosbecks. It is made of bright turquoise blue glass, with daisy-like flowers with yellow petals and orange centres.

Below: a sketch of Colin 'Indiana' Austin, supervisor of the dig at Gosbecks in 1997.



The strainer bowl from the 'doctor's' grave

The vessel is like a lidless teapot, since it has a finely-perforated strainer plate behind the spout. Two hands were needed to use the vessel, one to lift the handle and the other to support the underside of the spout. If the bowl contained boiling liquid, then it would have been too hot to hold (especially the spout) without a protective cloth.

Vessels of this sort were thought to have been used for straining wine, but now drinks such as ale, mead or tea-like infusions are considered more likely. The discovery of this bowl, associated with medical instruments, makes medicinal drugs a slight possibility. The answer may come from a small plug of organic-like material found inside the spout. Unfortunately, results from an inspection with a scanning electron microscope were disappointing, so our hopes are now pinned on pollen analysis of this material.

Silversmith Mark Munson made the replica (left) as accurately as possible by using casts of the original spout, handle, and feet, as the strainer bowl itself was crushed flat in the ground.





Great ditch

The great ditch which enclosed the temple at Gosbecks is proving to be a source of much new and important information about Gosbecks in Roman times. A two-metre wide slice (section) was dug through the fill of the ditch during the summers of 1996 and 1997 to great effect. Not only did it show what a substantial feature the ditch had been, but the section also provided much new information about the appearance of the adjacent temple and the colonnaded walkway (portico), as well as how long they were in use before being demolished.

The excavations were carried out as part of a three-year programme to recover the plans of the temple and the portico, which is bound up with proposals to build a multi-million pound interpretation centre on the site. A similar section was dug across the ditch about sixty years ago, but the records of this work are poor, and of course excavation techniques have improved considerably since then, making investigations of this kind far more productive.

The ditch proved to be an impressive 3.8 m (12.5 ft) deep. It was V-shaped, with no evidence of there having been a bank. It enclosed an area of about 40 m (131 ft) square, with the temple in the south-east corner. The ditch was continuous except for an entrance in the middle of the east side. Pagan cult practices normally took place out of doors, so buildings of this type usually

stood inside a precinct. Often these were walled, but here it was the ditch which defined the limits of the precinct. The portico was a covered, colonnaded walkway of monumental proportions, which was built around all four sides of the ditched precinct. The fact that the ditch had no bank meant that people in the portico could look out between the columns into the precinct, but were physically prevented from going into it by the ditch.

For a long time, archaeologists supposed that the ditch not only pre-dated the temple and portico, but that it was pre-Roman and marked out an area which had been sacred to the Britons. Certainly it is now clear that the ditch is on a slightly different alignment to the portico which, although not proof that the ditch was pre-Roman, suggests that the two were probably not part of the same building scheme. We might suppose that if the ditch was pre-Roman, then we would find pre-Roman objects in the bottom of it. This did not happen. In fact the earliest material in the ditch is very interesting, but it is early Roman in date. It includes pieces of broken-up whole pots and animal bone, particularly parts of pig heads, which must have been products of ritual pagan practices within the ditched area in the early Roman times. However, five Iron Age coins were also found in the ditch. These are all pre-Roman, and five is a surprisingly high number given how little Iron Age pottery came from the ditch. Although the coins were scattered throughout the fill of the ditch and thus in Roman layers, their presence does suggest significant activity in the immediate vicinity in pre-Roman times. The ditch therefore may be pre-Roman in origin after all, and may have been simply cleaned out or deepened in the early Roman period. Alternatively it may have enclosed an area which was already special to the Britons before the arrival of the Romans, but had been defined on the ground in some other way.



Five Iron Age coins found at Gosbecks.



Above: at work in the trench across the great temple ditch at Gosbecks.

Below: volunteer Johanna Burstrom cleaning up a fragment from one of the columns (left).



Right: temple column fragment in the ground. Columns were made of tile and surfaced with plaster — here you can see the tiles forming the curve of the column.

The temple

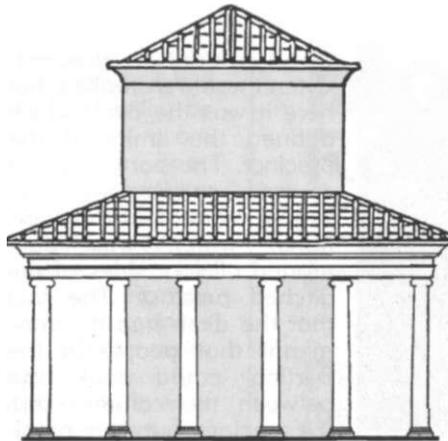
The recent excavations also included two trenches across the site of the Roman temple. Before these were dug, our knowledge of the building came from aerial photographs.

These reveal the distinctive square-within-a-square plan, which shows that the building was the type of temple known as Romano-Celtic, where a central square room is surrounded by a covered walkway (ambulatory). The excavations indicate that the temple was not quite square (measuring about 13.4 x 13.9 m) and probably faced northwards. It seems to have had six columns along each side, making a total of 20 columns in all. Parts of at least one of these columns were found in the fill of the ditch, and the pieces show that the columns were more than 0.6 m (1.9 ft) in diameter and well over 6 m (19.7 ft) in height, including bases and capitals. The square room which forms the centre of the building would have been a shrine where, presumably, there was a large statue of the god who was worshipped there, Mars or Mercury. The walls of this room were wider than normal, suggesting that the room may have been in the form of a low tower, although it is possible that the building had a single pitched roof, giving it a more orthodox classical appearance.

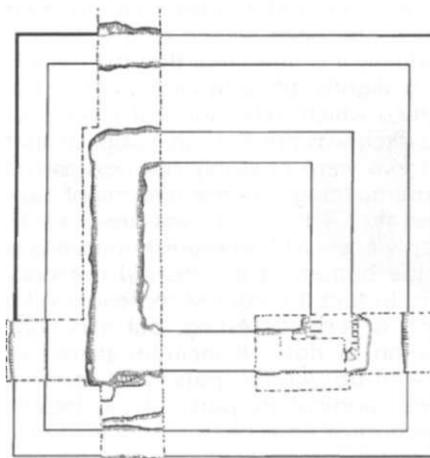
The middle and upper parts of the fill of the great ditch contained parts of the superstructures of the temple and the portico. The column fragments already mentioned were mixed in with large amounts of rubble which derived from the demolition and robbing of the temple for building materials. Christianity spread rapidly throughout the Roman empire with the conversion of the emperor Constantine the Great in the early 4th century. However, paganism persisted for a long time despite the destruction of many pagan temples and the conversion of others for Christian use. It is therefore interesting to note that a late 4th-century coin has been found in the rubble

— the coin shows that the Gosbecks temple was still standing until at least that date. Perhaps its destruction was indirectly brought about by the emperor Theodosius I who, as a devout Christian, banned all forms of pagan religion in the Roman empire in AD 391 (and consequently received the title 'the Great').

Destruction debris from the temple forms a distinctive group of layers in the upper backfill of the ditch. The rubble is concentrated on the inner side of the ditch, near where the temple stood. Building rubble from the portico is distinguishable in the ditch fill because it is concentrated on the other side of the ditch, where the portico



Above: one possible design of the temple.
Below: ground plan of the temple, with the 1995 and 1996 trenches.



stood. It is also lower down in the ditch backfill, suggesting that the portico was in ruins for some time before the temple was demolished. Unlike the temple debris, this material from the portico is mainly roof tile and painted plaster, as if the building had been made entirely of timber and plaster up to roof level (although this seems unlikely). The high proportion of roof tile in the debris suggests that the structure was abandoned and left to become derelict rather than demolished all at once. This conclusion is supported by charred material among the debris. We thought this was the remains of structural timbers, but microscopic examination by environmentalist Peter Murphy reveals it has the appearance of charred woodland litter. Its main component is charred twiggy wood with fragments of acorns, but the list of other organic remains is impressive: ash, bramble, elder and probably hazel and wild cherry, cereal grains, mollusc shells, insect remains, small mammal/amphibian bones, and the seeds and fruits of wild flowers and other plants. It is hard to explain the presence of material of this kind, unless we assume that when the portico was derelict, the area became overgrown with woodland

which was sufficiently mature to produce fruits and nuts, and that there was an accumulation of debris on the ground which was charred during accidental fires. The food debris is intriguing because it hints at domestic occupation nearby, and there is no other evidence for this at such a late date in the Gosbecks area.

Monumental colonnaded walkway

The easiest way to get an accurate ground plan of the portico is to uncover large parts of it. However, excavations on this scale would be expensive, even with the help of volunteers; they would also damage the surviving archaeological remains no matter how carefully the work was done. Therefore the excavations were limited to the corners of the portico, and the trenches were made as small as possible. This was done by setting them out after the positions of the portico corners had been located by geophysical survey with a magnetometer. This technique is good enough to find the corners but not sensitive enough to produce the required plan.

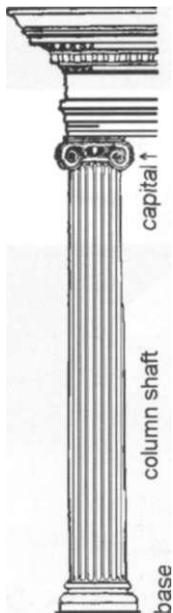
The portico was built on three parallel foundations which continued around all four sides of the ditched precinct, except for an entrance in the middle of the east side. It seems likely that the central and inner foundations each carried a colonnade, and that the outer foundation supported a solid wall which rose to the eaves.

We also discovered that the three foundations were of different widths. This in itself would not be a problem, except that each foundation varied in width from corner to corner. Moreover, the plan of the portico was slightly off square, because it had not been laid out very accurately! Unfortunately all this means that it is not possible to produce a plan of the portico without more excavations. Nevertheless, we can tell that each side of the outer wall of the portico was a massive 98 m in length, and the building must have incorporated about 250 columns, each one — like those forming the temple facade — over 0.6 m (1.9 ft) wide and 6 m (19.7 ft) high. In theory, it should be possible to work out the exact number of columns that this monumental structure contained, although how much of it will need to be uncovered to do this is a difficult question.

The excavation was funded by Colchester Borough Council, and the excavation was supervised by Colin Austin.

For more information on the Stanway and Gosbecks sites, see the Trust's book City of Victory.

Colchester Archaeological Trust



ASDA superstore site



Archaeological excavations on the site of the ASDA superstore at Turner Rise in Colchester, funded by ASDA

The extensive redevelopment on the north side of Colchester on Turner Rise near North Station, including the new ASDA superstore, led to rescue excavations in the winter of 1996/97 by the Colchester Archaeological Trust — sometimes in the snow! — which revealed a large Roman cremation cemetery.

Roman cemetery

The existence of a Roman burial ground in the vicinity of North Station has been known for many years, although recent archaeological investigations ahead of the building of the new ASDA superstore provided us with the first opportunity to explore the cemetery in detail in modern times. The earliest-known archaeological discoveries from here were

made on the adjacent site of the railway embankment, where the Victorian amateur archaeologist William Wire recorded several Roman burials in the 1840s, during the building of the railway. These included two burials in amphoras, one containing six glass vessels. Later, in the 1920s, over 30 burials were found in clay pits just to the south of the railway line. Then, between November 1996 and February 1997, our work on the ASDA site showed that this same cemetery had extended north of the site of the railway and that it probably contained hundreds of burials.

Work in 1996/7

This recent work shows that the burials were loosely strung out from north to south, in small irregular clusters.

Careful machine stripping and trenching was necessary to find them. In about 20 examples, the cremated bone had been buried in a pottery vessel, but there was also a surprising variety of other forms of burial, ranging from small pits with only bone, to pits containing the remains of wooden caskets with iron fittings, and large regularly-shaped pits each containing as many as five vessels. Other grave goods included copper-alloy brooches, discs of worked bone, pottery lamp fragments, and a miniature pewter vessel. In most graves, the cremated bone was distributed throughout the fill as though it had been scattered into the grave as it was backfilled.

The burials can be broadly dated from the late 1st to the 3rd centuries, and form part of Roman Colchester's northern cemetery area. This was possibly associated with a Roman suburb (known from earlier discoveries) which was situated north of the river in an area around what is now the Victoria Inn in North Station Road.

Many cremation vessels have been collected in Colchester, mainly by antiquarians in the last century, but this is the first time that a Roman cremation cemetery has been excavated and recorded in detail in the town. In the past, detailed records were not made and many finds were not kept, especially such things as bone, nails and other small objects. However, at this site, we have now recovered a lot of information relating to such topics as burial rite and cemetery organisation. Further analysis of the bone and the pottery will produce even more data about the population of the Roman town and use of the cemetery.

Other findings

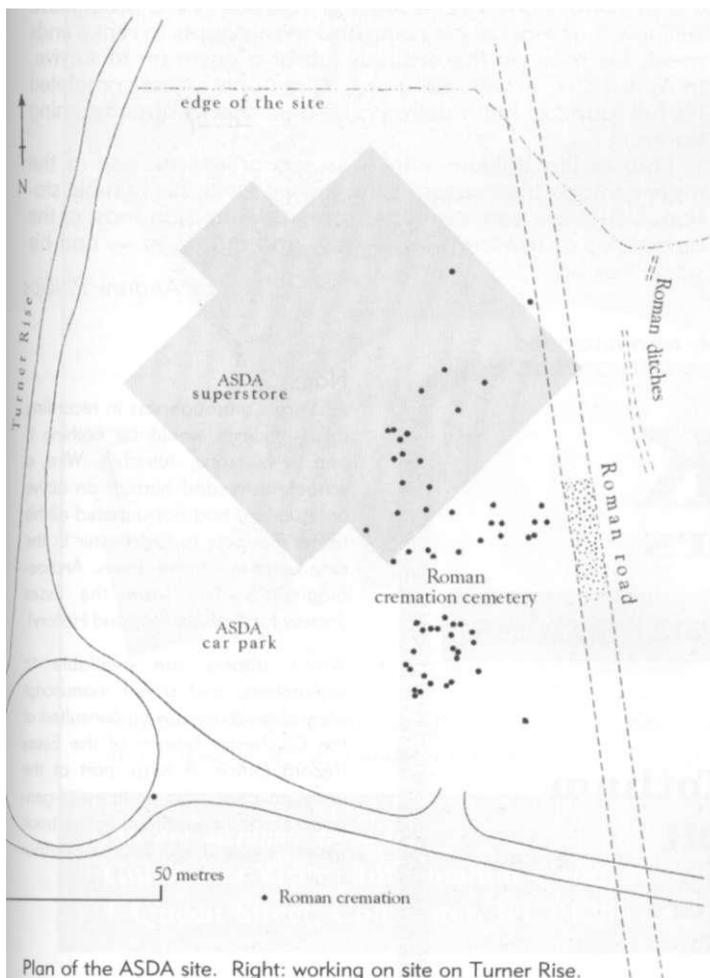
To the east of the burials lay a previously unknown north-south Roman road, the lower layers of which were quite well preserved. The cemetery lay on the west side of the road, and fronted on to it.

Wire noted in his diary that a Roman kiln had been discovered during excavations for clay near the brick kilns east of the station. This would place it about 250 yards east of the cemetery. The kiln was here because of the clay, and there must have been similar Roman kilns in the area which have not been found or recorded. Thus the discovery of the road clarifies the layout of the area in the Roman period. We can now see that the cemetery was on one side of the road, with pottery working on the other.

The low quality of some of the pots from the cemetery is interesting. Some may be unsaleable products from the nearby kilns. The grave goods here are so poor that this must have been the burial place of a relatively poor section of the town's Roman community. The nearby pottery kilns suggest that pottery workers were buried here. More interestingly, it also suggests that such people were poor compared with the typical person buried close to the town centre. This is of great interest because it is rare for archaeological discoveries in Colchester to provide such clear indications of the marked social divisions which existed at that time.

We also found a 19th-century brick kiln (presumably one of those referred to by Wire) and clay pits nearby. Industrial remains such as these are also of interest, since they are rarely recorded and yet provide evidence of important local industries of the more recent past.

by Don Shimmin



William Wire (1804-1857)

The postman's tale

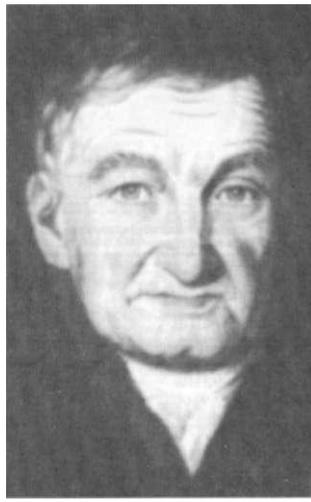
Colchester's first archaeologist helps with the ASDA site

William Wire qualifies as Colchester's first archaeologist. While previous antiquarians like Stukeley or Morant wrote history largely based on written sources, it was 100 years later that the extraordinary Wire systematically investigated and recorded Colchester's buried archaeological remains — and quite a lot were being uncovered and destroyed in his day.

William Wire was from an old Colchester family: weavers, freemen of the borough and sturdy Radicals in politics. William was born in Colchester and apprenticed in London as a clockmaker; he returned to Colchester in 1828. Here he became active in the Liberal/Radical cause during a period of unusual political excitement in our history. He organised its poorer supporters into an Independent Radical Club, thereby anticipating the Chartist movement; his Colchester Working Men's Association became a local Chartist Branch.

Wire increasingly withdrew from active politics after 1839 as Chartism became more militant; there was some local persecution of Radicals, and Wire, with poor health, was struggling to raise his large family on the profits of a retail workshop. Despite his difficulties, Wire devoted more and more time to his antiquarian interests. He was both a Latin and Anglo-Saxon scholar and a numismatist of national standing, corresponding with many of the leading antiquarians of his day. He attended lectures in the town and himself presented a paper to the Society of Antiquaries in London. Wire's learning was outstanding, but local antiquarians were disposed against him because of his social class. However, 'his shop (in Church Street) was a place of resort for many leading men of science and archaeology' and 'for the next 25 years there passed through his hands the chief bulk of the coins, urns, and Roman remains found in the town...'

He secured re-publication of the rare tract 'Colchester's Teares', which described conditions in the town during the Siege of Colchester in 1648. He wrote regularly to the press and strongly argued for Colchester being Camulodunum, an issue which had not then been resolved.



Above all, from 1842 until his death in 1857, Wire kept a detailed record in diary form of all his archaeological findings in the town, and these constitute essential sources for all subsequent archaeology. Not only did he use archaeological techniques, and scrupulously record the site of any findings, their condition, context and (sometimes) their stratigraphy, but drawings in his diary make clear details which are invaluable for archaeologists today. It has been suggested that similar standards of archaeological recording are not found locally until the 1920s. He had much to record. In 1842/3 the railway arrived in Colchester and Wire, as well as making regular visits to its construction sites (for which the chief engineer gave him a pass), also had a network of contacts who would tell labourers to "take that to Mr Wire". Wire bought and sold antiquities on

a semi-regular basis in his shop, as well as adding to his own considerable private collection; his reputation ensured that most local archaeological finds came to his notice. The Trust's ASDA site includes some of the area of Wire's study of the works for North Station and the railway cutting. Wire's discoveries here included the amphora containing six glass vessels.

Wire also made regular records as a new sewer system was installed in Colchester, as new buildings were put up, when a local clergyman (Rev Jenkins) excavated the important Gosbecks temple site in 1842, and when skeletons were found at the sand-pit by Butt Road. The Trust does much of its work in Wire's footsteps and uses his records.

Wire died aged only 52, his last years dogged by disappointment and illness. His great hope was to establish a museum in Colchester based on his own collection; he did this in 1840, but sadly he records in his diary the progressive selling-off of most of his coins and manuscripts to make ends meet. He took on the arduous job of a postman to survive. In April 1857, ill with influenza, Wire nonetheless completed his full round of letter delivery; he died shortly after returning home.

Late in life William Wire was recognised as one of the more remarkable figures in the town despite his humble station. Today his name is better remembered than most of the luminaries of the town in his day, and rightly so — and his work lives on.

by Andrew Phillips

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Note

All Wire's thoroughness in recording these findings would be nothing if one of his sons, Alfred P. Wire, a schoolmaster and himself an active antiquarian, had not donated all his father's papers to Colchester in the safe-keeping of the Essex Archaeological Society (now the Essex Society for Archaeology and History).

Wire's papers are available to researchers, and a full manuscript copy of his diary can be consulted at the Colchester branch of the Essex Record Office. A large part of the diary, concentrating on items of general interest, is reprinted in the book *Essex People 1750-1900* by Arthur Brown.

It's not what you'd expect —
Roman wall in hotel foyer

The Trust conducted a huge urban rescue excavation 1971-4, during the development of the Lion Walk area into the new shopping precinct. The site contained the remains of many Roman houses and finds.

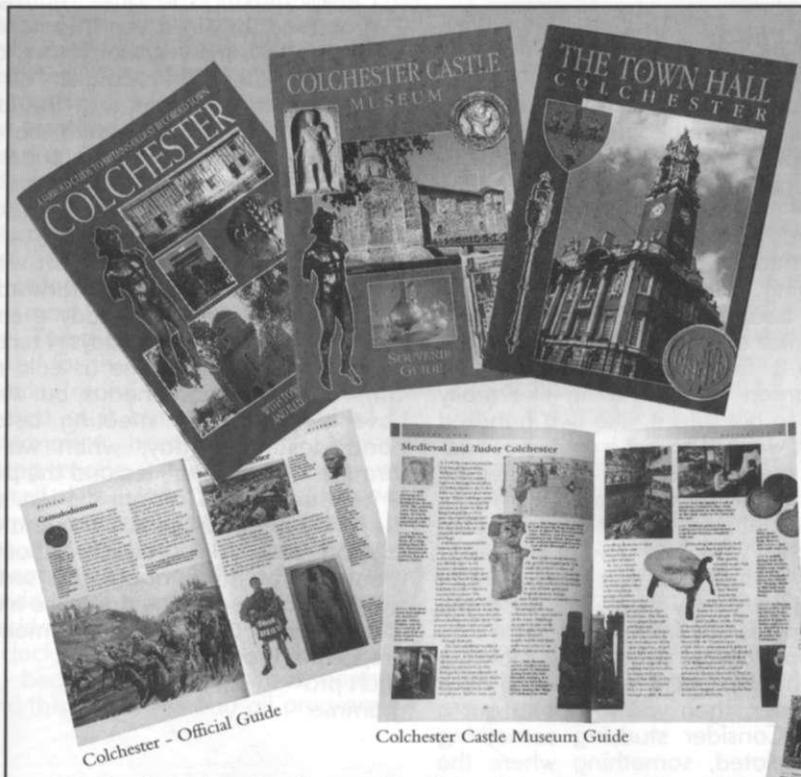
The cellar seems to have started as a timber structure, with timber walls and a timber floor. Various pits were dug before the floor was laid, including two graves for babies. (It was permissible for newly-born or very young babies to be buried within the grounds of their parents' property.) The cellar seems to have been rebuilt following a fire. The replacement walls were of stone and tile and the new floor was of plain mortar. Later three pits were dug through the floor to bury votive pots; one of these contained the bones of three puppies.

Part of a collapsed wall lay in the backfill of the cellar, showing that the room above it had been built in stone too. Most of the cellar walls were robbed for building materials in the early medieval period, but part of one wall, close to the adjacent street frontage, survived. You can see the remains of this wall in the foyer of the Rose & Crown Hotel in Colchester, carefully rebuilt almost exactly as it came out of the ground. It is a real and solid 'snapshot' of Roman Colchester.

Colchester Archaeological Trust



Part of the cellar wall as it was found at Lion Walk (now rebuilt at the Rose & Crown.)

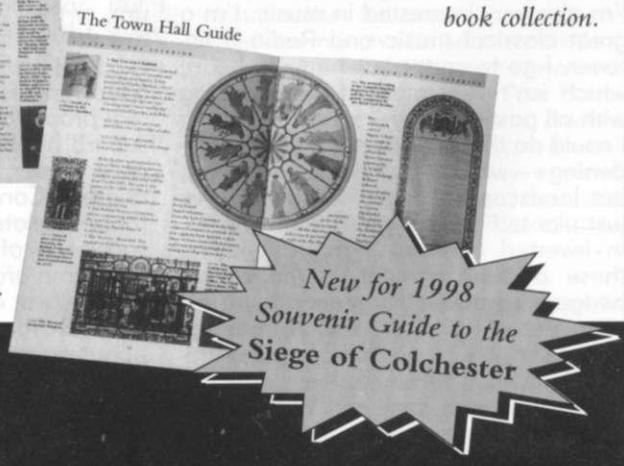


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Mick Aston

in conversation...



Britain's favourite archaeologist talks to Philip Crummy about himself, the Time Team, and how he tries to make archaeology accessible.

in the beginning...

My parents, particularly my father, used to take me round lots of castles and historic sites when I was a kid. We were coming back one year through Wiltshire — I would have been about 15, I suppose — and we called in to see Stonehenge, which was shut. But with the light going down behind it, it was very impressive. My father said, oh, you should read Atkinson's book on Stonehenge, which I did. And then I began to go round looking at sites in the local area myself. Later I went to university at Birmingham to study geography, and then I found I could do archaeology as a subsidiary subject, and so I gradually drifted into archaeology...

and the day job

I'm Professor of Landscape Archaeology at the University of Bristol. I'm in the Department for Continuing Education at the moment, and have been for the last 18 years, but in 1998 I'm moving into the Archaeology Department. I'm interested in the way the landscape has developed, and within that I'm particularly interested in settlements — the development of everything from early times, through the Iron Age, Roman, post-Roman, and eventually to the emergence of villages, hamlets, farmsteads and the modern settlement patterns. The other big thing I'm interested in, which is connected to that, is monastic sites — not so much from a religious or architectural point of view, but from the point of view of how they manipulated the landscape for their water supplies, their precincts, their granges, and their estates — and the patterns of exploitation.

a little light gardening

I'm also very interested in music. I'm a great classical music and Radio 3 listener. I go to concerts whenever I can, which isn't very often. I like painting with oil pastels, when I get the chance; I could do that for hours. I also like gardening — well, not so much gardening, but landscaping, really [laughing], I've just planted a lot of prehistoric hedges, in inverted commas. I'm busy laying those at the moment. Some of my hedges are about 15 years old, so it's very interesting to see how to manage things like that, such as how much firewood you can produce. I've got a terrific variety of species, 23 I think. Gardening is very therapeutic. It's also of course physical. I enjoy cutting trees down, moving tons of clay and building



stone walls and stuff like that. I've got ample scope here because we're on the end of the Mendips, with the levels below us and the Mendip hills above us.

one word: passion

Wanting to be an archaeologist is a good thing, provided you are that passionate about it and you can put up with all the disappointments when you get into it. Everybody I know who has ever wanted to get into it, like really wanted to get into it, like two hundred per cent wanted to get into it, has succeeded in some shape or form, either running a one-person business or working for a unit, or they work in a museum, or they work half time or whatever. But they're in it. But you have to want to do it very very hard, because the opportunities are limited and there's no real proper career structure. It makes a superb hobby, but if you want to do it as a career, then you've got to get a degree. Consider studying something that is related, something where the specialism of the career can be brought to bear in archaeology. In that way you get the best of both worlds. What I also tell sixth formers, and people thinking about going into the sixth form, is that a really good track these days is to do something like physics, biology, chemistry, computers, or math.s, and then come at archaeology from that direction.

thirty-one up and going strong

We've just finished the fifth series of the Time Team, so we've made 31 programmes counting the live weekend, and a pilot we made in 1982. Eight are going out in January and February 1998, and then the plan at the moment is to make at least 13 next year, with an option on a possible 13 for the two years after that. The Time Team was thought up by me and the producer Tim Taylor, and it came about when we were making four half-hour programmes for Channel Four called 'Time's Signs'. It took many years to convince Channel Four to risk the money on it, because archaeology was just thought to be boring and a no-go area.

thinking on our feet

I enjoy making the Time Team programmes, but in a very masochistic sort of way. It's very hard work, and there is potential for conflicts all the time, and making sure that the local archaeologists are happy with the way everything's going is my top priority. I need to make sure that standards are OK, too. I find the weekends making the programmes very wearing — I'm glad to get away, really! If I'm within driving distance, I just look forward to driving home on that Sunday evening and crashing out for two days. I tend to go into each programme as cold as I can, so that it's spontaneous, but we do have a production meeting beforehand, lasting a day, when we go through the personalities and the problems, the sources of information, and the likely targets. I usually have a discussion with the producer about a month beforehand about the sort of site it might be and the angle we might take. There's usually about a month's preparation for each programme.

We have up to three researchers working on it. They get a great dossier together using the Sites and Monuments Records, the Record Office and air photos. The shortest run-in we've had I think is about a week, which was a nightmare. But so much of it's thinking on our feet that it doesn't really matter.

the payoff

Making the Time Team programmes is hard work but the payoff is that people enjoy them immensely. It's turned round the idea that archaeology is boring. It's now seen to be whizzy, and in the end, if I look back on it, that's what I've been trying to do all along — to interest as many people as possible in archaeology. So I have to bury my — 'terror' is almost the word that comes to mind! — of another series with the fact that a lot of people now think archaeology is a good thing. People in museums say they get people coming in now who've never been in museums before, and people in units say that if they talk to developers now they say, 'oh, is it like they do on that programme, with the geophysics, and the evaluations? Oh, well, we understand that!' The feedback from the public is fantastic. They don't see it as an academic discipline. Why should they? They see a Time Team programme as an enjoyable thing that's almost like a detective story, that keeps them going as to what's going to happen next. We get hundreds of letters a year. Up to three and a half million people watched each programme in the last series, and we had half a million visitors to our internet site each day we went out live.

— or lack of thought processes

My most embarrassing moment is in the Temple Combe programme. I'd asked for the tithe map, and it was on Sunday morning — I realised we'd all looked at it but hadn't absorbed the information, because of the decisions being made. I was so angry with myself, I just went bananas — and a cameraman appeared and started filming... Michael Grade (then head of Channel Four) thought the whole thing made great television, but they had to decide what was permissible at eight o'clock in the evening. I said leave it all in, because it shows what happens, and this is a warts and all programme.

In the end, most of it was used. The *New Scientist* picked it up and did a review of the programme. The critic said you could see the thought processes going on (or he could have said the lack of thought processes going on!), and he wished there could be something like it for science — a programme that followed people as they worked out what they were going to do. So I don't think it actually did any harm. But if you have any sort of qualms about your image or your academic reputation, don't get involved in television!

awkward questions

There is no time in the programme for detailed debate about issues. You have to give the viewers either a simplified version or a short version of what's going on, and of course that's why Tony Robinson's there. He asks the awkward questions. I think that's good. There's an awful lot of people out there who are very interested, and you have to make it intelligible for non-archaeologists. I feel very strongly about that. That's what we're trying to do, and it's why we get flak from some academics, and that irritates me. I think that *City of Victory* is an absolute model and is exactly what's wanted. At the Trust you're doing locally and through your work and your open days, and books like *City of Victory*, what we're trying to do nationally with the Time Team.

getting a job done

It's surprising how well everybody on the Time Team gets on. In fact Tony thinks it's quite incredible. He tells me that by the third or fourth series of anything he's ever been involved in, the actors are communicating through their lawyers. That's not to say that there aren't squabbles on site, because there are. But I think the difference is that we are archaeologists, not actors, and what we're trying to do is get a job done.

— and don't forget Essex!

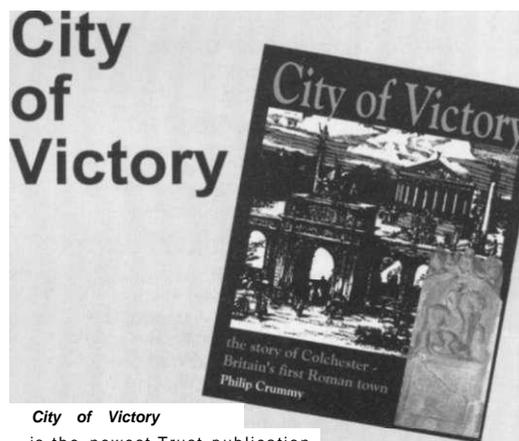
East Anglia is one of the places we have done very little in and we are hoping to go to Norfolk next year. But I would like to go to Essex — in the same way I would like to go to Lincolnshire, I'd like to do more up north, I'd like to do more industrial areas and more in the south-east. They're all targets as far as I'm concerned.

a professor in the supermarket

People are incredibly complimentary about the Time Team. They think it's an absolutely fantastic programme. They say they sit down with their whole family on a Sunday evening, and say: where are they going to this week? — and what will they be getting up to now? Most people just want to shake your hand and say how much they like the programme, and ask when you are coming to their area. I'm not frightened to go to the supermarket, but Tony tells me he has to travel by private car now, because it's too much. But some people say awful things to me now, like 'You are now the best-known archaeologist in Britain'. That feels very uncomfortable. We're trying to make archaeology accessible, and being on television makes it accessible, but then people treat you differently. If you're introduced as professor, people take a step back — it's like digging a big trench between them and you. But you have to try and keep accessibility. Most people call me Mick, and that's great.

Mick Aston talked to Philip Crummy over the 'phone — many thanks to Mick for giving some of his time to the Trust and producing such an enjoyable piece.

Colchester Archaeological Trust



City of Victory

is the newest Trust publication.

It is a modern and 'popular' book, extensively illustrated throughout in full colour and including a series of specially-commissioned reconstruction paintings by the artist Peter Froste.

City of Victory: the story of Colchester, Britain's first Roman town presents the reader with the story of Colchester from its Iron Age origins, through its long Roman history, and to its development by the Normans 1200 years later.

City of Victory is available direct from the Trust for £9.95 (including post and packing). Just send a cheque with your order to Colchester Archaeological Trust, 12 Lexden Road, Colchester, C03 3NF, or you can call in at the Trust in person and buy your copy from an archaeologist! (Please make cheques payable to Colchester Archaeological Trust Ltd.)

The secrets of the Romano-Britons' genes —

new data
from old bones

by Dr Patricia Smith



Biochemists at the University of Essex are working on bones from the Trust's excavation of the Butt Road Roman cemetery. With the help of the Poulter Studentship, Dr Patricia Smith and Ken Vonng have made a breakthrough in extracting DNA from ancient bones. Patricia Smith explains..

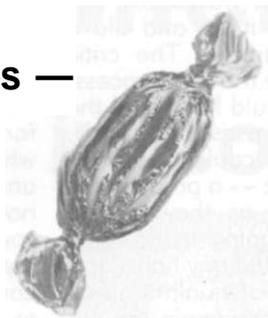
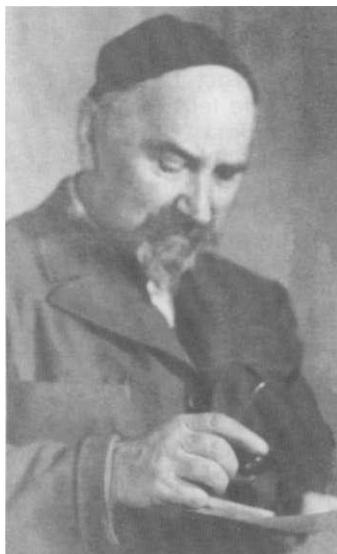
Mr Poulter, founder of the Poulter Studentship

Harold William Poulter, 1880-1962
In a profession that has always attracted the eccentric and the colourful, H W Poulter shone for 30 years as one of the most unforgettable characters at Colchester Museum.

A Yorkshireman by birth, he travelled widely and was involved in various mining enterprises in Canada, Latin America and the Pacific rim. After his travels he trained as a mining engineer in Cornwall. He returned home to look after his mother in Scarborough, and there he became involved in archaeological excavations. He also struck up what became a life-long friendship with Rex Hull. Hull was appointed curator at Colchester Museum in 1926, and he persuaded HW Poulter to join him here, where he served as conservator and assistant curator from 1929 until his death. He brought his mother with him and made his home in an apartment in Holly Trees museum, where he lived for the rest of his life.

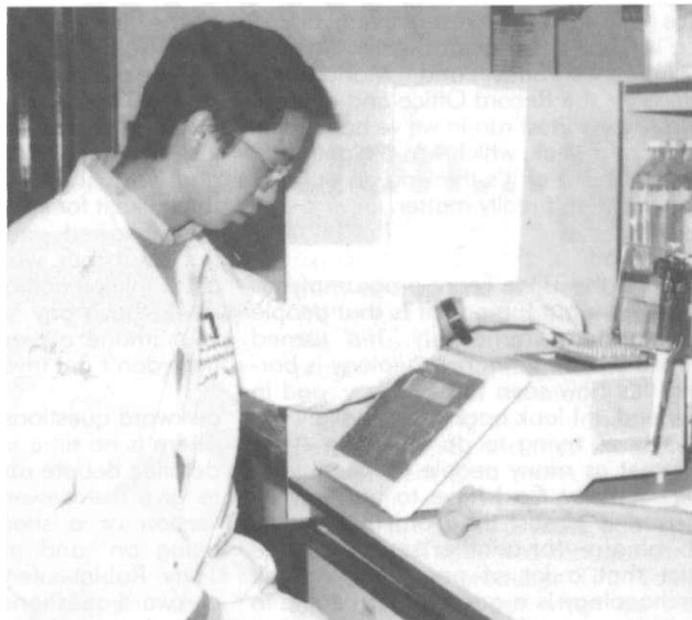
Poulter was a man of many skills. He did site surveying and photography on Rex Hull's archaeological excavations in the town — he is acknowledged in Hull's *Roman Colchester* — he restored pottery, and managed the day-to-day running of the museum service. The model he made of the Temple of Claudius is still on display in the castle today. It is typical of the man that he financed the refurbishment of the conservation laboratory at the museum out of his own pocket. His generosity to the then infant University of Essex was every bit as outstanding and the Poulter Studentship, which he set up to fund research in archaeological science, has helped finance the research described here (and funded 14 PhD studentships in archaeology to date). The tributes that followed his death expressed the great affection in which he was held in the town.

by Dr Paul R. Sealey. (Photo. Colchester Museum)



DNA

Interest in ancient DNA was established long before the appearance of the film *Jurassic Park* in our cinemas. Although *Jurassic Park* was generally welcomed by researchers, as it stimulated much interest among the general public, it did, however, raise unrealistic expectations as to what science can achieve. Few, if any, researchers in this field believe that we can clone a dinosaur — or more to the point would even want to! What we do want, however, is to know how our genes have evolved over the centuries, where populations originate from, which races are distantly related to each other



Above: Ken Vonng (the current Poulter Student) at work with the PCR machine in a lab. at the University.

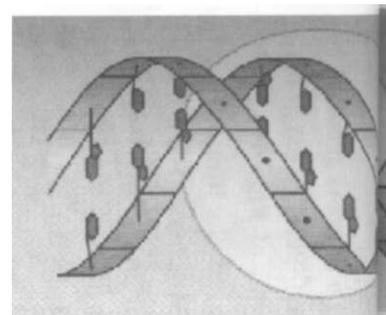
and, quite importantly, why some diseases are associated with particular racial groups. These are the type of questions being asked by a wide range of researchers including, to name but a few, anthropologists (who study human beings), taxonomists (who study classification), evolutionary biologists, and immunologists (who study disease prevention). To answer these questions it is necessary to have a large sample size available to study, something that is very difficult to obtain with archaeological material. Fortunately for us, the Colchester Archaeological Trust excavated over 660 Romano-British skeletons from the Butt Road site, and which are in a good state of preservation. Having access to a superb collection such as this, we have felt like children let loose in a sweetie shop!

DNA extraction

We have concentrated on extracting DNA from femurs (the leg bones), as these are thick, and being sealed at both ends, internal damage by water and micro-organisms is prevented while in the ground. One of the main problems associated with the study of ancient DNA is that of contamination, from both the archaeologists and the

laboratory environment. The best way to remove contamination introduced by everyone who touches the bones is to remove the top millimetre or so from the bone surface. This is done by sand-blasting followed by ultra-violet irradiation, which destroys any DNA on the surface. After this, the bone is kept sterile, and anyone handling the bone or extracts from it must wear surgical gloves and a full face mask. A sample of the bone is then ground to a fine powder, and this is bathed in a solution of chemicals which dissolve the DNA away from the bone solids. Several chemical steps later, we end up with a liquid solution of pure DNA the size of a raindrop. However, the DNA is colourless, and there is simply not enough of it for us to make any genetic analysis.

Any further analysis would be impossible were it not for



the Polymerase Chain Reaction (PCR), invented in 1985. PCR makes use of a naturally occurring enzyme, called "DNA polymerase", which takes one strand of DNA and produces up to a million identical copies of it. With PCR you can choose which region of the DNA in particular you wish to look at; with ancient DNA, of course, it depends on that region having survived the passage of time relatively intact. We have chosen two types of DNA to look at; firstly, the Major Histocompatibility Complex (MHC) genes, and secondly mitochondrial DNA (mtDNA).

MHC and mtDNA

MHC genes are the most polymorphic, or varied, gene system identified to date. The variability in the pattern of the MHC genes determines the ability of individuals to mount immune responses and is closely associated with certain diseases such as multiple sclerosis and diabetes. Different types of MHC genes predominate in different countries, and even within countries, for example, in Cornwall and Brittany there are pockets of the population where the MHC types are different to those of the neighbouring populations. Determining the MHC types of the Romano-Britons buried in the cemetery excavated at the Butt Road site will help us in determining MHC gene flow, and what diseases they were susceptible to compared with the present-day population.

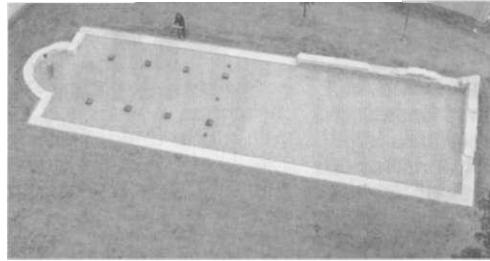
The other type of DNA we are looking at, mitochondrial DNA (mtDNA), is found in small organelles called mitochondria which take the oxygen we breathe in and convert it into the energy which powers our muscles and makes us function on a

day-to-day basis. mtDNA is much easier to find in ancient samples than MHC DNA as there are 600-1000 times more copies of it in each cell. In addition, we only inherit mtDNA from our mothers and so have only one type of it, as opposed to MHC DNA which we inherit from both parents. mtDNA has some variable regions which are associated with particular groups, so by looking at these regions we can say what race a person belonged to. This is of great interest to us and to the archaeologists, as we may be able to determine where in the Roman Empire the Romano-Britons originated from. By combining the information we obtain from the MHC and mtDNA we also hope to determine family relationships among the skeletons.

The project

Technically this is an extremely difficult project, and it utilises all the latest technology available in the field of molecular biology. As such, it is very expensive to run, and has been supported by the University of Essex Poulter Studentship, which pays a stipend to enable a PhD student to work on the project. The University of Essex Research Promotion Fund has been generous in supplying a grant for consumables. We are also fortunate in having collaborators at the National Blood Transfusion Service in Colindale and at the Institute of Neurology in London, who allow us access to their machinery. I suspect that they too are slightly in awe of the potential goldmine of information present in these skeletons, and would quite like to be let loose in the sweetie shop as well!

Dr Patricia Smith is a biochemist currently researching at the University of Essex.



Butt Road church as it is now at the Maldon Road roundabout.

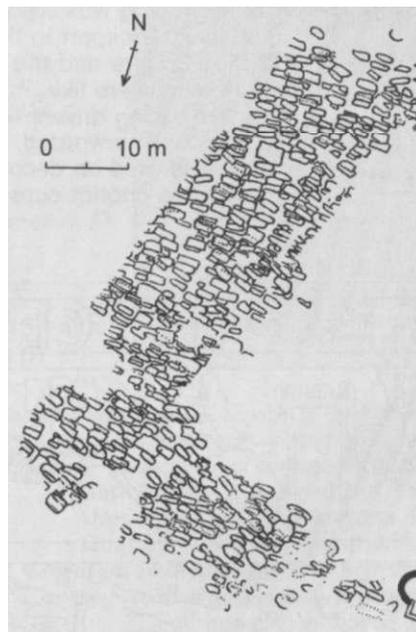


Butt Road — Roman church and cemetery

The site of the police station at Butt Road was excavated by the Trust, mainly in late 1970s. With the excavation of nearly 700 graves, it was one of the largest investigations of a Roman burial ground in Britain. The cemetery had two main phases. At first (in the 3rd century), the graves were laid out north-south, but later, in about AD 320/40, the cemetery was replanned, with the bodies subsequently being placed east-west in a characteristically Christian manner. One important feature of the site is a presumed church, which stood at the edge of the cemetery. Another is evidence for family plots in the graveyard. This is deduced from relationships between some of the graves, and from the distributions of certain finds and variations in bones (especially skulls), as well as the locations of skeletons showing congenital abnormalities. The large number of skeletons means that the DNA researchers have a large sample to work with, and the evidence for family groups suggests that the whole collection is likely to be heavily cross-linked genetically and thus of great interest for investigations of this kind.

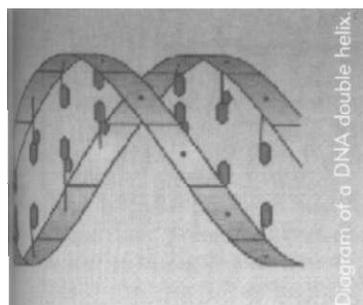


Above: two skeletons, of a man and a woman, in their grave at the Butt Road cemetery.



Further reading on the excavation and site: CAR 9 is the detailed technical report for Butt Road (excavations of Roman and later cemeteries, churches, and monastic sites in Colchester, 1971-85.) There is also the Trust's booklet called *Secrets of the Grave* (available from the Trust), and there is also a short section in *City of Victory*.

Plan of the excavated graves and church. Colchester Archaeological Trust



Making Roman glass today

by Mark Taylor and David Hill

— to launch their new, even more authentic reproduction
with a special offer

Mark Taylor and David Hill are glassmakers based in Hampshire. They make high-quality reproductions of a range of examples of Roman glass by hand, using traditional techniques. Their glassware is in great demand.

One reproduction made by Taylor & Hill is based on a cup from Colchester, the fragments of which were found by the Trust.

Roman glass

The technique of glassblowing was invented in the 1st century BC; migrating glassmakers ensured the rapid spread of glassblowing across the Roman Empire. Most examples found in the UK are likely to have been imported. Glassblowing meant that glass vessels could be produced much faster and so compete with pottery. Despite the fragility of glass, enough fragments have been found to give us a good picture of the diversity of five centuries of Roman glass. Roman glass was a soda-lime type, made of silicon, sodium and calcium oxides, with potassium, magnesium and aluminium oxides; the characteristic pale blue-green colour is caused by an impurity, iron oxide. Our glass is closely based on Roman ingredients, but with the advantages of modern glass technology we produce a glass which is easy to work by hand, but with the colour and characteristics of Roman glass, ie thinness, light weight, bubbles and 'cord', and a shiny fire-polished finish.

Chariot racing was a popular spectator sport in the Roman Empire and the charioteers were like modern racing drivers — famous, well rewarded, and celebrated on decorated glass chariot cups...

Chariot or circus cups

Mould-blown glass beakers with scenes of chariot racing and/or gladiatorial combat were fairly common during the second half of the 1st century AD, and have been found throughout the western provinces of the Roman Empire. Chariot-race cups are known as circus cups, the *circus* being the race track. These cups were perhaps like a souvenir of a popular sports personality today.

Four fragments of glass were found by the Colchester Archaeological Trust at Balkerne Lane. These fragments are nearly one quarter of one such beaker, a cylindrical cup with a single racing frieze, possibly made in or around Cologne. It depicts the victorious charioteer Olympe, with chariot (*quadriga*) and team of four horses, holding aloft his winner's wreath and palm, with the inscription

The most famous race track was the Circus Maximus in Rome, and details of the 'spina' (the central barrier of the race track) are often included in the beakers, such as the three 'metae', the conical turning-posts, as well as the central obelisk and the seven bronze 'ovarium' (eggs) or 'delphinarium' (dolphins) which indicated to crowd and drivers the numbers of laps remaining (see frieze below).

OLYMPE VA. Part of this is now used as the logo of the Colchester Archaeological Trust. Fortunately, other fragments of similar beakers have been found at sites including London and Vindonissa in Switzerland, and a virtually complete example is held at the Musée Archéologique in Namur, Belgium, enabling us to reconstruct the whole design.

The design

There are four chariots in the full design of this example, which has a main frieze of the race, with the inscription of the four names (with VA, for *vade*, meaning go, or *vale*, meaning farewell), and

Sadly, nothing seems to be known of Olympe (Olympus), but his name recurs on most of the different examples of circus beakers, suggesting that he was a frequent and popular competitor. Three of his fellow drivers named on other cups are described in antiquity. Incitatus is mentioned by the Roman writer Martial, and two others are featured in contemporary inscriptions. Pompeius Musclosus won an extraordinary 3,559 races, and Crescens was killed (presumably in a race) aged 22, having already earned the vast sum of 1,588,346 sesterces by winning races.



Above: Mark Taylor at work, finishing a newly-blown circus cup prior to annealing.

Below: the complete frieze.



a lower frieze with a hunting scene and trees. Three chariots are racing and the winner is standing — this may record one actual race, in which Olympe was the winner, as he is shown at the front, ahead of Ierax, Pyramus and Eutycus, in the complete frieze.

All of the known chariot race cups show the four teams (whites, blues, reds and greens) racing from left to right around the vessels, reflecting the spectators' view of the event.

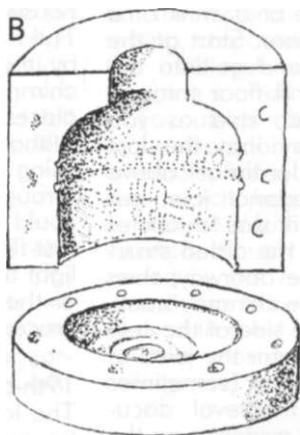
Production

We now produce reproductions of twelve different circus beaker designs, intended to complement our range of free-blown Roman glass reproductions, and our methods of production follow what we believe to be similar processes to those used by Roman artisans.

Firstly, a **former** (A) has to be produced on a lathe. It includes the horizontal bands of the frieze and the foot rings on the vessel's base, as well as a "dome" and "chimney" above the lip of the beaker.

Next, a three-part plaster **mould** (B) is made from the former. When dry, the beaker's design is carefully drawn backwards onto the

three inner surfaces. The design can be engraved using the simplest of tools such as iron needles with both sharp and rounded ends. As the engraving progresses, one can check the depth of sculpture by taking plasticine impressions.



When all three parts of the mould have been engraved, it is re-assembled, and a clay **archetype** (C) is made.



At this stage the Roman artisans probably fired the archetype in a kiln, producing one or more durable masters from which many moulds could be made by pressing clay around the surface of each one, and carefully cutting it away to provide clean-fitting seams.

After drying, these three parts were fired. The glass-blower could now expand a glass bubble inside the mould whilst his assistant held the three parts together. After the blown vessel was annealed (cooled in a controlled cycle to remove stresses in the glass), the dome or 'moile' would be cracked off, and the lip of the beaker ground to produce a safer edge.

Our moulds are cast in bronze for ease of use and durability, but carefully chased (finished) to impart a similar surface texture to the glass as on the Roman originals.

Text and pictures by Mark Taylor and David Hill.

For further details on Roman mould-blown glass, including circus cups, see 'Decorated mould-blown glass table-ware in the 1st century AD' by Jennifer Price, in 'Roman glass — Two Centuries of Art and Invention' edited by Martine Newby and Kenneth Painter (published by the Society of Antiquaries in 1991).

CAR 8 is the Trust report which deals with the vessel glass found in excavations in Colchester 1971-85 (by HE M Cool and Jennifer Price).

See the inside back cover for the Trust's chariot-cup fragments.



The Trust logo.

Special offer

for readers of *the Colchester Archaeologist*

to launch their new version of
the chariot race mould-blown beaker

a hand-made reproduction based on the example from Colchester is being made available to readers

by **Mark Taylor and David Hill, Glassmakers**

at **£11** each
(including post & packing)

— usual price **£16** each
(including p & p)



To support the Colchester Archaeological Trust, Mark Taylor and David Hill, who make a magnificent range of free-blown reproduction Roman glass vessels, have made a generous offer to donate **£2** to the Trust for every beaker purchased in this special offer. These superb lightweight beakers are directly based on originals found in Britain and on the Continent. They are in a pale blue-green glass, made entirely by hand and blown into three-piece moulds, with ground rims. These beakers make a beautiful addition to any display as well as being tactile, informative and fascinating ornaments.

This is **not an offer to be missed** — and it helps the Trust as well!

Please make all cheques payable to Colchester Archaeological Trust Ltd: send your order, with cheque for £11 per item required (inclusive of postage and packing), to

**Mark Taylor and David Hill, Glassmakers,
Unit 11, Project Workshops, Lains Farm,
Quarley, Andover, Hampshire SP11 8PX.**

Orders will be despatched direct from the workshop as soon as they are received, and will be sent individually boxed. (Catalogue sent on request.)

— new reproduction available from February 1998
Offer ends 31st December 1998

The **Rose & Crown** is one of the more picturesque buildings in the town, near East Bridge, on the corner of the old junction of the roads to Ipswich, Harwich and Tendring. The Royal Commission on the Historical Monuments of England (RCHME) did a survey of the building ahead of conservation works in 1997. The author of the report guides you round the building...

The Rose and Crown Hotel, Colchester
The Rose and Crown Hotel on East Street has been a familiar Colchester landmark for much of this century, with its multiple gables, undulating tiled roofs, black-painted timbers and white-painted panels of wattle and daub. Yet like many such buildings, until recently we knew more about its 19th- and 20th-century history than we did about its medieval origins. There is a good reason for this. Documentary sources are much fuller for the recent past than for the remote past. Even where early documents survive, the process of matching them to surviving buildings is fraught with difficulties, and they rarely tell us more than a fraction of what we wish to know. To understand these buildings, therefore, we have to look at the only substantial body of evidence which is left to us — the building itself. Essex County Council, already alerted to the significance of the Rose and Crown, asked the RCHME to investigate it in advance of conservation works, and this was our opportunity to look in detail at the fabric of this ancient and fascinating building.

Early 14th-century aisled hall

At the heart of the Rose and Crown are the substantial remains of a timber-framed aisled house probably dating from early in the 14th century. Essex has more than its fair share of aisled medieval houses, but from a national perspective they are a rare commodity, and the often fragmentary evidence which they contain is correspondingly precious.

For those who are unfamiliar with aisled houses, the basic form may be more familiar from churches. Aisled buildings have a tall central 'nave' flanked by lower aisles, the roofs of the aisles being continuations of the nave roof. The division between the nave and aisles takes the form of an arcade supported by widely-spaced posts (or in stone buildings by columns), permitting free movement from one to the other. Aisled houses are among the earliest which survive in this country, timber-framed examples existing from about 1200.

The principal room of the Rose and Crown was originally a hall, open to the roof. At the west end there was a more private room — what came to be

known in the 14th century as a parlour — and at the east end there was a service room or rooms. First-floor accommodation was limited to a room above the parlour and probably one above the service end as well. The hall alone was heated, by an open hearth. Little of the original structure is visible externally, but at the west end, in the entrance to the car park, you can see two surviving posts, set in from the ends of the gable; these posts, and some re-used studs (vertical timbers) in the same gable, all have halving joints which hint at the original form of the building.

Inside (for the price of a drink or a meal) one can see more. Start at the rear, main entrance and go into the pub. Follow the ground floor through towards the west end, and as you approach the doorway into the last room look at the slender timber above the door, with a diagonal joint cut across its face. This joint was for one of the passing braces of the aisled structure. Walk through the doorway, then turn to look back at the chimney stack, and you will see, in the side of the ceiling beam, the mortices for the joists of the room above the parlour (sometimes called the solar in medieval documents). There is more evidence on the first floor, but the hotel premises are not open to the public.

Aisled halls were not easily adapted to suit the needs of later generations; consequently they are rarely encountered without a heavy disguise of

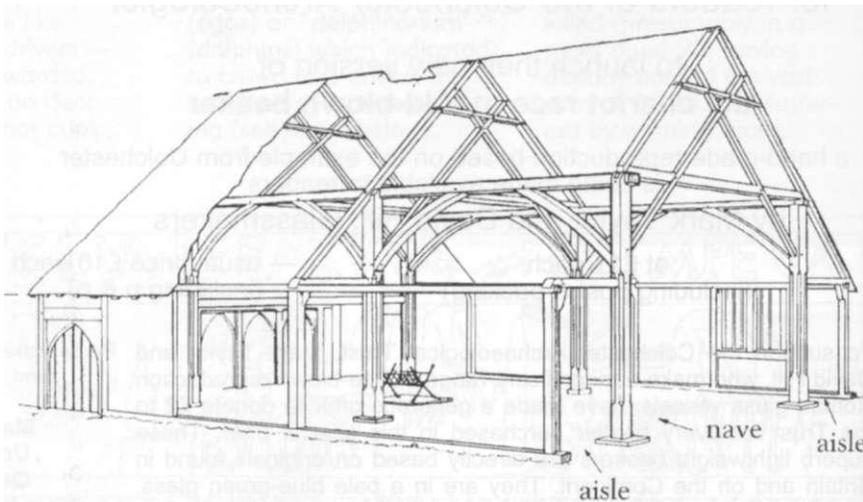
the Rose & Crown Hotel

Explore the Rose & Crown — from 14th-century aisled hall to 20th-century restoration

alterations. The present appearance of the building is largely the result of a complex sequence of mainly 15th-century alterations and additions which transformed the relatively simple aisled structure into a hall-and-cross-wings house with an addition at the east end. The transformation was made possible by the construction of a large brick chimney stack in the hall, with fireplaces heating no less than four rooms. Without the open hearth and its smoke rising to the rafters before escaping through a hole in the roof, the hall could be ceiled over and an additional first-floor room created, but in order to light the upper room the low side walls of the aisles had to be rebuilt. In the process the original roof was lost.

19th-century droving inn

The later fortunes of the building can be summarised quite briefly. It was documented as an inn in 1741 and remained one until late in the 19th or early in the 20th century. Its position on the principal roads from Colchester to Harwich and Ipswich no doubt contributed to its trade, as did the presence



Perspective view of an aisled hall.

This is based on a Kent example, and not all the features shown here are paralleled at the Rose and Crown. (RCHME © Crown Copyright)



The Rose and Crown in 1921.
It had ceased to be a public house and was divided up into three cottages. (RCHME © Crown Copyright)

made the building more comfortable to live in, and the sash windows and panelled doors which brought it up-to-date with the fashions of the day. These too were historical evidence, but they jarred with the vision of the restorer. It is a useful reminder that in interpreting old buildings we need to understand not only the physical evidence that has come down to us, but also the minds of those who have shaped the building throughout its history.

of a nearby cattle fair (at St Anne's field). When it changed hands in 1857 much of its business was tied up with the livestock droving trade. The out-buildings included a slaughterhouse, and the inn was known as a place where animals were assembled before being taken to various local markets (in the town, there was one in the High Street, and another at Bury field). When the inn closed, the building was converted into three cottages and fell into disrepair, becoming at risk of being demolished.

Conservation — old style

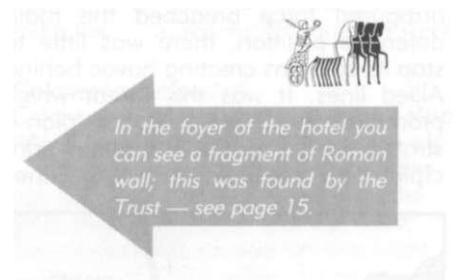
Twentieth-century restorations of historic buildings may seem an odd focus for our interest, but unless we appreciate something of their nature we may be led astray in looking for earlier evidence in buildings. The Rose and

Crown was restored between 1937 and 1939 by Mrs Grace Faithful Roper, who over a number of years restored a series of Essex buildings (including the timber-framed building on the opposite side of East Street). Mrs Roper probably saved the building from destruction, but the restoration had an uncompromising character, aiming to recreate the medieval building by completely stripping it of all later features.

To outside observers the most dramatic alteration was the removal of the external plaster, bringing to light timbers which had been concealed for centuries. Mullioned windows were inserted, though not in every case warranted by the evidence. There is now virtually no trace of the interiors which evolved in the 18th and 19th centuries — the plastered walls, underdrawn ceilings and additional fireplaces which

I am grateful to the management and staff of the Rose and Crown for their assistance in the making of the record on which this article is based. The full record is deposited at the National Monuments Record Centre in Swindon. Copies can also be consulted at the Essex Sites and Monuments Record in Chelmsford and at Colchester Public Library.

Article written by Adam Menuge of the RCHME, 1997



The Rose and Crown in 1997.

The timber framing has been exposed, mullioned windows have replaced sash windows, and the tall chimney on the front has been dismantled.

(RCHME © Crown Copyright)



World War Two survey

Essex County Council Archaeology Section is conducting the current WW2 Defences project to survey and record in detail the fortifications along the county's four major defence lines, one of which was the Eastern Command Line. Colchester was a key town on this line.



Colchester at war —

the WW2 defences of Colchester

by Fred Nash of the ECC

The defence of the county

In June 1940, the town of Colchester, with its outstanding Roman remains from an invasion nearly 2,000 years earlier, faced another threat from across the Channel. In the immediate aftermath of the evacuation from Dunkirk, a German landing on the beaches of England seemed imminent; a question not of if, but when. Working around the clock, anti-invasion defences were being constructed all over Britain, and nowhere more so than here.

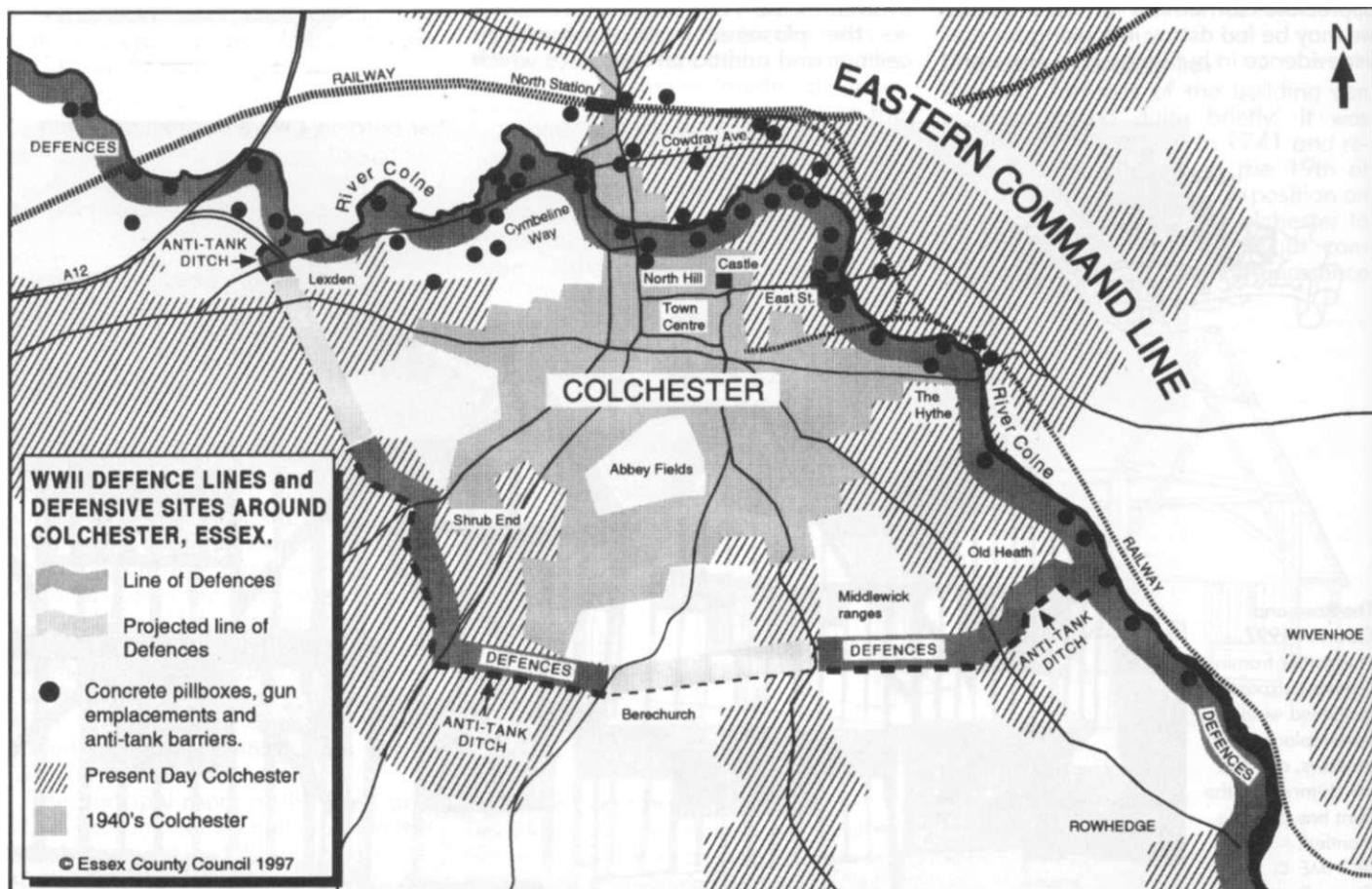
It had been seen in the invasion of the Low Countries that once a German armoured force breached the main defensive position, there was little to stop its columns creating havoc behind Allied lines. It was this threat which prompted the Chiefs of Staff to plan a strategy based on the "stop-line" principle with multiple anti-tank lines

between the coast and the heartland of Britain. The first of these linear barriers to be met by a German invasion force driving in from the north-east Essex coast would have been the Eastern Command Line, a defensive position which originated at the mouth of the River Colne at Mersea Island and, using the river as an anti-tank barrier, headed north-westwards across the county to Sudbury and Suffolk. At its southern end, it hinged on the garrison town of Colchester, the capture of which would not only have opened up a large part of Essex but would also have been a major industrial, military and communication prize for the German forces.

The town was very heavily defended. The defensive line led along the west bank of the River Colne as it curves its way through the Hythe area, East

Street, the old brickworks south of Cowdray Avenue, the Castle grounds, North Hill and to Lexden; the line was studded with concrete pillboxes sited to provide overlapping fields of fire. The wooden bridges across the river were demolished by Army engineers; the shallow crossing points of the river were lined with concrete and steel anti-tank obstacles; and road barriers were set up to block the approaches into town. Fortified emplacements and machine-gun positions faced across the river from warehouses and sheds along the wharfsides. More pillboxes were constructed at Colchester North Station and the Ipswich Road/St Andrew's Avenue junction, in positions on high ground overlooking the river.

In all, the sites of 42 pillboxes have been recorded by the WW2 Defences project around the north and east of



the town, over a distance of no more than four and a half miles. Of these, just seven remain, one having been demolished at North Station car park as recently as 1996.

In 1942, spigot mortars were issued to the Home Guard. Each one required a concrete pit with a central mounting pedestal. Eleven of these emplacements were constructed to add their

More to come

The great number of defensive sites on the Eastern Command Line around the north and east of the town still only represents half of the picture of the town's defences. The remit of the current WW2 Defences project covers the detailed surveying and recording of the fortifications along the county's four major defence lines, including those along the River Colne stretch of the Eastern Command Line. However, it is known that, following the concept of an "anti-tank island", Colchester was to be defended against attack from all sides. The river provides a boundary to the north and east, but there is no natural obstacle to the south and west. So a huge engineering work was undertaken — the digging of a four-and-a-half mile anti-tank ditch, up to 20 feet wide and 10 feet deep. Although not due to be surveyed in the field as part of the current project, it is possible to trace much of the path of this line, and its supporting defence works, from contemporary records and aerial photographs. Starting on the west bank of the Colne south of the Hythe, it headed westwards to Old Heath Road



This pillbox at North Station car park survived until 1996, when it was demolished for the ASDA development.

Above: concrete blocks in Colchester Castle park in 1997 — during WW2, the river at this point was silted up and shallow, so these blocks were embedded along the river bank, and linked by heavy cables, to prevent tanks crossing the river. Go and have a look at them, if you've ever wondered what they are!

Even the recent past is archaeology, and it is all around us — this is why archaeological work is so important, to record things as we alter our environment. The record survives even though the object is lost. *Colchester Archaeological Trust*

before crossing the rifle ranges at Middlewick to Berechurch and Layer Road. Here it turned northwards through Shrub End to rejoin the Colne at Lexden, thus completing the encirclement of the town. The whole of this southern section would have been lined with pillboxes, anti-tank road barriers and gun positions in much the same density as the river section, although how many survive remains unknown.

Colchester defended

Colchester did not suffer greatly during WW2, and attack was all from the air.

The town was bombed quite often but not badly: 54 people died in the town during the war, and the worst destruction was caused on one night in February 1944, when 20 houses and shops and three factories at St Botolph's were destroyed in an air raid.

Colchester has a long defensive and 'offensive' history, as does nearby Harwich. Read on for more information on the coastal defences..

Top left: the Colchester Home Guard manning a Northover Projector — this launched a glass phosphorus grenade which burst into flames when it broke.

(© Imperial War Museum: H.22520)

Left: map of the recorded defences around the north and east of Colchester during WW2. The Eastern Command Line followed the River Colne from its estuary at Mersea Island to Wakes Colne before heading northwards to Suffolk. The defences around the south and west of the town have only been recorded from documents and photographs.

(© Essex County Council)

Right: The Colchester Home Guard on exercises with a spigot mortar. The gun could be deployed in open ground, but was more usually mounted on a concrete pedestal in a purpose-built octagonal pit, as here.

(© Imperial War Museum: H.22518)



Around the county — Essex in 1997

The Essex County Council Archaeology Section



Work of the RCHME (Royal Commission on the Historical Monuments of England) at Beacon Hill Fort in Harwich.

Coastal artillery battery

The impressive and complex remains of a large coastal artillery battery, known as Beacon Hill Fort, in Harwich, were the subject of a detailed photographic and drawn survey between February and April of 1997. The battery formerly protected the Stour/Orwell estuary and the route into Harwich harbour. The survey was undertaken by staff from the Cambridge office of the RCHME on behalf of Essex County Council.

The present remains date largely from the 1880s and after, but there were much earlier fortifications here. Beacon Hill, situated between the ancient port of Harwich and the Victorian spa resort of Dovercourt, was the site of a Henrician blockhouse and then a Napoleonic gun battery (the Redoubt, built in 1808, is 100m away, with the site of another gun battery at Bathside Bay). Both the Napoleonic and older works at Beacon Hill have been lost to quarrying and coastal erosion. Subsequently, around 1870, a practice battery of three guns was constructed for the Royal Garrison Artillery volunteers.

Radical coastal defence

Following the results of a secret defence committee, construction of the present installation began in 1889; it was one of a new generation of forts designed to mount the new breech-loading

guns. The design was radical for coastal defence, with a new, low profile, built to blend with the natural topography when viewed from the sea. It contained six guns in concrete emplacements with a range of support buildings: magazines, stores, shelters, etc. Beacon Hill Fort was the first coastal site to utilise the Twydall Profile, on its landward side, an innovative arrangement of earthworks and fencing which was designed for infantry to repel ground assault. By 1892, the fort was fully armed, and during the 1890s it was maintained at peak efficiency.

The 20th century

The fort was enlarged at the turn of the century and further developments occurred during WWI and WW2, with changes in armament and ancillary structures. During WWI, Harwich was in the front line of defences, and the Fort was augmented with two 1-pounder automatics, the first anti-aircraft guns to be installed here. The harbour was packed with destroyers, and for the duration of the war, Harwich stood ready — but the only German warships to enter the harbour were the surrendered U-boats brought here after the Armistice.

Early radar

During WW2, it was recognised that the main threat would be from the air, not from the sea, and various measures were put in place to give the guns and the garrison greater protection. There was also an interesting development in the form of a brick tower north of the fort, built in 1940, for early experiments in radar. This is one of the earliest radar emplacements in the country, and some internal aerial array still survives.

Post-war

Beacon Hill fort continued in use until it was decommissioned by the Ministry of Defence in 1956, although a token military presence of a single soldier one day a year was maintained until the early 1970s. Today, Beacon Hill Fort contains an impressive and diverse range of structures which effectively illustrate much of the development of coastal artillery technology in the late 19th and 20th centuries.

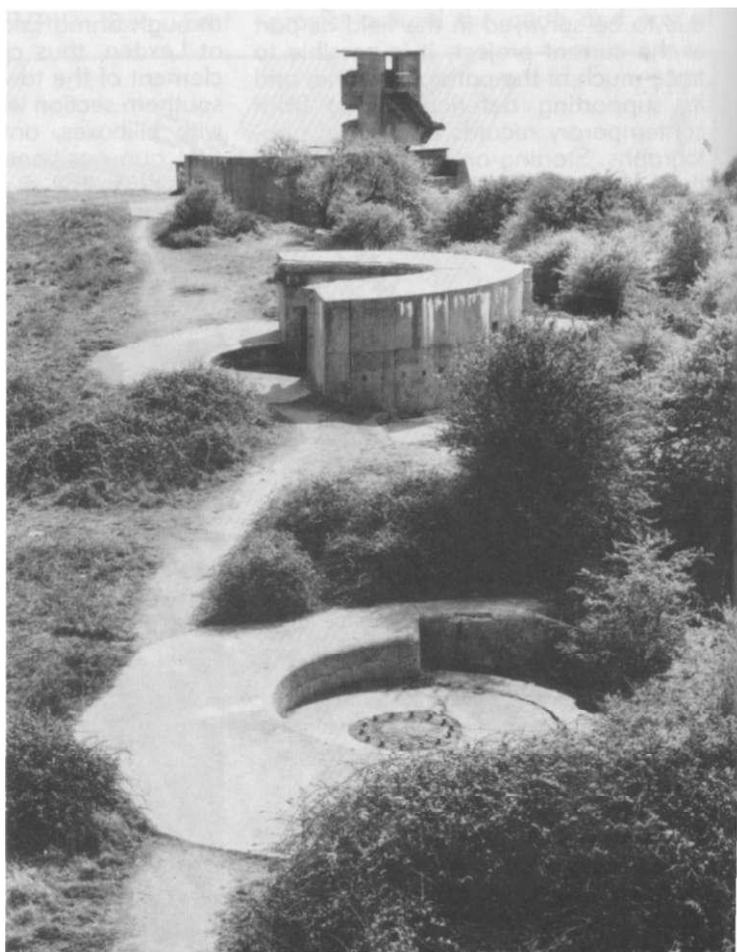
Copies of the full site report may be purchased from RCHME, Brooklands, 24 Brooklands Avenue, Cambridge CB2 2BU; tel. 01223 324010. A management report is available from Tendring District Council for £3.00.

Beacon Hill Fort is a Scheduled Ancient Monument

and is on land which is designated as public open space. The site is now overgrown, but there are plans to develop it as a museum.

Beacon Hill Fort is only one of the sites of historic interest in the old town of Harwich, and which are all parts of its long maritime and defensive history. (See the advertisement opposite for more details.)

Three of the main gun emplacements at Beacon Hill; a 4.7" quick-firing gun emplacement built in 1892 (foreground), a 6" breech-loader gun emplacement of 1890, replaced around 1904 by a 6" Mark VII gun and with a WW2 protective casemate over (centre), and the WW2 twin 6"-gun emplacement with its prominent fire control tower (background) — looking out to sea. (National Monuments Record BB97/5431; © Crown Copyright reserved)



Cressing Temple

Cressing Temple is owned by the Essex County Council and is open to the public as a visitor site and for various events, including an archaeological Field School for amateurs. Cressing Temple is a complex of agricultural buildings once associated with the Knights Templar.

Since 1993, the Cressing Temple archaeological team has been working to locate, map, and put into its proper context the Tudor manor house at the site; the Field School excavations of August/September 1997 brought this phase of the study to a successful conclusion.

Previous excavations unearthed parts of several medieval structures including a stone chapel and hall and a succession of timber buildings, as well as a brick cellar and other substantial brick foundations. A resistivity survey provided more indications of the outline of a complex structure which incorporated the medieval

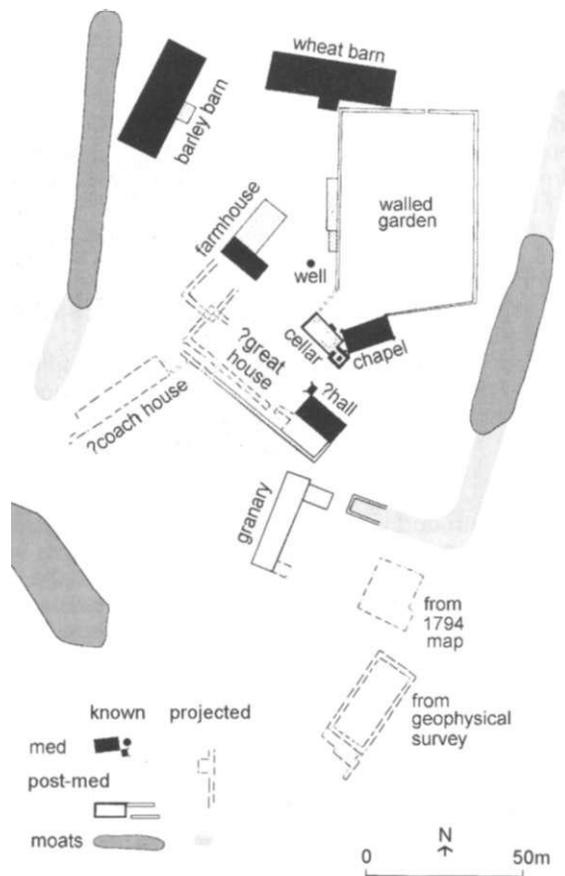
buildings into a larger brick mansion. From 1994, the annual Field School excavations have centred on parts of the 'greate house', re-excavating the chapel and cellar at the north-east corner, and examining a pair of medieval stone houses, one of which had a Tudor cellar sunk into it.

The completion of the new visitor centre marks the end of most development work on the site and few groundworks will be undertaken here in the foreseeable future.

New discoveries

The 1997 trench was positioned in the south-western corner of the Tudor house. Small test excavations confirmed the presence of brick walls and demolition rubble and a larger trench was opened up for the Field School.

The excavation revealed the boulder clay subsoil sloping away to the south-west, with a much steeper drop or bank across the middle of the trench. This surface had been cobbled over in the late



Plan of the Cressing temple complex. (© Essex County Council)

Historic Harwich is well worth a visit

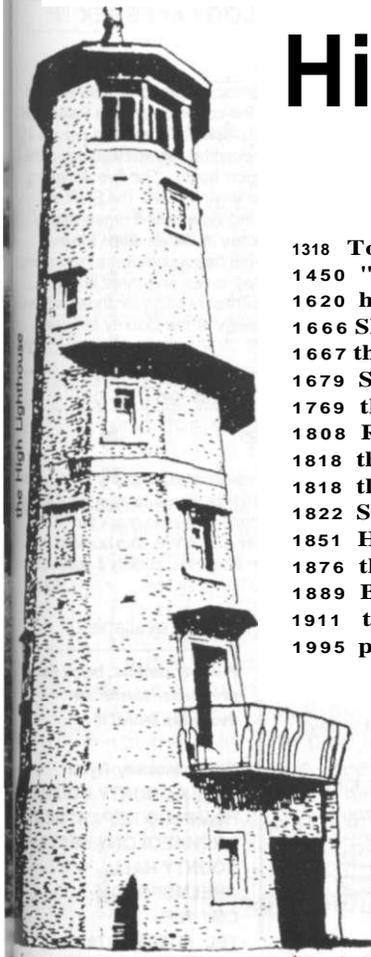


- 1318 **Town Charter** granted by Edward 11.... *historic documents held in the Guildhall*
- 1450 **"Foresters" built**.....*the oldest surviving house in town, in Church Street*
- 1620 **home to the Mayflower**.....*see Captain Jones' house, in King's Head Street*
- 1666 **Shipyard bell installed**.....*see the bell at Navyard Wharf*
- 1667 **the treadwheel crane built**.....*now on Harwich Green, it is unique in the UK*
- 1679 **Samuel Pepys MP for Harwich**.....*see plaque on wall of Quayside Court*
- 1769 **the Guildhall built**.....*contains rare wall carvings — visit on public open days*
- 1808 **Redoubt Fort built**.....*open to the public, with historic guns, a small display, views*
- 1818 **the Low Lighthouse built**.....*now houses the Maritime Museum*
- 1818 **the High Lighthouse built**.....*now houses the Wireless Museum*
- 1822 **St Nicholas' Church built**.....*organ newly restored*
- 1851 **Ha'penny Pier built**.....*now the Visitor Centre, on the Quay*
- 1876 **the Lifeboat house built**.....*now a museum; climb aboard a real lifeboat*
- 1889 **Beacon Hill Fort built**.....*the remains are accessible on Beacon Hill*
- 1911 **the Electric Palace built**.....*now the oldest working cinema in the UK — see a film!*
- 1995 **painted mural on 90-foot long wall**.....*in Wellington Road, it depicts Harwich buildings and ships*

C o m e a n d v i e w t h e b i g s h i p s
— **numerous cafes, restaurants, and pubs**

~ the Harwich Society has been working to improve Harwich for over 25 years ~

The Harwich Society organises guided tours for parties of 10 or more at any time by prior arrangement (tel. 01255 502668). Individuals or family groups are invited to call in at the Ha'penny Pier Visitor Centre, May 1-August 31, for advice.



medieval period to form an all-weather yard surface. The north-east corner of the trench was occupied by the corner of a substantial building with 1 m-wide brick footings laid over rammed flint foundations. The corner, which was almost on top of the bank, had been reinforced by especially deep brick rubble foundations and an even broader brick footing.

Along the western side of the excavation a thick dump of silt and cess had been thrown down the bank and later capped with a thick layer of clay. Into this a 1.5m-square foundation of brick rubble had been set and covered with a layer of mortar, on which was built a solid brick structure, only a small part of which survives. More walls once existed to the south and west, showing that the complex continued in this direction. The square foundations were similar to those reinforcing the corner of the house and may have supported a large gateway. Between the two structures the cobbled yard had been extensively repaired, and several wheel ruts were found, indicating a well-used way around the house.

The Field School

The 1997 Field School at Cressing ran for five weeks in August and September. The courses include lectures and workshops on recording,

stratigraphy, surveying and artefacts. For the first time there was a workshop on the identification of animal bones, and sessions on fieldwalking were included. The trainees were a varied group, including high school and university students from as far afield as Edinburgh and Milan, and local retired people.

Essex place-names project

People from all walks of life and local groups have, over 1997, been recording the names of places, farms, fields, streams, woods, streets, former landowners and tenants as part of the Essex place-names project. They have been using all sorts of sources — old documents such as the Tithe Award dating to the 1830s and 1840s, plus old estate maps and deeds. Some have been looking more closely at their parish on the ground to find evidence of former features such as mills, field boundaries or old cottages. Many no longer exist, but traces may survive in the form of mounds, ridges in fields, and kinks in an otherwise straight lane.

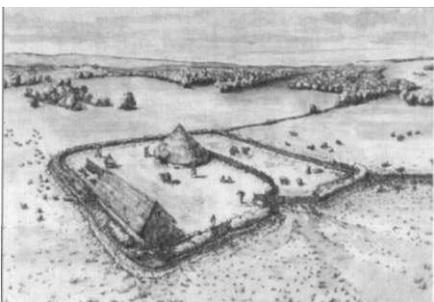
All this information is noted on forms and then transferred to a computer database. This sorts and analyses the information in a way that is useful to historians, archaeologists and land-

owners. A large number of old names suggest reasons for their use. In Cressing parish, for example, a field called *Moulshams* was probably owned by one of the Moulsham family; similarly a part of Chelmsford is still called Moulsham. Other fields called *Egypt meadow* and *Bombay lands* would have been a long way from the farmstead, necessitating a tedious journey there and back.

In Cressing a field called *Hanging Bags* is on a slope. In Strethall and Little Bromley, fields called *Clapit Shot*, *Potash Meadow* and *Potash Close* were once quarried for clay (to make pottery) and potash (to use as fertiliser). One in Mountnessing called *Brick Kiln Field* marks the site where bricks were fired; although no kiln remains can be seen here, archaeological investigation has revealed medieval pottery kilns in nearby Fryerning.

A field called *Blowers* was documented as being the property of Adam le Blower in 1258, and he was perhaps the man who worked the bellows in the smithy's forge. Of thoroughly enigmatic nature, however, is *Repentance Field* in Greensted-by-Ongar.

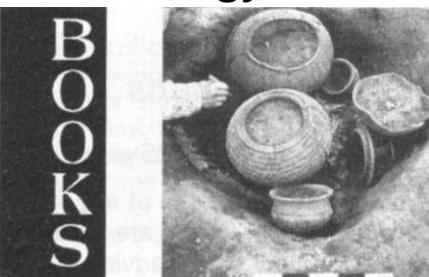
Over 130 parishes, a quarter of the total in Essex, are now being studied, and the information should become available in the Essex Record Office for future researchers.



Essex County Council



Archaeology Section



East Anglian Archaeology Titles:

EAA 25 Excavations at Hill Farm, Qestingthorpe.
J Draper 1985 £6.50

EAA33 Excavations at Woodham Walter and an assessment of Essex enclosures.
D Priddy and D Buckley 1987 £5.40

EAA 41 Excavations at Great Dunmow, Essex.
N Wickenden 1988 £7.40

EAA 42 Archaeology and Environment in South Essex.
T Wilkinson 1988 £7.40

EAA43 Excavation at the north ring, Mucking, Essex.
D Bond 1988 £3.40

EAA71 The Archaeology of the Essex Coast Volume 1. The Hullbridge Survey Project.
T Wilkinson and P Murphy 1995 £26.50

EAA 75 Excavations at North Shoebury, Settlement an Economy in south-east Essex 1500 BC - AD 1500.
J Wymer and N Brown 1995 £22.00

THE ARCHAEOLOGY of ESSEX

Ed. Owen Bedwin

This new publication presents an up-to-date account of the archaeology of the county, from the Palaeolithic to the Industrial period. Specialist authors provide 21 chapters, 16 of which describe the archaeology of the county on a chronological basis. The five remaining chapters deal with; the environment, the SMR and historical accounts of individuals and organisations involved with archaeology in Essex since the war. This 232-page book also has a comprehensive index, 70 line drawings, 23 half-tones and three colour photographs. It is essential reading (or those with an interest in the archaeology of the County of Essex.

£21

Fortress Essex

P Gilman, F Nash 1995

The rich heritage of Essex contains many sites which provide a witness to threats posed to past inhabitants of the county. Published in 1995 to mark the 50th anniversary of the ending of WWII, this booklet reviews what is known about the county's defences and their significance. £3.50

.....Many more titles are available.....

ESSEX FROM THE AIR

Covering the evolution of the County's landscape from the Neolithic until today, each photograph is accompanied by an annotated line drawing to aid interpretation, extended captions and introductions which set the picture for each chapter. In addition, complementary illustrations, such as maps, finds, ground shots and reconstruction pictures accompany the aerial views.

**SCHEDULED FOR PUBLICATION
IN SPRING 1998**

Enquiries to: David Strachan - tel. (01245) 437681



Further details, book lists and order forms are available from:

Roger Massey-Ryan
ESSEX COUNTY COUNCIL
PLANNING DEPARTMENT
ARCHAEOLOGY SECTION
COUNTY HALL
CHELMSFORD
CM1 1LF
TEL: (01245) 437633

More Recorders are needed to investigate other parishes and to help with those currently under study. No skills are required other than an interest in the subject and a little time, and a full explanation as to how to go about the research is given. It is an excellent way of getting to know more about where you live.

Further information is available from the Project Co-ordinator at 27 Tor Bryan, Ingatestone CM4 9JZ; please include a large stamped, self-addressed envelope.

Hylands House

Heligan was on television — but has Essex got the lost gardens of Hylands?

Hylands House is a 'stately home' near Chelmsford, now owned by Chelmsford Borough Council. The original house was remodelled and extended by Sir Humphrey Repton in the Neoclassical style. The second phase of the Council's restoration of Hylands House will take place during 1998, returning the East Wing to its early Victorian splendour. This work is costing £1.4m, and the house will be closed to the public until early in 1999.

Meanwhile, conservators have been at work on the ornate plaster ceiling of the banqueting room, which was sagging badly from the wooden beams

and has been propped up on scaffolding for 10 years. The ceiling is now exposed again, thanks to a new method of suspending the plasterwork.

Archaeology in the garden

The ECC Field Archaeology Group undertook excavations in the walled kitchen garden to see what remains of the 19th-century greenhouses and other structures. These were once the envy of the horticultural world in Britain and rivalled anything at places like Heligan in Cornwall, including hot-frames containing pits full of dung for growing pineapples! Although

nothing survives above ground, the greenhouse foundations were located, as well as cobbled paths, drainage channels, blocked doors and footings for cisterns. Archaeological evidence of how the walled garden once looked will be crucial if a reconstruction of the garden is attempted in the future.

Chelmsford Museums Service is trying to piece together the story of Hylands, and is keen to talk to people with memories, photographs and memorabilia of Hylands House and its estate.

Please contact Nick Wickenden on 01245 281660 if you can help.



Secret basin

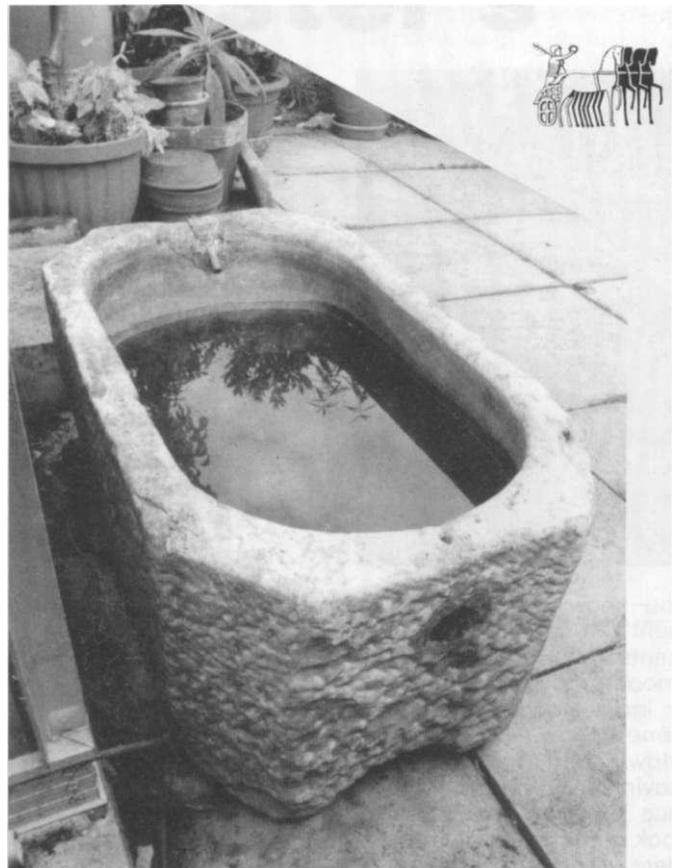
Recently archaeologists at the Trust were delighted to be let into a family secret and shown what appears to be a very unusual imported Roman marble basin. The owner remembers it being ploughed up about 70 years ago on the site of a villa near Alesford, and confirms that it has been a prized family possession ever since. The basin is so heavy that it took three men to move the object into the back garden in Colchester where it is now kept.

The basin has two original holes in it, one in an end for a lead water-pipe (part of which is still there), and the other in the bottom for the outlet. Comparable Roman basins are plain and rectangular in shape, but this one is octagonal in plan and has an unusual base which slopes downwards towards the outlet.

As yet, no close Roman parallel has been found for the object so its identification must remain uncertain, since the basin might prove to be 18th century or later in date, despite having been found on a Roman site. However, it was very probably a fancy basin which formed part of the water supply for the villa. The flow of water into the basin would presumably have been controlled by a brass or bronze tap, unless it was 'plumbed' directly into one of the many springs in the vicinity of the villa.

Colchester Archaeological Trust

— with thanks to the owner.



Archaeology for young people

Mike Corbishley is Head of Education and Interpretation at English Heritage.

Investigate the clues to the past that can be found in the streets near to your school!

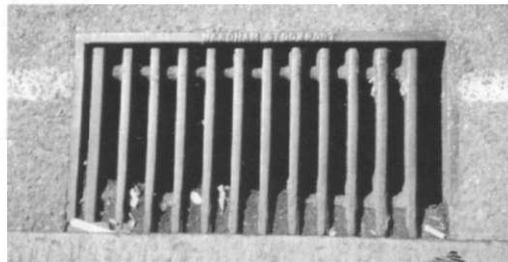
text and photographs by Mike Corbishley



Looking underfoot

What do you look at as you walk to the shops or to school? Do you look straight ahead at other people? Or do you look up at the buildings and the sky?

Try looking down sometimes — you'll be surprised at what is under your feet!



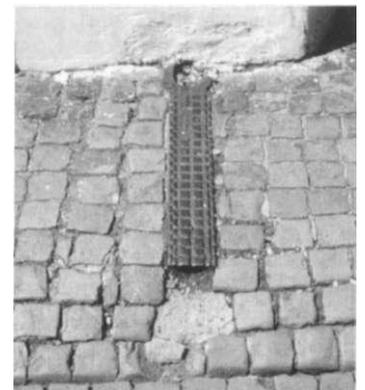
You can still find iron grills for the large drains which run under the roads. Sometimes you might find the maker's name on them, as here — Needham from Stockport. (Be careful that you only look from the pavement.)

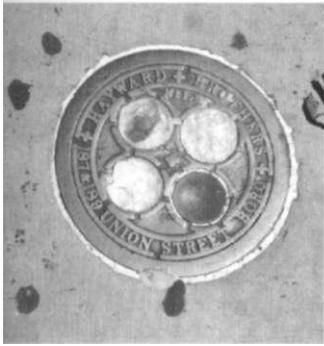


You will sometimes find old paving like this. These are hard stone blocks (usually granite) cut with a chisel into rectangles or wedges. These 'setts', as they are called, can be anything from 15 to 45 centimetres deep.

But there are other things to look out for under foot. Here is an iron drain cover for a gutter pipe (now missing). The water ran in a groove in the setts and out into the road.

You know the word 'pavement', of course. Our pavements are usually flat and smooth, made from concrete or large stone (or imitation stone) slabs. But did you know that in the past, 'paving' also meant the surface of roads and streets? Look at the different surfaces there are in this street.





Covers with hinges might show that regular deliveries were made, as here. Perhaps this house was once a pub.



Iron was, and still is, often used for sturdy covers set into pavements or roads. This is a coalhole cover in the pavement outside a house. Sacks of coal were tipped through here into the cellar of the house.



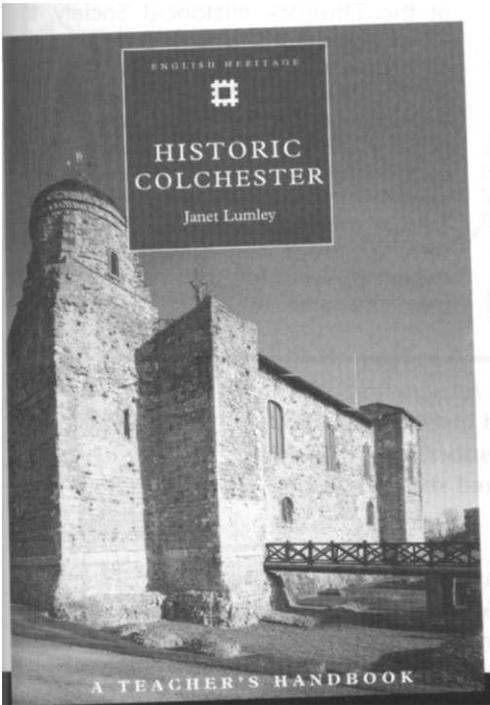
Iron covers also provide clues for showing that buildings had cellars. This is outside a house. Heavy glass was often used to let some light into the cellar or below-street level rooms.



How many makers' names can you find? Can you find out from the local studies library if there was an iron factory in the town, or how far away covers and grills had to be transported?



Uncover Colchester's Unique Past



The engrossing story of Colchester, one of the oldest recorded towns in Britain, is portrayed in this new book from English Heritage Education Service. A 'must read' for anyone interested in local history, the book, written for teachers, looks at the physical remains of the town's past, including the pre-Roman defence system which surrounded the area, the buried remains of the Romano-British temple and theatre, the Roman city with its massive walls, the Norman castle and buildings which testify to the effects of the catastrophic siege during the Civil War.

Written by Janet Lumley, formerly Education Officer for the Gosbecks Archaeological Park, the highly-illustrated 36-page A4 book costs just £3.95 including p&p. To order, please send a cheque (made payable to English Heritage) to English Heritage Education Service, Freepost 22 (WD214), London W1E 5EZ.



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the Friends of the Colchester Archaeological Trust



Friends on stage at the Globe



The popularity of the Friends continues to increase, with the number of fully paid-up members in 1997 approaching 400. The annual round-up of archaeological work was held as usual in the lecture theatre of the Castle Museum where Friends were given slide shows about the latest discoveries at Stanway, Gosbecks, and the ASDA site. This was followed up later in the year with a special Friends visit to see the excavations in progress at Stanway and Gosbecks.

The churches of the Rodings

The annual churches trip was well attended as usual. This year we visited five of the famous Roding churches, and as a result Friends were able to ring the oldest bell in Essex at Leaden Roding, see the picturesque church at Beauchamp Roding, and admire the Norman carvings at Margaret Roding.

Museum of London

There were two trips to London this year. First there was an extremely interesting 'hands-on' cloth seals session at the Museum of London, which gave Friends from south of London a chance to meet up with those from north of London! The two-hour session was led by Geoff Egan of the Museum of London Archaeology Service, who produced dozens of examples of cloth seals for everybody to handle. In an excellent presentation (which included slides), he discussed the cloth trade in Colchester from the 13th to the 17th centuries. It may seem odd to have to go to London to learn about

Colchester's cloth trade, but far more Colchester cloth seals have been found in London than anywhere else, including Colchester itself.

The Globe Theatre

Later in the year the Friends returned to London to find out about two of the capital's earliest theatres. Julian Bowsler gave a slide talk in the Museum of London about his discovery and excavation of the Rose Theatre. The Friends then looked round the new displays at the museum for free, before visiting the sites of the Rose and the Globe theatres. These are very close together on the South Bank, and we learned how they were briefly in competition, with Shakespeare at the Globe and Christopher Marlowe at the

Rose. Then the Friends enjoyed a guided tour of the 'new' Globe under the expert guidance of Professor Andrew Gurr who played an important role in its reconstruction. The new Globe (completed in 1997) is an impressive building, and we were able to wander freely and explore the whole theatre. We each had our moment of glory on the stage, but unfortunately there was no audience at the time! All the Friends on the trip agreed that it was one of our most memorable outings ever.

The Bartlow Hills

The Bartlow Hills in Cambridgeshire form the most impressive group of Roman barrows in Britain, so the first trip to see them by the Friends was long overdue. They were excavated mainly in 1835-40, but most of the finds, which proved to be spectacular, were destroyed in a fire shortly afterwards. Fortunately, Michael Faraday (the scientist portrayed on modern 20-pound notes) carried out the chemical analysis of the finds, so we at least have the best possible scientific assessment which was available at the time. *En route* to Bartlow, the Friends visited Colchester's own two barrows, the Lexden Tumulus in Fitzwalter Road and the Mount in Marlow Way, as a taster of what was to come.

Tilbury at war

Another exceptionally interesting trip was made to the Tilbury area, courtesy of the Thurrock Historical Society, to learn about forts and other defensive measures along the Thames over the last four hundred years. We visited the Tilbury fort, Purfleet Magazine (a gunpowder store), and Coalhouse Fort. John Webb, a member of the Society, joined the coach as it entered the Tilbury area and provided the Friends with a remarkably entertaining and expert commentary as we were taken from site to site.

If you would like future issues of our magazine *The Colchester Archaeologist* sent to you direct, then why not consider joining the Friends of the Colchester Archaeological Trust? The Friends of the Colchester Archaeological Trust is a group which exists to keep interested members of the public in touch with the work of the Trust in and around the historic town of Colchester. Members receive a yearly magazine, 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, museums, historic buildings and ancient monuments in the Colchester area and beyond.

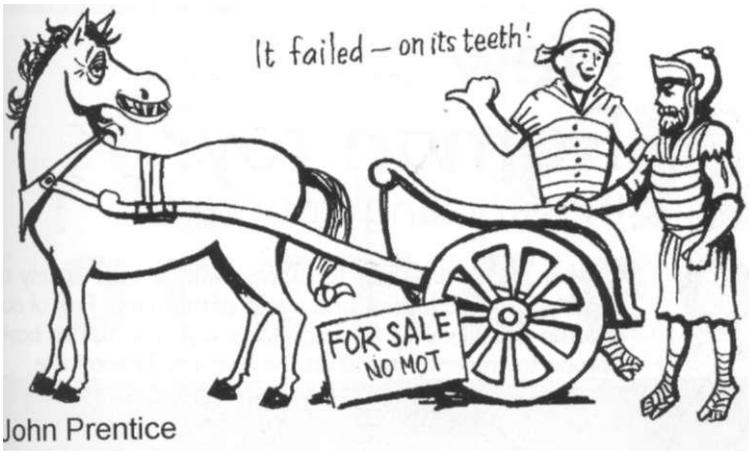
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only joking...

Acknowledgements

The Trust's replicas of some of the doctor's' grave goods were made by several craftsmen: the medical instruments were made by Bill Corduroy in Norfolk, the wooden gaming board by Brian Foukes at Leavenheath, and the glass counters by Mark Taylor & David Hill. Silversmith Mark Munson at Ardleigh made the strainer bowl and the fittings for the gaming board.



The four fragments of one glass chariot race cup found by the Trust at Balcerne Lane.

Victorious Olympus

Four joining fragments of pale yellow-green glass from a mould-blown chariot race cup were found on the Balcerne Lane site in 1976, in a deposit of dumped material under a Roman house. The dumped material dated to immediately after the Boudican revolt in AD 60/1. The deposit incorporated much burnt building debris, showing that the cup was almost certainly in use at the time of the disaster, and that it was owned by someone who lived in a house fronting on to the south side of the main street leading westwards out of town towards London and the west. It may have been smashed during the revolt, when the house was perhaps wrecked by native Britons as they destroyed the town.

The design has been used as the Trust's logo almost since the discovery of the fragments twenty years ago. The fragment shows the triumphant Olympus, having just won his race against three other competitors Ierax, Pyramus, and Eutyclus. He holds up a wreath in his right hand and has a palm branch extending behind his left shoulder as symbols of victory. The reins of his team of four horses are in his left hand. Each of the animals has a bent and raised left forelock as if walking slowly or standing still. The chariot is quite detailed; the wheels have four spokes and the body is woven as if of wickerwork.

At least 24 other examples of this design of cup have been found in Europe, five of these in Britain (at York and London). The design and inscription of the Colchester cup are carefully and clearly modelled. A Roman racing driver Olympus also appears on three fragments of similar but different cups also found in Colchester (from Balcerne Lane, the Gilberd School, and the Head Street Post Office).

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Celtic warrior
1st century BC/AD



See pages 20-21 for the making of a reproduction of the cup which this fragment comes from.



The stacking counters from the Mercury Theatre in Colchester

New Roman toy? the stacking counters

Children today are used to playing with a wide variety of brightly-coloured toys — and plenty of them too. Few of our children are likely to be impressed with the rather basic Roman toy recently found on the Mercury Theatre site.

However, some things never change, and instinctively they would play with the toy in just the same way as Roman children would have done many years ago.

Modern toys, particularly those for young children, are designed to help with physical and personal development as much as entertain and amuse. These stacking counters would have helped develop children's hand-eye co-ordination and shape-sorting skills, although we cannot say if Romano-British parents would have seen the toy in quite this way.

Pottery discs

Round discs of pottery are often found on archaeological sites and archaeologists have long been puzzled over what they were for. Various uses have been proposed for them, such as reckoning counters, weights, counters for hopscotch or large board games, counters which were thrown as a part of an outdoor game, pottery lids, and even table mats for hot pans! However, the remarkable examples from the Mercury Theatre site provide one convincing explanation for these mysterious objects. They make a set which neatly stacks to make a tall cone, just like a set of stacking bricks which a young child might play with. Of course, there is no way of telling if these particular counters were made as a child's toy, but it is hard to resist the conclusion that they were.

The counters were made from broken grey-ware pottery. Bits from large vessels were chosen so that the curvature would be slight and easy to eliminate. Each piece was chipped into the shape of a rough circle. The sides were then ground smooth and the curved parts of the faces ground flat. At least two of the counters were reused pottery bases so that less work was needed to convert them.

Eighteen counters were found. Eleven of them form the stacking set, although it seems as if there must have been at least two more which fitted between the second and third largest of the counters. They are probably 4th or early 5th century in date.



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