



CATALOGUE

NEWS OF ARCHAEOLOGICAL EXCAVATIONS IN COLCHESTER

Number 16

Winter 1984/5



**Chinese Silk
Gilberd School
Computer Aid**

THE SILK ROAD TO COLCHESTER

A tiny fragment of finely-woven textile found on the arm of a Roman burial at the Butt Road site in 1977 has been examined by experts with unexpected results. Dr J P WILDE of Manchester University describes his exciting conclusions.

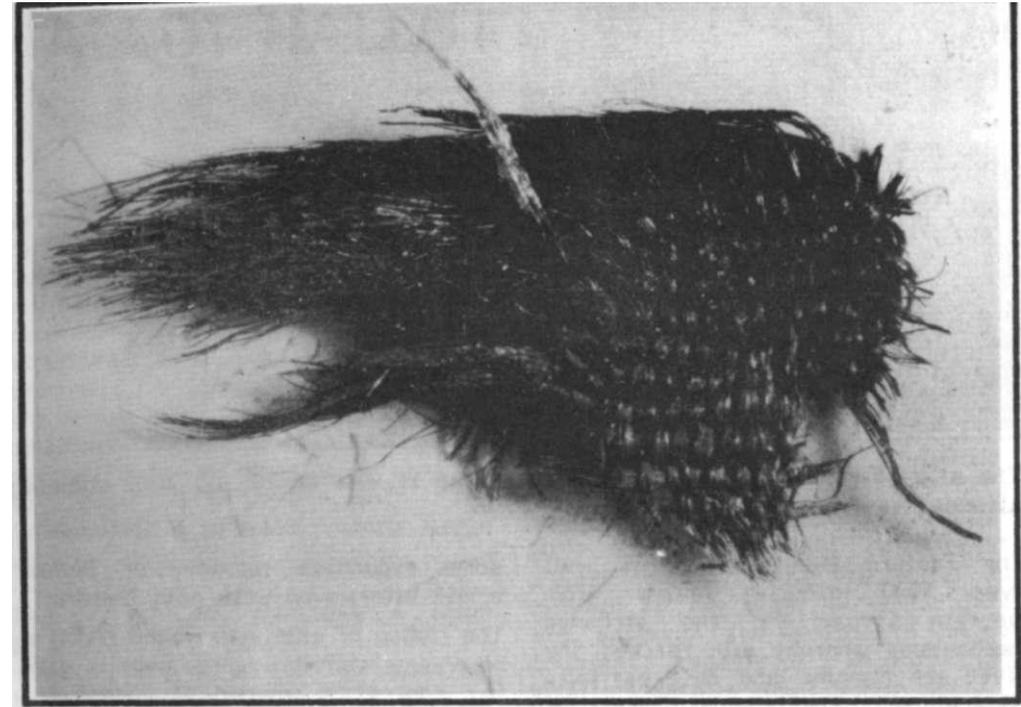
In Nina Crummy's new and highly readable Colchester Archaeological Report 2 (1983) are a few cautious paragraphs describing a minute fragment of silk cloth from late Roman Grave 77 in the Butt Road cemetery outside Colchester. Now black in colour, the silk measures only about 8mm by 3mm. It was found because the excavator was half expecting textile remains (and there

is a moral in that). It is not clear through what agency the material survived; but it looks to have been partially carbonised. The fragment is in plain weave (one thread over one) and is exceptionally fine; it has a count of 45 threads by 100 threads per cm, and neither weft nor warp has been spun. The fibre was cross-sectioned in the textile laboratory at Manchester University's Institute of Science and Technology and can be confidently identified as cultivated (not wild) silk. It is not of course possible to guess from what textile item, clothing or soft furnishing, our fragment came.

All this introduces some interesting lines of thought. The silk moth (*bombyx mori*) and its larva, the silk-worm, were reared as domesticated insects in China from before 1300 BC, but not unnaturally the Chinese discouraged the export of both the eggs and sericultural techniques. Han expansion westwards into Central Asia in the second century BC took the silk-worm and the cultivation of the white mulberry on which it feeds into the frontier regions; but it was not until the mid sixth century AD that Justinian was able to secure a supply of eggs and found the Byzantine silk industry. Until that time, all silk in the western world was imported.



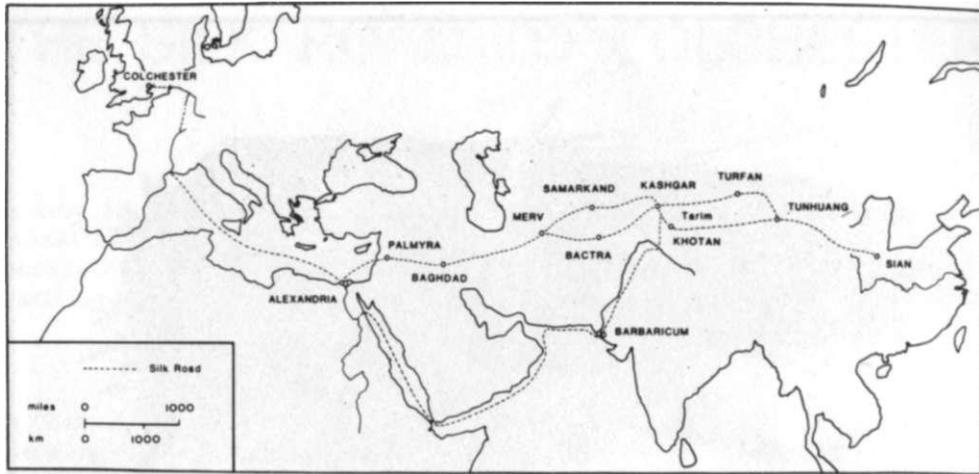
Grave 77 at Butt Road, Colchester. The white circle shows the position of the silk.



Fragment of Chinese silk from Colchester, enlarged tenfold. Note that it is not spun, and was therefore probably made in China. (Photo: Trevor Jones, UMST.)

We can be sure therefore that the yarn in the Colchester textile was grown in China or its western fringes, But there is more to it than that. The Chinese did not spin their silk - it was reeled from the cocoons as a double filament of great length that required no twist to give it stability. Western weavers, however, were used to having to spin wool and flax, and when they obtained silk yarn regularly spun it before weaving, at least when using it for warp which requires more strength than weft. So it seems likely that the Colchester silk, lacking spin, was woven in the East. If that is correct, then it is the earliest attested Chinese silk fabric in western Europe.

It is far from being the earliest silk fibre in western Europe, however. Silk yarn was one of the prestige goods in the hands of the Hallstatt D princes of the latter half of the sixth century BC. Grave VI in the Hohmichele in Wurttemberg contained remains of the border of a woman's woollen dress which had been embroidered with silk thread. The new and breathtaking finds from the lavishly furnished barrow at Hochdorf-Eberdingen in the same area included more silk embroidery. The immediate source was probably Massalia Marseille or one of her sister Greek colonies on the Mediterranean coast. Finds of silk fabrics in the Kerameikos cemetery at Athens make Greek involvement highly plausible.



The silk road from China to Colchester, as it was about AD 200, showing alternative routes to the West.

The Eastern Mediterranean is well over 3000 difficult miles from western China, and the exchange mechanisms whereby silk reached the West are complex and only partially understood. The Steppe nomads of Central and Western Asia, principally the Hsiung-Nu, were placated by successive Han emperors with gifts of huge quantities of silk which came to play an important part in maintaining their social hierarchy. Some of it ended eventually in Greek hands, perhaps through their Black Sea colonies or even through Achaemenid Persia.

To the Romans silk was an everyday luxury; the doctor Galen expected the wealthy houses in which he conducted his surgical operations to have silk yarn to hand for tying off blood vessels. By the third century there were specialised workshops in Syria weaving silk damask for the imperial market - and one piece of damask reached Kent, to turn up in the Holborough barrow. Yet silk retained its diplomatic function. The Lexden tumulus outside Colchester, the tomb perhaps of Addedomarus, contained

some expensive tapestry of Roman origin interwoven with gold thread.

The ribbon of gold was wound round a now-vanished fibre core, usually silk in contexts where it survives.

So Colchester for several centuries lay at the end of the Silk Road. The overland route from the Tarim Basin to the coastal entrepôts of the Mediterranean is well known; but the more important route in Roman times was from Central Asia to the mouth of the Indus and thence by ship to Alexandria. One wonders how much the occupant of Grave 77 knew of all this; to judge by the curious tales in circulation among the Romans that silk was combed from trees, probably very little!

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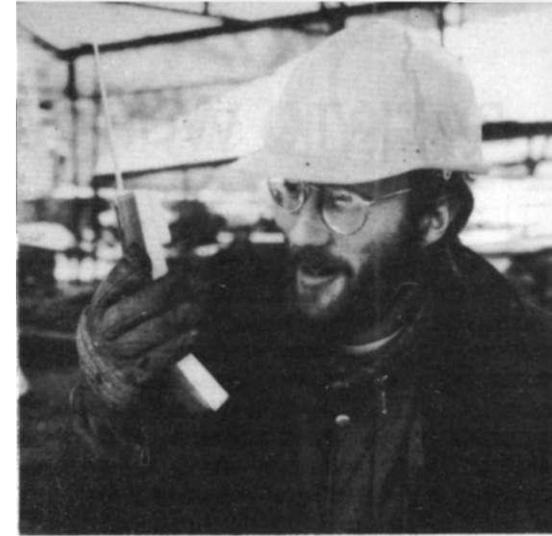
HALLO! HALLO!

Archaeologists working in big town-centre sites such as those seen in Colchester have to deal with large quantities of finds and paper records. The information is loosely structured thus making it ideal for processing by computer. Advances in the design of machines and programmes now mean that microcomputers have the processing power and storage capacity to cope effectively with the 'information explosion' which large urban excavations produce.

Philips Business Systems, a large international company with a substantial part of its UK operation based in Colchester, recently came to the aid of the Trust by donating one of their P2000C portable personal microcomputers. The support for the machine is to be provided by Harrison Computer Services (Eastern) Ltd of North Hill, Colchester.

For several years the Trust has harnessed the power of a micro to help process Roman pottery although it was always planned that this operation would have to be completed with the use of a large machine at Essex University. Now it is to be mostly done in-house and to encompass most of the various post-excavation processes.

The Culver Street site is to be the first site in the town where practically all the site records are to be entered on to a computer. By this means, the lists previously produced laboriously by hand during the post-excavation phase of an excavation will be generated quickly



and efficiently by machine. Particularly effective is the capacity of the computer to sort large quantities of data in different orders (eg according to date as opposed to the order in which data was entered), the ability to merge different types of records (eg inserting details about Roman pottery into the appropriate places in the site notes), and to produce summaries easily and quickly.

Powerful portables still (by and large) need a mains supply so that it is not very practical to use one an excavation for direct entry of site records. As an experiment, a radio link between the computer operator and the site supervisor is being tried. In this way, the machine is kept safely away from the dirt and bad weather whilst at the same time allowing the supervisor to stand on his site and dictate his notes. Print-outs, provided after each dictation session, are used by the supervisor for recording subsequent alterations and additions. The radio link is still fairly new so that its effectiveness has yet to be assessed. For the outcome, see the next issue of Catalogue....

Philip Crummy

BACK TO WORK AT CULVER STREET

After more than two year's delay, digging at the Culver Street site has at last resumed for the second and final stage of the project.

A major feature of the new development will be a huge, twenty-foot basement, built to provide underground servicing for the new shops. The basement - to be the size of a football pitch - is to be reached by lorries via a purpose-made breach in the Roman wall. Although there will be new buildings all around the basement as well as over it, the archaeological effort is being concentrated on the western half of the basement area. This is because resources are limited so that archaeological activities are being concentrated on where the destruction of the archaeological remains will be the greatest and the archaeological rewards likely to be the most

significant. When complete, the excavation of the western half of the basement will reveal for the first time in Colchester details relating to the origins, development, and layout of one half of a complete 'square' of the Roman town.

With the assistance of the developers, the Carrol Group and Balfour Beatty, the initial machine work has been done on the two areas currently being investigated. And even at such an early stage in the work, the remains of walls and floors of Roman houses are already visible.

The excavations will last until at least the middle of 1985 by which time more areas should have been made available for excavation. Much more of all this in the summer edition of Catalogue....

Philip Crummy

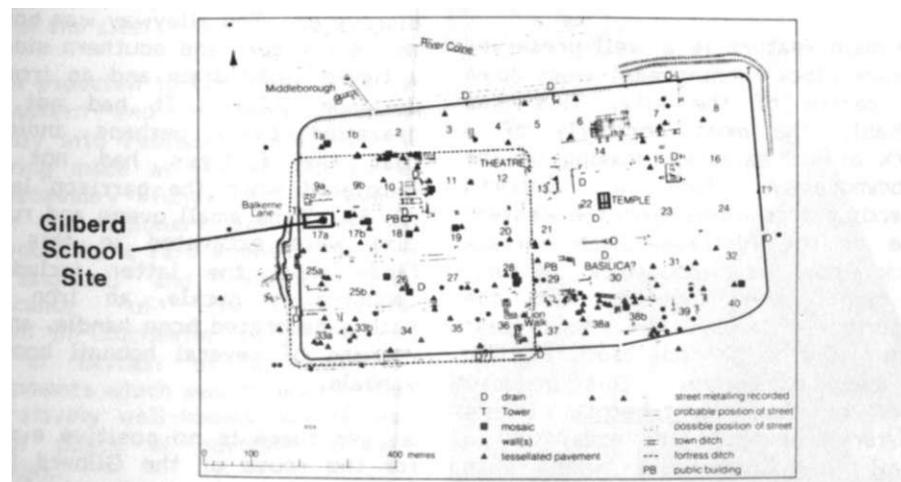
ROMAN BARRACK AT THE GILBERD

Further evidence for the military origins of Roman Colchester has come to light in a rescue excavation in the grounds of the Gilberd School on North Hill.

Excavations began in July 1984 in advance of the redevelopment of the site as a sixth form college annex. The site lies to the south of the main school building, immediately inside the Roman town wall, near the intersection of east-west and north-south Roman streets (see plan).

The site occupies a position towards the rear of the legionary fortress which was built soon after the Roman invasion of AD 43 and which underlies the western part of the later Roman town. The layout and size of the fortress, confirmed by recent excavations elsewhere in the town, conforms broadly to the classic

'playing card' shape, well-known from later sites such as Caerleon in Wales and Inchtuthil in Scotland. The key elements of the blueprint for this plan have recently been 'cracked', on the basis of the Colchester fortress (see Catalogue 13). However, for fortresses as a whole, the broadly-standardized shape masks a complex pattern of development of layout and building types, involving many differences of detail. While it was expected that military buildings, probably barrack blocks, would be encountered at the Gilberd School, various factors, such as distortion due to the slope of North Hill, uncertainty over the exact position of the early streets, and the lack of any previous detailed archaeological investigation in the area, meant that it was not possible to predict the position of the buildings with any degree of



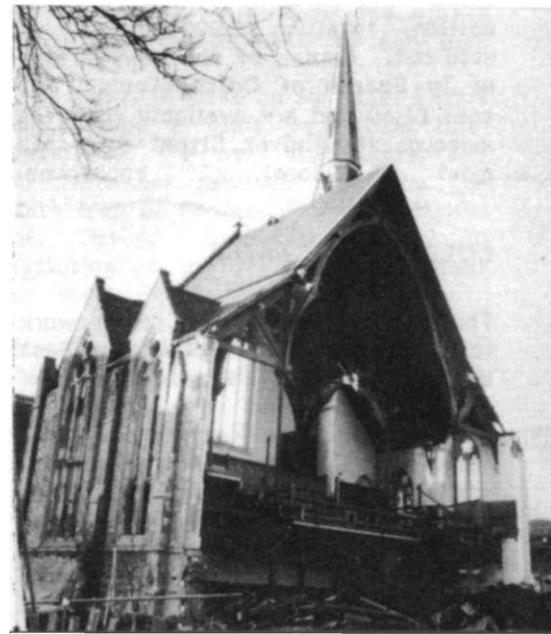
Plan of the Roman Colchester, showing the position of the Gilberd School site.



NOTES AND NEWS

LION WALK CONGREGATIONAL CHURCH

Lion Walk Congregational Church, a Victorian building on the site of an 18th-century predecessor, is almost gone. Only the tower survives, supported below by special piles, so that it can be incorporated in the new building. In February a short excavation will take place on the site before construction work begins. Unfortunately damage to the underlying archaeological remains caused by the digging of graves has turned out to be more severe than expected. Substantial numbers of coffins have been uncovered in often, large and deep brick crypts, the construction of which has removed most of the archaeological remains over large parts of the site. However all is not lost because sufficient survives to throw some light on the



block had been dismantled and built over by the time of the Boudican uprising of AD 60/1. The remains of this period were somewhat vestigial, although a small structure in the north-east corner of the site had been burnt down in AD 60/1, with the charred remains of beams and upright timbers surviving in situ.

Post-Boudican occupation on the site was surprisingly sparse. The remains of a small building, probably of 3rd or 4th century date, lay in the north-east corner of the site and consisted of wall foundations, largely robbed, and ?post-bases. A timber-lined drain ran eastwards towards the north-south street. The southern part of the site consisted of Roman pits and midden deposits, dating from the late 1st to the 3rd centuries.

The site remained unoccupied in the medieval and post-medieval periods, when it was used primarily for cultivation. Two medieval industrial features, a lime kiln for the production of quicklime through the roasting of seashells (mainly cockle and oyster), and a ?furnace of uncertain use, lay in the south-east corner of the site.

Work is expected to continue exposing the eastern end of the barracks, hopefully into February 1985. Efforts are being made at present to raise the necessary funds to excavate totally the legionary barrack block. This would be a rare event in south-east England, and reinforce the significance of the legionary fortress in Colchester as a starting point in Britain of a chain of developments which was to lead to the comparatively well-known, spectacular frontier posts of northern Britain and Wales.

Donald Shimmin

quarters, examples of which have been excavated in some detail at Lion Walk and Culver Street, would have lain at the western end near the area later occupied by the town wall.

The external walls of the barrack block, which were carefully terraced into the natural slope, were probably timber-framed, with 'clay' block infill, resting on substantial, well-preserved pebble-and-mortar plinths. The contubernia, clearly delineated by regularly spaced slots for timber-framed partitions, had been refloored on a number of occasions and were often associated with small hearths. Examples from somewhat later sites in Britain suggest that each contubernium was subdivided into an outer room for storage and an inner room for sleeping. The total length of the barrack is also as yet unclear, as the number of contubernia varied between ten and fourteen.

The barrack block faced southwards, across an alleyway, towards an adjacent barrack block, the north wall of which was recently discovered. The alleyway was bounded on its northern and southern sides by a timber-lined drain and an irregular drainage gully. It had not been gravelled over, perhaps indicating that the fortress had not been completed when the garrison left in AD 49. Some small ovens and rubbish pits were excavated in this area. Finds from the latter included a copper-alloy buckle, an iron knife with a decorated bone handle, and the remains of several hobnail boots or sandals.

As yet there is no positive evidence for the reuse of the Gilberd School barrack block in the newly-founded colonia, following the garrison's departure. Certainly the barrack



Dennis Tripp and David Underwood uncovering a wall of the barrack block in the snow at the Gilberd School site.

accuracy. The initial indications on the site also proved misleading, and as a result, it was not until well into December that the pattern became clear.

The main feature is a well-preserved barrack block running east-west down the centre of the site. This was probably the most northerly of a block of six barracks, making up the accommodation for a 'cohort', extending northwards from the western gate of the fortress. Each barrack block would have housed a 'century' of eighty men, together with the centurion. Only the south-east corner of the barrack block has so far been excavated. This includes parts of four 'contubernia' (men's quarters), never before excavated in detail in Colchester, with each 'contubernium' probably accommodating eight soldiers. The wider and more spacious centurion's

Roman street, houses, and military remains which we know to exist here as a result of the excavations at the nearby site at Lion Walk in the 1970s. A short excavation is planned for February.

NICK SMITH GOES BACK TO SCHOOL

After more than ten years as an Assistant Director with the Trust, Nick Smith left to take up a post-graduate teacher-training course at Cambridge. He intends to teach religious education and possibly Latin. We all wish him the very best in his new career.

IN SEARCH OF COLCHESTER'S PAST

The Trust's publication outlining the story and results of excavations in Colchester since they began in the 19th century has been revised and enlarged to include the first stage of the Culver Street excavation and the recent discovery of the Roman theatre. The booklet has been entirely reset and now includes some colour photographs. The original edition, totalling 4,000 copies, is sold out. Copies of the new version of *In Search of Colchester's Past* cost £1.60 and are available from the museum, the Culver Street site, and most local bookshops.

COLCHESTER CASTLE

The second phase of the repair work to Colchester Castle began last December with the erection of scaffolding around the south-west tower. As before during the first stage (see Catalogue 14), stone-for-stone drawings are being prepared by the Trust's draughtsmen, Bob Moyes and Terry Cook. Their work begins

just in time to catch the icy winds of the winter whistling around the castle walls.

Philip Crummy

RECENT MEETINGS

Our July trip took place on one of those humid 'days of the thunder fly'. The morning visit to the county Archaeological Section's site at Springfield, on the outskirts of Chelmsford, showed members how very different rural excavations on naturally stony subsoils can be from those they are accustomed to seeing inside Colchester's town walls. Once the features at Chelmsford were excavated they were recognizable enough, but they were very difficult to pick out on the surface, especially in the drought. However, the ditch round the Bronze Age enclosure, and the Anglo-Saxon graves, seemed real enough, and Dave Buckley had thoughtfully brought along a site plan and an imaginative reconstruction to help us visualize what was really there. Hilary Major showed us some of the finds from the Bronze Age occupation and the Anglo-Saxon graves. The latter were particularly exciting as we see so few pieces of that date here.

From Springfield we went over to Dunmow for lunch, then melted our way round Thaxted and then Finchingfield, where we had an unexpected treat at the church in the shape of the Thaxted Morris Men who were performing at a wedding. Tea at the Colne Valley Railway Centre at Castle Hedingham was extremely welcome, but left no time (alas!) for the steam engines,

The book sale at Lexden Road in August raised about £90 towards the cost of mounting this September's

lectures at the University of Essex (see below). The archaeology section sold out early on, but we had enormous numbers of both hard- and paperback novels to keep us going. Some families came on both Saturday and Sunday and carried off box loads! Thank you all for your donations for this event. We retained some novels for sale at the AGM, and the remainder were given to the St Helena Hospice book sale held last September.

The weekend trip to Wessex in September was a great success. We plunged wholeheartedly into prehistory with visits to Wayland's Smithy, Uffington hill-fort, Woodhenge, Stonehenge, Silbury Hill, and Avebury. Bath with its Romans seemed positively modern by comparison, as did Salisbury, where we had excellent accommodation, and Winchester, where Ken Qualmann, the City Archaeologist, led us on a tour of the upstanding remains of the medieval town. I am sure all those who came will join me in thanking our driver, who manoeuvred the coach around the sites as if it were a mini!

On the November churches' trip we took in Marks Tey, Little Tey, Copford, Messing, Inworth, and Layer Marney, Copford is undoubtedly the finest of the group, with its medieval wall-paintings (some heavily restored in Victorian times), though my favourite will always be Inworth, with its extended chancel, the early part being pre-conquest.

DATES FOR YOUR DIARY

Details of the AGM fixed for February 2nd have already been sent out.

The next date to mark on the calendar

is March 30th, when we will be having an Open Day on the Culver Street site, with conducted site tours. At the moment the topsoil and most recent features are still being cleaned up, but Philip assures us that 'it's all there', later Roman buildings, town rampart, and undoubtedly right at the bottom the military buildings of the Claudian fortress.

For family reasons there will be no trip in May, but there is a strong possibility of another site Open Day, which you will be informed of nearer the time.

On July 27th there will be a day trip to Kent organized by Jenny Watson (ex-Colchester, now Rochester, and member of the Friends). In the morning there will be a tour of Chatham's historic Naval Dockyards, then time for lunch at Rochester and a look round the Castle and Cathedral. To round off the day Jenny has promised to fit in a visit to one or two of Kent's prehistoric sites. The coach will leave the War Memorial at the Castle park at 8.45 a.m., and expect to be back in Colchester by 6.00 p.m.

In August, to make up for May, I hope to arrange a visit to Sutton Hoo, details in the next Catalogue, and in September remember to keep the 28th free as Professor Barry Cunliffe of Oxford University will be lecturing at the University of Essex on 'Roman Bath'.

I am sorry that family commitments make it impossible for me to organize another Wessex trip this year, but for those wishing to repeat the experience, I hope to arrange one for summer/autumn 1986.

Nina Crummy



Members of the Friends at Avebury during their trip to Wessex. Photo by Miss V M Ellis.

The FRIENDS OF THE COLCHESTER ARCHAEOLOGICAL TRUST has been formed to provide a means of keeping interested members of the public informed about the archaeological work going on in and around the historic town of Colchester. The Friends provide the funds to publish CATALOGUE - the newsletter of the Colchester Archaeological Trust. Friends receive two newsletters a year, attend an annual programme of lectures on the previous year's progress, are given conducted tours of current sites and can take part in a regular programme of visits to archaeological sites and monuments in the area.

The annual subscription rates are as follows: Adults £2.00, Children and Students £1.00, Family membership £2.50, and Institutions £2.00. Those who live too far away to attend meetings or go on trips can receive newsletters only at a reduced rate of £1.50. Subscriptions should be sent

to Brenda May, Honorary Treasurer, Friends of the Colchester Archaeological Trust, 5 William Close, Wivenhoe, Colchester, Essex.

Officers of the Friends are:
Organizer: Colin Bellows, Honeypot Cottage, Honeypot Lane, Wix, Essex.
Treasurer: Brenda May, 5 William Close, Wivenhoe, Essex. **Editor of CATALOGUE:** Philip Crummy, 12 Lexden Road, Colchester, Essex.
Friends's representative on the Trust's Executive Committee: Gabrielle Chadwick, 171 Wivenhoe Road, Alresford, Essex. **Social Secretary:** Nina Crummy, 12 Lexden Road, Colchester, Essex.



Cover photograph: the presentation of a Philips P2000C personal computer to the Trust in December. In the photograph are: John Williams (Product Marketing Manager, Philips Business Systems) and Lorna Ring (computer operator for the Trust).