

The European Archaeologist

No 13 Summer

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ISSN 1022-0135

Archaeology and urban development

New Council of Europe code of practice

At its 15th Plenary Session in Strasbourg on 8-10 March 2000 the Cultural Heritage Committee of the Council of Europe adopted the *Archaeology and the urban project: a European code of practice* as part of its activity under the title of "Archaeological heritage in urban development policies." The code was prepared by a group of experts in urban archaeology.

In its preamble the document (CC-PAT (99) 18 rev 3) begins by describing the Council's activity in the heritage field and its role in drawing up the revised European Convention on the Protection of the Archaeological Heritage (1992), better known as the Malta Convention. It then goes on to explain the background to the code of practice, as follows:

The urban transition has been complete throughout Europe for several decades. Urbanisation and the growth of urban populations have profoundly transformed the fabric of towns founded before the Industrial Revolution. Taking different forms and proceeding at different rates in different places, this transformation has been accompanied, almost invariably, by wholesale and indiscriminate destruction of the vestiges of the town's past.

At a time when urban policies are increasingly being rethought to correct past mistakes and stem the "urban crisis" and when those involved in shaping the urban fabric are again focusing on historic centres, it seems more vital than ever to acknowledge the importance of the past in creating the town of the future.

In order to prosper in the future, towns must continue to change and develop, as they have always done in the past. This means that a balance must be struck between the desire to conserve the past and the need to renew for the future.

Urban construction is a complex process, involving numerous partners in a joint project:

- public authorities and planners,
- architects and developers,
- archaeologists.

Close and continuous voluntary co-operation between all participants is the only way to ensure quality results. The town of the future must embody and express its historical wealth.

Preservation and creation should not be regarded as intrinsically irreconcilable. Archaeology complemented by written sources and iconography is the first, indispensable step in any urban strategy. Its goal is not merely to study the town's structure and evolution, but also to assess its social and cultural development. Such research combines consideration of all the activities taking place in the town and the processes that produced them: this is why archaeology has a natural role in the dynamic of urban development.

Urban archaeology tells us how the town has developed throughout its history, and introduces concepts such as empty/full, inside/outside, rich/poor, monumental/vernacular, planned/spontaneous, dense/diffuse, etc, concepts shared by archaeologists, town planners, architects, and developers.

Archaeology's global study of the town introduces two fundamental dimensions. The first relates to urban and social topography and their evolution to the present. The second is a specific economic dimension, through the examination of past techniques, and the development of applied and experimental research on materials and their conservation. This research, closely linked to progress in restoration techniques, has a direct impact on the job market, especially for the young.

The conservation and presentation of archaeological remains is also part of the approach to urban organisation: through innovative planning and architectural solutions, their functional or symbolic reuse can play a part in contemporary design.

The Malta Convention expresses a preference that archaeological remains should be preserved in situ if possible. This principle should be applied to urban archaeological deposits as much as to any other kinds of remains.

In planning and executing urban developments, all parties should consider whether it is possible to take measures to mitigate the impact of development on buried deposits and remains (for instance, by using specially designed foundations, or by not constructing basements). This is preferable to their excavation, unless there are strong and clearly defined research grounds for excavation, and that such excavation is fully funded.

The eventual decision whether to preserve remains or whether to excavate them will

depend upon many different factors. What is important is that all parties are involved in the dialogue which leads to the decision.

The role of public authorities and planners

The parts of the Malta Convention most relevant to urban planning are:

1. The value of the urban archaeological heritage to society as a whole. It is important both to the residents of the community and to visitors (Preamble, Article 1).
2. That in urban planning, there should be a preference for the preservation *in situ* of important archaeological remains wherever possible, and development plans should be modified to minimise adverse impact (Articles 4ii and 5ii, iv).
3. That the archaeological heritage can contribute to the identity of the town and to its future evolution (Preamble, Article 1).
4. That the archaeological heritage should be taken to include upstanding structures and buildings, as well as the historical topography of the town, which can form an important part of the character of the town and may merit protection (Preamble, Article 1).
5. That the decisions of planners can affect the archaeological heritage irrevocably. Once archaeological remains have been destroyed, they can never be replaced (Preamble).
6. That planners should take account of archaeology in their work. This includes when making development plans for towns; deciding budgets for urban development projects; giving permission for new developments carried out by private investors (Article 5I).
7. That before taking decisions affecting the archaeological heritage, planners should obtain adequate archaeological information and advice, applying non-destructive methods of investigation wherever possible (Articles 2 and 3).
8. That appropriate measures should be taken to reconcile the respective needs of archaeology and development plans (Articles 5ii-iv).
9. That planners should take steps to explain to the public and developers why the urban archaeological heritage is important and why money should be spent on preserving or investigating it. Public education through displays, museums, publications, and other means are among the ways this can be achieved (Article 9).

The role of architects and developers

Architects and developers shall:

- 1 At the earliest possible date seek a professional archaeological evaluation of potential redevelopment sites. Such advice may be obtained from nationally or regionally approved archaeological authorities. The purpose of this evaluation will be not only to establish if it is necessary to dig but also to build a picture of its urban morphology and its potential.
- 2 Recognise the desirability of preserving important archaeological deposits *in situ* wherever possible, in preference to their excavation unless there are strong and clearly defined research grounds for excavation and such research is fully funded.
- 3 On this basis of this evaluation integrate the archaeological work into the overall design, construction, and conservation strategy for the development.
- 4 Allow both adequate time and financial support to permit an archaeologically worthwhile investigation.
- 5 Be aware of the possibility of displaying important structural remains *in situ* and that, given they can be sympathetically incorporated into the new works, they could add value to the project.
- 6 Give full consideration to the important need for scientific and popular publication as an essential part of the excavation costs.
- 7 Ensure that archaeologically movable objects, records, and reports are deposited with appropriate institutions.
- 8 Try to settle any disputes through negotiation, where appropriate through a national or regionally organised body
- 9 Give support to media coverage, eg joint press releases and agreed statements, as to the discoveries made and the type of support given; give consideration, when naming the development, to the archaeological and historical context and to the display of the archaeological discoveries within or near the development.
- 10 See the archaeologist as a member of the project team, to be given appropriate access to the site and to be properly informed of all design and programming changes, so as to enable the archaeological input to be properly integrated.

The role of archaeologists

Archaeologists shall:

- 1 Provide all necessary information to other relevant authorities and to the developer at the earliest possible stage in the consideration of the development. The archaeological authorities will advise on any evaluation that will be required to determine more fully the extent, character, and importance of archaeological deposits and remains.
- 2 Recognise the desirability of preserving important archaeological remains *in situ* wherever possible, in preference to their excavation unless there are strong and clearly defined research grounds or excavation and such research is fully funded.
- 3 Be aware of development costs and adhere to strict timetables. The archaeologist will be aware that archaeological works adds value to the development, contributing to the overall concept and architectural design. The archaeological work will thereby contribute to the urban landscape of the future
- 4 Ensure that archaeological work, both on-site and writing the report, will be carried out to written agreements setting out standards, timetables, and costs. The archaeologist will be aware that the archaeological work is generally part of a larger project and that the archaeologist is part of the project team.
- 5 Assist in integrating important structural remains in the development.
- 6 Assist the planning authorities and developer, as appropriate, in any displays or other publicity.
- 7 Ensure that archaeological movable objects, records, and reports are deposited with appropriate institutions.
- 8 Try to settle any disputes through negotiation, where appropriate through a nationally or regionally organised arbitration body.
- 9 Discuss promptly and fully with the planning authorities and developer, as appropriate, the implications of any unforeseen discoveries made in the course of an excavation. Ensure that any statements to the press are made together with or in agreement with the project team. Keep the project team informed of the media potential and implications of any discoveries.

- 10 Ensure that the results of archaeological work are adequately published within a reasonable time.

Irish archaeological heritage

In April 1999 the Irish Minister for Arts, Heritage, Gaeltacht and the Islands (who has specific responsibility at central government level for protection of the archaeological heritage) published two documents setting out policy on protection of the archaeological heritage in Ireland: *Framework and Principles for the Protection of the Archaeological Heritage* and *Policy and Guidelines on Archaeological Excavation*.

Overall national policy on protection of the archaeological heritage in Ireland is defined by the European Convention on the Protection of the Archaeological Heritage (revised) (the Malta Convention), which was ratified by Ireland in 1997. The two documents published in 1999 are intended to further compliance with the policies and standards set out in the Convention.

While setting out principles which are applicable to all aspects of the protection of the archaeological heritage, the *Framework and Principles* document has a particular focus on appropriate responses to the archaeological implications of development. The document sets out the approaches which will be taken by the Minister for Arts, Heritage, Gaeltacht and the Islands in implementing the archaeological protection legislation for which she has direct responsibility. However, a key aspect of it is that it seeks to provide clear guidance to all bodies and authorities involved in authorizing or promoting development on the approach they should take regarding protection of the archaeological heritage. In Ireland much development is regulated through a planning control system administered at local level. Use of this system to ensure appropriate protection for the archaeological heritage in the context of development has taken on increased importance in recent years, with archaeological conditions being included extensively in grants of planning permission. Other legislation relating to various categories of development such as road construction and marine development has been similarly used. The *Framework and Principles* document aims to encourage and consolidate this approach, which is seen as essential in avoiding unnecessary conflict between appropriate development and protection of the archaeological heritage.

The principle that developers should pay for the costs of archaeological work necessitated by

development has been widely applied for some time now in Ireland. Again, the *Framework and Principles* document aims to encourage and consolidate this approach. A central aspect of the document is the approach of recognizing the archaeological heritage as a non-renewable resource. The view is taken that whenever the archaeological heritage may be affected by development the approach to be followed must be either preservation *in situ* or preservation by record (ie archaeological excavation and recording). The document states that there should always be a presumption in favour of avoidance of developmental impacts on the archaeological heritage, that preservation *in situ* must always be the first option to be considered rather than preservation by record in order to allow development to proceed, and that preservation *in situ* must also be presumed to be the preferred option.

In addition to setting out these basic principles, the document addresses the circumstances in which it is considered appropriate to carry out archaeological assessment (which may include test excavation) to determine the archaeological implications of proposed development, and the circumstances in which it may be appropriate to provide for archaeological monitoring of development works. Over the last number of years there has been a large amount of re-development in many Irish historic towns containing buried medieval deposits as well as upstanding archaeological features. In view of this, the document gives particular attention to archaeological issues which must be addressed in the context of such redevelopment, including particular reasons for avoiding developmental impacts on the archaeological heritage within present-day urban areas, notwithstanding the fact that such redevelopment can allow an opportunity for archaeological investigation which would not otherwise occur. Such reasons include the extensive archaeological work already undertaken in certain towns.

The extensive consideration of protection of the archaeological heritage within the planning process and application of the "developer pays" principle, as noted above, have resulted in a large increase over the last number of years in the number of archaeological excavations being undertaken. All archaeological excavations in Ireland are subject to a requirement to be licensed. Currently the number of licences being issued is running at c 600 a year, the vast majority being for excavations carried out either to assess or to mitigate the archaeological impact of development. Such excavations are carried out by private sector archaeologists. The *Policy and Guidelines on Archaeological Excavation* has been issued in that context. Key aspects of it include the setting out of criteria for eligibility to apply for an archaeological excavation licence and the setting of a basic framework of

applicable standards for archaeological excavation.

Both documents may be purchased (IR£3.00 and IR£2.00 respectively) by mail order from: Government Publications, Postal Trade Section, 4–5 Harcourt Road, Dublin 2, Ireland (fax + 353 1 4752760).

Some problems of heritage documentation and management in India

S P Gupta

Editor's introduction: *EAA members may be somewhat surprised to find this article in their newsletter. However, it raises some issues that are common to India and European countries. It also draws attention to the need for collaboration and the imparting of European practices and technology in countries whose archaeology is less well developed but where the archaeological potential is enormous..*

Background

India has in the past been a very vast country, almost a sub-continent, only slightly smaller in area than Europe. It also has many thousands of prehistoric sites, from the Palaeolithic to the Bronze Age, similar in time-span to the civilizations of central and western Asia and Egypt. The Neolithic settlements go back to the 8th/7th millennia BC, the Bronze Age cities date from the 4th millennium BC, and the Iron Age began at the end of the 2nd millennium BC. The Indus-Saraswati civilization is as old as that of Mesopotamia and Mohenjodaro, Harappa, Kalibangan, and Lothal are unique for the period as planned cities.

Like Europe, India witnessed the intermingling of a large number of ethnic groups, some of which remained in India, whilst others passed through, leaving evidence of their cultures. This process has been continuous for several thousand years.

As a result, several millennia of history have left the present-day state of India with more than a quarter of a million archaeological sites and monuments. This immense archaeological wealth is to be found all over the country – in the valleys of the snow-clad mountains of the Himalayas, along the borders with Pakistan, Nepal, and China; in the impenetrable forests of the regions of high rainfall in the north-east,

along the frontiers with Burma, Bhutan, and Bangladesh; along the long sea-coasts of the Bay of Bengal, the Indian Ocean, and the Arabian Sea; in the rocky formations of the world's oldest volcanic landmass, the peninsular

Gondwana of the Deccan; in the rock shelters and caves of the central folded beds of the Vindhya and the Aravali; in the rolling sand-dunes of the Thar deserts, and in many other places. In addition there are many submerged sites around the coasts which are being explored by underwater archaeologists.

Archaeology in India

Archaeological investigations began in India as far back as 1862. Since that time many systematic campaigns have been carried out, first by Alexander Cunningham and then by John Marshall, Mortimer Wheeler, A Ghosh, B B Lal, H D Sankalia, S R Rao, and hundreds of other archaeologists, young and old. Some of these worked for the Archaeological Survey of India, a government organization intended to explore and excavate sites for the conservation of archaeological remains, both movable and monumental. Their efforts are supplemented by similar organizations operating at state level, of which there are fourteen. Field archaeology is taught and practised at a dozen universities and research institutes, and some non-governmental organizations are also active in this field of research.

This demonstrates that India is well served so far as archaeology is concerned. There is a vast amount of archaeological data available in the country and there is a large band of dedicated field workers to explore and study it. However, at the present time Indian archaeology is facing a number of problems, a number of which also confront other countries.

Present difficulties

One of the major problems is the inadequate documentation of the archaeological remains. This is due not so much to the lack of records but rather to the fact that many of the records do not conform with contemporary computer-based systems. Indian archaeology in the 19th century was very different from that of the 20th century, and that of the first half of the 20th century, dominated by Mortimer Wheeler, is radically different from that of the present day, which is wholly given over to the use of computers. We belong to this latter period, even though most of us were trained in an earlier tradition. In a sense this may be seen as an advantage, since our generation is fully aware of the limitations of the system that we have been following in India while at the same time being fully aware of the potential of the new system that has been adopted in many other parts of the world.

Indian archaeologists are therefore looking forward to closer interaction with their colleagues in Europe so to be able to evolve a system that would be of universal application. It should be possible to develop good software packages (if these do not already exist) which could be applied to the special problems of high Bronze

Age city mounds in Mesopotamia and India which have dozens of levels containing immense numbers of artefacts and structures for various cultural periods. This example has been chosen because it represents problems only very rarely faced by archaeologists working in Europe. Another problem is that of urban settlements that have moved their sites over time within a relatively small area. This has led to what is known in India as "spiral chronology."

The problem of documentation

Like every country, India has many archaeological sites and objects that came to light by chance. These include caves, rock shelters, temples, mosques, churches, buried sites, inscriptions, sculptures, paintings, coins, pots, graves, memorials, etc. Some of these are untouched whilst many objects have found their way into museums and private collections. Sadly, many of these are either unrecorded or inadequately recorded.

The antiquarian remains of India are also faced with another very serious problem of documentation, the lack of proper identification in terms of iconography, metallurgical analysis, dating, or even location.

In recent years the towns and cities of India have been expanding very rapidly, extending to areas that with previously outside the urban areas. Encroachments, demolitions, and other forms of vandalism are now unfortunately a common feature. Since total systematic documentation of heritage remains has never been attempted in India we have no idea of what is being lost. As a result the world has become poorer since each country is responsible for those elements of the total human heritage located on its territory.

We are greatly concerned about the monstrous growth of human settlements, which provides no safeguards in terms of legal provisions and public awareness programmes in order to protect the heritage. Since time is running out, world and regional bodies have come forward to initiate projects involving extensive and intensive archaeological explorations in order to document the archaeological wealth of the country.

The role of non-governmental organizations

India is also facing a situation which probably confronts other countries that are rich in heritage

but poor in global participation, such as China, the Central Asian Republics, and the countries of South-East Asia. The role of non-governmental organizations (NGOs) is generally crucial in such cases, not only in heritage protection and documentation but also in heritage management, since there is considerable flexibility in their operations. They are work-oriented and result-oriented rather than administration-oriented, since they are self-motivated and follow self-imposed disciplines. These are co-operative,

teamwork efforts in which everyone involved has a greater sense of participation and of working for a common cause, aspects which are often sacrificed on the altar of red tape and rules of regulations. Governmental systems are often based on status and protocol whilst those of NGOs are based on an ability to work with other people and achieve results.

Unfortunately there is all too little understanding of the inherent merits of NGOs in our part of the world than in Europe. It is therefore imperative that the European archaeological community should take the initiative: their Indian counterparts are ready for full Cupertino and interaction, including the exchange of scholars, technologies, and data.

At the present time we face difficulties in obtaining sufficient funding for large archaeological projects. It is not that the money is not there: the problem is that governments have only just begun to appreciate our work and are not yet convinced of the benefits resulting from NGOs involving archaeological experts from all over the world. This situation is bound to change, perhaps sooner than many realize, but it is important that some collaborative projects should start first.

Heritage management and conservation: teaching and training

In India archaeology is taught at a number of institutions at postgraduate level. However, there are few possibilities for training in heritage management – embracing *inter alia* exploration, excavation, recording, conservation, laws and regulations, charters, manuals, tourism, museology, electronic and print media.

The same applies to the conservation of monuments and works of art, which is fundamental to all heritage preservation. There are several excellent government conservation laboratories in India but there is no teaching centre for professionals who may wish to work in the private sector.

In both cases there is a need for links to be established with European institutions in developing teaching programmes, perhaps in the form of Indian branches of their centres.

Conclusion

The Indian Archaeological Society, the leading NGO in India devoted to archaeology, invites NGOs and other institutions in Europe and elsewhere to explore with them the possibilities for collaboration in a variety of heritage-related programmes.

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RESEARCH NEWS

New science-based archaeology society

On 28 May 1999 the Gesellschaft für Naturwissenschaftliche Archäologie ARCHAOMETRIE (the Society for Science-Based Archaeology ARCHAOMETRY) was founded at Heidelberg (Germany). The society's objective is to strengthen the transdisciplinary dialogue between the scientific and cultural-historic disciplines. Its aim is the promotion of archaeometric research and teaching. Archaeometry in this context is interpreted in its broadest sense, namely the development and application of scientific methods and concepts, including those of anthropology, biology, chemistry, environmental sciences, geology, and physics, in order to contribute to the solution of archaeological and art-historic tasks. In order to achieve this objective the society plans to hold meetings and workshops, to issue publications, and to cooperate with related societies, in particular on an international level. Although based in Germany, the Gesellschaft für Naturwissenschaftliche Archäologie ARCHAOMETRIE does not look upon itself as a national organization. Members from abroad are welcome. A website has been set up (<http://www.archaeometrie.de/home.htm>) which provides information about the society and news. For further information and membership details contact

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An exciting new development: calcined bones can be ¹⁴C-dated

J.N. Lanting & A.L. Brindley

Introduction

Since the 1950s radiocarbon dating has played an ever-increasing role in archaeology, and

especially prehistoric archaeology. Collecting charcoal and bone samples for dating during excavations is standard practice and although less common, systematic dating for research purposes is also becoming more frequent. The traditional dating techniques require relatively large amounts of sample material. The new AMS-dating technique allows the use of very small samples: a single charred grain of wheat, a piece of bone the size of a molar.

Recent studies have emphasized the importance of samples with negligible own-age because the calibration of radiocarbon ages only makes sense when own-ages are absent. Only then can calibrated radiocarbon ages be compared with dendrochronological and/or historic dates. Bone (preferably of terrestrial herbivores) and seeds should therefore be preferred by archaeologists rather than the charcoal samples with all their attendant problems which continue to dominate sample selection. Prehistoric human bone is usually a reliable dating material with a relatively small own-age (10-20 years). The fact that cremated bone was undatable was regarded by many as a serious drawback.

Dating unburnt bone

Bone consists of long chains of proteins (collagen) in which particles of poorly crystallised inorganic material are imbedded. Normally when dating unburnt bone the collagen is used. The inorganic material is primarily a calcium phosphate with an apatite-like structure. A feature of this 'bio-apatite' is that it incorporates a certain amount (0.5-1% by weight) of carbonate as a substitute for phosphate in the crystal lattice. This so-called structural carbonate has its origin in blood bicarbonate generated by energy production in the cells. It is therefore directly related to the food intake of the person/animal in question. Structural carbonate is of great interest to palaeodietists who have developed and tested methods of collecting structural carbonate from the bio-apatite and separating it from 'absorbed' carbonate in archaeological bones (Lee-Thorp, Sealy & Van der Merwe, 1989; Lee-Thorp & Van der Merwe, 1991; Ambrose & Norr, 1993). The 'own-age' of structural carbonate is limited and similar to that of bone collagen, 15-20 years at the most. During life, bio-apatite and collagen are replaced in bone at a slow but constant rate. Structural carbonate has been used for radiocarbon dating on a very limited scale probably because carbonate in unburnt tooth enamel (which from a chemical point of view closely related to bio-apatite) produced aberrant dates due to post-depositional changes (Hedges, Lee-Thorp & Tuross, 1995). At the 3rd International Symposium 14C and Archaeology in Lyons (6th-10th April 1998), a

group of French scientists (Saliège, Person & Paris, 1998; Person, Saliège, Gérard & Paris 1998) presented the results of dating samples of structural carbonate in prehistoric skeletons from the Sahel. These carbonate dates were checked against dates on collagen, charcoal or burnt bone and proved to be reliable. Post-depositional changes were not a factor because of the extremely dry climate in the Sahel.

Carbonate dating of cremated bone

After hearing this lecture, one of us (JNL) realised that it might be possible to date calcined bone from cremation burials using structural carbonate. All previous attempts to date *cremated bone* had failed because it had been treated as charred bone. Charred bone is heated at relatively low temperatures (200-300EC), contains carbonized fats and proteins and is grey or black inside while calcined bone has been heated at far higher temperatures (above 600EC), contains no carbonized material at all and is white throughout. Some collagen may survive in charred bone, but none survives cremation. However, of great significance is the fact that during cremation, *i.e.* at temperatures above 600EC, the bio-apatite recrystallises and larger and better-structured crystals are formed (Shipman, Forster & Schoeninger, 1984). This is one of the reasons why cremated bone survives even in acid soil. During the burning some of the structural carbonate disappears (Stiner, Kuhn, Weiner & Bar-Yosef, 1995) but JNL postulated that it was unlikely that all the structural carbonate would disappear on a prehistoric pyre. The Groningen radiocarbon laboratory was approached and asked to date the structural carbonate from a number of prehistoric cremations. These tests showed that cremated bone does indeed retain sufficient structural carbonate for dating by AMS although in some cases the amount is quite small, not more than 0.1%. The stable isotope ratio $d_{13}C$ indicated that considerable amounts of carbonate must have burnt out, resulting in a remarkable shift in $d_{13}C$ due to isotopic fractionation during this process. This does not influence the possibility of dating cremated bone, however. The tests also showed that sufficient structural carbonate for dating is present in samples of no more than 1.5-2 grammes of cremated bone. Small fragments, including porous ones, can be used instead of larger fragments of solid calcined bone.

Results

In the meantime some 150 cremation dates have been produced in Groningen, partly on Dutch/Belgian/northwest German material, partly on Irish material. The results of an Irish dating programme financed by the Heritage

Council of Ireland and comprising 46 Bronze Age cremations, will be published shortly. A short note with some Irish results, and results of the test programme on Dutch cremations appeared recently (Journal of Irish Archaeology 1998). This test programme included cremations previously dated on charcoal.

Finally, some dates obtained on calcined bone/cremations from the Netherlands, and adjacent Belgium and northwest Germany.

Late Palaeolithic *Federmesser* site near Doetinchen

calcined bone from hearth	GrA-13387	10.880 \pm 50 BP
calcined bone from dump zone	GrA-13388	10.930 \pm 50 BP
charcoal in settlement layer	GrA-13386	10.870 \pm 50 BP

Cremation burials of the late Havelte phase of the Funnel Beaker Culture

Angelslo grave 1	GrA-13705	4200 \pm 50 BP
Angelslo grave 3	GrA-13598	4220 \pm 50 BP
Angelslo grave 5	GrA-13599	4130 \pm 50 BP
Leer WH 578	GrA-14093	4205 \pm 40 BP
Leer WH 581	GrA-14088	4270 \pm 40 BP
Leer WH 585	GrA-14089	4190 \pm 35 BP
Leer WH 600	GrA-14168	4170 \pm 40 BP
Leer WH 604	GrA-13706	4170 \pm 50 BP

Cremation burials with Bell Beakers of Veluvian type in the Lower Rhine area

Meerlo	GrA-14066	3840 \pm 35 BP
Hoog-Buurlo	GrA-14067	3830 \pm 35 BP
Veen, Kr. Moers	GrA-14080	3810 \pm 40 BP
Nijmegen	GrA-14840	3850 \pm 40 BP

Cremation in Middle Bronze Age urns of Drakenstein type

Neer	GrA-14529	3340 \pm 40 BP
Poppel	GrA-14285	3320 \pm 30 BP

Cremation burial with bronze sword of Wohlde type

Garderen-Bergsham No. 25	GrA-13707	3320 \pm 50 BP
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Keyhole shaped ditches in Late Bronze Age urnfields

Erica-Hankenberg	GrA-14527	2840±40 BP
Buinen-HV 14	GrA-14528	2760±40 BP

Harpstedt-type urns of the Early Iron Age

Wapse W70	GrA-11669/71	2535±30 BP
Wapse W152	GrA-1672/74	2545±30 BP

Rich graves of the middle Iron Age, with situlae and ribbed bucket

Wijshagen-De Rieten C	GrA-14279	2420±30 BP
Wijshagen-De Rieten E	GrA-14281	2440±30 BP
Wijshagen-De Rieten H	GrA-14284	2430±30 BP

Cremation burial in Anglo Saxon pottery

Wijster grave XXIV	GrA-13369	1600±40 BP
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Cremation burials with Frankish *Knickwand* pottery

Hoogeloon-Broekeneind grave II	GrA-13368	1530±30 BP
Hoogeloon-Broekeneind grave VIII	GrA-13367	1490±40 BP

Literature

Ambrose, S.E. & L. Norr, 1993 Experimental evidence for the relationship of the carbon isotope ratios of whole diet and dietary protein to those of bone collagen and carbonate. In: J.B. Lambert & G. Grupe (eds) *Prehistoric human bone. Archaeology at the molecular level*, Springer Verlag, Berlin etc, pp 1-37.

Hedges, R.E.M., J.A. Thorp & N.C. Tuross, 1995 Is tooth-enamel carbonate a suitable material for radiocarbon dating? *Radiocarbon* 37, pp 285-290.

Lanting, J.N. & A.L. Brindley, 1998 Dating cremated bone: the dawn of a new era. *Journal of Irish Archaeology*.

Lee-Thorp, J.A., J.C. Sealy & N.J. van der Merwe, 1989 Stable carbon isotope ratio differences between bone collagen and bone apatite, and their relationship to diet. *Journal of Archaeological Science* 16, pp 585-599.

Lee-Thorp, J.A. & N.J. van der Merwe, 1991 Aspects of the chemistry of modern and fossil biological apatites. *Journal of Archaeological Science* 18, pp 43-354.

Person, A., J.-F. Saliège, M. Gérard & F. Paris, 1998 Utilisation d'un indice caractéristique de la diagenèse de la fraction minérale d'ossements archéologiques en milieu

désertique pour discuter de la fiabilité de ces matériaux comme support de datation par le radiocarbone, application à deux nécropoles néolithiques de l'Aïr (Niger). *Pré-actes du 3ème Congrès international 14C et archéologie, Lyon 1998* pp 77-78.

Saliège, J.-F., A. Person & F. Paris, 1998 Datation du carbonate-hydroxylapatite d'ossements holocènes du Sahel (Mali, Mauritanie, Niger). *Pré-actes du 3ème Congrès international 14C et archéologie, Lyon 1998*, pp 172-173.

Shipman, P., G.F. Foster & M. Schoeninger, 1984 Burnt bones and teeth: an experimental study of colour, morphology, crystal structure and shrinkage. *Journal of Archaeological Science* 11, pp 307-325.

Stiner, M.C., S.L. Kuhn, S. Weiner & O. Bar-Yosef, 1995 Differential burning, recrystallization, and fragmentation of archaeological bone. *Journal of Archaeological Science* 22, pp 223-237.

The history of European archaeology

AREA is a research network which focuses on the history of European archaeology. Launched in April 1999 and funded by the European Commission's DG X, it is bringing together an increasing number of archaeological institutions. Among them are the Hellenic Ministry of Culture in Athens, the University of Liège, the Macdonald Institute for Archaeological Research in Cambridge, the University of Göteborg, the Deutsches Archäologisches Institut in Berlin, and the Centro Andaluz de Arqueología in Jaén.

The history of European archaeology is a complex field in which national traditions and language barriers often inhibit a fuller understanding of those facets of the disciplinary past which are marked by cross-boundary research programmes and international tendencies. Appreciating the impact of the antiquarian travellers, the Romanticist movement, colonial enterprise, or World War II on the practice of archaeology requires a pan-European perspective.

Through research, meetings, workshops, publications, and its internet site, AREA seeks to enhance the understanding of this multifarious field, to address its theoretical and methodological premises, and to highlight its broader contribution to both historical analysis and contemporary practice.

The archives of the discipline contain an enormously rich potential for research in the form of correspondence, minutes, internal reports, drawings, excavation notebooks, and

photographs. These are scattered over university libraries, museum depots, government archives, and private collections and are often difficult to access and assess. AREA is compiling an online catalogue which locates the most important archives and indicates how they can best be used.

The AREA project is co-ordinated by Giovanni Scichilone, Alain Schnapp, and Sander van der Leeuw for the Maison des Sciences de l'Homme, Paris, where the secretariat is based.

Details can be obtained on www.num-inha.edu or by e-mail to david.vanrebrouck@worldonline.be.

New information service

The new website ROSTRUM is a joint venture by ABACO-M.A.C. in Italy and Genius Loci Ltd in the United Kingdom. Its aim is to provide a high-quality information service to meet the needs of archaeologists and museologists who wish to be informed about European Union legislation, institutions, processes, and funding opportunities. It also intends to improve communication between cultural heritage practitioners in Europe by advertising conferences and meetings with a European dimension. Its multi-lingual editorial team comprises professional archaeologists, specialists in European cultural heritage law, communications, and European affairs.

For more information register at www.genius-loci.net.

New journal from IUPPS/UISPP

The International Union of Prehistoric and Protohistoric Sciences – IUPPS (*Union internationale des Sciences Préhistoriques et Protohistoriques – UISPP*) is preparing to publish a new journal, to be known as *Prehistoria 2000*.

The principal objective of the new journal will be to encourage the exchange of information between specialists and discussion of scientific advances. It will also take steps to improve the dissemination of information about the activities of IUPPS and universities, museums, and research institutions working in the fields of prehistory and protohistory.

The first issue of the new journal, which will be published annually, is scheduled to appear in 2001, to coincide with the 14th IUPPS Congress.

Funding for conferences

The European Science Foundation administers the European Research Conferences (EURESCO) Programme. It has issued a call for conference proposals for 2002 and beyond.

Full information on the programme can be obtained on <http://www.esf.org/euresco> or from Dr C A Williams, European Science Foundation, 1 quai Lezay Marnésia, F-67080 Strasbourg Cedex, France (tel + 33 3 88 76 71 45, fax + 33 3 88 36 69 87).

TALKING POINTS

Digging in the dirt

Geoff Carver

The first Digging in the Dirt session, held at the Bournemouth Conference, was a successful example of the EAA's strengths as an international organization. Lectures covering such topics as pre-excavation survey, post-excavation and stratigraphic analysis, and contrasting "national" methods of excavation brought the discussion much further than had been intended for this first session. As the proceedings will show (I hope to have them published in time for Lisbon - the abstracts are available for those who cannot wait on <http://home.t-nline/home/gcarver/abstract.htm>), excavation techniques differ between countries to a degree not found in such "hard" sciences as biology, chemistry, or physics. One would not speak of a "German geology" or an "English chemistry" in the way that Bournemouth speakers mentioned the "German planum method" or some continental archaeologists call stratigraphic excavation "English methods."

This year will see the continuation of this discussion, as a lecture session (Digging in the Dirt 2) and as a round table discussion (Digging in the Dirt 3). One of the goals for Lisbon – besides continuing from Bournemouth – is to take one step backwards and to collect data for continued discussion. I had hoped at Bournemouth to collect more basic information about how archaeologists excavate in the various countries of the EAA. This might seem fairly boring and mundane stuff in comparison to the analytical discussions we did have, and it might be that the lecture format is not best suited to its presentation. But I think it is necessary if we are both to progress further in the present discussion and for the EAA members to better understand one another.

There is also another factor (which I had been considering as a long-term goal and which the Lisbon organizers suggested should be considered this year), and that is the development of a unified, international methodology for archaeological excavation. Whether that is either possible or desirable will have to be discussed, but even before such discussions can begin we need to know the range of methodological diversity. That almost means asking for representatives from all the countries of Europe (and our outside members, too, if possible!) to give accounts of how archaeologists dig in their countries. Stratigraphically, non-stratigraphically; what kind of documentation systems, what tools are used, how are the workers trained and organized, etc. Although some of this information will overlap with work being done by EAA working groups for education, setting standards, professional organizations, etc, some of it will be new, and much will neither be known nor widely available.

To this end, I would like EAA members either:

- to send me information about excavation methods in their countries which I can publish on my webpage; or
- to present information in the form of a background lecture or as printed material at the Lisbon session (possibly to be used as material for continuing the discussion in Esslingen in 2001).

Although the importance of this information might not be immediately obvious, there are serious implications of such methodological diversity. On the scientific level, increased communication between archaeologists from different countries and ever-increasing reliance on "foreign" sources of information for comparative studies means that there must be recognized international standards or norms for the collection and presentation of evidence. This was underlined by a number of lectures last year, several of which mentioned problems of re-interpreting old site archives within national traditions.

Moreover, although there are also practical implications resulting from archaeologists being allowed to work anywhere within the European Union, for example, this diversity might also to some degree be responsible for the reputation archaeology has long held of either not being a science or of not being "scientific." My example has been to contrast the scholarly reputation held by historians or the scientific reputation held by geologists with the two icons of modern archaeology (at least in the minds of the general public), Indiana Jones and Lara Croft. If we could somehow reverse this adventurous impression, we might better our standing with the public, governments, and the private

investors who pay for archaeological projects. I think this means not only a sense of professionalism being discussed by the working group on professional organizations, but also a more systematic, one might say evolutionary, approach to excavation methodology, as opposed to the historical-cultural diversity we have today.

But we can talk about that.

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EAA NEWS

Lisbon in September

Most members will already by now have received the Third Announcement of the 6th Annual Meeting, which is being held in Lisbon on 10-17 September 2000.

For those who have not received the information, and for non-members who would be interested in attending, this is what awaits those who will be in Portugal in September.

There will be two-day pre-conference excursions on 10-12 September. These will be to the Côa Valley prehistoric rock-art sites, the Iron Age hillforts of northern Portugal, Islamic archaeology in southern Portugal, and the Alqueva archaeological salvage project.

On Tuesday 12 September there will be three special interest group meetings in Lisbon – on the AREA (Archives of European Archaeology_Research Network (described above), problems in the reconstruction of religious beliefs on modern archaeology, and professional associations for archaeologists.

Registration begins on Wednesday 13 September, followed by the opening ceremony, which will be addressed by Professor Manuel Carrilho, the Portuguese Minister of Culture, who was awarded the first European Archaeological Heritage Prize last year by the EAA in recognition of his action over the Côa Valley dam project.

The serious work of the meeting in the form of no fewer than 57 academic sessions and round tables, which will take place over the whole of 14 and 15 September and the morning of 16 September. It can be stated with absolute confidence that there is something in this programme for every archaeologist working in Europe.

The academic sessions are divided into four groups:

- I. Archaeological practice: means and basics;
- II. Archaeological record: studies and interpretations;
- III. Archaeological heritage: management and beyond;
- IV. Archaeological representations: audience and influence of archaeology.

The round tables are on archaeology in schools, "digging in the dirt" (see above), professional education for underwater archaeologists, training excavations, illicit trade in antiquities and cultural material, setting standards for archaeologists, the ICOMOS International Committee on Archaeological Heritage Management (ICAHM), archaeological heritage in the Cracow Charter, and ArchWebs – accessing archaeology on the Internet.

The Annual Business Meeting will take place on the afternoon of Saturday 16 September. For those who want to stay on afterwards there is a number of half-day and full-day tours on Sunday 17 September. The half-day tours will visit the Copper Age hillfort of Leceia, Lisbon, and Sintra, whilst those taking part in the full-day excursions will visit Évora and the Roman remains of Miróbriga, the Megalithic monuments of the Alto Alentejo, or the Roman ruins of Conimbriga.

No EAA Annual meeting would be complete without its traditional social programme. This begins after the opening ceremony with a wine reception. On Thursday 14 September there will be the Annual Party, at an attractive riverside location, and the closing dinner-dance is on the evening of Saturday 16 September.

This attractive programme is the work of an enthusiastic Local Organizing Committee, under the leadership of Professor João Zilhão, Director of the Instituto Portugues de Arqueologia (IPA), who also chairs the small Meeting Secretariat. The meeting will take place in the Centro Cultural de Belém in one of the most significant cultural areas of Lisbon.

And in 2001...

Plans are well under way for the 7th Annual Meeting, which is to be held in Germany. It had originally been proposed that this should take place in Stuttgart, but the venue has been switched to Esslingen-am-Neckar, a small town with a beautiful and well preserved medieval town centre.

For the first time the conference town itself is playing a major role in the organization of the meeting. Municipal officials are members of the

Local Organizing Committee, which is headed by Dr Rüdiger Krause and Prof. Dr. Dieter Planck of the Landedeskmalamt Baden-Württemberg.

From the Secretariat

Welcome to the EAA 2000! We hope that our next Annual Meeting in Lisbon in September this year will be a great event and will attract a lot of archaeologists – both former members and new members – to join the Association! You will find information about the Conference elsewhere in this issue.

In mid July last the EAA Secretariat moved from MoLAS in London to the National Heritage Board in Kungsbacka, Sweden. We are sorry if this abrupt move caused you any trouble. From 2000 we shall further improve the service to our members, using the e-mail system to a larger extent.

Since February EAA has been using a Swedish bank, Skandinaviska Enskilda Banken, Kungsmässan, S-405 04 Göteborg. We have recently begun accepting payments by credit card and this has caused some delays in the banking process. We are sorry if this has caused you any trouble.

The Yearbook

As our financial situation is still critical, the Executive Board decided not to produce a Yearbook for 1999. However, since the information is useful for all members, the EAA Secretariat has sent out a list of EAA Members 1999 in digital form instead.

Members should also have received a list giving the fields of archaeological competence of the EAA membership (as of 1999). To make the list more useful, we shall be grateful if members who have joined more recently and who have not informed the Secretariat about their special areas of competence or interest to send the details to enable us to complete the list, preferably by e-mail.

If you have any queries, please contact me. I can be reached by telephone during office hours (08.30–16.45 Monday–Friday).

Petra Ottosson Nordin

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Membership in 1999

At 31 December 1999 70% were full members, 17% students, 10% institutional, 2% corporate, and 1% retired.

Membership grew slowly, with some setbacks, in the early years of the EAA, but has risen sharply since 1998, as the following figures show:

Year	Individual	Institutional	Total
1993	283	23	325
1994	435	37	495
1995	396	36	464
1996	360	44	448
1997	427	47	505
1998	938	150	1092
1999	1021	112	1135

On 31 March 2000 the paid membership stood at 430.

“Situations vacant”

These notes have been discussed amongst the members of the EAA's Executive Board and Editorial Board and so represent a consensus on what the Association is trying to find in the person of a new **General Editor**.

Trying to define the key qualities, talents, and abilities which an ideal General Editor of the *European Journal of Archaeology* should possess is a little like futile, essentialist attempts to characterize particular stages in social evolution or distinguish two rather similar cultural variants one from another. A story about the English archbishop of the Victorian era, Archbishop Temple, sums up another aspect of the problem. After a Sunday service in Westminster Abbey, an outraged parishioner approached Temple and complained bitterly about the quality of his clergy. "Ah well," said Temple, "the problem is that I have only the lay people to choose from." So any approach should be polythetic (*après* David Clarke) and not too optimistic (*après* Temple)!

If anyone could define the meaning of "an European dimension" to archaeology, the General Editor (henceforth "GenEd") should have a proven track record in this orientation. It is, of course, not impossible that someone who has spent thirty years researching and publishing on nothing but, say, the brochs of the Outer Hebrides (with special reference to the Northern Isles) should have an European

orientation to their archaeology but usually there will be better evidence from individual output.

Because Europe is continuing to evolve into a place of increasing size and awesome complexity, it goes without saying that part of this European orientation is a generalist appreciation of how different parts of Europe connect – whether in time/space or through social networks (also once known as "cultures"). Since the death of Grahame Clark – the archaeological equivalent of Voltaire (the last person who knew *everything*), no-one seriously expects anyone to be familiar with all the detailed problematics in all time/space research fields – indeed, this may be considered a major disadvantage to a person with European pretensions! But it would be important to be able to make the links and assess the validity of claims based on the formulation of wide-ranging links.

Since so many links these days are based on an aspect of archaeological theory, it would be important for a GenEd to have an evolving and growing respect for, and serious dialogue with, archaeological theory. This may be thought to be an unnecessarily restrictive "quality," since it may rule out over half the membership of the EAA, but the quality of journal articles is so often closely related to the generality and applicability of new theoretical insights that this quality should be emphasized. What no-one wishes to define *a priori* is the kind of theoretical commitment of a future GenEd: that is surely part of the portfolio which a candidate would offer to the membership in an election.

Another aspect of the wide-ranging interests which one should expect in a GenEd is the talent to connect archaeological science with the human sciences and with public archaeology and heritage management. These fields sometimes seem rather disparate within the EAA and more integration could well be desirable.

It would be preferable if the new GenEd were to be from continental Europe rather than the United Kingdom. It would be essential, however, for the successful candidate to be fluent in English, the language in which the majority of papers for the journal are submitted.. It is only fair to the membership that a high level of linguistic competence is maintained by the person in control of their journal.

A final point in this bunch of heterogeneous qualities is editorial experience. Our publishers, Sage Publications Ltd, are understandably keen to work with a highly skilled editor, and one of the obvious ways of documenting such a skill is a previous track record of not only running a journal but also making major changes or improvements in that journal. Part

of these skills therefore relate to ideas and innovations, part to IT skills and Web talents, part to teamwork with the publishers and the editorial board, and part to the personal disciplines required to keep to tight schedules.

The *EJA* has grown from an unruly child, whose manners could at best be described as variable, sometimes on the block (though, as early members realized to their cost, sometimes not to be found on the block!), to a somewhat more reliable adolescent with more predictable behaviour but hopefully not having lost the capacity to shock or surprise. There is a long way to go before the *EJA* is really well established in the homes (not just the institutional libraries!) of the majority of European archaeologists. The fulfilment of such a goal needs a committed and skilled person with the charm of a Kristiansen, the looks of a Heracles, and the voice of a Pavarotti (but not conversely...). Since no-one can possibly combine all of these, the membership needs to look very closely at what may be expected from a strong field of candidates. It is hoped that these "pass notes" will help to sharpen the members' perceptions of what is desirable in a new General Editor and open up a debate on this issue.

John Chapman

(on behalf of the EAA)

It would be foolish to attempt to emulate such an elegant and erudite job advertisement and so this call for candidates to take over the running of *The European Archaeologist* will be more prosaic.

It has always been the intention that there should be three issues of *TEA* a year. It is also intended that the newsletter should go on the web as soon as possible.

The present Editor is anxious to find a successor within the next year, so as to concentrate his failing energies on writing his *magnum opus* and doing some teaching. It is proposed that the work of compiling and publishing *TEA* should be shared out among several members – not because the present editor is some kind of Superman but rather because of the greatly expanded workload that is foreseen for the future.. There will be a General Editor supported by at least two Assistant Editors, whose role will be to seek out "stories" and information that is likely to be of interest to members. The Executive Board will assist by inviting members in various countries or regions to act as correspondents, sending material to the editorial team for publication.

As with the "GenEdEJA", the "GenEdTEA" ought to be comfortable in the three EAA languages – indeed, to have some knowledge of Spanish and/or Italian as well – whilst the

"AsstEdsTEA" (this sort of thing is contagious) should be able to work in at least two of them. If you think you can help out, write to the Secretariat. I shall be at the Annual Meeting in Lisbon and shall be delighted to talk to anyone who feels he/she could help.

Henry Cleere

(on behalf of the EAA – and himself)

LETTER TO THE EDITOR

The third tribe

In an article in *TEA* 12 (1999), Bruce Morgan expressed the fear that the third tribe of archaeologists, the public sector excavators, might be extinct soon. Fortunately, there is still a fairly strong population in Central Europe, particularly in Germany. This tribe is worshipping a god called State Budget, though there is a small group that believes in Investors' Money. This third tribe is divided into two castes. The higher ones are civil servants and the lower, such as this writer, are humble state employees. Both are pretty active and I am sure that both will survive into the next millennium.

Timm Weski

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DIARY

30 August-7 September 2000: *Millennium Congress of The International Committee for the Conservation of the Industrial Heritage – TICCIH2000*, London (UK). Contact TICCIH2000, 42 Devonshire Road, Cambridge CB1 2BL, UK.

2-11 September 2000: *Limes XVIII - the 18th International Congress of Roman Frontier Studies*, Amman (Jordan). Contact Limes XVIII, Department of Archaeology, SACOS, William Hartley Building, The University, Liverpool L69 3BX, UK [e-mail pfreeman@liv.ac.uk].

2-8 September 2001: *XIV Congress of the International Union of Prehistoric and Protohistoric Sciences*, Liège (Belgium). Contact ABACO-M.A.C. srl, V.le A. Gramsci 47, I-47100 Forlì (Italy)

13-18 September 2001: *World Islands in Prehistory*, Deia, Mallorca (Spain). Contact William Waldren at william.waldren@linacre.ox.ac.uk