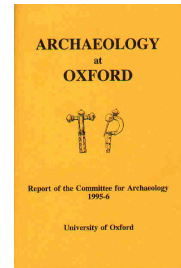


# Report of the Committee for Archaeology 1995-6



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## Report of the Committee for Archaeology

1995-6

University of Oxford

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#### **CHAIRMAN'S REPORT FOR THE YEAR 1995-6**

The Final Honour School in Archaeology and Anthropology continues to grow in popularity and strength. In June 1996 14 candidates took the examination. Of these 3 gained a First Class degree, the remaining 11 being awarded Upper Second Class degrees. Twenty students successfully completed the Honour Moderations course. In December the number of applicants showed a significant increase on the previous year and in the event 26 offers of places were made. Since the course was first set up in 1991 numbers of applicants have increased by 60% which is contrary to the downward trend shown by a number of traditional subjects.

It is a matter of some satisfaction that the University has agreed to create a new Lectureship in Aegean Prehistory as the result of receiving two significant donations. The document of agreement signed by the University states the post holder 'will be closely involved in teaching for the Honour School of Archaeology and Anthropology, and for graduate courses under the Committee for Archaeology'. The new post will enable the teaching gap in the Greats special subject *Homeric Archaeology*, caused by the Literae Humaniores Faculty's abolition of the Lectureship in Homeric Archaeology, to be filled whilst the option remains on offer.

We are also pleased to welcome half of Andrew Sherratt on to the establishment of the Committee for Archaeology after his teaching duties were redesignated following the Report of the Review Committee on the Ashmolean Museum in which the significance of his contribution to teaching was recognized.

Much energy, and some ingenuity, has this year been spent on preparing the submission on Archaeology for the 1996 RAE. The work was coordinated by John Lloyd to whom our grateful thanks must be recorded. Oxford Archaeology claimed 'international excellence' in nine sub areas: European Archaeology, Classical Archaeology, Egyptian and Near Eastern Archaeology, Palaeolithic and World Archaeology, Radiometric Dating, Archaeomaterials, Biomolecular Archaeology, Environmental Archaeology, and Computer-based Archaeology. The prodigious publication output of Oxford's archaeologists (150-200 individual publications each year) made the selection of only four per person difficult but we hope we have chosen wisely to reflect our strength and breadth.

The long-awaited response of the General Board on the Committee's claims for Faculty status has now been received. In the light of the responses from the relevant Faculty Boards the General Board felt that it could not approve the change. This does not, however, lessen the Committee's determination to continue to demonstrate that the

interfaces between the traditional academic groupings within the University are places of innovation and energy which must be allowed space to grow if the University is to continue to evolve.

MICHAEL TITE and BARRY CUNLIFFE

## **THE UNIVERSITY'S ARCHAEOLOGICAL UNITS**

### ***Under the Committee for Archaeology***

#### **Institute of Archaeology**

36 Beaumont Street, Oxford, OX1 2PG (01865) 278240; Fax (01865) 278254

- Professor B.W. Cunliffe, Professor of European Archaeology, Director of the Institute
- Professor R.R.R. Smith, Lincoln Professor of Classical Archaeology and Art
- Professor E.M. Steinby, Professor of the Archaeology of the Roman Empire
- Dr J.J. Coulton, Reader in Classical Archaeology
- Dr H. Hamerow, Lecturer in Medieval Archaeology
- Dr D.C. Kurtz, Lecturer in Classical Archaeology
- Dr J. Lloyd, Lecturer in Roman Archaeology
- Dr G. Lock, Lecturer in Archaeology
- Dr M. Mango, Lecturer in Byzantine Archaeology

#### **British Academy Research Fellows**

- Dr J. Bardill
- Dr N. Spencer

#### **Research Associates**

- Dr M. Ballance
- Dr M. Henig
- Dr D. Miles
- Miss G. Seidmann
- Dr S. Sherratt
- Dr J. Toms

#### **Research Staff**

- Ms E. Cameron
- Dr P. de Jersey (Celtic Coin Index)
- Ms V. Fell
- Dr P.M. Kenrick (Corpus of Arretine pottery stamps)

The Institute has continued to function as the centre for research in European archaeology and it is from here that a number of the major fieldwork programmes are run. The Institute also houses two major archive programmes, the Celtic Coin Index and the Corpus of Arretine pottery stamps both of which are under active development as interactive computerized databases supporting digitized images.

Our publication programme has made particular demands this year on the secretarial staff, the drawing office, the photographic department and the conservation department. In addition to preparing excavation and fieldwork reports we have published five volumes in the OUCA monograph series.

Lack of funds has meant that little repair or improvement work could be carried out on the building but the programme of continuing to update the computing facilities has been maintained and we were delighted to hear that the General Board has agreed to fund a post to provide an IT officer to service Archaeology, the Oriental Institute and Theology. A beginning has been made on developing an Institute web page.

With the development of the new Honour School in Archaeology and Anthropology the building is seeing more active use for meetings, seminars and lectures. It also houses the secretariat responsible for servicing the course.

There have been several staff changes during the year. We have welcomed two new lecturers, Dr Marlia Mango and Dr Helena Hamerow, and our new Administrator Lidia Lozano who has replaced Jill Drake. Sue Hurst also joined us to fill the post vacated by Jennie Lowe in the photographic department.

### **The Beazley Archive**

Ashmolean Museum, Cast Gallery (01865) 278083

Archivist - Dr Donna Kurtz (Wolfson College)

Established services include (1) extensive use on site of the photographic collection of Athenian pottery by members of the University and visiting foreign scholars (2) ordering of new photographs from more than 100 collections worldwide (3) mounting of more than 2500 new prints per year (4) further development of the text database on Athenian pottery and enhancement with images; since January 1993 more than 14,500 have been scanned (5) interrogation of this database (56,000 records) on site by Archive staff for members of the university and foreign scholars and (6) networked for interactive access at remote sites in North America, Europe, Australia, New Zealand and Japan (7) continuing development of on line multimedia version of pottery database.

The EU RAMA project (UK: Beazley Archive. Paris: Musée d'Orsay. Berlin: Pergamon. Hague: Museon. Madrid: Archaeological Museum. Athens: Goulandris Museum of Cycladic Art. Florence: Uffizi) which aimed to develop a standard format for exchange of information between museums of different types in collaboration with organizations promoting standards (e.g., Getty AHIP, UNESCO ICOM) ended in December 1995. In 1996 the benefits of the project were transferred to a not-for-profit company (MUSEA), legally registered in the United Kingdom, under the direction of the Beazley Archive. In July the Archive began participation in a new EU project in telecommunications (SICMA) which aims to develop the RAMA software for Internet and to establish a satellite connection between a western museum server and one in Russia.

The Beazley Archive's contribution to the EU LACE project, which also ended in 1995 was a multi-media educational programme. From it new programs are being created in formats for on-line access and CD-ROM.

New grants from the EU were awarded for student exchange programs with the

University of Thessaloniki and the University of Catania.

Outside EU Research and Development projects the Beazley Archive is working with the School of Theatre Studies in the University of Warwick, Trendall Archive in Australia, and the University of Pennsylvania in Philadelphia. In Oxford it is collaborating with Oxford Brookes University and the Rutherford Laboratory; within the University with the Computing Laboratory and the Ruskin School.

With the assistance of the University's Telecommunications Manager several mini video-conferences were made with the University of Philadelphia to establish protocols for interactive lectures and seminars using room-based systems.

The BBC's Open University prepared a program for television about the Information Technology projects of the Archive.

### **Research Laboratory for Archaeology and the History of Art**

6 Keble Road, Oxford, OX1 3QJ (01865) 515211; Fax (01865) 273932

- Professor M.S. Tite, Director, Edward Hall Professor of Archaeological Science
- Professor R.E.M. Hedges, Deputy Director, Lecturer in Archaeological Science

#### Research Assistants

- Mr G. Adamiec
- Dr V. Mandi
- Dr A. Allsop
- Dr S. Patel
- Ms I. Colson
- Dr P. Pettitt
- Dr A. Cooper
- Dr C. Ramsey
- Mr C. Doherty
- Dr M. Richards
- Miss S. Hall
- Mr C. Salter
- Dr Jiang Zhi-Xing
- Mrs D. Stoneham
- Dr G.J. van Klinken

The Research Laboratory has continued to undertake research in radiocarbon dating, luminescence dating, biomolecular archaeology and ceramic, glass and pigment studies.

The output of the Radiocarbon Accelerator Unit has been maintained at more than 1000 dates per year. Procedures for making graphite targets which increase both the throughput and precision have been developed. Notable dating projects include dating the earliest anatomically modern human presence in Britain, the publication of a comprehensive series of dates for Stonehenge and dating organic haft remains from Bronze Age bronze weapons. The major demand on the luminescence dating service has been for dates for sediments from archaeological sites, including material from Uffington, Eton and Gibraltar. Both the luminescence dating of marble and the nitrogen profile dating of flint have been shown to have some potential but new funding must be

obtained before the feasibility of these methods can be further investigated.

Stable carbon and nitrogen measurements have been used in the investigation of changes in diet between the Mesolithic and Neolithic periods and between burials of different social status. The database of modern European mtDNA has been used to show that the present variation can be interpreted as deriving from the migration of anatomically modern humans at 40kaBP with subsequent adjustment following the last glacial maximum. Procedures for detecting ancient DNA have been improved but it is becoming clear that the survival of even mtDNA in archaeological contexts will be relatively rare. The investigation of the diagenetic alteration of bone under different environmental conditions has continued.

A comprehensive investigation of the production technology and properties of transparent and tin-opacified lead glazes has been initiated. Chemical analysis and/or thin section petrology is being undertaken on Byzantine pottery from the eastern Mediterranean, on Neolithic-Iron Age pottery from Oxfordshire and on the raw materials used and pottery produced by traditional ethnographic potters in sub-Saharan Africa. The examination of the industrial debris from recent excavations of the glass production area at Amarna, Egypt has suggested that the production of a vitreous faience was a major activity at the site. Work has started on the examination of the pigments, binding media and plaster ground associated with Hellenistic wall paintings from the eastern Mediterranean.

### **Isotrace Laboratory (RLAHA)**

Nuclear Physics Building, Keble Road, Oxford, OX1 3RH (01865) 273444, 273489; Fax: (01865) 273418

- Dr N.H. Gale, Director
- Dr Z.A. Stos-Gale, INSTAP Research Fellow

### **Research Technician:**

- Nick Annetts

### **Research Student:**

- Maria Kafaya (Ph.D., University of Birmingham)

### **Research Associate (part-time):**

- Dr D. Evely

In the academic year 1995-6 the Isotrace Laboratory equipment and clean chemistry laboratories ran smoothly and we were able to analyse on average 40-80 samples a month for their lead isotope composition. We still have over two thousand unpublished lead isotope data of ores and Bronze Age artefacts from the Mediterranean. A generous and timely grant from the Institute of Aegean Prehistory (INSTAP) allowed the maintenance of a minimum staffing level necessary for carrying out research in the Laboratory. The major emphases of our work last year were on:

- Reliable lead isotope analyses of many ores and copper slags from various sites in

the Mediterranean to build up a data base for the field in general and particular projects of our own, and further to clarify the methodology of lead isotope provenance studies.

- A great many new analyses of a wide selection of ores from Cyprus, leading to an essential review of the lead isotope characteristics of what may be one of the most important prehistoric copper sources in the Eastern Mediterranean.
- Clearing the backlog of analyses of Aegean metal artefacts.
- Lead isotope and chemical analyses of samples of oxide ingots and bronze artefacts from the Cape Gelidonya and Uluburun Shipwrecks, collected in August-September 1995.
- Publication of the accurate analyses of minerals from various ore deposits for the benefit of the academic community.
- Publication of the lead isotope and chemical data of Aegean metal artefacts obtained in our laboratory.

Accurate lead isotope data from the Isotrace Laboratory are currently being published in successive volumes of *Archaeometry*. In the past year the Laboratory has published three such lists, including one giving data for British ore deposits. The next data base, which will appear in February 1997, consists of 200 new data on Cypriot ores.

To speed up the publication of the data, and to provide a direct archaeological input into the relevant papers, we are collaborating on a day-to-day basis with two archaeologists:

1. Publication of data for metals from Peloponnesian sites (total number of artefacts for consideration is in the region of 900, from sites such as Lerna, Nichoria, etc.) is going to be part of the Ph.D. thesis of Maria Kayafa (University of Birmingham), who is jointly supervised by Ken Wardle and Sophie Stos-Gale.
2. Publication of nearly 300 artefacts from Late Minoan Crete (lead isotope and chemical analyses of all of them) has been undertaken jointly by Sophie Stos-Gale and Doniert Evely, who is financed on a part time basis from our small amount of lead isotope service work.

### **New developments:**

- development of new methods to extract traces of lead, for mass spectrometry, from difficult matrices
- development of new methods to explore the isotopic analysis of the elements tin and copper, to assess possible new methods of provenancing metals and to assess certain suggestions from the University of Bradford that anthropogenic metallurgical processes might cause changes in the isotopic composition of lead and tin
- analysis of tin isotopes in tin ingots and bronzes,
- analysis of lead isotopes in tin ingots and artefacts.

Results of research on methodology:

A thorough study was carried out of possible variations in the isotopic composition of lead which might have been caused by metallurgical processes; if such exist, they would be of grave concern for the basis of lead isotope provenancing. It was proved that such variations do not exist to the precision attainable (better than  $\pm 0.1\%$ ) by existing

methods of mass spectrometry; any variations which may exist on a finer scale are therefore unimportant for lead isotope provenancing.

Work was carried out with a Part 2 chemistry student on developing successfully a mass spectrometric method for detecting small variations in the isotopic composition of copper in copper ore minerals and archaeological artefacts, with possible applications to provenance studies. It was proved that such small variations do occur in certain minerals, and that some artefacts (e.g. those analysed oxide ingots from Hagia Triadha, Crete) also display non-normal copper isotopic compositions. This work is now being prepared for publication.

A method was devised for the mass spectrometric determination of the isotopic composition of tin metal and applied to tin ingots excavated from underwater off the coast of Israel and to 17th century AD tin ingots made from tin ores from the Erzgebirge in Saxony and Czechoslovakia, and to tin extracted from a range of Bronze Age bronze artefacts from the Mediterranean region. It was shown that the large variations in tin isotopic composition predicted, by the Bradford archaeometallurgy group, to result from processes such as remelting bronzes do not exist.

Fieldwork:

April 1996 - collection and survey of slag sites and small ore occurrences in the East Troodos (Cyprus) - with Dr. G. Maliotis of the Hellenic Mining Corporation

June 1996 - collection and survey of slag sites and small ore occurrences in the West Troodos (Cyprus) - with Dr. G. Maliotis of the Hellenic Mining Corporation

July 1996 - collection and survey of copper occurrences and ancient metal smelting sites on Seriphos and Siphnos - with cooperation from Dr. S. Papastavrou of IGME, Athens.

Major projects in progress include:

- a project with the Institute of Nautical Archaeology, Texas (G. Bass and C. Pulak) on the metals found on the two Bronze Age shipwrecks 'Cape Gelidonya' and 'Uluburun', which is included in a larger project to study the Bronze Age trade in copper oxide ingots throughout the Mediterranean.
- a joint project between the Bulgarian Academy of Sciences and the British Academy on Eneolithic and Bronze Age metallurgy in Bulgaria.

### ***Under other departments***

#### **Environmental Archaeology Unit (University Museum)**

Parks Road, Oxford, OX1 3PW (01865) 272983; fax (01865) 272970

- Dr M.A. Robinson, Director (HBMC)
- Mrs G.V. Campbell (HBMC)

The next stage of work has been completed for the Raunds Area Project with the preparation of a report on plant and invertebrate remains from the South Stanwick Long Barrow. Work is now under way on analysis of biological remains from Neolithic and Bronze Age deposits on the Thames floodplain at Yarnton. This has not only given



useful palaeohydrological information but has also yielded insect assemblages of considerable interest because they include further beetles now extinct in Britain. Palaeohydrological studies also continue in the middle Thames basin, where the Oxford Archaeological Unit has discovered the remains of several Bronze Age and Iron Age bridges in a silted former channel of the Thames. Further work has been done on charred plant remains from the Danebury Environs Project.

The Unit has become involved in three overseas projects. Charred plant remains are being analysed from Professor Cunliffe's excavations in Brittany at Le Yaudet. A sampling programme for biological remains was set up with an Archaeology and Anthropology undergraduate from Oxford for the University of Reading/British School at Rome excavations at Pompeii. A preliminary investigation has been made of waterlogged plant and insect remains from an Iron Age coastal settlement at Nacqueville, Normandy, excavated by the Service Régional de l'Archéologique de Basse Normandie.

Teaching work has been extended to include the holding of practical classes in the Unit for first year Archaeology and Anthropology undergraduates.

### **Materials Science-Based Archaeology Group** (Department of Materials)

- Dr J.P. Northover, Research Fellow
- C.J. Salter, Research Fellow
- Dr S. Shalev, Visitor (Weizmann Institute, Israel)/Research Fellow in Biblical Archaeology, Christ Church
- Dr B.J. Gilmour, Visitor (The Royal Armouries)

Research in ancient and historical metallurgy is based jointly in the Department of Materials, where the group has its offices and laboratory, and in the Research Laboratory for Archaeology where the electron probe microanalyser is located. The group also contributes to the development of archaeological applications for Oxford's scanning proton microprobe which is administered by the Department of Materials. Projects fall into four main categories: post-excavation studies, support or initiation of museum-based research projects, numismatics, and detailed technical investigations of individual antiquities. Where possible this is supported by a programme of experimental research, most notably in collaboration with the Snowdonia National Park, while we are beginning to develop pure materials science projects where the stability of metal microstructures and aspects of corrosion can be studied over very long timescales.

Post-excavation studies at home and abroad continue to supply the stimulus for much of our research. Particularly striking examples are associated with Anglo-Saxon iron-working, revealing the complex structure of iron blades in the cemetery at Barrington, Cambridgeshire, or iron smelting furnaces at Carhampton, Somerset. The project with the Folly Lane cremation at St Albans has shown how careful excavation and an imaginative approach to the metallurgy supported by results from an experimental cremation has led to a very convincing reconstruction of the ritual involved. Another important site with which we are associated is the long running excavation of the Oxford Archaeological Unit at Yarnton with a sequence of occupation from Bronze Age to medieval.

Abroad post-excavation and museum-based projects have continued in a number of

countries. We continue to develop research in the Early Bronze Age in Syria, especially with the Tell Beydar excavations. In central Europe our study of the cremated metalwork from the cemetery at Bischofshofen-Pestfriedhof in Austria continues, and has provided a very clear understanding of the evolution of the place of metal grave goods in the cremation ritual. In Switzerland the extensive project at Zug-Sumpf has come to an end and is now being prepared for publication. The work on Iron Age situlae has greatly expanded, while new work on Middle Bronze Age metalworking sites has produced some startling results on the organisation of metalworking with the whole sequence from copper-refining onwards being based at lakeside settlement sites. A new partner is the National Museum in Slovenia, our first link being with their work on Bronze Age copper ingots, possibly to be followed by a project on Hallstatt period ironworking.

The iron-smelting project with the Snowdonia National Park has revealed ever-greater complexity in the products of the bloomery process. Undoubtedly it is the leading source of quantitative data on early iron smelting in the British Isles, if not in Europe. Other experimental archaeology has included work on cremation and the two D.Phil. projects on gilding and crucible slags.

The arch-metals discussion list on mailbase, owned in the Department of Materials, has proved very popular both for the range of topics discussed and the temperate nature of the discussions on it. Chris Salter maintains and up-dates the group's web pages.

Kilian Anheuser successfully obtained his D.Phil. on ancient gilding and silvering techniques. Since the award of his doctorate he has expanded his work to include amalgam tinning. Juli Whewell, having completed her laboratory research on crucible residues was tempted away by employment at the Royal Mint and is now writing up. A third project is that of Evanthia Baboula on the deposition of metalwork in Middle Bronze Age cemeteries in Crete, jointly supervised with Dr S. Sherratt. Dr Northover also jointly supervises Ph.D. projects on Late Bronze Age weapons and warfare at the University of Sheffield, and on La Tène gold torcs at the University of Poitiers.

The group seeks to expand its research into more recent historical periods. One pilot project has already started, on the metallurgy of artillery, in association with the Royal Armouries and the Museum of Artillery. The next likely projects are in association with the National Railway Museum, using their collection to explore developments in steelmaking in the 19th century.

### **Scanning Proton Microprobe Unit**

No report has been received.

### **The Donald Baden-Powell Quaternary Research Centre (Pitt Rivers Museum)**

60 Banbury Road, Oxford, OX2 6PN (01865) 274722

Dr D.A. Roe (University Lecturer in Prehistoric Archaeology)

The Centre has been as busy as ever, as the Oxford base for graduate and postdoctoral students working on the earlier segments of Prehistory, with increasing use also by second and third year undergraduates, as Palaeolithic archaeology becomes more heavily involved in the Archaeology and Anthropology BA degree. Next year a new Palaeolithic Archaeology option will be offered in the Final Honours School, and some

current undergraduates have already chosen Palaeolithic dissertation topics. As usual, various parties of students from other Universities have visited the Centre during the year, the main attractions on these occasions being a lecture and handling session on Palaeolithic implements by Derek Roe, a visit to the laboratory to see a demonstration of microwear analysis by John Mitchell, and a visit to the Pitt Rivers Museum's Hunter-Gatherer Gallery in the adjacent Balfour Building. Individual visitors during the year have included Professor Romauld Schild from Poland (under the auspices of the British Academy), Dr Richard Cosgrave from Australia, Dr Julie Cormack (from Berkeley, California, working with Dr Roe on the publication of Early Stone Age artefacts from Kalambo Falls, Zambia), Dr Wil Roebroeks from Holland, Professor Bog-Soon Shin from Korea, and Professor John Speth from Ann Arbor, Michigan. It was also a great pleasure to receive an informal visit from Mr Francis Baden-Powell, Donald Baden-Powell's son, the benefactor who generously gave the Centre to the University, now 21 years ago.

Doctoral research students based at the Centre this year have included John Mitchell (microwear analysis of handaxes from Boxgrove, Sussex and other British sites), Julie Scott-Jackson (British Lower Palaeolithic sites and the Clay-with-Flints of the chalk downlands), Hyeong Woo Lee (Palaeolithic of the Upper Thames Valley), Sabrina Dumont (final Palaeolithic industries in France and southern Britain), and Marcos Llobera (application of GIS techniques to archaeology). Postdoctoral researchers have included Dr Bill Waldren (Balearic Archaeology), Dr Katharine Scott (the Stanton Harcourt 'Oxford Mammoths' project), Dr Ruth Charles (the Middle to Upper Palaeolithic transition in northwest Europe) and Dr Susan Keates (Early Human occupation of China). Dr Pamela Wace has continued to organise varied and invaluable work on the Pitt Rivers British and foreign archaeological collections, from a base at the Centre, and made a visit to Japan in connection with her work. We have lost as a resident member of our community, but gained as a visitor, the incomparable Mac (Mr R.J. MacRae, tireless recorder of Palaeolithic sites in the field and rescuer of their artefacts, mentor of so many graduate students over the years and latterly an Honorary Curator of the Pitt Rivers Museum); he has moved to Norfolk.

While these brief notes risk seeming no more than a selective list of names, they should convey something of the Centre's wide range of interests and of its international contacts. Perhaps the discerning may even catch a hint of how this heady mixture, shaken and stirred by a lack of staff support and of realistic funding, contrives to create the Centre's vibrant and productive atmosphere, on which so many visitors rather enviously comment.

### **Department of Antiquities (Ashmolean Museum)**

Beaumont Street, Oxford, OX1 2PH (01865) 278020/278023

- Dr P.R.S. Moorey, Keeper (Near East and Cyprus)
- Mr M.J. Vickers, Senior Assistant Keeper (Cretan, Greek, Etruscan, Roman and Byzantine)
- Dr A.G. Sherratt, Senior Assistant Keeper (European Prehistory)
- Mr A. MacGregor, Senior Assistant Keeper (Dark Ages, Medieval and Early Modern)
- Dr H. Whitehouse, Assistant Keeper (Egyptology)
- Mr C. Kirby, Sackler Research Assistant in Egyptology
- Mr M. Norman, Chief Conservator

The Forecourt Development Project was completed in February 1996, and was opened by the Heritage Minister, the Rt Hon. Virginia Bottomley MP. It has provided much needed workshop space, accommodation for the Education Service, a restaurant and a more spacious bookshop. Work is now progressing on a further building programme in the area of the Sunken Court. This will result in the addition of three new galleries, one of which, the Bothmer Gallery, will be a study gallery for the Greek collection at the same level as the Beazley Gallery. The Egyptian galleries, which bore the brunt of the earlier reorganisation, are slowly being put back in order. The Petrie Gallery is the object of immediate attention.

### **Heberden Coin Room** (Ashmolean Museum)

Beaumont Street, Oxford, OX1 2PH (01865) 278058

- Professor D.M. Metcalf, Keeper (Byzantine and Early Medieval)
- Mr N.J. Mayhew, Senior Assistant Keeper (Medieval and Modern Coins, and Medals) and Reader in Numismatics
- Dr C.J. Howgego, Assistant Keeper (Roman)
- Dr W.L. Treadwell, Assistant Keeper (part-time) (Islamic)
- Mr H.S. Kim, Assistant Keeper (Greek)
- Dr C.E. King, Research Assistant (Roman and Celtic)
- Dr P. Nightingale, Research Assistant (Leverhulme Trust grant)

The Coin Room, which is one of the leading international centres of research in numismatics and monetary history, houses a systematic collection of about a third of a million coins, medals, and tokens. The staff are involved in teaching at both undergraduate and graduate levels.

### **Cast Gallery** (Ashmolean Museum)

Beaumont Street, Oxford, OX1 2PH (01865) 278079

Professor R.R.R. Smith, Curator

A new exhibition of Greek and Roman portraits is being prepared in the lower gallery, and a number of portrait casts have been moved in preparation for redisplay. Seventy figurines have been cleaned and moved to open storage, and the mezzanine and other storage areas in the Gallery are being reorganised. With the aid of a successful SEMS application, plans are being made to construct a racking system in the Osney Store for out-housing casts not on display. A database of the cast collection has been initiated, and the work of inputting the old Beazley catalogue is well under way. The whole cast collection has been photographed (ca 900 pieces), and this photographic inventory will be used in the database. A herm portrait of Plato was loaned to Television and Film Productions for a TV program on Atlantis. A study room dedicated to the extensive collection of gem casts and impressions has been established on the lower floor and all the material transferred there from the mezzanine. A complete condition survey of the gem impressions was carried out and the associated catalogue was updated over the Summer with help from Scott Marchand (MA student at St Andrews University).

Test-casting of moulds of sculptures from Aphrodisias in Turkey was carried out by conservator Daniel Bone with Trevor Proudfoot of Cliveden Conservation. A fume

extractor has been installed in the Gallery's laboratory, and a lifting beam and hoist has now been fitted with funds from the Museum and the University Safety Office. This will enable larger casts to be taken apart and conserved. Mr Bone is continuing work on the high-priority list of casts most in need of conservation. The Artemis of Versailles is now in the gallery for the first time following extensive conservation. New casts of a marble head of Hermes and a portrait of Livia, Augustus' wife, were made for the Department of Antiquities with the help of the Cast Gallery. Life Drawing classes have continued successfully and a number of artists regularly make use of the gallery for their work.

### **Maritime Archaeological Research Unit (MARE) (Non-departmental)**

St Peter's College

Mensun Bound (Director)

The principal activity of the past 12 months has been the completion of a two volume report for the Federal Government of Malaysia on the 1995 excavation of the Dutch East Indiaman *Nassau*. The latter sank beside the Bambek Shoal, 5 miles out to sea in the Straits of Malacca, during the Battle of Cape Rachado in 1606. Four vessels, 2 Dutch and 2 Portuguese, went down in the battle; all have now been found.

The month of August was spent on a survey of the Mahdia wreck, a 1st century BC ship that went down 3 miles off the coast of Tunisia with a cargo of statuary and architectural pieces. The site consists mostly of columns, capitals and ship's hull. Poor weather prevented completion of the work. The project was a collaboration with the underwater archaeological division of the Institut National du Patrimoine of Tunisia and the German maritime archaeological organisation DEGUWA.

Field-work continued in 1996 on sites off Gibraltar, the Shetland Islands and Rhyl, North Wales. Consultancy work was carried out in several other countries.

In addition to Britain lectures on the work of MARE were given in Germany, Italy and Gibraltar.

Editing was completed on *Excavating Ships of War*, the third volume in the *International Maritime Archaeology Series*.

### **General activities**

#### **Seminars, Lectures and Conferences**

Sponsored by the Committee or by members of staff, in addition to the normal lecture programme.

*Hillfort Study Group* (G. Lock as Secretary to the HFSG)

- Day Conference

*Seminars in Ancient Numismatics* (C.J. Howgego and H.S. Kim)

- Dr Andrew Burnett The relevance of buildings on ancient coins
- Mr T.R. Volk Exploiting numismatic data-sets: examples from the Roman

Republican coinage

*Ancient Architecture Discussion Group* (J.J. Coulton)

- Seminars throughout the year

*German for Archaeologists* (Miss G. Seidmann)

- One week's intensive course

*Istanbul Study Trip* (C. Mango and M. Mango)

*XXth International RCRF Congress on Roman pottery*

- Dr P.M. Kenrick (Hon. Treasurer of the REI CRETARIAE ROMANAE FAUTORES) was involved in the organization of this event which took place at York and Newcastle in September 1996

*Institute Lunchtime Lectures* (R. Osgood)

Lectures were given by

- R. Osgood, M. Popham, P. de Jersey, T. Kiely, C. Finn, N. Spencer, G. Lock, J. Lloyd, B. Cunliffe (Michaelmas Term)
- P. Kenrick, G. Seidmann, J. Bardill, A. Claridge, M. Henig, V. Fell/E. Cameron, P. de Jersey (Hilary Term)
- M. Mango, H. Hamerow, T. Bell, M. Henig, G. Oteyo, A. MacDonald (Trinity Term)

*Remote Access to Museum Archives* (D. Kurtz)

- Day seminar

*Other lectures*

Dr F. Al-Rashedy (Gar Younis University, Benghazi)

- Death amongst the Garamantes

Dr E. Kurti (University College London)

- Rome as a Hellenistic Capital

Dr C. Lightfoot (Istanbul)

- Excavations at Amorium, Summer 1995

Professor Richard Bradley (University of Reading)

- Prehistoric Rock Art in Galicia

Professor Peter Ucko

- The World Archaeological Congress: the first ten years

Professor Barry Cunliffe

- The Danebury Environs Project

Dr Janusz Czebreszuk (University of Poznan)

- The Bell Beaker Tradition in the Polish Lowlands

Dr Yvonne Marshall (University of Southampton)

- How can feminist theory expand our understanding of sexual imagery in prehistoric Northwest Coast art?

Professor Kathleen Gibson (University of Texas, Houston)

- The Human Cognitive Niche

Dr Julian Thomas (University of Southampton)

- An Economy of Substances in Early Neolithic Britain

Dr Negris Günsenin (Bogazici University, Istanbul)

## **Publishing Activities**

### *Journals*

- *Anglo-Saxon Studies* 8 (Institute)
- *Archaeometry* (Research Laboratory)
- *Archaeological Computing Newsletter* (Institute)
- *Oxford Journal of Archaeology* (Institute for Blackwells)

### *Monographs*

#### *Oxford University Committee for Archaeology Monographs (OUCA)*

- 41 *Romney Marsh. The Debatable Ground*  
Jill Eddison (ed.)
- 42 *Egyptian and Egyptianizing Scarabs*  
Andrée Gorton
- 43 *Guernsey. An Island Community of the Atlantic Iron Age*  
Bob Burns, Barry Cunliffe and Heather Sebire
- *Lithics and Landscape* (Thames Valley Landscapes Monog. 7)  
Tim Allen
- *Two Oxfordshire Anglo-Saxon Cemeteries: Berinsfield and Didcot* (Thames Valley Landscapes Monog. 8)  
A. Boyle, A. Dodd, D. Miles and A. Mudd

## **REPORTS FROM PERMANENT ACADEMIC STAFF**

**E. Cameron** Conservator, Institute of Archaeology

Lectured on *cuir bouilli* to members of the York Archaeological Trust at the Archaeological Resource Centre, York; gave two lectures on archaeological conservation at the Universidad Peruana Cayetano Heredia in Lima, Peru, and ran a one-and-a-half day conservation seminar for field archaeologists for the OUDCE. She sits on the committee of the Archaeological Leather Group and is currently editing its conference papers.

Research interests lie in technology, particularly of organic materials, in early medieval Europe.

### **Dr J.J. Coulton** Reader in Classical Archaeology

Dr Coulton continued to serve as Secretary to the Harmsworth Trust at Merton College (in charge of Junior Research Fellowship and Senior Scholarship competitions), and also acted as Director of Graduate Studies in Archaeology. He lectured at Atlanta (Georgia) and the Institute of Archaeology at London, and gave a paper at the International Symposium on the Greek Polis at Copenhagen. In March-April he visited Tunisia and Libya, where he spent three weeks excavating at Euhesperides (Benghazi). He acted as Chairman of Examiners for the M.St. in Archaeology and the M.Phil. and M.St. in Classical Archaeology at Oxford, and (for part of the year) served on the Managing Committee of the British School at Athens. He continued as a member of the Council and Executive Committee of the British Institute of Archaeology at Ankara, and as convenor of its Publications Subcommittee and Monographs Editor. He also served on the Pompeii Research Committee, and the Joint Triennial Committee of the Hellenic and Roman Societies.

Current research interests are:

- Greek and Greco-Roman architecture
- Archaeology and history of Lycia

Specific projects include:

- The Balboura Survey
- The Phylla Fort Project
- The Euhesperides excavation

### **Barry Cunliffe** Professor of European Archaeology

Two fieldwork-based programmes were continued this year. The Danebury Environs Programme, carried out on behalf of the Danebury Trust, involved the excavation of part of an Iron Age settlement and cemetery at Suddern Farm, Hants. and the excavation of an Iron Age boundary and road complex at Five Ways, Longstock, Hants. The Le Yaudet programme, carried out in collaboration with the University of Brest, examined an occupation area within the promontory fort spanning the Iron Age to late medieval period and the main Iron Age defences. Work was completed on a monograph on the Iron Age settlement and cemeteries of Guernsey and the volume was published during the year. Post-excavation research on the Guadajoz Programme continues.

Professional duties outside the University include chairmanship of the Archaeology Panel for the RAE exercise, membership of the Ancient Monuments Advisory



Committee of English Heritage, of the Board of Governors of London Museum and of the Discovery Programme Directorate (in Ireland), and general editorship of *Internet Archaeology*.

Current research interests are:

Social and economic change in the first millennium BC in Europe. The current emphasis is on Atlantic trading systems, cultural interaction and state formation in southern Iberia, and social hierarchies in central southern Britain.

Specific research projects include:

- The Danebury Environs Project
- The Wessex Hillforts Project
- The Le Yaudet Project, Brittany
- The Guadajoz Project, Spain
- The Celtic Coin Index

**N.H. Gale** Director of the Isotrace Laboratory

The Isotrace Laboratory in Oxford is the only existing centre equipped with the most up-to-date high quality facilities for Thermal Ionisation Mass Spectrometry applied solely and specifically to archaeological and related materials. The laboratory has set up methods and techniques for analysing lead, copper, strontium, neodymium, uranium and thorium isotopes in metals, minerals and rocks used as raw materials in antiquity. A special concern of the Isotrace Laboratory lies in the analyses, for provenance studies, of milligram samples of silver and copper based metals, pigments used in paintings, glasses and glazes for their lead isotope compositions. The extensive comparative data base acquired in the last twenty years allows good assessments to be made of the origin of raw materials used for the production of these materials.

A major interest of the Director of the Laboratory in the last year was a study of possibilities of using measurements of the isotopic composition of tin and isotope compositions of lead present in tin and cassiterite. A new, much improved, low blank method was invented for the extraction of lead from difficult matrices; the method is quicker and less demanding than previous known methods, and at last solves the problem of extracting small amounts of lead from tin ingots for reliable isotopic analysis.

An important, unsolved, problem of Bronze Age Mediterranean archaeology is the source or sources of tin used to make tin bronze. Thus far science has been powerless to solve this problem. Using the new analytical method mentioned above, a start has been made on a possible approach by comparative analyses of the lead isotope composition of the traces of lead in tin ingots from the Uluburun wreck and from underwater excavations off the coast of Israel, with that in cassiterite samples from the principle relevant tin deposits. Coupled with this has been the development of a method of measuring tin isotopic composition themselves. Application of this technique has demonstrated that large fractionation of the isotopic composition of tin does not exist in the studied tin metal and tin bronze artefacts from the prehistoric Mediterranean region.

Conferences at which papers were presented included the Third International Congress of Cypriot Studies, Nicosia, Cyprus, April 1996, and the Council of Europe International Conference, Bronze '96, Neuchâtel, Switzerland.

### **C. Gosden** University Lecturer and Curator of Archaeology, Pitt Rivers Museum

He lectured in undergraduate and M.St. courses on World Archaeology, Regional Studies in Material Culture, Man Environment and Culture. In August 1995 he carried out excavations on and around the Iron Age hillfort at Uffington in South Oxfordshire, together with Gary Lock, Institute of Archaeology. For the first time these included training for Honours Moderations students in Archaeology and Anthropology. He continues to write up fieldwork in both New Britain and New Ireland Provinces of Papua New Guinea, as well as more general works on the Pacific, in addition to writing up fieldwork in Turkmenistan. He is also co-ordinating the cataloguing of archaeological holdings in the Pitt Rivers Museum from Europe, Japan and Africa and has applied to a wide range of sources for extra funds for this work. He examined two D.Phil. theses from the Australian National University and two from the University of Oxford. He gave papers in Reading and London. He helped organise a day meeting on archaeological fieldwork in Australia and the Pacific. He was external examiner at the Institute of Archaeology in London. He sat on the editorial boards of *World Archaeology*, *Archaeology in Oceania* and the Cambridge University Press *World Archaeology* series.

Current research interests are:

Archaeological approaches to time, the archaeology of landscape, archaeology and contact history, the links between archaeology, history and anthropology in the Pacific.

Specific research projects include:

- The Archaeology of West New Britain, Papua New Guinea
- The origins of agriculture in Turkmenistan
- Hillforts of the Ridgeway Project

### **Helena Hamerow** University Lecturer in Medieval Archaeology

Provides lectures and tutorials on the archaeology of early medieval Europe and Anglo-Saxon England for undergraduates in Archaeology, History and English and for Master's degree candidates. She supervises three doctoral students, and acts as an external examiner for the MA in Medieval Studies at York University. She is Assistant Editor of *The Archaeological Journal*, an Officer of the Royal Archaeological Institute and a member of the Oxford Archaeological Unit's Academic Committee. With John Blair, she acted as Director of Studies for a conference on 'Late Anglo-Saxon Towns', held at Rewley House in November 1996.

Current interests involve research into rural communities in north west Europe, AD 400-900 for a forthcoming book. Other work on publications includes preparing the discussion section for an English Heritage monograph on the early medieval settlement at Catholme, Staffs, a paper on Migration theory and the Migration Period for a volume of the Arbeitsgemeinschaft für Sachsenforschung and two articles for Dutch and German *Festschriften* comparing Anglo-Saxon settlements with Migration Period settlements in the Anglo-Saxon 'homelands'. A volume of papers on *Migrations and Invasions in Archaeological Explanation*, edited jointly with Dr John Chapman of Durham University, is also nearing completion.

**R.E.M. Hedges** Professor of Archaeology, and Lecturer in Archaeological Science, Director of the Radiocarbon Accelerator Unit

Lectured and tutored for the undergraduate course, and supervised five postgraduate students for the D.Phil. Continued to direct the Radiocarbon Accelerator Unit which is now financially viable as a commercial operation. Current research interests include applications and novel developments of radiocarbon dating; applications of uranium-series disequilibrium dating to bone; the uses of stable isotopic data in reconstructing ancient diet, the recovery of genetic and related information from surviving DNA (in collaboration with Dr B. Sykes of the Institute of Molecular Medicine), diagenetic changes in buried bone and in ancient proteins. Participated in the following conferences and meetings:- Stable isotope mass spectrometry (Llandudno), Bone Diagenesis (Paris), NERC Ancient Proteins Meeting (Newcastle), Archaeometry Symposium (Urbana, Ill. USA), Stable Isotopes in Biology (Newcastle). Carried out fieldwork in Argentina (sampling material from rock art of the Aguada culture).

**Martin Henig** Visiting Lecturer in Roman Art

During the year gave lectures and tutorials on Roman Art in the Institute of Archaeology. He supervised four students at postgraduate level. Other teaching activities in the University comprised lectures on the Ancient Theatre for the Department for Continuing Education (weekly class) and on Religion in Roman Britain for the Certificate in British Archaeology in Trinity Term. He has also convened a monthly advanced class at Earley. He gave a course on the theme 'From Pagan to Christian' at UEA for their Autumn semester and four lectures on Greek and Roman Architecture for Oxford Brookes University in Michaelmas Term. In Michaelmas Term, he taught for the Certificate in British Archaeology at King Alfred's College, Winchester and also gave a lecture for Christie's Fine Art course; in Trinity he lectured at Birkbeck College, London. He examined a Ph.D. for UCL (Institute of Archaeology) in Michaelmas Term and an M.Phil. at Warwick (Michaelmas and Hilary). In Michaelmas Term he attended a day school in Paris (Cabinet des Medailles) in honour of Dr Marie-Louise Vollenweider and gave a paper on Animals on Engraved Gems, to be published shortly. In Hilary Term, he lectured at the Museum of Oxford and at Wallingford on Roman art. He gave a day school at Bristol on the subject and two summer schools in Oxford after the end of Trinity Term. He was the resident archaeologist accompanying the Alumni Office's 'Hadrian's Wall Walk' in the Easter Vacation. At the Institute he gave a lecture on 'Art of Roman Oxfordshire' in Hilary and on 'Religious Buildings in Late Roman Britain' for the Architectural History Seminar repeating it for the benefit of Institute staff.

He attended a meeting of OIKOS (of which he is Academic Advisor) in Hilary Term (at Woodstock) and the British Archaeological Association's annual conference in Bristol during the summer, giving a paper on the Newton St Loe pavement, to be published in Transactions. As Hon. Editor he has been very much involved with the Association and its activities throughout the year.

As Chair of FAMOS he has been involved in campaigning to save the Museum of Oxford from the threat of closure as the result of expenditure cuts. For the present this threat seems to have been lifted.

**C.J. Howgego** Assistant Keeper, Heberden Coin Room, Ashmolean Museum; University Lecturer in Roman Numismatics

Gave twenty lectures, supervised four D.Phil. students, taught one candidate for the M.Phil. in Ancient History, and acted as an Assessor for the M.Phil. in Classical Archaeology.

Current research interests are:

coinage and history (especially, at the moment, cultural history); Roman provincial coinage.

**H.S. Kim** Assistant Keeper, Heberden Coin Room, University Lecturer in Greek Numismatics

Presented 'Archaic coinage as evidence for the use of money' at an Oxford conference on the uses of money in Antiquity in November. He lectured sixteen times on Greek coinage and gave tutorials to three masters students in Classical Archaeology. As part of his continuing work on the inception of coinage in the Greek world, he has made several research trips to examine coins in the British Museum, London and the Bibliothèque Nationale, Paris.

Current research interests are:

The development and spread of early Greek coinage; metallurgical applications to numismatics.

**C.E. King** Research Assistant, Heberden Coin Room, Ashmolean Museum

Attended a conference at MacMaster University in Hamilton, Ontario in September where she gave a paper on Roman portraiture, a topic which she also discussed in a paper given to the late Roman seminar. She gave informal tuition on late Roman coins to three graduate students during the year.

Current research interests are:

Roman numismatics from 3rd - 5th centuries AD with specific programmes on revision of *Roman Imperial Coinage* Vol. V, pt. (AD 253-268); catalogue of Roman imperial quinarii; catalogue and analysis of a 3rd century AD antoninianus hoard (Dorchester, Dorset, c. 10,000 coins), and a late Roman hoard from N. Africa (with A. Cepas); catalogue of the coins of Valerian and Gallienus and family in the Gneccchi Collection in the Museo Nazionale, Rome; (with P. de Jersey) annual publication of individual finds of Celtic coins found in Britain for the *British Numismatic Journal*.

**C. Kirby** Sackler Research Assistant in Egyptology

His work is primarily directed at the design and arrangement of the refurbishment of the Petrie (Predynastic) Gallery. Directed the Egypt Exploration Society archaeological survey of Kom el-Hisn (ancient Amu), Western Delta, Egypt.

Current research interests are:

Writing Survey of Gebel el-Haridi I, a Preliminary Report monograph for the Egypt Exploration Society.

**D.C. Kurtz** University Reader in Archaeology and Beazley Archivist

Lectured, tutored, and supervised for the Faculty of Literae Humaniores. Acted as Assessor for M. Phil. in Classical Archaeology. Directed Beazley Archive (Sections 2 and 4). Attended meetings in Florence and Paris. Continued research on History of the Cast Collection.

**J.A. Lloyd** University Lecturer in Roman Archaeology

He acted as coordinator for Unit 58 (Archaeology) for the RAE. Fieldwork programmes continued at the Greco-Libyan city of Euesperides (Benghazi) in March/April and in the Sangro valley, Italy in September. He continued to serve on the Council of the Society For Libyan Studies and as a member of the Pompeii Research Committee. He gave invited lectures at the Museum of Oxford, Garyunis University, Benghazi and in London to the Society for the Promotion of Roman Studies and the Society For Libyan Studies.

Current research interests are:

Town and country in the central Mediterranean lands (particularly Italy, Libya and Greece).

Specific projects include:

- The Sangro Valley Project (Italy)
- Euesperides Excavations (Libya)

**G.R. Lock** University Lecturer in Archaeology (Computing and statistical methods)

His time is divided equally between the Institute of Archaeology and directing the archaeology programme in the Department for Continuing Education. He teaches on the undergraduate degree course, supervises research students and gives general courses on using computers in archaeology. Current research interests include approaches to landscape archaeology and how the use of GIS technology can fit with current landscape theory. Fieldwork based on the hillforts of the Ridgeway in Oxfordshire (with Chris Gosden) and on Monte Pallano in Abruzzo, central Italy (with John Lloyd), provide the practical basis for the GIS research. Other work this year has included post-excavation on material from Uffington Castle, King's Low and Queen's Low.

Dr Lock edits the *Archaeological Computing Newsletter*, is external examiner for the M.Sc. in Archaeological Computing at Southampton University and gave papers at the annual Computer Applications in Archaeology Conference in Romania, in Poznan, Poland and at an EU Colloquium in Ljubljana, Slovenia. He is secretary of the Hillfort Study Group, sits on the Council for British Archaeology Education Committee, the Technical Panel of *Internet Archaeology* and the Management Committee of the Archaeology Data Service. Within the University he is Chairman of the Committee for Archaeology IT sub-committee.

**A.G. MacGregor** Senior Assistant Keeper in the Department of Antiquities, Ashmolean Museum

He lectured to conferences on Archives and Art History at the Royal Library in The Hague and on Royal Stables in Europe from the 16th to the 18th Century at the Palais

de Versailles. He was elected Director of the Society of Antiquaries.

Current research interests are:

- Artefacts of the Continental Migration Period
- History of collecting, 16th-19th century

**M.C. Mango**, University Lecturer in Byzantine Archaeology and Art

Dr Mango lectured in late Roman and Byzantine subjects for graduate degrees in Classical Archaeology and in Byzantine Studies. She gave 1 class for the History Faculty. She was a co-convenor of the Byzantine Studies Seminar, of the Byzantine Art and Archaeology Seminar, and of a 1-term Byzantine-Islamic Seminar. She contributed papers to the Ancient Architectural Discussion Group, to the After Rome Seminar and to the Oxford Aram conference on Trade Routes in the Near East. Together with Professor C. Mango she took a group of 24 students (and 5 former students) on a 1 week study trip to Istanbul in March, which was preceded in Hilary Term by 8 lectures on Constantinople. In April she made use of a research permit in Turkey and also went to Sinai.

Current research interests are:

The colonnaded street in late antiquity; Byzantine trade; late Roman and Byzantine secular art; late antique silver plate.

Specific research projects:

- Tchalenko Archive Computerisation Project
- Catalogue of Byzantine Antiquities in the Ashmolean Museum
- Late antique cloisonné ornament project (British Museum/Ashmolean Museum)
- Lead isotope analysis of late antique silver (Oriental Institute, Chicago)

**N.J. Mayhew** Senior Assistant Keeper, Heberden Coin Room, Ashmolean Museum.

Has served as acting Keeper during Professor Metcalf's absence on sabbatical leave. Over the year he gave a number of classes for the Modern History Faculty. He gave a lecture on seventeenth-century silver coinage at the Victoria and Albert Museum in November, and also spoke to the Oxford University Numismatic Society. In June he visited Aberdeen to work on the medieval city council records there and to speak at the Mackie Symposium organised by the Department of History at the University of Aberdeen. In July he spoke at the Second Exeter International Gender History Conference on the status of women and the brewing of ale in later medieval Scotland. He continued to serve on the Advisory Committee of the Department of Archaeology and Numismatics at the National Museum of Wales, and to supervise the Leverhulme Research Project on Debt in medieval England. He was appointed Reader in Numismatics in July, 1996.

Current research interests are:

Medieval credit; English monetary history, with special reference to its influence on prices; mint organisation; feudal coinages in Europe.

**D.M. Metcalf** Keeper, Heberden Coin Room, Ashmolean Museum

Took sabbatical leave until January 1996. He continued to supervise one D. Phil student, and a Visiting Student from the University of Pisa, at Wolfson College. He was appointed an Assessor for the M.Litt. examination in Byzantine Studies. Appointed Professor of Numismatics.

Current research interests are:

The coinage of the Sueves in NW Iberia; late Anglo-Saxon monetary circulation; the Lusignan dynasty in 13th-century Cyprus; Anglo-Saxon sceattas.

**P.J. Mitchell** University Lecturer in African Prehistory and Curator of African Archaeology, Pitt Rivers Museum

He lectured for the undergraduate degree in Archaeology & Anthropology and coordinated the Honour Moderations course *Introduction to World Archaeology*, as well as serving as an examiner for Mods and co-organizing the Archaeology & Anthropology Open Day. He also served as Secretary of the Sub-Faculty of Archaeology and as Safety Officer of the Pitt Rivers Museum. He continued to write up fieldwork from previous seasons' excavations and field survey in Lesotho and visited South Africa to develop plans for a coordinated programme of archaeological and palaeoenvironmental research in the Lesotho highlands. Though not carrying out fieldwork himself this year, he made arrangements for a total of eight Oxford undergraduates to work on projects in Bénin, South Africa and Zambia. He also began work on a catalogue of the Southern African Stone Age archaeological collections of the British Museum, for publication as a monograph. As well as giving a guest lecture at Cambridge, he gave papers at conferences in London, Bloemfontein and Poznan and was an invited participant in a symposium on the organization of African lithic technologies at the Society of American Archaeology meeting in New Orleans. He became Secretary to the Commission on Archaeology and Human Palaeoecology of the International Quaternary Association (INQUA) and co-organized the first of a regular series of meetings of Africanist archaeologists in Europe held at the British Museum in October 1995.

Current research interests are:

the relations between cultural and environmental change among hunter-gatherer societies, the evolution of the cultural systems of southern African hunter-gatherers and the study of prehistoric exchange networks.

Specific projects include:

- Hunter-gatherer landscapes of the Lesotho highlands
- Later Stone Age archaeology of the Phuthiatsana Basin, Lesotho

**P.R.S. Moorey** Keeper in the Department of Antiquities, Ashmolean Museum

He has continued to teach, lecture and supervise for the Committee for Archaeology and to supervise for the Faculty of Oriental Studies; he served as Vice-Chairman of the Committee for Archaeology and continues to serve as the President of the British School of Archaeology in Jerusalem. He gave a seminar in the Louvre. He was the Anthony McNicol visiting Lecturer for 1996 giving two lectures and two seminars in Sydney

University; single lectures at the Australian National University (Canberra), Melbourne University and Monash University, and a lecture and seminar at Adelaide University.

Current research interests are:

Catalogue of the Ancient Near Eastern Terracottas in the Ashmolean Museum; ancient Near Eastern technology.

**M. Norman** Chief Conservator in the Department of Antiquities, Ashmolean Museum

He continues to be involved in the Ashmolean redevelopment projects, both at the planning and post construction stages. These currently include the restitution of the Egyptian Galleries and the Sunken Court Project. He is also involved in the development and implementation of departmental collections management databases and research projects, continues to sit on the Standards and Qualifications Committee of the Museums Training Institute, and has lectured for the Ashmolean Education Service.

Current research interests are:

The development of computerised text and image based recording systems for conservation. The applications of non destructive analytical and examination systems to archaeological artefacts. The effects of pollution on museum collections.

**D.A. Roe** University Lecturer in Prehistoric Archaeology

Dr Roe provided his usual teaching on Palaeolithic and Mesolithic archaeology for the graduate Master's Degree courses (M.St. and M.Phil.) and for Final Honours undergraduates in Archaeology and Anthropology and in Geography, plus several special lectures for undergraduates in their first and second years. This year he held the post of Director of Graduate Studies for the Committee for Archaeology, and became heavily involved in a complete overhaul of all the taught Master's degree courses in Archaeology under the Committee's aegis. This was completed in time for the new courses to be offered to students in the 1996-7 Academic Year, but a great deal of new explanatory literature had to be prepared and various existing booklets needed to be rewritten. He continued to direct the work of the Donald Baden-Powell Quaternary Research Centre for the Pitt Rivers Museum and the Faculty of Anthropology and Geography. In November, he was co-director, with Dr A. Lawson of the Trust for Wessex Archaeology, of a large Oxford weekend conference on British Palaeolithic Archaeology, organised by the University's External Studies Department. He gave the opening lecture for this, chaired various of the sessions and organised an exhibition of relevant archaeological material for the delegates. During Hilary Term, he gave a course of 8 lectures at Cambridge in addition to his Oxford teaching.

He was awarded a grant of £2,200 by the British Council in Madrid (with Professor M.J. Walker of Murcia University), under its 1996 *Acciones Integradas* scheme for Anglo-Spanish projects, to advise on setting up microwear research facilities in Professor Walker's laboratory at Murcia and to study certain stone artefacts from Spanish Palaeolithic sites: the work and visits involved will take place later in 1996 and early in 1997. Elsewhere in Spain, he continued his involvement with the team researching the earliest Palaeolithic occupation of the Orce Basin (Andalucía): there has been no field work this year, but work has been in progress on the publication of the finds made so far, following the 1995 International Conference, and plans are being made for further



field work to start probably in the summer of 1997. In Britain, he undertook a study of the stone artefacts recovered during the several years of excavation at the Stanton Harcourt Middle Pleistocene site. He continued to serve on five Editorial or Advisory Boards for international journals, on the Archaeology Advisory Committee of the National Museums and Galleries of Wales, and on the Scientific Advisory Panel of the Irene Levi-Sala CARE Foundation for Archaeological Research in Israel. With Professor D. Austin of the University of Wales at Lampeter, he undertook the detailed evaluation and eventual validation of the new Honours BA course in Archaeology for the University of Wales College of Newport.

**A.G. Sherratt** Lecturer in Archaeology and Senior Assistant Keeper in the Ashmolean Museum

Sabbatical leave in Hilary Term gave time to complete the editing and updating of a first volume of collected papers (*Economy and Society in Prehistoric Europe: changing perspectives*) to be published early in 1997. As well as Oxford teaching for Mods and FHS courses in Archaeology and Anthropology, there was opportunity to lecture and give seminars by invitation in Cambridge, London, Aarhus, Copenhagen and Leiden. Service in a variety of editorial capacities, as on University committees and examining boards, was continued. New work published in this period included contributions on Celtic hydronymy, plate tectonics and agricultural origins, and megalithic monuments, as well as a chapter on the UNESCO *History of Humanity* and an extended version of the David Clarke Memorial Lecture, which offers the theoretical underpinnings for an interactionist archaeology. Solicited chapters for works on European historical geography and on subsistence change allowed this model to be elaborated in relation to early farming and its development, in which contact and trade are primary determinants of agrarian intensification. This offers a theoretical bridge between punctuationist accounts of human evolution and core-periphery models of historical change.

Current research interests are:

Consumption, meaning and value, especially as exemplified by psychotropic substances; the nature of early trade; spatial differentiation in productive activities; transport systems; the social monopolisation of symbolic capital; long-term global change.

Specific research projects include:

- The Çatalhöyük Project (trustee)
- Why prophets receive more honour abroad than at home

**R.R.R. Smith** Lincoln Professor of Classical Archaeology and Art

Smith lectured for the University on early Greek sculpture and on historical narrative in ancient art, and examined in Mods, Greats, and the M.Phil. in Classical Archaeology. He gave papers at conferences in Ankara, Athens, and Vienna; invited public lectures at the Universities of Göteborg, Heidelberg, Lund, New York, and Stockholm, and at the British Museum; and seminar papers to the Cambridge Philological Society, the Oxford Ancient History Seminar, and the Oxford Ancient Philosophy Seminar. In the summer he directed a sixth season of archaeological research and excavation at Aphrodisias in Caria (SW Turkey).

Current research interests are:

Greek and Roman portrait sculpture and self-representation, the art and archaeology of Asia Minor in the Hellenistic and Roman period.

Specific projects include:

- Aphrodisias Excavations

**E.M. Steinby** Professor of the Archaeology of the Roman Empire

The main effort still concentrates on the Lexicon Topographicum Urbis Romae: vol. III (H-O) was sent for publication and part of the manuscripts for vol. IV were revised. In Rome, research continued on the Via Triumphalis necropolis. The papers of the seminar 'Ianiculum - Gianicolo' (organised in 1994 in Rome) were edited.

Current research interests are:

Topography of ancient Rome; the necropolis of the Via Triumphalis in Rome; politics and ideology in the building activity of republican Rome; the excavations at Lacus Iuturnae, Rome; Roman brickstamps and the building industry.

**Z.A. Stos-Gale** INSTAP Research Fellow

Major activities in this period were to oversee the day-to-day activities of the Laboratory, to begin supervision of a research student from Birmingham, and to work on the interpretation of lead isotope analyses of Bronze Age artefacts from Crete and Peloponnesian sites, in preparation for publication of these large projects, carried out under the aegis of the five year British Academy grant. She also undertook paid service work to augment the finances of the Laboratory, and undertook the completion of bodies of ore lead isotope analyses in preparation for regular publication in *Archaeometry*. She gave regular tutorials, for various colleges, in archaeological science for undergraduates in the Oxford archaeology course.

**M.S. Tite** Edward Hall Professor of Archaeological Science, Director of Research Laboratory for Archaeology and the History of Art

Served as Chairman of the Committee for Archaeology and lectured and tutored for the undergraduate degree course. Research projects in luminescence dating and ceramic, glass and pigment studies with three D.Phil. research students being supervised in these areas. During a sabbatical in Trinity Term, prepared the first draft of a review paper on lead glazes and visited Peru in order to investigate possible future collaboration in the application of archaeological science at the Moche culture site at El Brujo, the excavations of which are being funded by the Fundacion Wiese in Lima. Participated in the following conferences and meetings: - UK Luminescence and ESR Dating Meeting (University of Sussex), Science and Stonehenge Discussion Meeting (Royal Society, London) (member of Organising Committee), Geology and Geochemistry in Archaeology (Open University), International Archaeometry Symposium (Urbana, USA).

**W.L. Treadwell** Assistant Keeper (part-time), Heberden Coin Room, Ashmolean

## Museum

Gave sixteen lectures on Islamic monetary history to students in the M.Phil. in Islamic Art and Archaeology. He gave a paper entitled 'The Mint of Samarra' in the two-day conference on Samarra held in Wolfson College in May 1996. He took sabbatical leave from 1 April - 30 September 1996 in order to continue his research on the history of Eastern Iran in the 10th century A.D.

Current research interests are:

Bukharkhuda coinage; coinage of Iraq and Iran during the Buyid period, the Islamic mint of Marv.

**M.J. Vickers** Reader in Archaeology and Senior Assistant Keeper in the Department of Antiquities, Ashmolean Museum

Curated the Ashmolean's Greek and Roman collections. Taught for the Faculties of Anthropology and Geography and Literae Humaniores, and examined for the Faculty of Oriental Studies. Served as Convenor of the Classics Sub-Group of the Sub-Faculty of Archaeology. Gave classes to groups of visiting students from University College, Cardiff and the Open University. Read papers at the Seminar für Alte Geschichte, University of Konstanz, the Allard Pierson Museum, University of Amsterdam, at the British Museum Symposium on Sir William Hamilton, the Silver Society, the Oxford Late Roman and Byzantine Seminars, the Centre for Archaeological Studies of the Georgian Academy of Sciences, Tbilisi, the Society for Libyan Studies, the Fine Arts Club, New York University, the Museum of Oxford, and the Classical Association Sixth Form Conference at Radley College. Visited the Republic of Georgia with the assistance of the Marjory Wardrop Fund. Mounted an exhibition at the Museum of Oxford 'From the Gardens of the Hesperides: the Excavation of an Ancient Greek City in North Africa', based on material from Euesperides/ Benghazi excavated by the 1952-54 'Ashmolean Expedition to Cyrenaica'; the exhibition subsequently travelled to Woodstock, Durham and Newcastle-upon-Tyne. Elected a Senior Research Fellow in Classics at Jesus College, Oxford, and made Reader in Archaeology in the Recognition of Distinction exercise.

Current research interests are:

Ancient material values and metrology. The publication of finds from the Ashmolean Expedition to Cyrenaica's excavation at Euesperides, Benghazi in 1952-54. Political imagery in Greek art and literature.

**H.V.D. Whitehouse** Assistant Keeper in the Department of Antiquities, Ashmolean Museum

Taught for the Faculty of Oriental Studies, lectured to the Sudan Archaeological Research Society in London and the Roman Egypt seminar at Warwick University, and worked with the Dakhleh Oasis Project in Egypt, recording Roman wall-paintings at Ismant el-Kharab (Kellis). She continued to serve as Editor-in-Chief of *Journal of Egyptian Archaeology*

Current research interests are:

Painting and drawing in Roman Egypt; 17th-century drawings after the antique; the

post-Pharaonic reception of Egyptian antiquities.

## **RESEARCH PROJECTS IN PROGRESS**

### ***Summary Accounts of Projects***

#### **Scientific investigations**

*Holocene hydrology and the alluviation of the Upper/Middle Thames, Ouse and Nene Valleys*

Dr M.A. Robinson

Work has begun on deposits on the Upper Thames floodplain at Yarnton. They should give details of the onset of hydrological changes in the Bronze Age. A preliminary sequence for Holocene channel evolution has been established for the Middle Thames at Dorney. As in the Upper Thames, channel stabilisation seems largely to have occurred by the start of the Holocene, but backswamps developed on the floodplain and alluviation began at a much earlier date than upstream. Neolithic occupation surfaces are interstratified within the alluvium.

Sponsors: English Heritage and Oxford Archaeological Unit

*Waterlogged plant and invertebrate remains from Neolithic to Bronze Age sites in Southern and Eastern England*

Dr M.A. Robinson

Records are being gathered together for scarabaeoid dung beetles that are now extinct or very rare in Britain. While agricultural intensification was probably responsible for a general decline of these species, two Bronze Age sites, the Wilsford Shaft and a well at Yarnton, stand out as having a high proportion of beetles from the genus *Onthophagus*. They would have been favoured by a warm climatic episode.

Sponsor: English Heritage

*The environmental archaeology of the Raunds area of the Nene Valley*

Mrs G.V. Campbell and Dr M.A. Robinson

With the completion of work on the South Stanwick Long Barrow, samples are now being sorted from the Stanwick Roman Villa.

Sponsor: English Heritage

*Charred plant remains from the Danebury Environs Project*

Mrs G.V. Campbell

The first stage of sample sorting has now been completed and full identification will start shortly.

Sponsor: English Heritage

*Plant and invertebrate remains from the Project Archéologique de Nacqueville, Normandie*

Dr M.A. Robinson

A preliminary analysis of waterlogged Iron Age deposits from this coastal settlement has shown the preservation of plant and insect remains to be extremely good. The site clearly has potential for more detailed work and perhaps, at a later stage, a comparison with Hengistbury on the other side of the Channel.

*Macroscopic plant and invertebrate remains from the University of Reading/British School at Rome excavations in Pompeii*

Dr M.A. Robinson

The excavations of Professor M. Fulford, Dr J. DeLaine and Professor A. Wallace-Hadrill to study urban development at Pompeii have provided the opportunity to apply modern bulk sieving and flotation techniques for the recovery of smaller macroscopic biological remains and to investigate deposits below the AD 79 destruction levels. They were successful in retrieving large quantities of charred plant remains, small bones and shell. More detailed analysis of the charred remains revealed what appeared to be burnt kitchen and table waste from horticultural crops.

Sponsor: British Academy

*Eneolithic and Bronze Age metallurgy in Bulgaria*

N.H. Gale and Z.A. Stos-Gale with Ana Raduncheva, Ivan Ivanov, P. Lilov and Ivan Panayotov

On the present evidence the Balkan metallurgy presents the earliest attempts of European people at smelting of copper minerals. The metallurgical developments in this part of Europe started much earlier than in Greece and developed chiefly for copper and gold, with total omission of lead/silver. Some 20 years ago Chernykh published a substantial study of the Eneolithic and Bronze Age metallurgy of the regions bordering in the north and west with the Black Sea. Much of his conclusions were based on the survey of ancient mines and chemical analyses of ore samples and artefacts. Lead isotope analyses provide a new tool for re-examining his conclusions. We have continued lead isotope and trace elemental analyses of the copper artefacts from the Varna Cemetery, the Dolnoslav site and other Eneolithic and Bronze Age sites in Bulgaria (in total there are over 300 samples), combined with analyses of ores from the deposits surveyed by Chernykh and others known to the geologists. Another aspect of this study is concerned with the examination of possible movement of metal between Greece, Anatolia and the Balkans.

Sponsors: The British Academy and the Bulgarian Academy of Sciences

*Tin and copper isotope anomalies in archaeology*

N.H. Gale, Z.A. Stos-Gale, P. Woodhead and N. Annetts

Methods were devised for the relatively precise measurements of the isotopic compositions of tin and copper, and appropriate methods were developed for the separation of these elements in a state of high purity from archaeological objects and metal ores. The existence of isotopic anomalies in copper from certain minerals and ores was demonstrated, and may lead to a new provenancing technique, ancillary to and complementing the use of the lead isotope method. For tin the first interest was to investigate whether the large fractionations of isotopic composition, predicted by the Bradford Ancient Metallurgy Research Group to be produced by remelting of bronzes, exist or not. Fractionation at the predicted level was not found.

### *Sources of Ancient tin*

N.H. Gale, Z.A. Stos-Gale, P. Woodhead and N. Annetts

A long standing, unsolved, problem for Mediterranean, European and Middle Eastern archaeology has been the precise sources of, and trade in, tin in the prehistoric world. We have begun to try to investigate this using a three-pronged attack, investigating trace element compositions together with tin and lead isotope variations in tin ores and ancient tin metal artefacts, such as the tin ingots found on the Uluburun shipwreck and excavated off the coast of Israel. The initial results are promising.

### *Isotopic archaeology - the Radiocarbon Accelerator Unit*

Professor R.E.M. Hedges, Dr C.B. Ramsey, Dr G.J. van Klinken, Dr P.B. Pettitt

Most of the Unit's work in the last year has been on dating applications, as there is now no direct funding for research and development. Notable projects undertaken include the following:-

A major series of Pleistocene faunal assemblages from British sites including Pontnewydd and Kent's Cavern, with the aims of establishing a biostratigraphy of the Last Glacial and of dating the earliest anatomically modern human presence in the country. The results clearly indicate the replacement of a steppic bison and reindeer dominated fauna by a mammoth steppe community at the height of the Last Glacial, and suggest strongly that Neanderthals arrived in Britain relatively late.

Another major series of dates has been used to establish the nature of the recolonisation of northern Europe after the Last Glacial Maximum. Other Palaeolithic material dated comes from sites as wide afield as the Ukraine (Gontsy), Poland (Predmosti), and Germany (Geissenklossterle).

ORAU's major project to date Stonehenge has now been published in the *Archaeometry* datelist and in the Stonehenge monograph. The dates indicate the use of the locale in the the Mesolithic, the curation of ox skulls later buried in the main ditch, and a clear phasing of the monument with a probable sequence for the construction of various elements.

Other Neolithic projects include the establishment of the first chronology for the Ronaldsway culture of the Isle of Man, and the dating of longhouses and associated pits from *Linienbandkeramic* sites in Belgium.

A large series of Bronze Age burials were dated from various sites on Menorca, which

has provided the first chronology for burials of this period. Other Bronze Age projects also concluding in this year include a major dating of organic (haft) remains from bronze weapon forms, which has established some degree of contemporaneity between Middle Bronze Age British metalworking horizons.

On the technical side, we have developed a routine procedure for making graphite targets, which enables the accelerator to be used more efficiently, doubling the throughput and with higher precision. Smaller samples are still run as carbon dioxide. Some experimental work on very small samples has been carried out on atmospheric samples. We are undertaking a critical study of our bone chemistry, using our greater understanding of protein diagenesis, aiming at more effective purification using routine methods. Some novel materials have been investigated, including hand-picked pollen grains, oxalate crusts, and rock painting pigments.

#### *Isotopic archaeology - stable isotopes and diet*

Professor R.E.M. Hedges, Dr G.J. van Klinken, T. O'Connell, M. Richards and S. Webb

We are continuing to augment the database of stable isotope variations in archaeological European humans and animals. Some sites, notably Poundbury, Oronsay, Hambledon Hill are being studied in statistical depth, to discover changes in diet between both the Meso- and Neolithic periods, and between burials of different social status. A comparison of modern hair protein with carnivory is strongly indicating a definite 3 per mil shift in nitrogen isotope ratio between omnivory (about 35% meat) and a vegetarian diet. The locust study has produced interesting and informative data on nitrogen fractionation, especially under conditions of poor nutrition. Work continues in developing models of fractionation in metabolic pathways which can be used to explain the observed relationships between diet and body tissue composition. Three papers on this subject were presented at the Archaeometry Symposium in the USA.

#### *Molecular archaeology - ancient DNA*

Professor R.E.M. Hedges, Dr B.C. Sykes, Dr M.R. Richards, J. Bailey and I. Colson

The database of modern European mitochondrial DNA haplotypes has enabled some quite strong inferences to be made about the historical development of this relatively homogeneous population. A major paper describing how most of the present variation can be interpreted as deriving from the migration of anatomically modern humans at 40 kaBP with subsequent adjustments following the last glacial maximum has been published. These data also point to a possible Middle Eastern origin for the Neolithic LBK culture, which is a hypothesis that we are currently trying to test using ancient DNA.

The main technical advance in the last year is the better detection of human contamination artefacts in ancient DNA samples using cloning methods. All the evidence points to the survival of even mitochondrial DNA in archaeological contexts as being relatively rare. The chances of success are shown to increase greatly using freshly and carefully excavated material from environments free from microbiological and oxidative attack.

The relatively successful ancient DNA results from the palaeoindian site of Port au Choix (some 40 individuals reliably typed) are undergoing detailed analysis in the context of the site archaeology and also of haplotypic analysis of modern American Indians.

Sponsor: NERC

*Molecular archaeology - ancient proteins*

Professor R.E.M. Hedges, Dr G.J. van Klinken, G. Hodgins (with Dr M.J. Collins, Newcastle University)

Substantial progress has been made in raising antibodies to collagen-based glues which are relatively species-specific. The specificity has been shown to relate to the collagen structure rather than protein or bacterial impurities. Work is now proceeding to understand how well the antigenicity is maintained over time as the collagen degrades.

At the same time, the collaboration with Newcastle is producing data relating to the rate of collagen loss through hydrolysis in bone under different environmental conditions. This is part of a strategy to test a well-defined model of Collins, in order to see whether it is able to describe what actually happens to buried bone over archaeological time.

Sponsor: NERC

*Molecular archaeology - bone diagenesis*

Professor R.E.M. Hedges, C. Nielsen-Marsh

This project has focused on studying the diagenetic alteration in bones from various sites (Brean Down, Yarnton floodplain, Poundbury, Piddington) for which enough information on hydrology and soil conditions is available to enable some predictions about the course of diagenesis to be made and tested. This work is proceeding in parallel with laboratory based observations, both in terms of different types of hydrological processes (such as diffusion or hydraulic flow), and for different chemistries. Results so far were presented at the Paris Conference on Bone Diagenesis.

*Molecular archaeology - nitrogen profiles in lithics*

Professor R.E.M. Hedges, Dr S. Patel (with Professor J. Kilner, Imperial College London)

The funding, and therefore the project, finished in September. The outcome has been interesting, but disappointing in a practical sense, in that while we now know that nitrogen profiles can be found in lithics, we have not succeeded in showing how these can be related to the burial age. For obsidian, we discovered that the "profile" is in fact due to a number of extremely localised concentrations of carbon and nitrogen - presumably organic, probably microbiological, matter - which develop during burial. The only other lithic to show nitrogen profiles is flint, and indeed there is evidence that these profiles differ between assemblages of different ages, but are similar within a given assemblage of the same age and from the same environment. (Freshly cleaved flint shows no profile.) However, measurement of the profile in flint (which is weak and relatively deep) is technically extremely difficult and time-consuming, and further investigation of the phenomenon will have to wait until a method more suited to this problem than SIMS is developed.

Sponsor: NERC



## *Materials analysis - ceramics, glass and pigments*

Professor M.S. Tite, C. Doherty, C. Salter, H. Hatcher, A. Shortland, I. Kakoulli

Technological and provenance studies of ancient ceramics have continued using, as appropriate, a combination of analytical scanning electron microscopy, thin section optical petrology and inductively-coupled plasma spectrometry. A major ongoing project is the investigation of the production technology and properties of transparent and tin-opacified lead glazes undertaken in collaboration with a group in Barcelona under the auspices of the British Council Acciones Integradas programme. The glazed ceramics recently analysed include Anglo-Saxon floor tiles, Byzantine pottery and Spanish medieval pottery.

The chemical analysis by ICPS of Byzantine pottery (c 1000-1300 AD) from eastern Mediterranean has continued, the preliminary results suggesting that it should be possible to distinguish between pottery from the major production centres on the basis of chemical composition. Thin-section petrology has been started on Neolithic-Iron Age pottery from the Oxford Archaeological Unit excavations at Yarnton and Cassington. A scientific study of the raw materials used and the pottery produced by traditional ethnographic potters in sub-Saharan Africa is being undertaken (in collaboration with Professor Maret, Bruxelles) in order to assist in the interpretation of comparable data obtained for archaeological pottery.

A second group of industrial debris (frits, glass fragments, fused clays and ceramic containers) from recent excavations of the glass production area at Amarna, Egypt has now been analysed. The results obtained suggest that the production of a vitreous faience was a major activity at the site. It is therefore possible that the two furnaces located during the excavations were used for the production of faience rather than for glass production as originally thought.

Work has started on the scientific analysis of the pigments, binding media and plaster ground associated with Hellenistic wall-paintings, samples having so far been collected from wall-paintings on Cyprus and Delos.

Sponsor: British Council

### *Luminescence dating*

Professor M.S. Tite, Dr A.L. Allsop, D. Stoneham, S. Hall, Dr V. Mandi, L. Shepherd, G. Adamiec

The luminescence dating service has continued to provide dates for pottery and burnt flints but the major demand on the service has been for dates for archaeological sediments, with work in progress on sediments from archaeological sites at Breeshill, Eton, Uffington, on Offa's Dyke, Gibraltar and in the Wye Valley.

Preliminary measurements of the TL accumulated in the surface layers of marble samples from Kos and Rome have produced encouraging results, suggesting that it should be feasible to estimate the date when the ancient marble surfaces were last worked and then concealed from light. However, for the work to progress, further funding is required. The projects to investigate the feasibility of optical dating of fired materials

and to develop the methodology for radiation accident dosimetry measurements using TL have continued.

Sponsor: EEC

### *Artifacts from Eynsham Abbey*

Ms V. Fell

The post-excavation programme of investigative conservation and related scientific analysis continues for this large group of material, predominantly iron, glass and wallplaster from Saxon and medieval contexts.

Sponsor: English Heritage

### *Iron Age axeheads*

Ms V. Fell and C.J. Salter

Seven pre-Roman Iron Age axeheads (two socketed and five shaft-hole) have been examined by metallography and electron probe microanalyser to determine variations in metal structure and composition.

### *Early Medieval leatherworking in England*

Ms E. Cameron

A specialist report and catalogue of mineralised leather remains from two Anglo-Saxon cemeteries in Ipswich was completed and a large group of Anglo-Scandinavian knife sheaths and sword scabbards from York was also recorded. This is part of an ongoing programme of analysis.

Sponsor: English Heritage

## **Excavations**

### *Danebury Environs Project*

Professor B. Cunliffe, L.Y. Brown, K. Laws, C. Poole (Danebury Trust), Dr J. Evans (University of Cardiff), Dr I. Brooks (University of Sheffield), A. Grant (University of Leicester)

The Danebury Environs Project began in 1989 as a five-year programme (now extended to eight years). Its aim is to study the social evolution of communities occupying an area of the chalkland of western Hampshire in the first millennium BC, and to trace the effects of these communities and their economic strategies on the landscape. The eighth season (August 1996) of excavations took place on an Iron Age settlement at Suddern Farm and at the site of Five Ways where Iron Age land division coalesced.

Sponsors: Danebury Trust with financial support from English Heritage and Hampshire County Council

### *Le Yaudet (Atlantic trade in the first millennium BC)*

Professor B. Cunliffe, Dr P. Galliou (Centre de Recherche Bretonne et Celtique, University of Brest), L.Y. Brown

The promontory of Le Yaudet on the north coast of Brittany near Lannion has been chosen as the site of a long-term excavation designed primarily to examine the Iron Age and Roman culture of northern Brittany and its wider maritime context. The sixth season of excavations took place in July and focused on an area excavation within the defended area where occupation from the Iron Age to the medieval period was discovered. The Iron Age entrance was also identified.

Sponsors: British Academy, Direction des Antiquités de Bretagne and the Département de Côtes-d'Armor

#### *Aphrodisias Excavations, Turkey*

Professor R.R.R. Smith, Professor C. Ratté (New York)

The current research project at Aphrodisias in Caria (SW Turkey) began in 1991 and aims (1) to record, document, and publish the earlier excavations carried out between 1961 and 1990, and (2) at the same time to pursue archaeological investigation of the city's urban plan, street system, and infrastructure. In the campaign of 1996 (July-August), excavations were carried out in the north agora to investigate the earliest remains in the area of the later city centre and to define better the character of its north stoa that ran in front of the Council House. Limited excavation and thorough documentation were also pursued in the Sebasteion, the Stadium, and the North Temenos House. The rewarding subsurface magnetometer and electronic resistivity survey begun in 1995 was continued in the northern part of the site, revealing a clear street grid over a dense residential area. Test trenches showed the accuracy of this new geophysical map. Individual research projects continued the recording, studying, and writing up of the various categories and complexes of marble sculptures from the site. Conservation work included a continuing lime-mortar programme to cap exposed walls and the restoration and display in the Aphrodisias Museum of a fine marble sarcophagus and a marble portrait statue of a woman of the second century AD from the Agora Gate.

Sponsors: New York University (Institute of Fine Arts and the Faculty of Arts and Sciences), with financial support from the National Endowment for the Humanities, Washington DC, the Friends of Aphrodisias in Istanbul, Izmir, London, and Paris, and other private donors

#### *Excavations and survey in the Sumbar and Chandyr valleys, Turkmenistan*

Dr C. Gosden

In March and April nine cave sites were excavated in two valleys on the Iranian border in order to attempt to find sequences from both the Neolithic and Palaeolithic periods. It was hoped that such sequences would throw light on the origins of agriculture in central Asia. In the event, only later deposits were found, which may be due to on-going tectonic action which has destroyed older caves and shelters.

Sponsors: British Academy

*Vicus Augustanus (Castelporziano) Italy*

Amanda Claridge

A second season of excavations at this Roman seaside town near Rome took place in September 1996. The deeper sequence of occupation levels was examined near the centre of the settlement and a new trench was opened in the ancient rubbish dumps, retrieving a wide range of material in well stratified deposits. Surface surveys identified a group of hitherto unknown buildings, probably tombs, on the inland margin of the site and traced the remains of a scattered hut-village of more recent date (18th-19th century or possibly earlier) located further in the hinterland.

Sponsors: Craven Trust (Oxford), Society for the Promotion of Roman Studies, British School at Rome, St John's College, Oxford, Tenuta Presidenziale di Castel- porziano, Vicus Augustanus Trust Fund

*Excavations at Euesperides (Benghazi), Libya*

Dr J.A. Lloyd, Dr J.J. Coulton, Dr L. Nevett, Mr S. Pressey, Mr A. Wilson

A second season of excavation was undertaken at this north African Greek city (6th to 3rd centuries BC) in conjunction with the Department of Archaeology, Benghazi University and the Libyan Department of Antiquities. The research concentrated on a northern suburb of the city and recovered successive city walls, part of a necropolis, housing, streets, and a pottery kiln complex as well as much evidence for ancient diet and trade.

Sponsors: Society for Libyan Studies, University of Benghazi, Libyan Department of Antiquities

*The Hillforts of the Ridgeway Project, England*

Dr G. Lock and Dr C. Gosden

Excavations within Segsbury Camp hillfort. A training excavation for Archaeology and Anthropology undergraduates, OUDCE Summer School students and volunteers. Artist in residence funded by Southern Arts working with school art pupils. Associated fieldwalking and post-ex organised for OAHs members.

Sponsors: The Society of Antiquaries, The Roman Research Trust

*Excavations at Likoaieng, Lesotho*

Dr P.J. Mitchell

Sponsors: The British Academy, The Society of Antiquaries, The Swan Fund, The Prehistoric Society

*Sangro Valley Project, Italy*

(See section C. Fieldwork.)

### *The Madra Çay Archaeological Project (Northwestern Turkey)*

Dr Nigel Spencer, Dr Kyriacos Lambrianides (University College London), in collaboration with Dr Ilhan Kayan, Dr Hasan Gümü\_ and Mr Serdar Vardar (all from Ege University, Izmir, Turkey), Miss Lynda Carroll (Binghamton University, New York)

The four year collaborative venture is carrying out inter-disciplinary geomorphological, archaeological and anthropological research into the coastal district of northwestern Turkey opposite the northeastern Aegean island of Lesbos. This region has rarely been the object of detailed research and modern political geography has led to studies of the region being carried out in almost total isolation from the northeastern Aegean islands even though the two spheres were important parts of the same study area and were linked intimately up to the present century. The current inter-disciplinary project in the area therefore tackles an important (but hitherto neglected) aspect of the region's archaeology, namely the diachronic relationship of the coast of Anatolia to the island of Lesbos opposite from the Neolithic to the Ottoman periods. Recently a second field season was completed, during which more augur survey was conducted in order to clarify past sea-levels and details of the coastal geomorphology, and a program of archaeological surface survey was begun. Subsequent work will continue the geomorphological analysis, see more intensive archaeological survey and excavation together with anthropological and ethnographic research.

Sponsors: The Wainwright Fund (Oxford), The Craven Committee (Oxford), The Meyerstein Fund (Oxford), The British Academy (London), The British Institute of Archaeology at Ankara (London/Ankara), The Leverhulme Trust (London), The Centre for Field Research (Watertown), The Institute for Aegean Prehistory (INSTAP) (New York)

### *Stanton Harcourt, Oxfordshire*

Dr Katherine Scott and Christine Buckingham

Excavations were again in progress this year. The late Middle Pleistocene gravel deposits are continuing to yield an abundance of plant and animal remains, including spectacular items such as branches of trees, bison skulls and complete mammoth tusks. Finds during the whole excavation now include more than 600 large animal remains and 15 stone artefacts (four of the latter coming to light during the summer of 1996). The excavation was featured by Channel Four in a television programme in its 'Time Team' series. It is also to be a special focus of the Quaternary Research Association's Annual Field Meeting next spring, at the beginning of the final season of excavation at the site. A preliminary report was completed during the year and is due for publication in the autumn of 1996 in the *Journal of Quaternary Science*.

Sponsors: ARC (Hanson Group), Earthwatch, the British Academy, and the Society of Antiquaries

### *Son Mas and Ferrandell-Olèza, Mallorca*

Dr W.H. Waldren

Excavations have continued at the prehistoric sanctuary of Son Mas and the Chalcolithic Pretalyotic settlement complex of Ferrandell-Oleza.

## Fieldwork

### *Sangro Valley Project, Italy*

Dr J.A. Lloyd, Dr G. Lock, Dr N. Christie, Mr A. Wilson, Mr T. Bell

In collaboration with the Soprintendenza Archeologica dell'Abruzzo and Leicester University, a third season of fieldwork took place in September. The project is investigating settlement history and land-use in a region of south-central Italy extending from the high Apennines to the Adriatic sea. Survey again produced much new evidence, especially for the Iron Age and Samnite periods but also (for the first time) for the 6th/7th centuries AD. Excavations at M. Pallano, a large Samnite and Roman hilltop settlement, were also productive, recovering evidence for domestic occupation and a probable temple. Ethnographic enquiry and finds analysis continued.

Sponsors: British Academy, British School at Rome, Craven Fund, Oxford, Society for the Promotion of Roman Studies, Society of Antiquaries, London, National Park of Abruzzo

### *The Balboura Survey, Turkey*

Dr J.J. Coulton, Ms P. Armstrong, Ms A. MacDonald

The project investigates the settlement history of a highland city in SW Turkey and its territory. Work continued on the pottery catalogue.

Sponsor: British Institute of Archaeology at Ankara

### *The Phylla Fort Project, Greece*

Dr J.J. Coulton, Mr M.R. Popham

The project concerns an ancient fort in central Euboea (inland from Lefkandi) with an unusually regular archaic or classical Greek barracks building with potentially exciting historical implications. An excavation season to ascertain its date and usage, planned for September 1996, will take place in October 1996.

Sponsor: British School of Archaeology at Athens

### *The Wessex Hillforts Project*

Professor B. Cunliffe and G. Lock with S. Trow, A. Payne, A. David and D. Batchelor of English Heritage

The programme focuses on a selected group of hillforts in Wessex which are being subjected to intensive survey using magnetometry and detailed ground survey in an attempt to characterise the nature of the buried settlement features.

Sponsor: English Heritage

### *Mazaka - Caesarea Cappadociae - Kayseri, Turkey*

Dr M. Ballance, Dr D. Welsby (British Museum), Mrs I. Welsby-Sjöström

Topographical and architectural survey of the Byzantine (and Turkish) city in the plain and of the Roman and earlier one in the hills behind; especially of their defences. City wall on hills, probably built in AD 241 (new discovery); separate wall possibly defending an imperial villa in the suburbs; north wall of Byzantine city, probably 4th-6th century and still in places 13m high; south wall of Byzantine city, probably 7th century or later. Also some work on Roman baths (planned in 1961 but now built on), monumental tombs and possible theatre. The Roman site is now being rapidly built over.

Sponsors: British Institute of Archaeology at Ankara, Seven Pillars of Wisdom Trust, Craven Fund (Oxford), Society for Promotion of Byzantine Studies

*Battlewrecks of Cape Rachado, Bambek Shoal, Straits of Malacca*

Mensun Bound

Much of 1996 has been spent on post-excavation work on the Dutch East Indiaman *Nassau* that went down in 1606 during the Battle of Cape Rachado, between the Dutch and Portuguese, in the Straits of Malacca. The battle was fought to relieve Malacca, the capital of the spice trade, which was being besieged by the Dutch at the time. The project also involves the establishment of a conservation unit and a special new maritime museum. All work is in collaboration with the National Museum of Malaysia, the National University of Malaysia (UKM) and the maritime salvage and engineering company Transea.

Sponsor: Federal Government of Malaysia

*The Mahdia Wreck, Tunisia*

Mensun Bound, Fethi Chelbi

In August a second season of survey took place on the Mahdia wreck three miles out to sea from the coast of Tunisia. The work was co-directed by Mensun Bound and Fethi Chelbi and was a collaboration between the underwater archaeological division of the Institut National du Patrimoine of Tunisia, the German maritime archaeological organisation DEGUWA and MARE. The principal objective of the season was to complete a plan of the visible remains of the wreck and its cargo of architectural pieces (mostly columns and capitals).

Sponsor: MARE and 'Discovery', USA

*Survey of submerged sites of archaeological interest off Gibraltar*

Mensun Bound

In collaboration with the Museum of Gibraltar the survey of archaeological sites off Gibraltar continued in 1996. Areas of interest include a cannon deposit beside the main harbour and an ancient anchorage off Europa Point.

Sponsor: The Gibraltar Museum and Armed Forces of Gibraltar

*Wrangels Palais shipwreck survey, Shetland Islands*

Tim Sharpe, Mensun Bound

Survey of a 17th century Danish man-of-war that went down on the cliffs of the Out Skerries. In collaboration with Strathclyde University and the Shetlands Museum and under the authority of Historic Scotland.

Sponsor: Shetland Trust

*Rhyl, Clwyd*

Mensun Bound, Bryan Smith

Survey of hulks in Rhyl Harbour that are threatened by redevelopment programmes. All work under the archaeological authorities of Clwyd.

Sponsor: Clwyd Department of Development and Tourism

**Publication programmes**

*The Danebury Environs Project*

Professor B. Cunliffe, L.Y. Brown, C. Poole and others

Publication of an eight-year programme of excavations and fieldwork undertaken on Iron Age and Roman sites in western Hampshire.

Sponsors: English Heritage and Hampshire County Council

*Guadajoz Project (Andalucía)*

Professor B. Cunliffe, Dr M.-C. Fernandez Castro (Universidad Complutense, Madrid), L.Y. Brown

The Guadajoz Project, sited in the campiña of Cordoba, is a programme of excavation and fieldwork designed to study social and economic change in central Andalucía in the first millennium BC. The first programme of excavation and fieldwork has now been completed and the results are being prepared for publication.

*Excavations and field-survey at Sehonghong, Lesotho*

Dr P.J. Mitchell

Publication of a series of papers in international, refereed journals reporting on the archaeological excavations undertaken at Sehonghong Shelter, a late Quaternary hunter-gatherer site in the Lesotho highlands, southern Africa. A paper analysing the results of field survey in the surrounding area was also published.

*Later Stone Age archaeology of the Phuthiatsana Basin, Lesotho*

Dr P.J. Mitchell



Publication and preparation of papers reporting the results of the analysis of terminal Pleistocene and Holocene charcoal assemblages from excavated sites and their implications for reconstructing palaeoenvironments in the Caledon Valley of southern Africa.

*British Museum Catalogue*

Dr P.J. Mitchell

Production of a comprehensive catalogue of the British Museum's southern African Stone Age collections for publication in the Museum's Occasional Papers in 1997. The catalogue will also include summary information on the southern African Stone Age holdings of other UK museums.

*King's Low and Queen's Low excavations*

Dr G. Lock and Dr R. Spicer (Staffordshire University)

The study and final publication of the six years of excavations at this pair of round barrows.

Sponsors: Stoke-on-Trent Museum Archaeological Society and the City Museum, Hanley, Stoke-on-Trent

*Prehistoric trade in the Mediterranean*

N.H. Gale and Z.A. Stos-Gale

In conclusion of the British Academy project on trade in the prehistoric Mediterranean, the large amount of data relevant to the metals trade, including establishment and investigation of metal ore sources and metal processing places, is being assessed and interpreted so as to be able to publish monographs summarising the results of this work. Monographs on the Aegean, Cyprus and Crete are planned, as well as one collecting together work on the copper and tin ingots.

*The Matrice (Italy) Excavations*

J.A. Lloyd, D.W. Rathbone, P.C. Roberts and others

Completion of the study and final publication of the Samnite and Roman villa and associated finds, excavated 1980-1986.

*The Berenice (Libya) Excavations*

J.A. Lloyd, D. Michaelides, A.J. Price, E.M. Pye, J. Reynolds

Completion of the study and final publication of the mosaics, wall-paintings, marble, glass, small finds and graffiti from the Hellenistic-early Islamic city; the fifth and final volume on the 1971-1976 excavations.

Sponsor: Society for Libyan Studies, Meyerstein Fund Oxford

### *Lexicon topographicum urbis Romae*

Professor E.M. Steinby, editor; dott. E. Papi, bibliography; Miss A. Claridge, illustrations; some 150 collaborators

Volumes I-II have been published, and the entries for volume III prepared for print. In all, 5 volumes should be published before the end of 1997, the last of them comprising the indexes and Addenda et corrigenda.

Sponsor: Regione Lazio

### *The necropolis of the Via Triumphalis in Rome*

Professor E.M. Steinby, dott.ssa C. Coletti, Dr M. Carre

The publication of excavations made in 1956-8 by F. Magi, and a revision of the edition of the inscriptions published in 1973 by a team of the Institutum Romanum Finlandiae.

### *The Lacus Iuturnae project*

Professor E.M. Steinby and 24 Finnish, Italian and Norwegian collaborators

The project started in 1982 in collaboration with the Soprintendenza Archeologica di Roma at the Lacus Iuturnae in the Roman forum. Excavations and restoration went on until 1985. In 1988 a first volume on sources and material from earlier excavations was published; all that remains now is the final editing of the excavation reports (some 2,500 pages in manuscript).

Sponsors: Suomen Kulttuurirahasto (Foundation for Finnish Culture) and Suomen Akatemia (The Finnish Academy)

### *Politics and ideology in the building activity of republican Rome*

Professor E.M. Steinby, team of 11 Finnish graduates

The project generates from the courses in Roman topography held in 1993-4 for Finnish university students in classics, history and archaeology. The essays written during their three months stay in Rome are being developed into a publication, which should be finished in August in Oxford, if the necessary funding is found.

Sponsor: Suomen Kulttuurirahasto

### *Feudal coinages of Western Europe*

Mr N.J. Mayhew and Jack Williams

(Publication 1997-8.)

### *The Gros Tournois*

Professor D.M. Metcalf

With leading scholars from England, France, Germany, the Low Countries and Italy.

(Publication 1997.)

*Analysis of the metal content of Roman coins minted between AD 253 and 274*

Dr C.E. King, Mr R. Bland (Department of Coins and Medals, British Museum),  
Dr J.P. Northover (Science of Materials), L. Cope and T. Clay

Over 500 coins from AD 253 to 268 from all mints have been analysed by EPMA. These analyses will form the basis of a study of the alloy content of the antoninianus in the mid-3rd century in the context of debasements, reforms and retariffing of the coinage. Approximately 900 analyses of Roman coins made by L. Cope which concentrate on the 4th century AD have been added and all of the analysis results and discussion will be complete by the end of 1996 and be published as a British Museum Occasional paper.

(Publication 1997.)

*Late Anglo-Saxon coinage*

Professor D.M. Metcalf

Professor Metcalf is preparing an Atlas of Finds of Anglo-Saxon Coins (c. 973-1086).

**Corpora, Archives and Computing Systems**

*Celtic Coin Index*

Dr Philip de Jersey, Professor Barry Cunliffe

During 1995-6, the third year of funding by the Leverhulme Trust, Dr Philip de Jersey continued to transfer information on Celtic coinage held on approximately 24,000 index cards on to an INGRES computerised database. This process is now complete and following a successful application for further funding from the Leverhulme Trust work is now commencing on incorporating images in the database.

Sponsors: The Leverhulme Trust

*Tchalenko and Creswell Archives*

Professor J. Allan, Dr M. Mango, L. Burnard, Dr J. Moffett

Again computerisation of the two archives differed. The hardware for the Tchalenko Archive, including the scanner, was moved from the Computer Centre, Banbury Road to the Institute of Archaeology. Scanning of Tchalenko material continued with relevant database records added. Scanning of most contact prints, index cards with drawings and notes, and some notebooks has been completed. Data-base fields for 6 files of material (sites, photos, notes, cards, plans, maps, archive) were devised. The Creswell Archive which received a grant from the British Academy announced last year appointed as research assistant for 1995-6 Dr F. Flood who compiled a database containing basic categories of information on all photographs in the archive, with additional fields to be filled at a future date; he also prepared a CD ROM (for sale) for that archive. In January Dr P. Robinson left OUCS to take up a university post elsewhere and in summer 1996

the project engaged a computer specialist from the commercial sector to finalise work on the software. The period of university funding was extended until October 1997.

Sponsors: Research and Equipment Committee; British Academy

### *The 'Paper Museum' of Cassiano dal Pozzo*

Amanda Claridge (Series editor), Dr H. Whitehouse, D.B. Bailey (British Museum), Dr Ian Campbell (Herriot-Watt University) and others

A catalogue raisonné of the 3,800 drawings relating to Roman antiquities and architecture from the 17th century collections of Cassiano and Carlo Antonio dal Pozzo. The first volume (A.II Early Christian and Medieval Antiquities), co-authored by J. Osborne and A. Claridge went to press in November 1995, for publication in November 1996 (Harvey Miller Publishers, London).

Sponsors: Olivetti, British Academy, Accademia dei Lincei, Getty Grant Program, Monument Trust

### *The Beazley Archive's Computer Projects*

Dr D. Kurtz

The Research Projects of the Beazley Archive continue to diversify (Section 1). In addition to the database of Athenian black- and red-figure pottery, new programmes have been developed on other aspects of classical art.

The pottery database has more than 56,000 records; 3,000 pages of Beazley's published catalogues have been recorded. Consulted on site and remotely by fax, electronic mail and direct interrogation, the database has also been used on line for demonstrations and classes. Scanning of images of Athenian pottery from the Archive's photographic collection, begun in January 1993, has now generated more than 14,500 images.

Formats for text and image transmission over Internet are being designed for remote exchange of documentation in RAMA/SICMA/MUSEA (please see section 2).

Research projects are directed by the Archivist, the pottery database by Dr Thomas Mannack, the network by Greg Parker. Specialised technical support is provided by Dr Jonathan Moffett (Ashmolean Museum), members of OUCS, and the University Telecommunication Manager. Imaging and program preparation are carried out by Veronique Davis, Ian Hiley, and Florence Maskell.

### *Geographic Information Systems in Archaeology*

Dr G. Lock and Dr T. Harris (University of West Virginia, USA)

Research into temporality and the use of 3D in GIS in archaeology.

Sponsors: The University of West Virginia

### *Corpus Inscriptionum Latinarum XV.1*

Professor E.M. Steinby

A long term project that goes back to the publication of the brick stamps of Ostia and various other minor collections in Rome, plus the new Indexes to *CIL XV.1*. Material is being collected and comments added to the single stamps.

*Corpus of Constantinopolitan Brickstamps*

Dr J.P. Bardill

The aim of the project is to assemble the first major catalogue and analysis of stamped bricks from Constantinople. Drawings, squeezes, rubbings and photographs of brickstamps are being gathered from museums and archives. Efforts are now concentrated on the recording of the material stored in the Aya Sofya Museum in Istanbul, which holds about 500 pieces in total. The brickstamps are datable to the 4th-6th centuries AD and are proving important for refining our knowledge of the chronology of building work in Constantinople in this period.

Sponsors: The British Academy, The British Institute of Archaeology at Ankara, The Seven Pillars of Wisdom Trust

*Supplement to Corpus Vasorum Arretinorum*

Dr P.M. Kenrick

Preparation of a new computerised catalogue of makers' marks on Italian terra sigillata pottery of the C1 BC - C2 AD. Further progress was made, with a total of over 19,000 entries in the Supplement at the end of the year. A second visit was made to Tuscany in order to continue the recording of makers' marks found at Arezzo in 1955, when it was also possible to see stamped material found at a production site near Orte in 1984. The success of the database format for the Supplement has made it imperative that the contents of the original volume should now be included, resulting in a comprehensive second edition of the work. Most of the necessary funding for the additional two years has been secured and the project is now due to be completed in September 1999.

Sponsors: Gerda Henkel Stiftung (Düsseldorf), Ceramica Stiftung (Basel),  
Dr A.M. McCann (New York), British Academy

*Catalogue of Cycladic material in the Ashmolean*

S. Sherratt

A catalogue of the substantial collection of Cycladic Neolithic and Bronze Age material in the Ashmolean Museum. Over 230 objects of stone, metal, clay and shell, mainly of 3rd and 2nd millennium BC date, plus over 600 fragments of pottery from the British School at Athens excavations at Phylakopi on Melos. Includes 32 Early Cycladic marble figurines and several objects of a unique or rare nature of particular international interest. Most of it reached Oxford in the later part of the 19th or early 20th century (much of it given to or bought for the Museum by Sir Arthur Evans). To be published by Oxford University Press.

Sponsors: The Mortimer and Theresa Sackler Foundation; Department of Antiquities,

Ashmolean Museum.

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#### *ARC (Hanson Group)*

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#### *Benghazi University*

– Excavations at Euesperides (Benghazi), Libya (Institute)

#### *British Council*

– Materials analysis - ceramics, glass and pigments (Research Laboratory)

#### *British Academy*

– Macroscopic plant and invertebrate remains from the University of Reading/British School at Rome excavations in Pompeii (Environmental Archaeology Unit)

– Eneolithic and Bronze Age metallurgy in Bulgaria (Isotrace Laboratory)

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WHITEHOUSE, H. 1995: The Rebirth of Adonis. *Pap. Brit. Sch. Rome* 63, 215-43.

## **RESEARCH STUDENTS STUDYING ARCHAEOLOGY IN 1995-66.**

### *M.Litt./D.Phil. candidates*

Angelidou, Stella (Hertford) PRS

Early Byzantine art  
Mango M. Mod. Hist. 1993

Armpis, A. Eleni (St Peter's) D.Phil.

Architecture of Asklepios sanctuaries  
Coulton J. C.Arch 1992

Baboula, Evanthia (Lincoln) PRS

Neo- and post-palatial mortuary practices involving metal objects: a study of the microstructure and spatial arrangements of metalwork in cretan graves  
Sherratt E.S./Northover J.P. C.Arch. 1995

Bagnall-Smith, Mrs M.J.B. Jean (St Cross) D.Phil.

Study of votive material from Roman temple sites in Britain  
Henig M. C.Arch 1994

Baker, H.D. (Wolfson) D.Phil.



The Egibi family archive  
Black J.A. Oriental Studies 1992

Bell, T.W. (Wolfson) D.Phil.

The Anglo-Saxon Re-use: Reinterpretation of Roman sites and structures  
Blair W.J. C.Arch. 1995

Blue, Lucy K. (Pembroke) D.Phil.

Ports in the eastern Mediterranean in the 2nd Millennium BC  
Sherratt A./McGrail S. A & G 1988

Borno, Ms H. (St Cross) PRS

Lock G.R./Hamerow H.F. C. Arch 1994

Bowtell, Anne (Lady Margaret Hall) D.Phil.

The group of Polygnotos  
Kurtz D. Lit. Hum. 1987

Brown, Terence J. (Queen's) PRS

A Comparative study of three Imperial capitals: Trier, Milan and Ravenna  
Ward-Perkins B.R. C.Arch 1995

Cahn, David (Wolfson) D.Phil.

Classical armour and its decoration in the Greek world  
Boardman J. Lit. Hum. 1991

Calcagno, Claire (Merton) D.Phil.

Seafaring & trade in the central Mediterranean 1200 to 800 BC  
Sherratt A./McGrail S. A & G 1991

Cameron, Ms Esther (St Cross) D.Phil.

Anglo-Saxon iron corrosion products  
Biddle M. C. Arch 1994

Christoforaki, Ioanna (Merton) D.Phil.

Patronage and donation in the churches of Rhodes from 1204-1522.  
Mango C. Mod. Hist. 1992

Davies, Ms A.E. (St John's) D.Phil.

Public space in Roman towns through epigraphy, art and architecture  
Woolf, G.D./Steinby E.M. C. Arch 1993

Davies, Mr G.N. (University) D.Phil.

Classical and Hellenistic Cycladis  
Purcell N./Coulton J. C. Arch 1994

De Angelis, Franco (Lincoln) D.Phil.

The evolution of two archaic Sicilian poleis: Megara Hyblaia and Selinous  
Osborne R. Lit. Hum. 1992

de Moor, Iziko (Lincoln) D.Phil.

The Griffin in the art of the Near East, Egypt and Greece down to c. 550 BC  
Boardman J./Collon D.C. Lit. Hum. 1987

Dipla, Miss Anthi (Hertford) D.Phil.

Greek iconography  
Kurtz D./Boardman J. C. Arch 1994

Ebbinghaus, Ms S. (Lincoln) D.Phil.

The horn-shaped Rhyton  
Boardman, J. C. Arch 1993

Economou, Miss M. Maria (Linacre) D.Phil.

Interactive multimedia in museums and archaeological displays  
Moffett J. A & G 1992

Eiland, Murray (Wolfson) D.Phil.

The Parthian period at Nineveh  
Moorey R. Oriental Studies 1991

Evans, Thomas L. (Linacre) PRS

Development of ethnicity in the Iron Age as reflected in 'Marnian' culture  
Cunliffe B. C.Arch 1995

Fenner, Seana E. (Lincoln) D.Phil.

Satyrs in mythological scenes in Athenian Art  
Boardman J. Lit. Hum. 1991

Finn, Christine A. (Queen's) PRS

Fieldwork: Archaeology and the poetic past of W.B. Yeats and Seamus Heaney  
Gosden/O'Donoghue C.Arch 1995

Garwood, Paul (Hertford) D.Phil.

Conceptualizing time and space: a study of ritual-associated structures and mortuary

practice in the later Neolithic and Bronze Age of Britain and north-western Europe  
Sherratt A. A & G 1986

Haarer, Mr Peter (Balliol) D.Phil.

Iron and iron working in archaic and classical Greece  
Osborne R./Salter C. Lit. Hum 1992

Henderson, Jon C. (Christ Church) PRS

European Archaeology: First Millennium BC  
Cunliffe B.W. C.Arch 1995

Henry, Philippa A. (Wolfson) PRS

The changing scale and mode of Textile Production in Late Saxon England: its relationship to Developments in Textile Production Technology and changes in society  
Hamerow H.F. C.Arch. 1994

Heuchert, V. (Oriol) PRS

Roman provincial coinage of Asia in the Antonina period  
Howgego C. Lit. Hum 1993

Hobley, Brian (Wolfson) PRS

Roman architecture and astrology  
Steinby E.M./Coulton J. C. Arch 1994

Hodgins, G. (St Cross) PRS

Developing methods for identifying medieval paints and glues in fine art  
Hedges R.E.M. Phys. Sci 1994

Hodos, T. Tamar (Keble) D.Phil.

Craft relations in south eastern Sicily during the period of Greek colonisation  
Boardman J./Lloyd J. Lit. Hum. 1992

Hueter, Gwyneth (Wolfson) D.Phil.

Late Babylonian dialect  
Black J.A. Oriental Studies 1991

Jansson, Ms S.Y.K. (St Cross) PRS

Crete in the Late Minoan IIIB Period: Internal Organization and External Relations  
Popham M./Sherratt S. C. Arch 1994

Jaworski, Mr Szymon (Somerville) PRS

The Neo-Assyrian Glyptic before the Sargonids

Moorey, P.R.S. C. Arch 1994

Jennings, David (St John's) D.Phil.

Bath-houses in Britain and Gaul  
Cunliffe B./Lloyd J. A & G 1986

Kakoulli, Ioanna (Linacre) PRS

The technique of Hellenistic and Roman wall painting in Cyprus  
Tite/Smith C.Arch 1995

Kana'an, Ms Ruba (Linacre) D.Phil.

Ottoman architecture in Greater Syria. `From "regional" to "international" architecture  
in the late Ottoman Bilad al-Sham'  
Johns J. Oriental Studies 1993

Karagiorgou, Olga (Christ Church) D.Phil.

The Archaeology of the Late Antique and Dark Ages Thessaly  
Mango M. C.Arch. 1995

Kiely, Mr Tom (Wolfson) PRS

The inter-relationship of tombs and settlements in Cyprus in the late Bronze Age and  
Early Iron Age c. 1600-950 BC  
Sherratt S. C.Arch 1993

Kim, S. Henry (Lincoln) D.Phil.

The impact of early silver coinage on the social and economic development of the  
city-state  
Howgego C. C.Arch 1992

King, John M. (St Cross) PRS

Anglo-Saxon burials and demographics  
Hawkes/Gosden C.Arch 1995

Konuk, K. (St Edmund Hall) D.Phil.

The Coinage of the Halikarnassos Peninsula  
Howgego C. Lit. Hum. 1991

Lancaster, Lynne (Wolfson) D.Phil.

The development of concrete vaulting in Rome from Nero to Trajan  
Coulton, J. Lit. Hum. 1993

Lapourtas, A. (St Cross) PRS

Sir Arthur Evans and the exhibition of Greek prehistory

MacGregor A.G./Sherratt E.S. C. Arch 1992

Lee, Hyeong W. (St Cross) PRS

A study of Lower Palaeolithic stone artefacts from selected sites in the Upper and Middle Thames Valley, with particular reference to the R.J. MacRae Collection  
Roe D. C.Arch 1995

Llobera, Mr Marcos (Linacre) PRS

Social theory, GIS and landscape archaeology: La Quebrada de San Andres (Tierradentro), Colombia. A case study.  
Lock, G. C. Arch 1993

Lodwick, Marcus (Corpus Christi) D.Phil.

Classical & Hellenistic architecture in the Cyclades  
Coulton J. Lit. Hum. 1992

MacDonald, Alison (Merton) D.Phil.

The analysis of Roman pottery from surface survey  
Lloyd J. Lit. Hum. 1990

Marcus, Ezra (Wolfson) PRS

Trade along the Levantine Coast in the Middle Bronze Age  
Moorey R. Oriental Studies 1992

Milson, David W. (Merton) PRS

The impact of Christian art and architecture on synagogues in Byzantine Palestine  
Mango M. C.Arch. 1995

Mitchell, John C. (St Catherine's) PRS

Functional analysis of earlier Palaeolithic stone tools  
Roe D. A&G 1993

Morgenroth, Ulrich B.J. (Wolfson) PRS

The impact of the Phoenician and Greek World on Southern Iberia  
Cunliffe B.W. C.Arch 1995

Nakou, Georgia (Merton) PRS

The end of the Third Millennium in the Aegean. Social Change in Early Bronze Age 2 and 3  
Sherratt A.G. C.Arch 1995

Nielson-Marsh, C. (St Cross) PRS

Hedges R.E.M. Phys. Sci. 1994

O'Connell, Ms Tamsin (St John's) PRS

The chemistry of archaeological proteins in relation to diet  
Hedges R. Phys. Sci. 1993

Opper, Mr T. (Merton) PRS

Herodes Atticus and the Greek Renaissance of the second century AD  
Smith R.R.R. C. Arch 1994

Osgood, Richard (Lincoln) M.Litt.

Warfare in northern Europe Bronze Age  
Sherratt A. A & G 1992

Papacostas, Tassos (Exeter) D.Phil.

Medieval Byzantine rural Churches in Cyprus  
Mango M. C.Arch 1995

Parani, Maria (Exeter) D.Phil.

Elements of contemporary material culture in Byzantine religious iconography (11th-15th centuries A.D.)  
Mango C. Mod. Hist. 1993

Prendergast, Ms Kate (St Hugh's) D.Phil.

The Celestial orientation of monuments and social practice in Neolithic Britain  
Sherratt A. C. Arch. 1993

Prentice Rosemary (Wolfson) PRS

Early Dynastic and old Akkadian administration  
Black, J.A. Oriental Studies 1993

Price, Richard (St John's) D.Phil.

Burial practice and social organisation in late Chalcolithic Bulgaria  
Sherratt A. A & G 1990

Pydyn, Andrzej (St Cross) D.Phil.

Trade and transport in central-northern Europe in the Iron Age  
Cunliffe B. C. Arch. 1992

Rees-Jones, J. (Hertford) D.Phil.

Luminescence dating of archaeological sediments  
Tite M./Robinson M. Phys. Sci. 1991

Richards, Michael (St Cross) PRS

Dietary studies using stable isotopes  
Hedges R.E.M. C. Arch 1994

Robson, Eleanor (Wolfson) PRS

Old Babylonian mathematical coefficient lists  
Black J.A. Oriental Studies 1991

Sarti, Susana (Wolfson) D.Phil.

The history of the Campana collection  
Kurtz, D. Lit. Hum. 1992

Schulten, T. Caroline (Merton) PRS

Origin and transformation of the later Chinese mirror tradition: the nature of its  
development, function and purpose  
Rawson J.M. C.Arch 1995

Scott-Jackson, J. Julie (St Cross) D.Phil.

A study of Lower and Middle Palaeolithic artefacts in relation to the clay-with-flints  
deposits and chalklands of southern England  
Roe D. A & G 1992

Shepherd, Lindsey (LMH) PRS

Optical dating of archaeological ceramics and vitreous materials  
Tite M. Phys. Sci. 1993

Shortland, Andrew J. (Christ Church) PRS

Early Egyptian Glass making at Amarna  
Tite C.Arch 1995

Sills, A. John (Keble) PRS

Early British Coinage  
Cunliffe B. A & G 1992

Sini, Efthalia T. (Hertford) D.Phil.

Studies in the choice and iconography of everyday scenes on fourth century Athenian  
vases  
Boardman J. C Arch. 1993

Smith, Tyler J. (Merton) D.Phil.

Komast dancers in Athenian black-figure  
Boardman J. C. Arch. 1992

Stamatopoulou, Miss Maria (Somerville) PRS

Greek burial customs 800-31 BC  
Kurtz D. C. Arch 1994

Stiff, Matthew (St Cross) D.Phil.

The vessel-glass from Wics and Emporia in North-West Europe  
Hawkes S./Henderson J. A & G 1988

Tselekas, P. (St Cross) D.Phil.

The coinage of Akanthus  
Howgego C. Lit. Hum. 1991

Tsetskhladze, Gocha R. (Balliol) D.Phil.

The cultural history of Colchis, 6th-1st cc BC  
Boardman J. Lit. Hum. 1991

Tsingarida, Athena (Wolfson) D.Phil.

Anatomy and posture in late Archaic Greek Art  
Kurtz D. Lit. Hum. 1992

Tzannes, Maria-Christina (Lincoln) D.Phil.

The iconography of early South-Italian vase painting  
Boardman J. Lit. Hum. 1992

Ulmschneider, Katharina (Exeter) D.Phil.

The economic role of the Church in the countryside, 7th-13th century  
Biddle M. C. Arch. 1992

Vanderstar, Pippa (Merton) D.Phil.

Hellenistic and Roman architecture of Cyprus  
Coulton J. Lit. Hum. 1991

Villing, Alexandra C. (Lincoln) D.Phil.

The iconography of Athena on Attic vases from 440-370 BC  
Boardman J. Lit. Hum. 1992

Wagner, Claudia (Merton) D.Phil.

Dedication practices on the Athenian Acropolis  
Boardman J. Lit. Hum. 1990

Webb, S. (St Cross) PRS

Hedges R.E.M. Phys. Sci 1994

Wilson, Mr Andy (Corpus Christi) D.Phil.



Water usage and management in Roman North Africa: a social and technological study

Lloyd J. C. Arch. 1993

Winzor, Christine (Merton) D.Phil.

The architectural patronage of the Attalids and Ptolemies

Coulton J. Lit. Hum. 1986

Zimi, Helen (Somerville) D.Phil.

Silver plate from Macedona 4th to 2nd century BC

Boardman J. C. Arch 1993

*M.Phil. candidates*

Armstrong, Naja R. (Magdalen)

Classical Archaeology

Coulton J.J./Steinby E.M. 1995

Marsden, Mr B. Adrian (Lady Margaret Hall)

Henig M. 1994

Maxfield, Miss V. (Worcester)

Byzantine Archaeology

Mango M. 1994

Yeroulanou, Ms M. (Lincoln)

Coulton J. 1994

*M.St. candidates*

Bell, Perry S. (Lincoln)

Classical Archaeology

Steinby E.M. 1995

Bell, Richard (Merton) 1990

Popham M.R.

Constantatos, Mr Basil (St John's)

Greek Architecture

Coulton J.J. 1994

Fox, Karen A. (St Cross)

Classical Archaeology  
Steinby E.M. 1995

Hall, Cassian J.V. (Brasenose)

Archaeology  
Lloyd J.A. 1995

Landuyt, Frederique A.F. (Wolfson)

Archaeology  
Coulton J.J. 1995

Lavan, Luke A. (St Hugh's)

Archaeology  
Ward-Perkins B.R. 1995

Lesk, Alexandra L. (Lincoln)

Classical Archaeology  
Coulton J.J. 1995

Owens, Sally J. (St Hilda's)

Archaeology  
Cunliffe B.W. 1995

Pratt, Nigel L. (Keble)

Archaeology  
Cunliffe B.W. 1995

Rempel, Jane E. (Brasenose)

Classical Archaeology  
Coulton J.J. 1995

Sauer, Eberhard W. (Keble)

Archaeology  
Henig M.E. 1995

Wiegel, Hildegard G.H. (Wolfson)

Archaeology  
Kurtz D.C. 1995