

# CONTEXT



Professor Kathryn Bard shows graduate student David Landon a palaeolithic handax from Egypt on display with Egyptian photographs lent to the Department of Archaeology by the Boston Museum of Science (see Center Activities, page 7).

## City of Sumerian Lord of Death Discovered in Mesopotamia

by Elizabeth C. Stone and Paul E. Zimansky

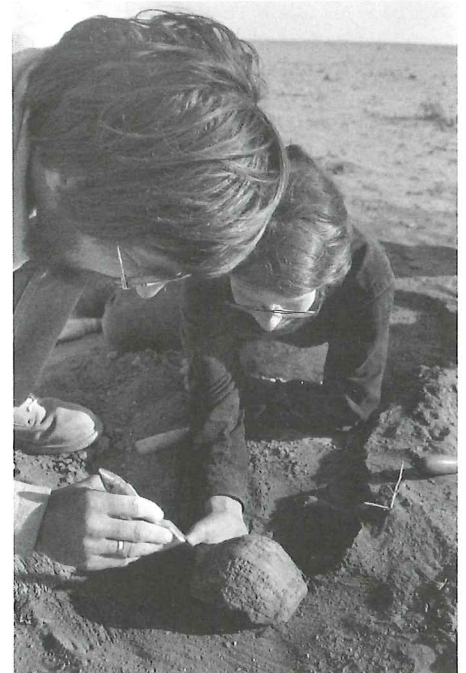
In the civilization that flourished in southern Iraq from the fourth to the first millennia B.C., cities were something more than focal points of human habitation—they were the homes of gods. Ur was the city of Nanna, the moon god, and Enlil, the most powerful member of the Sumerian pantheon, resided in Nippur. Even the god Nergal—lord of death, king of the nether world, "the ambusher, who spares no one" (to use one of his Sumerian epithets), a god whose portfolio included responsibility for disease, pestilence, and other disasters that destroyed humanity *en masse*—even this unpleasant character had cities of his own, and it is perhaps in accordance with his wishes that the location of one of the most important of them finally became known to the modern world on a Friday the thirteenth, in January of this year.

This discovery was made by Elizabeth Stone as she attempted to trace the city walls of Tell Abu Duwari, a site that she had selected for a study of Mesopotamian urbanism. As she approached the eroded lumps of clay that marked one of the city gates, she noticed fragments of clay cylinders inscribed with cuneiform lying on the surface. On one of the first pieces she looked at, she was able to read the name Mashkan-shapir and recognized that Nergal's city, long known from such documents as Hammurabi's law code and Old Babylonian letters, had at last been located.

Mashkan-shapir flourished between

2050 and 1750 B.C., a time when true cities and civilization existed only in parts of the Near East, Egypt, and the Indus Valley. Its rapid rise to power and subsequent collapse into obscurity are probably related to its location on what was for a time the easternmost of the many branches of the Euphrates. Although that branch carried little water and was not capable of providing a large enough irrigation system to support extensive settlement, it ran close to the powerful and dangerous Tigris River, which was an important avenue of communication.

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Paul Zimansky and Elizabeth Stone cleaning a cuneiform inscription found near the south gate of Mashkan-shapir.

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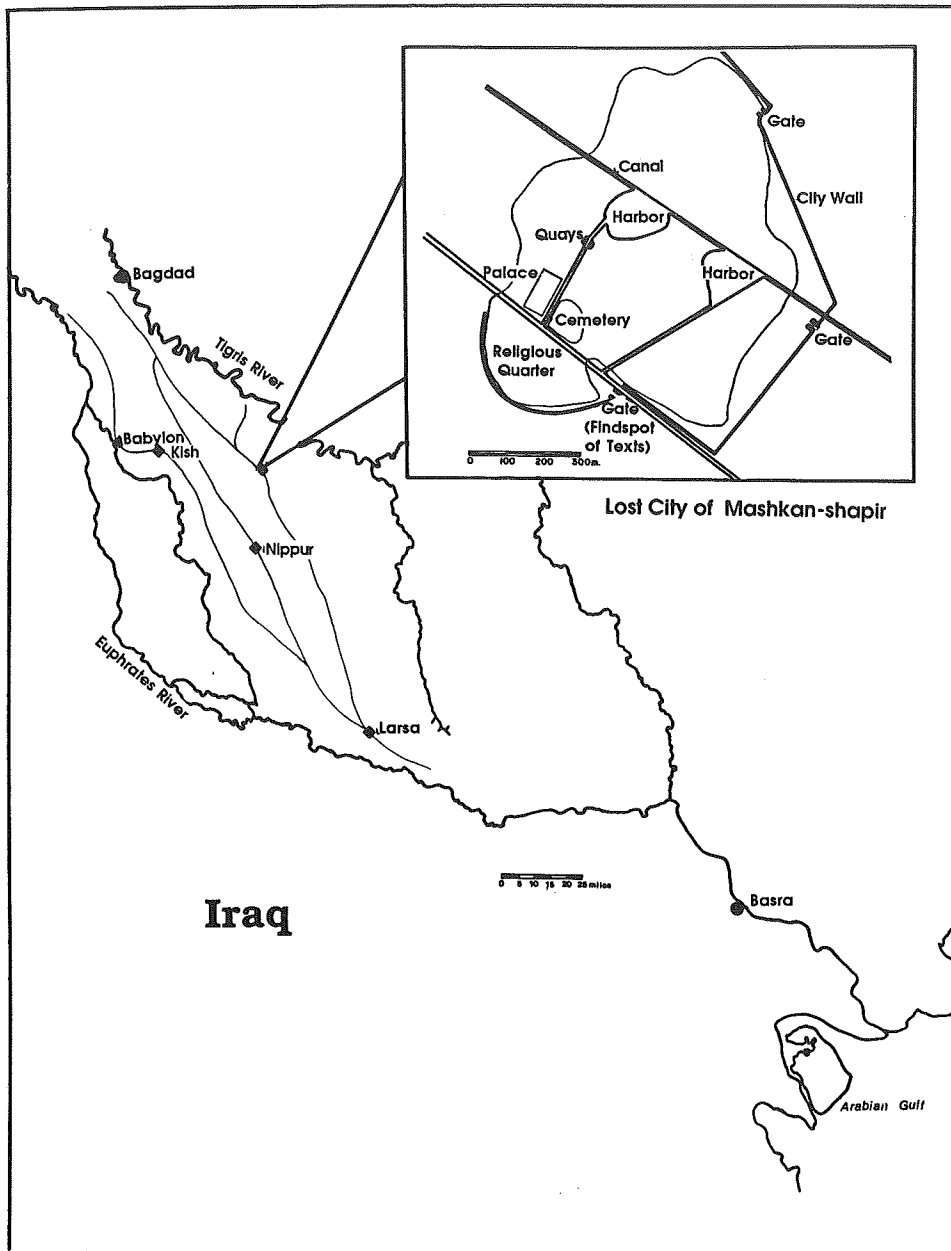
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Map of southern Mesopotamia and city plan of Mashkan-shapir.

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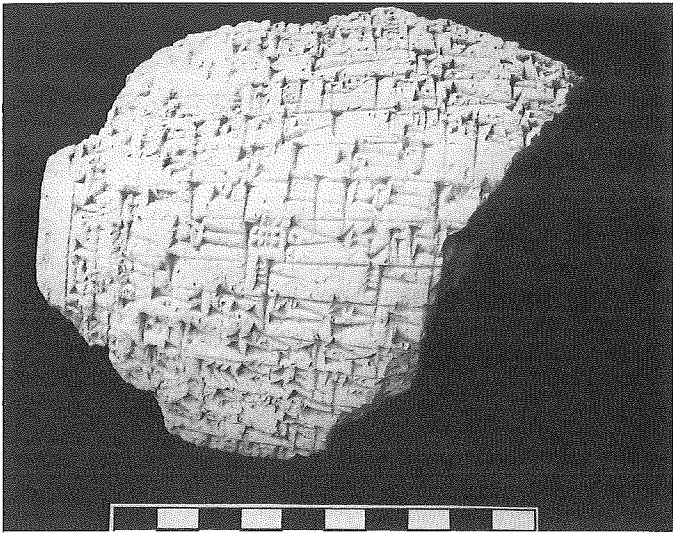
In the early second millennium B.C. political factors made this a strategic location. Until about 2000 B.C. Mesopotamia had been united into a single empire by the kings of the Third Dynasty of Ur. When this empire collapsed, smaller kingdoms, centered on some of the larger cities, began to compete with one another for power. Initially the two most prominent were Isin in the western part of the alluvium, and Larsa in the south. After two centuries of intermittent rivalry a new power, Babylon, arose in the northwest and supplanted Isin, but the struggle continued, this time between Larsa and

Babylon. This long period of intercity strife disrupted the usual trade routes that had supplied the southern cities, those allied with Larsa, with vital supplies of wood, stone, and other items necessary for survival in an environment that had little to offer besides mud, water, and sunshine. The opening up of a channel joining Tigris and Euphrates systems just north of Mashkan-shapir catapulted this small rural settlement to urban prominence. Its location allowed it to control all trade between the southern cities and the resource-rich areas to the north and east, and served as a staging point for raids against the Babylonian heartland to the west.

The kings of Larsa were fully aware of the importance of this city, and spent considerable resources in embellishing it. One of the more substantial contributions was made by a king named Sin-iddinam (1849-43 B.C.), who constructed a vast wall surrounding the city. The nearly 150 fragments found on January 13 represent parts of over ten different barrel- or mace-head-shaped foundation deposits written in Sumerian cuneiform to commemorate this feat. Each piece had the same inscription, which begins with the phrase: "When the great lord, the hero, Nergal, in his overflowing heart verily caused his city Mashkan-shapir to rise and determined to build its wall in a pure place and to expand its dwellings..." There follows a lengthy excursus on the titular and heroic deeds of Sin-iddinam before coming to the point: Nergal instructed Sin-iddinam to build the city wall and the king, therefore, mobilized one quarter of the troops of the land to make bricks for thirty days. The text includes a list of the workers' wages and of commodity prices of the time. The inscription ends with additional epithets of Sin-iddinam, including several that reflect on the good things he did in expanding and strengthening Mashkan-shapir.

Although in this inscription Sin-iddinam takes care to express his thanks to Nergal for granting him a long life, within a year he was dead. His descendants fared little better; soon they were pushed from the throne of Larsa by a new dynasty that originated in Mashkan-shapir itself. Gratitude is not listed among Nergal's attributes.

It was during this last period that Mashkan-shapir rose to the status of a capital. Although still nominally ruled from Larsa, it is clear that the palace at Mashkan-shapir played a major role in Mesopotamian affairs. It was here that the ambassadors from Hammurabi in Babylon came to discuss the possibility of joint ventures between the two rival powers, and it was here that some court cases from Larsa were heard. Even when Hammurabi had gathered sufficient



*Sumerian royal inscription of King Sin-iddinam of Larsa, recounting the building of the city wall of Mashkan-shapir in 1843 B.C. Found near south gate.*

strength to attack and finally defeat Larsa, Mashkan-shapir played an important role. He opened his campaign with a siege of that city, and only through its surrender was he able to gain control over the rest of southern Mesopotamia. But this victory was short-lived. Upon Hammurabi's death in 1750 B.C., the empire that he had forged began to collapse, led in part by rebellions centered in Larsa and Mashkan-shapir. Within three decades warfare, economic crisis, and the breakdown of the irrigation system led to the abandonment of the entire area of the kingdom of Larsa, its once mighty cities now isolated in the desert. Centuries later irrigation schemes brought water back to some of these ancient cities, but not to Mashkan-shapir. Its remains, little more than a broad expanse of bricks and potsherds, have rested in obscurity to this day, visited by few other than the bedouin of the desert.

It is this short florescence and subsequent obscurity that makes the city so interesting archaeologically. Most ancient Mesopotamian cities were inhabited for millennia, and complex processes of deposition and erosion make it impossible to understand the overall layout of the settlement for any given moment. Thus the details of the living, breathing, urban conglomeration are lost in the mass of later occupation and remolding of the landscape.

It was apparent from the moment we began working at Tell Abu Duwari in the spring of 1987 that this site was

something special. With a grant from the American Schools of Oriental Research and funds from Elizabeth's Fulbright Fellowship we were able to bring four students with us to Iraq and conduct a surface survey of the site for the last three weeks of May. From Boston University came Catherine Alexander, Lauren Cook, and Charles Pennington; John Suriano represented the State University of New York at Stony Brook. This crew was supplemented by a floating pool of young British archaeologists who had been working on other projects in Iraq and were able to join us for part of our season.

Traces of architecture were visible everywhere on the surface, and amid the dense scatter of broken pottery were found fragments of clay figurines, metal objects, and cylinder seals. Our first objective was to locate the different sectors of the city and explore their character on the basis of these surface remains. To this end, we studied satellite images of the area, mapped the topography of the mound, and managed to walk over about one-fourth of the city's considerable area, recovering and plotting in all features and objects as we surveyed the site in fifty-meter-square units.

Our second season at the site was funded by grants from the National Geographic Society and the American Schools of Oriental Research and was conducted over the winter holidays last December and January. Charles Pennington, now promoted

to Assistant Director, returned to continue mapping the site and was aided by Laurie Roberts of Boston University. The Stony Brook contingent was formed by Jayne Howell and Karen Westerlind. Once again we had invaluable support from British students: Heather Baker and Marcus Woodburn were with us for virtually the whole season, and Alan Lupton was able to work with us for a few days before heading off to the not-so-green pastures of the Gulf States. Our representative from the Department of Antiquities of Iraq, Kamil Aluadi, was also an energetic participant in the field work, so in essence there were nine of us engaged in the survey.

In addition to walking over more squares of the site, this time we took aerial photographs from a kite, and were greatly pleased to discover in them buildings and other large features that were not immediately apparent from the ground.

The aerial photos and satellite images reveal much of the urban plan and suggest that the city was located in a meander of the river, at that time swelled by a substantial body of water from the Tigris. Two smaller canals brought water into the city, each following the general northwest-southeast direction of the flow of the

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*Shield of model chariot decorated with symbols of the god Nergal. Height approximately 11 cm.*

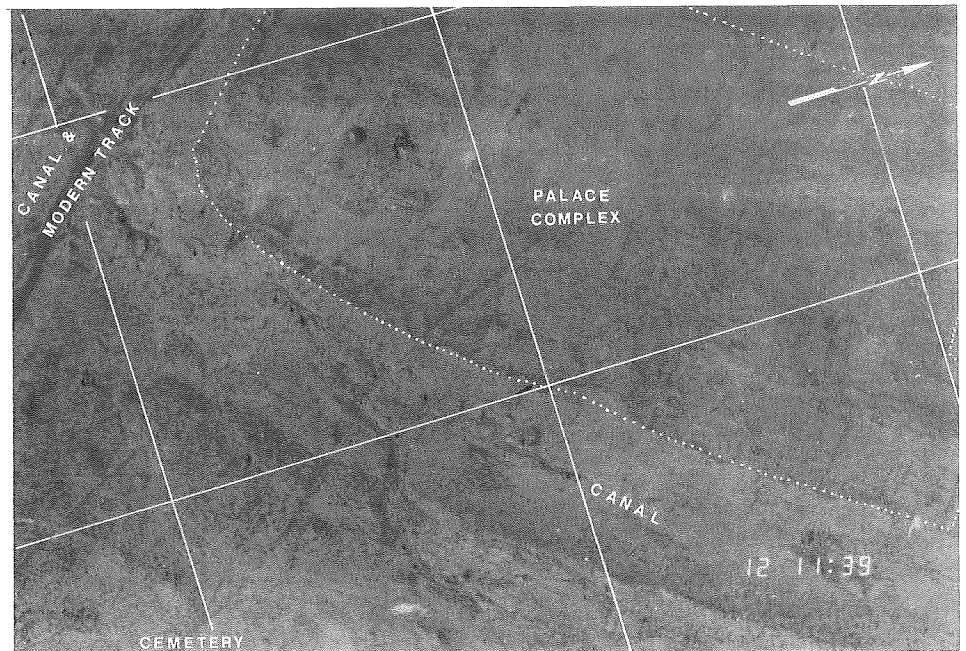
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river. These were linked together by two other channels, creating a central quadrilateral with four other sectors. The river itself may have flowed next to the southern and western sectors, since the city wall is not apparent there.

Closest to the river, and divided from the rest of the settlement by the south canal, was the religious quarter, consisting of a series of mud-brick and baked-brick platforms which must once have supported the main temples dedicated to Nergal and his consort Nin-gugga. Near one of these platforms were found pieces of life-size, and half-life-size statues of humans, lions, and a horse. The statues were made of terra cotta and may have been furnishings or decorations of one of the temples.

The cemetery of the city was located immediately across the canal from the main temples, within the central sector. Here, the dead were buried in huge jars, accompanied by a small number of personal effects. This area was rich in beads, cylinder seals, and weapons, all of which must have once accompanied the dead. Unfortunately, they have also begun attracting the attention of the local bedouin, and some of the graves have recently been plundered.

The palace is located across the west canal from the cemetery, and across the south canal from the religious quarter. Its full extent was only recognized after we had returned from the field and began studying the aerial photographs. It covers a little more than one hectare and seems to have included storage, residential, and manufacturing areas, in addition to those parts of the building devoted to more public activities. Besides the palace, several other large public buildings occupy the western sector of the site, and associated with all of this is a rather enigmatic type of artifact—model chariots. These clay vehicles, invariably decorated with symbols or depictions of the titular deity of the city, have generally been associated with religious or other public buildings. At Abu Duwari they have been found in unusually large



*Kite photo of palace complex at Mashkan-shapir. Traces of narrow storerooms are visible to the right of center.*

numbers in the ruins of the palace and in the religious quarter, and over the rest of the western sector of the site generally. On all decorated examples, their molded shields portray either Nergal himself, or the scythes with which he performed his work as the original grim reaper.

The central and western sectors of the city were connected by a bridge or pair of quays, evidenced by matching baked-brick foundations on either side of the canal.

We found extensive evidence of pottery and copper/bronze workshops in both the central and western sectors of the city. The northern and eastern portions of the site have yet to be surveyed, but casual observation suggests that they were also present there, an indication that manufacturing was dispersed throughout the city and embedded in residential neighborhoods. It appears that this kind of manufacturing was a major industry at Mashkan-shapir, since in addition to the products of these workshops—millions of pot sherds, numerous decorated baked clay plaques and models, and many objects of copper and bronze—a large number of grinding stones, pestles, and mortars made from slag, the by-product of this pyrotechnic activity, were also found.

Those items made in the workshops not for internal consumption, were probably traded at the two harbors, which have been tentatively identified at the points of intersections between the north canal and the two short connecting channels. It is in this area where the houses of the foreign and local merchants who supervised Mashkan-shapir's extensive trading activities might have been located, and it is here that the armada of 240 boats, recorded in texts as ready for an attack against the city of Kish, must have been moored.

The once massive city wall has now been eroded to plain level by the desert winds, yet it remains visible in the aerial photographs. The four gates through it that have been identified so far were all located near canals. Sin-iddinam appears to have overestimated the extent to which the city would expand, and there is a good deal of empty space between the walls and urban core. In that space, however, one can make out the ground-plans of a few relatively large houses which perhaps represent the first steps toward the expansion of the city into these zones.

Thus, in spite of the short time spent by the expedition in the field so far—only about six weeks—we have been able to determine the location of

## W. M. Keck Foundation Awards \$600,000 to Center for Remote Sensing

The W. M. Keck Foundation has awarded Boston University \$600,000 for equipment and program support of the Center for Remote Sensing in 1989/90. The award is the third grant from the W. M. Keck Foundation to the Center since 1985.

Dr. John R. Silber, President of Boston University, commented, "At Boston University we are extremely grateful for the W. M. Keck Foundation's continuing support of the Remote Sensing Center. The Foundation's grants, totaling over \$1.3 million, reflect the high distinction of the Center's staff and programs."

Professor James Wiseman, who chairs the Center's Executive Committee as well as the Department of Archaeology, has been the Principal Investigator for all three grants. He said that the grant is "truly gratifying because it clearly recognizes the success of the Center's research and educational programs. The support puts us in an excellent position to provide leadership in the development of new applications for remote sensing in archaeology, geography, and geology."

the major activity areas of this important ancient city and recover an extraordinary number of objects dating to the Old Babylonian period. In future seasons we hope to begin extensive excavations of different parts of the city to add documentary, architectural, and artifactual detail to the view that this unique site gives us on urban life in remote antiquity. Mashkan-shapir has apparently been granted a chance to return from the dead.

*Elizabeth C. Stone is Associate Professor of Anthropology at the State University of New York at Stony Brook and is a Research Associate of the Center for Archaeological Studies at Boston University. Paul E. Zimansky is Assistant Professor of Archaeology at Boston University and is Editor of Mār Šipri, a newsletter on Mesopotamian archaeology published by the American Schools of Oriental Research. For previous accounts by the two archaeologists of their research in Iraq, see Context Vol. 5, No. 3-4; Vol. 6, No. 1-2.*

The University's Departments of Archaeology, Geography, and Geology founded the Center in 1986 to provide academic courses for students, as well as workshops and seminars for professionals from around the world, and to sponsor interdisciplinary research in remote sensing. The Center also maintains a library, a photo archive, and a database.

The Center is the first in the world to place an emphasis on the use of remote sensing for archaeological research. It employs the most modern techniques available for the study of archaeological sites and their settings, including the computer-assisted analysis of images created from digitized recordings of sensors mounted on aircraft and spacecraft.

The Center is directed by Dr. Farouk El-Baz, an internationally recognized leader in the application of remote sensing technology. According to Dr. El-Baz, "This renewed support from the W. M. Keck Foundation will enable us to enhance all our programs, add postdoctoral fellows, and enlarge the Center's facilities in order to meet the demands of the increased number of researchers in projects involving remote sensing and the increased number of students in our academic courses."

The enhanced facilities will include several Sun color workstations for image processing, and other computers for remote access to the Center's main computer lab. Two postdoctoral fellowships in remote sensing for 1989/90, and one research assistant in remote sensing from each of the founding departments will also be funded. New field equipment will include a complete set-up for aerial photography from a tethered blimp. The latter will include a camera/sensor-supporting gimbal, which will be built to a new, improved design under the direction of Professor J. Wilson Myers. Other field equipment will include state-of-the-art surveying and measuring devices.

Remote sensing projects involving

## New Appointment in Classical Archaeology

Dr. David Kennedy joins the Department of Archaeology in September 1989 as Associate Professor, teaching Classical Archaeology. He is a specialist in the archaeology of the Roman Empire, with a particular interest in the eastern provinces in what is now the Middle East. His D.Phil. dissertation at Oxford University was on the auxiliary troops raised in the Roman province of Syria, and he has a book in press on aerial survey of the desert eastern frontier of the Roman Empire.

Despite his surname, David Kennedy is a Scot, born in Angus; his two sons, Ross and Euan, bear Scottish names. After a high school and junior college education in Scotland, he moved south to the Victoria University of Manchester, where he took a B.A. with honours in 1976, in Ancient History and Archaeology. He then moved still further south, to Oxford, where he did his dissertation research under

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faculty from the founding departments are now being conducted in many parts of the world, including Massachusetts, Egypt, Iraq, Turkey, and Greece, and others are in the planning stage.

The W. M. Keck Foundation, one of the nation's largest foundations in terms of total annual grants, was established in 1954 by the late William M. Keck, founder of the Superior Oil Company. The foundation's primary grant-giving focus is on universities and colleges throughout the United States, with particular emphasis in the fields of science, engineering, and medical research. It also provides limited support, restricted to southern California, in the areas of community services, health care, precollegiate education, and more.

*For recent articles on the Center for Remote Sensing and the W. M. Keck Foundation, see Context 5, 3-4 (Summer 1987) 4, 9-10.*

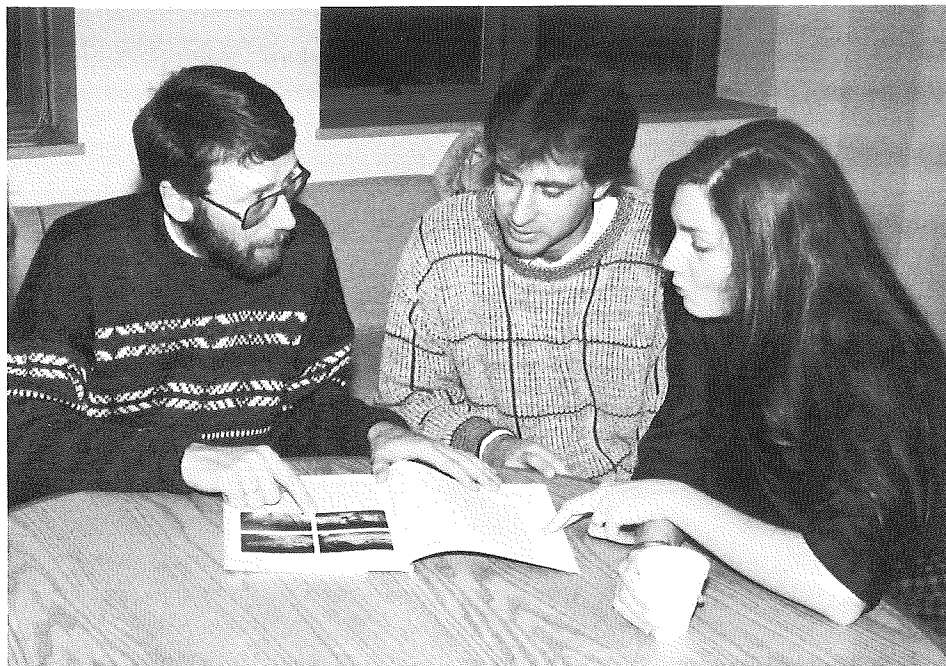
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Professor Sheppard Frere. At the same time he was appointed Lecturer (=Assistant Professor) in Ancient History and Classical Archaeology at the University of Sheffield, and was promoted to Lecturer A (=Associate Professor) in 1987. He has also been a visiting faculty member at the University of Western Australia, a member of the Institute for Advanced Study at Princeton (1986-87), and a Senior Fulbright Scholar. His honors include election in 1985 as a Fellow of the Society of Antiquaries of London; he will be the third F.S.A. in the Department of Archaeology, with Professors Hammond and Wiseman.

His teaching experience includes courses in Classical Archaeology, from Roman Britain across the Empire south and east to Syria, and he has also supervised Ph.D. candidates at Sheffield. He is an advisory board member of the *Journal of Roman Archaeology*.

David Kennedy's fieldwork experience began in 1971 on projects in Britain and Iran, and he directed his own project in Jordan in 1976. Since then he has carried out numerous seasons of survey in Jordan, together with excavations on Roman sites in Britain. He is currently assembling an aerial photographic archive for Middle Eastern archaeology, a collection which already holds some 6,000 images and 200 maps, and has coauthored a book with the aerial photographer Derek Riley. He has two other books on Roman archaeology in press and four in preparation, all on the eastern empire, its armies, and caravan cities. More than thirty published papers fill out detail on the same regions of expertise.

Professor Kennedy's arrival at Boston University will expand the Department of Archaeology's established concentration in Mediterranean eastwards, and will bring in for the first time a strong focus on Roman military history and sites. He hopes to begin a new field project in the near future, providing fresh opportunities for students and Center members to gain experience in another field of archaeology.



*Dr. David Kennedy, who will join the Department as Associate Professor in September, 1989, is shown here in discussion with graduate students Tom Tartaron and Holly Raab-Rust during a visit to the Boston University campus last January.*

## **Field School in Maya Archaeology Belize, Central America January-May 1990**

Students will learn archaeological field methods by participation in two research projects at the ancient Maya sites of Cuello and K'axob. The program will be based at a field camp at the Cuello site, three miles outside Orange Walk Town. The semester will be devoted to learning techniques of stratigraphic excavation, on-site mapping, artifact processing, and other archaeological methods.

The field study will be directed by Professors Norman Hammond and Patricia McNany, and will be open to both undergraduate and graduate students. Participants will receive a total of sixteen credits and will be eligible for financial aid available to students who take on-campus courses. Tuition will cover transportation from Boston to Belize and back, lodging and meals at the Cuello field camp, field trips to other Maya sites, and lodging and meals on field trips.

For additional information concerning the program, write to either Professor Norman Hammond or Professor Patricia McNany, Department of Archaeology, Boston University, 675 Commonwealth Avenue, Boston, MA 02215. Deadline for applying is October 30, 1989.

# Center Activities, 1989

Numerous special events took place at the Center and Department during January to May, 1989. Highlights included "The Mysterious Maya" lecture series, an archaeological exhibition on research and other activities of Center/Department faculty and students, and colloquia and seminars by several visiting scholars, including the annual "Context and Human Society" lecture series. The pictures and accompanying texts below and on the following three pages provide a graphic account of some of those occasions and attendant social events.

## Archaeological Exhibitions

by Kathryn Bard

### World Archaeology

"World Archaeology at Boston University," an exhibition of photographs and artifacts from excavations conducted by faculty in the Department of Archaeology, attracted hundreds of visitors to the George Sherman Union Gallery, January 19 through February 23, 1989.

Organized by Kathryn Bard, Clemency Coggins, Michael Hamilton, and Fritz Hemans of the Department of Archaeology, and Priscilla Murray of the Archaeological Institute of America, the exhibition focussed on field work done around the world. Countries where Department of Archaeology faculty have worked include Belize, Egypt, Greece, Guatemala, Iraq, Mexico, South Africa, Syria, the United States, and Yugoslavia.

Also included in the exhibition were displays about the Archaeological Institute of America, and two Boston University publications, *Context* and the *Journal of Field Archaeology*. The Perseus Project, a computer program documenting the major monuments and civilization of classical Greece, was on view as an interactive exhibit. Using the Perseus Project program and a Macintosh, visitors could select regions of Greece and specific monuments within those regions to view on the video display.

An opening reception for the exhibition was held on January 25 following Norman Hammond's inaugural

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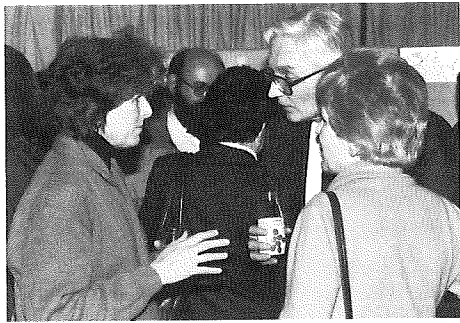


*Professors Norman Hammond (right) and Creighton Gabel prepare to toast Professor Kathryn Bard, chief organizer of the archaeological exhibition, "World Archaeology at Boston University," during the reception on January 25. The reception followed Professor Hammond's lecture in "The Mysterious Maya" series.*

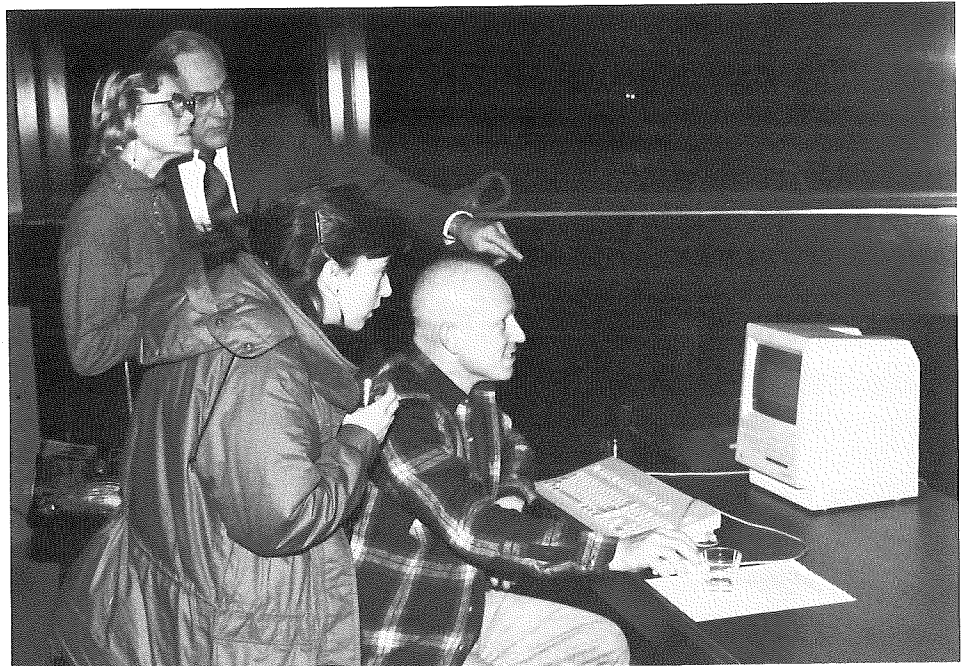


*Professor Curtis Runnels and Center members Bill and Betty Ruf of Andover.*

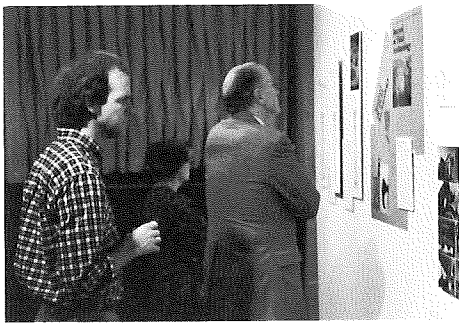
# More Center Activities....



*Professor Clemency Coggins and exhibition visitors Eric and Gulli Kula at the opening of the exhibition in the George Sherman Union.*



*One of the chief attractions at the archaeological exhibition was the interactive computer/video program on ancient Greek civilization developed in part by Professor Fritz Hemans, one of the principal investigators of the Perseus Project. In the photo above, visitors to the exhibition comment on some of the graphics displayed on the Macintosh computer as others explore the operation of the program.*

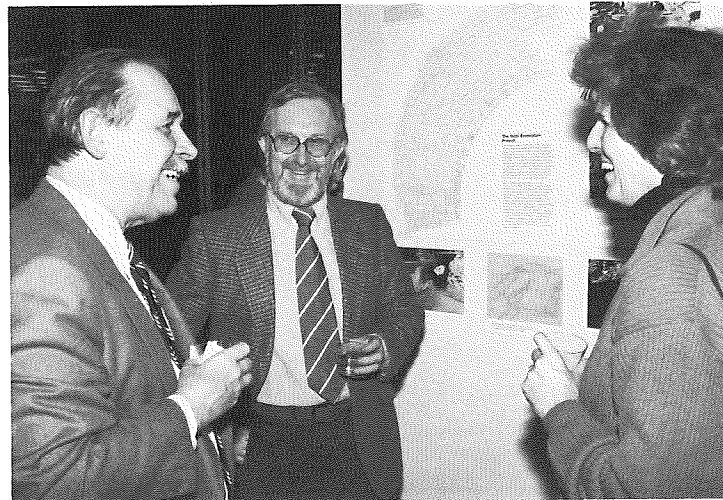


*Don Jones (left), Assistant Director of the Office of Public Archaeology and graduate student in the Department of Archaeology, reviews the Center's exhibition on publications and travel.*

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lecture in the Center's series, "The Mysterious Maya."

## **Egyptian Archaeology**

A permanent loan of thirty-one photographs from the Boston Museum of Science went on display in March in the Department of Archaeology. The photographs were taken in Egypt as visual aids for the exhibition, "Ramesses the Great," at the Museum of Science in 1988. On exhibit on the third floor of the Stone Science Building are photographs of ancient Egyptian temples and artifacts, and reliefs from Egyptian tombs. Photographs of modern village life in Egypt, including some activities that are unchanged since pharaonic times, are also on display next to corresponding scenes from ancient tombs.



*Professors James Wiseman, Norman Hammond, and Clemency Coggins in a moment of amusement at the opening of the exhibition in January. In the background is part of the display on research at Stobi in Yugoslavian Macedonia.*

*Professors Mary Beaudry and Creighton Gabel view an exhibition on historical archaeology.*





# Context and Human Society Lectures, 1989: Aspects of Cognitive Archaeology

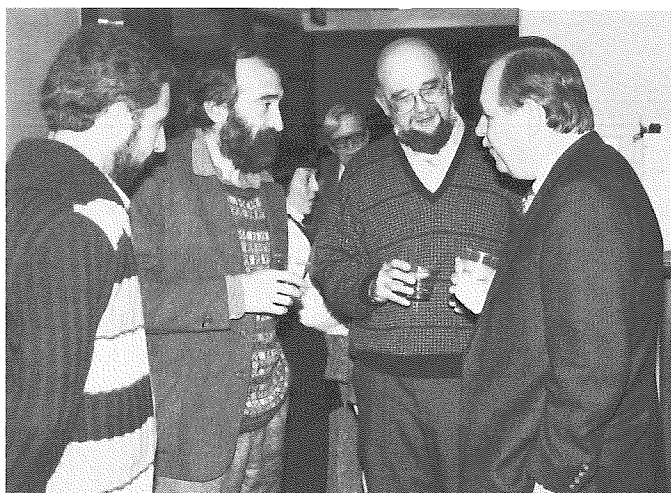
Dr. Colin Renfrew, Disney Professor of Archaeology at the University of Cambridge, gave three lectures on "Aspects of Cognitive Archaeology", March 30-April 3, 1989. All lectures were enthusiastically received by the 200 or so members of the audience each night, and each lecture was followed by a lively question-and-answer session. The three accompanying photos were taken at the reception in the Stone Science Library that followed the first lecture.



*Professor Renfrew has a discussion with Nancy Seasholes, graduate student in the Department of Archaeology at Boston University.*

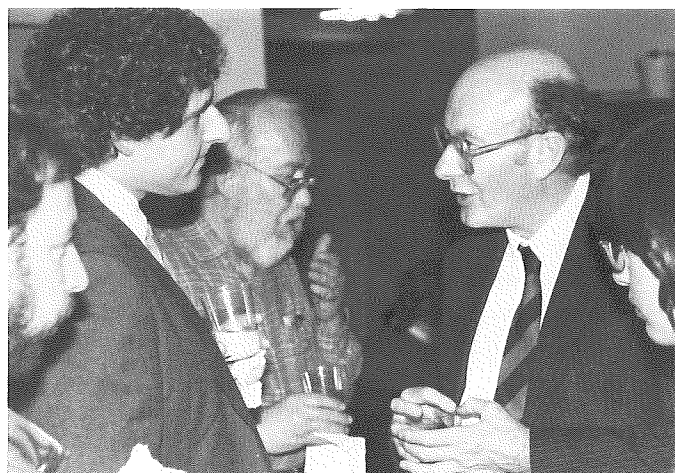
## **The challenge and excitement of scholarly debate....**

A highpoint of the visit by Colin Renfrew was his debate with Professor Carl Lamberg-Karlovsky, Director of the Peabody Museum at Harvard University, on the origins of the speakers of Indo-European, the topic of Professor Renfrew's most recent and most controversial book, *Archaeology and Language: the Puzzle of Indo-European Origins* (Cambridge University Press, 1987). The debate was prompted by an adversely critical review by Professor Lamberg-Karlovsky that appeared recently in *The Quarterly Review of Archaeology*. The debate took place in an open seminar meeting of one of the Department's core courses, AR 706 The Archaeology of Complex Societies, and was attended also by several faculty and students from other departments and other universities.



*Russian visitors (left to right) Dr. Ruben Babaljan of Yerevan, Armenia, and Dr. Zaal Kikobdze of Tbilisi, Georgia, both of the Soviet Academy of Sciences, discuss the opening lecture with Professor Philip Kohl of Wellesley College and Professor Wiseman.*

*Professor Herbert Golder (left), of the Classics Department at Boston University, shares a conversation with Professor Renfrew.*

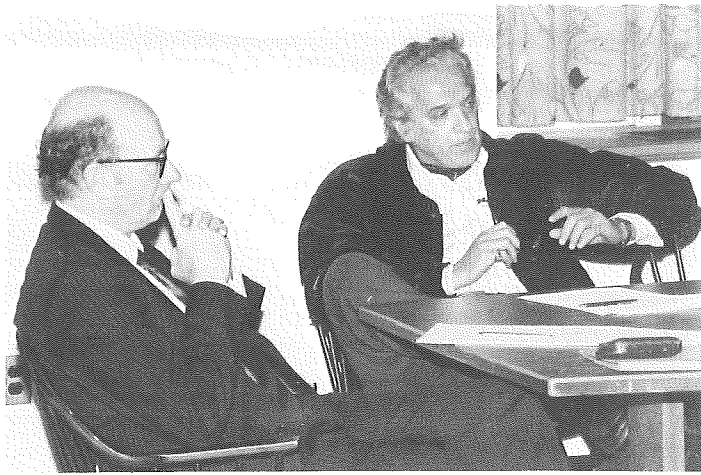


*The principals in the debate, in action. Professor Renfrew (left) and Professor Lamberg-Karlovsky.*

## ....And More Center Activities

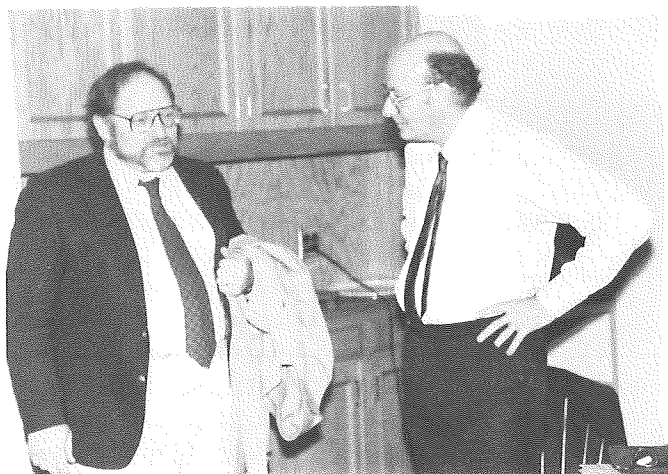


Professor Paul Zimansky (right), whose seminar was the setting for the debate, was the moderator for the occasion. In this photo Professor Renfrew fields a question from the floor.

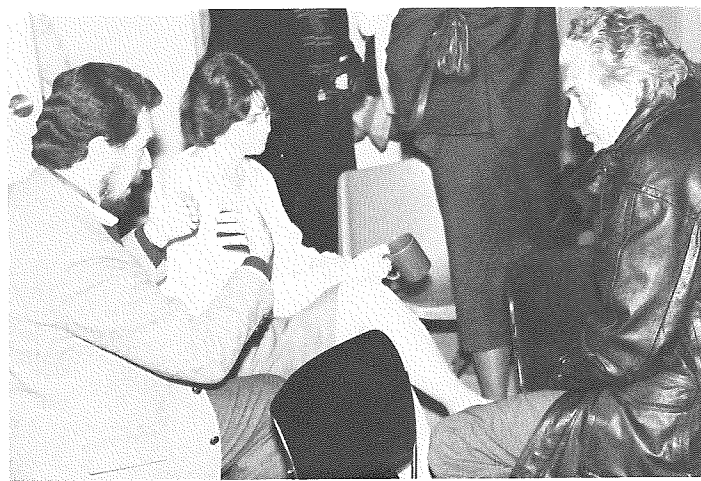


Professors Renfrew and Lamberg-Karlovsky consider a question raised by a participant in the seminar.

### And after the debate, the discussions continued....



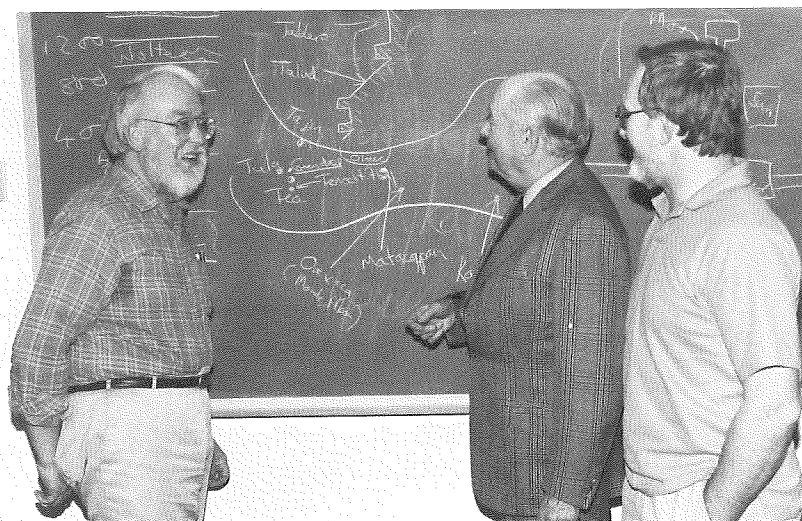
Professor Renfrew hears another point of view from Professor Lawrence Stager of Harvard University.



Professor Curtis Runnels and Professor Julie Hansen in post-debate discussion with Professor Lamberg-Karlovsky.

### The pleasures of collegial discourse....

Dr. Gordon Willey, Bowditch Professor Emeritus of Harvard University, who joined the Department and Center at Boston University as Distinguished Research Fellow during this past year, was a frequent participant in seminars and other activities. In this photograph Professor Willey (center) and visiting speaker Professor George Cowgill of Brandeis University discuss a point during Professor Hammond's spring seminar. Professor Hammond is at the right.



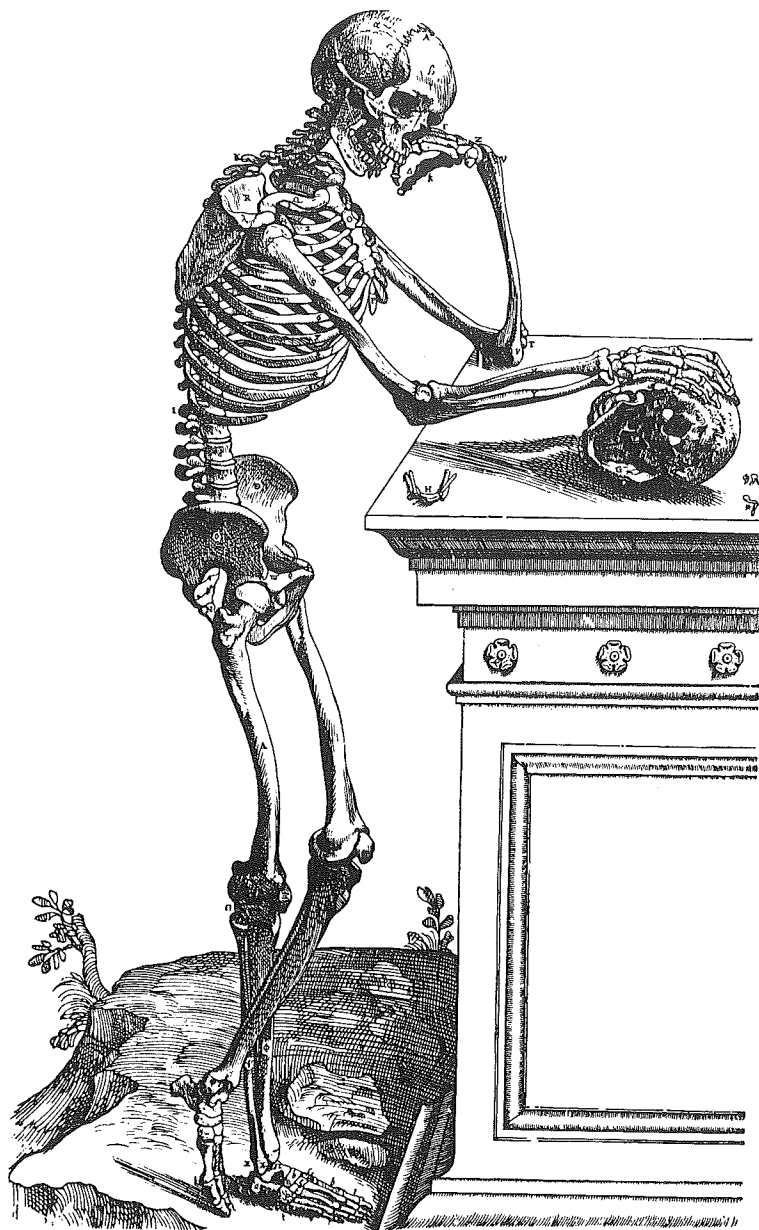
# Adventures in the Bone Trade

by Al B. Wesolowsky

The facetious title of this little reminiscence derives, of course, from Dylan Thomas' largely autobiographical *Adventures in the Skin Trade*. Lest one think that I buy and sell bones, I assure the gentle reader that my "trade" is only in a knowledge of bones, particularly human ones, their anatomy, and what they can tell us about earlier human lives. The "adventures," and small ones they are, I am quick to admit, largely revolve about people's often odd notions concerning skeletal anatomy and their readiness to share them with archaeologists. Fieldworkers who have had any experience to speak of in excavating cemeteries have had such misapprehensions foisted upon them by fascinated bystanders, and even, occasionally, by well-intentioned colleagues.

There is something about burials that has an appeal to the onlooker that is unique in public perceptions of archaeology. Something about viewing the corporeal remains of another human, no matter how distant the time in which this ancestor lived, fascinates, disturbs, and even repels the idly curious. By the same token, these sensations can produce some of the most outlandish or innocently funny misperceptions and will, presently, bring us to the lesson that these stories contain.

Once, in Texas, I happened to visit the aftermath of uncontrolled digging of prehistoric burials on Redfish Bay, not far from Corpus Christi. The pothunter had excited the interest of the local newspaper and had spared no details in describing his finds as doubtless those of the Karankawa Indians who had, in fact, inhabited the area during the historical period. Of all the hundreds of known historical Indian groups in Texas, the Karankawa were singled out by the early Spanish explorers as being "exceptionally tall" (perhaps six feet, which, after all, may have been quite



*This remarkable study of a skeleton examining a skull is a product of the work of Andreas Vesalius (1514–1564), the Flemish anatomist, and appeared in his De humani corporis fabrica (1542), a work regarded to this day as the most historically influential of medical publications.*

tall to a sixteenth-century Spaniard) and "fierce"; and, since they practiced an occasional ritual of devouring strips of flesh sliced from their captives, have been branded in modern eyes as cannibals.

The pothunter did not know anatomy, but this circumstance did not deter him from holding up a looted leg bone against his own leg for comparison. Since some six inches of his own thigh bone was obscured by his pelvis, of course the bare bone looked truly enormous. Another skeleton

was that of a child in which the adult dentition was beginning to develop and could be seen through breaks in the jaw bones; in fact, the permanent teeth were starting to erupt beneath the baby teeth, just as they do in all humans.

Not only were these the bones of giants, we were told, but clearly, with this formidable array of teeth, these Indians were well-equipped to devour their hapless neighbors. The pothunter may not have known his

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anatomy, but the newspaper editor clearly knew good copy when he had it, and helped to perpetuate the largely mythical status of these coastal dwellers as a folk so savage that, in this case at least, they required not one, but two sets of teeth to perform their barbaric rituals. The newspaper headline, predictably, trumpeted the discovery of "Double-Fanged Karankawa Cannibal Giants."

On other occasions I have been clearing away the earth that covered a burial and found that the lower jaw had dropped down and that the cranium had settled back, so that the mouth appeared to have been stretched wide open to a degree that was not anatomically possible in a living person. As the soft tissues of a burial disintegrate, the bone can, under the pressures of the earth overburden, fall into positions that greatly exaggerate those which can be assumed by a living being. The explanation that is regularly proffered to me by curious onlookers? "Look at how wide the mouth is opened. That poor person must have died in terrible agony!"

An extended burial, one in which the corpse is laid out, flat on the back, often results in a skeleton that looks as if it must have belonged to an exceptionally tall individual. Again, as the soft tissues decompose, the bones settle and often separate a little at the joints. An inch or so at each of the major joints of the body, plus the tendency of the bones of the feet to separate out, will result in lurid popular reports of "giants" easily seven feet or more in living stature.

Archaeologists, I am happy to say, do not perpetuate these particular false impressions, but others have arisen that serve to show the value of an interdisciplinary approach on excavation projects. One could be excused, I suppose, for looking askance at an archaeologist who would confuse an Ionic capital with a triglyph, or could not distinguish a Folsom point from a side scraper, but should we so regard the colleague who hasn't the training to know a human bone when it appears in the excavation? Rather

than curse the anatomically untutored, one of the benefits of interdisciplinary projects is the opportunity to light a few candles.

One project that I visited had, in earlier seasons, excavated a series of small tombs into which a succession of interments had been made. That is, the initial interment was laid to rest and the grave sealed; some time later, the grave would be reopened and pious hands would introduce a second corpse and, in so doing, would disturb to some degree the earlier remains. The process would be repeated as many as a dozen times for a single grave, over a span perhaps of several generations.

When, many centuries later, archaeologists opened the grave, they were perplexed at the seeming welter of bones which to their eyes were tumbled about higgledy-piggledy. Accordingly, the plans that were drawn of the contents of these graves would have a few oblongs at one end (likely representing crania) and some half-hearted pencil strokes elsewhere that conveyed eloquently the archaeologist's frustration at trying to make sense of what seemed to be a charnel house. From the field notes, these could have been simply ossuaries (repositories for disarticulated bones or secondary burials).

As additional graves were opened, we were able to clear off the bones and, now armed with some knowledge of anatomy, we could discern in the upper levels of a grave limbs still articulated with the torso. Clearly this, the latest interment, was not appreciably disturbed. After that skeleton was documented and removed, we continued on down, clearing off successive layers of bones, each stratum representing an event of interment, and the skeletons became more and more disarticulated as we approached the floor of the grave. Clearly, then, the lowest (earliest) skeleton had suffered the most disturbance, the later ones successively lesser degrees of disarticulation.

We now had the evidence, based on contextual study of the anatomical elements, to identify the practice of introducing successive corpses into

tombs over a period of time. The disarticulation of the earlier skeletons showed that enough time had elapsed after burials to permit some disintegration of soft tissues. These were definitely not ossuaries for bones from other graves, nor were they mass graves with multiple simultaneous interments, as after a plague or war. Instead, the evidence indicated a peaceful, commonplace ritual and taught us something about the treatment of the dead by the living at this site.

It should be pointed out that it took time to excavate and document these skeletons; sometimes as much as a day and a half of tedious brushing, measuring, and drawing were required in order to evaluate associations among bones and to reconstruct the sequence of events that took place within a single grave. I was told that in earlier seasons a grave could be cleared in thirty minutes; obviously, different questions were being asked of the data in different seasons. The difference, then, is more than just one of technique, or of training; the difference is one of the expectations that the archaeologist has of the data and of the questions that are being raised.

On a different project, a colleague who was working on another part of the cemetery breathlessly reported that they had found a cremation of a dog. This was interesting news, since we had found many cremations of humans, some with a few nonhuman bones that likely represented a funeral meal, but no nonhuman cremations. As we walked to the other excavation I had visions of opening a new chapter in the study of mortuary customs for this particular culture. We arrived, and my colleague was graciously going to let me share the excitement of discovery by letting me identify which of the two exposed graves contained the canine cremation. The graves, however, seemed to my eye to contain the usual jumble of the burned, shattered fragments of bone so characteristic of the cremation of an adult. I looked at the first grave, then at the second, then up at the field supervisor and said "Well, I give up. Where is it?"

"Here, look," I was told as my attention was directed to one of the cremations. "See the skull? Here's the braincase, here's the little snout. It's just as plain...."

"Oh, dear," I had to say, "you're looking at part of the upper arm bone of a human, the humerus. The 'braincase' is the rounded ball joint that goes into the shoulder socket. The 'snout' is just part of the shaft of the bone. This is a human cremation."

"Not a dog?"

"Nope, sorry. It's just one of us folks."

Finally, at one site the ruins of an ancient church were being excavated when, in the foundation of what would have supported the altar, a cruciform cavity was discovered. This feature measured perhaps 40 cm in either direction, and clearly formed a cross. It was definitely a "built-in" construction, and not created by loose stones becoming dislodged. This small reliquary crypt had been broken into in antiquity, and any precious contents would surely have been plundered. But it was full of earth, and might not the looters have overlooked the bones of a saint in their greed for treasure?

I was summoned to the spot in anticipation of the discovery of what could be the mortal remains of a Martyr of the Faith, whose bones had been lovingly interred within this church and which had conferred sanctity upon the structure and upon those who had worshipped here in ages past. It had the makings of a dramatic moment, in that hot, windswept valley, with the shattered remains of antiquity, tumbled columns and broken walls, all about us. Were we about to recover a relic more precious to the faithful than the gauds and jewels that were coveted by the plunderer?

There were bones in the crypt! "Finally," I thought, "something that will make up for all the 'Double-Fanged Karankawa Cannibal Giants' and 'Canine Cremations' I've had to endure."

More bones! Since they were, quite properly for holy relics, fragmentary and disarticulated, they were col-

lected onto a tray and passed up to where I was standing on the edge of the trench. After a few moments of silent study, I sighed.

"Do we have the bones of Saint Demetrius?" I was asked, half jokingly.

"Nope," I replied, "this time you *have* found his dog."

At our present remove, these small adventures in the bone trade may elicit a smile, but there is, I think, a deeper lesson to be learned. Some sorts of misidentifications and downright weird interpretations on the part of the public will probably always be with us. But the interdisciplinary projects with which I have had the good fortune to be associated have had a very positive role in opening up the awareness of colleagues to the sorts of information that we can gain from contextual study of human and faunal remains.

Note that I said "contextual" study. My experience has been that human osteology can make a considerable contribution to archaeology when a specialist can examine the remains *in situ*. One can deduce patterns of articulation and disturbance in buried skeletons that can help to reconstruct the sequence of events involved in the treatment of the corpse. Often, skeletal remains are so fragile that they cannot survive even the most gentle of exhumations, and osteological observations are made *in situ*, or they are not made at all.

Laboratory study of skeletal materials remains valuable, of course, and these can supplement and extend observations made in the field. The point is that the field observations are contextual, and therefore represent a direct archaeological application of specialized training and expertise. The laboratory work is still archaeological in the sense that it contributes to an understanding of the past through the direct examination of excavated material, but I think that laboratory work is at its most rewarding when it supplements field examination.

The days of shipping a crate of excavated skeletal remains to a specialist who has never set foot on the site (or *any* site, for that matter) are

## Student Awards/News

Edward L. Bell, who received an M.A. from the Department, was appointed Staff Archaeologist at the Massachusetts Historical Commission in January, 1989.

Jeffrey Jobe, graduate student in the Department, received a travel fellowship of \$250.00 to attend a conference at the University of Mississippi on "Digging the Afro-American Past, Archaeology and the Black Experience," held May 17-20, 1989. Jobe also presented a paper entitled "Appledore Island: A New Perspective on the Use of Salt Water in the Recovery of Archaeobotanical Material" at the Annual Meeting of the Northeast Anthropological Association in Montreal in March, 1989.

Daniel Finamore, graduate student, and Jorge Desanti, a freshman in the Department, were honored by the Humanities Foundation of the College of Liberal Arts. Finamore was named the Alice M. Brennan Humanities Scholar and was awarded \$3,100. Desanti was named the Angela and James Rallis Humanities Scholar and received \$1,800.

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not over, and probably never will be. Modern field archaeology, when done at its best, requires so varied a host of specialists, or at least those with specialized training, that few projects command the resources to prepare for every eventuality of context and discovery. What we are witnessing, and this even within the last twenty years, is a heightened awareness of the role of context in guiding the observations of specialists. To add yet another to a growing list of paraphrases of the dictum of Gordon R. Willey and Philip Phillips, "archaeology is context, or it is nothing."

Al B. Wesolowsky is Managing Editor of the Journal of Field Archaeology. He is currently working on his doctoral dissertation for Cambridge University on the cemeteries at the ancient Roman site of Stobi, Yugoslavia, which will result in a volume in the Stobi series to be published by Princeton University Press.

# Faculty Awards and Grants

## Wiseman Honored Twice

Professor James R. Wiseman, Chairman of the Department of Archaeology and Director of the Center for Archaeological Studies, was awarded the Gold Seal of the Archaeological Institute of America at the first Joint Archaeological Congress in Baltimore, Maryland, on January 6, 1989. The AIA, the oldest and largest archaeological society in North America, presented Wiseman the first-ever Gold Seal Award in recognition of "his distinguished leadership, commitment and significant achievements as President of the AIA, 1984-1988."



Professor Wiseman receiving the Gold Seal Award from newly elected AIA President, Professor Martha Sharp Joukowsky of Brown University.

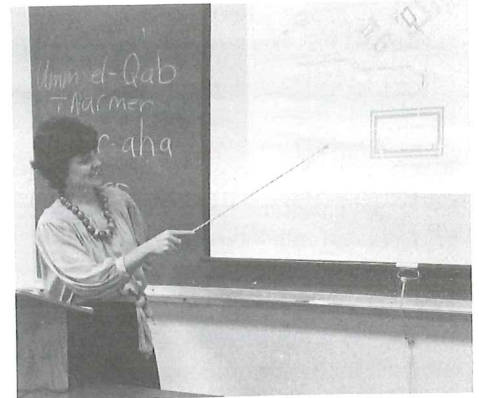
The master of ceremonies for the program at the black-tie affair was Frank Wezniak, Treasurer of the AIA. The testimonial program included comments from colleagues, friends, and family. One of the speakers was President John R. Silber of Boston University, who remarked: "Professor Wiseman has made significant contributions to archaeology and is recognized internationally as one of the foremost scholars in his field." Other speakers included Professor Machteld Mellink, Department of Near Eastern and Classical Archaeology, Bryn Mawr College; Professor Elizabeth R. Gebhard, Classics Department, University of Illinois at Chicago; Professor John Sullivan, Classics

Department, University of California at Santa Barbara; Dr. Jane Scott, Executive Director of Archaeological Exploration of Sardis, Harvard University; Lloyd E. Cotsen, Chairman of Neutrogena Corporation; Dr. Anna Marguerite McCann of New York; Professor James A. Wiseman, Department of Mathematics, Rochester Institute of Technology; Professor Lawrence Stager, Department of Near Eastern Languages and Civilizations, Harvard University; Professor Martha Sharp Joukowsky, Center for Old World Art and Archaeology, Brown University.

In February, 1989, Professor Wiseman attended a special awards ceremony of the College of Arts and Science at the University of Missouri-Columbia, where he was honored with a Distinguished Alumnus Award. Wiseman was the first person to receive a B.A. in classics (1955) with a concentration in archaeology from the University of Missouri. His major professor there was Dr. Saul Weinberg, who recently was a recipient, along with his wife, Dr. Gladys Davidson Weinberg, of the AIA's Gold Medal for Distinguished Archaeological Achievement. The Chancellor of the University of Missouri, Haskell Monroe, wrote a congratulatory letter to Professor Wiseman in which he commented: "Since your graduation from MU in 1957 you have often brought glory to your alma mater and I am pleased the College was able to recognize your achievements in this manner."

## Bard: Reconnaissance in Egypt

Assistant Professor Kathryn Bard has been awarded a grant for \$7,000 from the National Geographic Society to do an archaeological survey for Predynastic sites in the vicinity of Hiw, Upper Egypt. Bard will be doing the field work with Dr. Farouk El-Baz, Director of Boston University's Center for Remote Sensing, and Dr. Fekri A. Hassan, Professor of Geoarchaeology at Washington State University and currently an advisor to the Egyptian Minister of Culture. Fieldwork will be undertaken in May and June 1989.



Professor Bard discussing the royal First Dynasty cemetery at Abydos, Egypt.

The Egyptian Predynastic period dates from 4000 to 3000 B.C. Early Predynastic sites are the earliest evidence of farming villages in the Nile Valley. During the Predynastic, society evolved in complexity, and the end result was the emergence of the Early Dynastic state. The region in which the survey will be conducted was excavated by Sir Flinders Petrie in 1898-99. Petrie excavated mainly Predynastic cemeteries at Hiw, but he also recorded the location of associated villages.

The present survey is concerned with locating early farming villages and determining their state of preservation in terms of possible future excavations. Petrie's excavations at Hiw were published in *Diospolis Parva*, the Greek name for the ancient town. This was an important contribution to archaeology because it contains Petrie's seriation system for the excavated Predynastic pottery. Seriation is a basic concept for relative dating in archaeology, and Petrie was the first to realize this and develop a seriation system.

## McAnany: Research in Belize

Assistant Professor Patricia A. McAnany received a grant of \$3,700 from the American Philosophical Society for a project entitled "Provisioning Prehistoric Maya Households: An Investigation of Geological Source Location for Stone Tools at Pulltrouser Swamp, Belize, Central America."

Prehistoric Maya society of Mesoamerica is well-known for its



*Professor McAnany reviews a settlement map of an archaeological site from the Maya Lowlands with Department of Archaeology's senior honors thesis student, Valerie McCormack.*

outstanding cultural achievements such as Maya hieroglyphs and monumental architecture. Less is known, however, of the domestic foundations of ancient Maya society. Within the past decade, archaeological fieldwork in the Maya Lowlands has been focused increasingly on answering questions regarding the economic organization of Maya households. Of great significance has been the fact that fieldwork and analysis of the Pulltrouser Swamp material has yielded evidence that the Classic Period Maya (A.C. 250-900) were practicing expanded and intensive agriculture (including swamp reclamation) using imported stone (chert) tools. These tools were fabricated from chert nodules by specialists who resided at a community now called Colha, which is located not more than thirty kilometers to the south of Pulltrouser Swamp.

Significant quantities of a second type of crypto-crystalline rock—chalcedony—were also found in the archaeological deposits of residences at Pulltrouser. Chalcedony nodules were used as "core" material from which sharp-edged flakes were struck and used as basic tools for a variety of household tasks. According to Professors McAnany and Harry J. Shafer of Texas A & M University, identification of traces of use-wear on the edges of these flakes indicate they were used in particular for cutting and scraping. These chert tools and chalcedony cores were especially necessary and valuable household provisions in a swampy area such as Pulltrouser Swamp in which there are

no naturally occurring deposits of hard crypto-crystalline stone. It is hoped that by conducting a field investigation of source locations near Pulltrouser Swamp zone, the archaeologists will be able to determine from where the chalcedony originated and whether these cores, like the chert tools, were circulating within a trading network or whether the material was procured directly from nearby geological deposits. The project will facilitate successful completion of an important phase focused on the provisioning of Maya households at Pulltrouser Swamp, Belize, and, in a larger sense, help to provide for the basis of understanding regional inter-community dynamics in this eastern portion of the Maya Lowlands.

### **Runnels: Survey in Greece**

Assistant Professor Curtis Runnels has received a grant of \$7,000 from the Institute for Aegean Prehistory for the 1989 season of the Berbati-Limnus Survey in Greece. Runnels is one of the leaders of a Swedish-American team that is surveying Berbati and Limnus valleys that lie directly to the

*Professor Curtis Runnels (center) in discussion with Professor Larry Todd (left) and Professor Stelios Andreou of the University of Thessaloniki and Senior Research Associate in the Center 1988-89.*

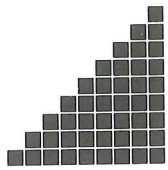


east of Mycenae. The other team leaders are Dr. Berit Wells (University of Göteborg) and Dr. Eberhard Zangger (University of Cambridge).

Participants in the project include members of the Swedish Institute in Athens and graduate students from the Department of Archaeology at Boston University. In 1988 the project was supported in part by grants from the College of Liberal Arts (Boston University) and the Institute for Aegean Prehistory. Swedish contributors include the Friends of the Swedish Institute.

Professor Runnels described his research in the Berbati-Limnus Survey to an open house for the Center for Archaeological Studies last December. An intensive survey of the area in 1988 produced substantial new evidence for prehistoric activity. Several sites belonging to the later Neolithic period (about 4000-3000 B.C.) were investigated, and a Mycenaean road with four or more bridges built in the same manner as the Cyclopean walls at Mycenae was explored. Numerous later sites that were hitherto unknown were discovered, including farmsteads of the Archaic period, a Medieval village, and several Medieval churches. Study of these new sites will continue in 1989 and the fieldwalking will be resumed in the Berbati valley where the staff hope to find sites belonging to the Early Helladic, Mycenaean, and Roman periods.

In addition to Runnels, American team members in 1989 will be Laura Gross, Laurie Roberts, and Thomas Tartaron from the Department of Archaeology at Boston University, and Priscilla Murray from the Archaeological Institute of America.



# CALENDAR

The full 1989/90 calendar of events will appear in the fall issue of *Context*.

## June 19-July 28, 1989

*Center Field School*: Professor Mary C. Beaudry will direct a Center Field School at the Spencer-Pierce-Little House in Newbury, Massachusetts (see *Context*, Vol. 7, 1-2., p. 15).

## October 28-29, 1989

Northeastern Mesoamerican Conference at Boston University featuring "The Gulf Coast Lowlands"; co-chairs: Professors Clemency C. Coggins and Patricia A. McAnany.

## January-May, 1990

Maya Archaeology Field School in Belize, Central America, directed by Professors Norman Hammond and Patricia McAnany (see page 6 for details).

## Spring, 1990

*Context and Human Society Lecture Series*: Alexander Marshack, Research Fellow, Peabody Museum, Harvard University

The Center for Archaeological Studies, which was founded at Boston University in 1980, has as its chief aim the development and coordination of interdisciplinary archaeological programs in education and research on local, national, and international levels. The Center also seeks to increase national and international awareness of the importance of understanding other cultures, and of preserving the world's cultural heritage, by involving professional archaeologists, scholars in other fields, and the general public in the activities of the Center.

*Context* is the newsletter of the Center for Archaeological Studies and is published quarterly. Institutions and individuals may subscribe separately to *Context* at a cost of \$10 per year. Membership to the Center is open to the public; annual dues are \$20 (\$10 for students); benefits include a subscription to *Context*, invitations to attend our fall and spring lecture series and other events, and the use of our library facilities. The Center also offers special seminars for the public during the academic year and summer field schools here in the Boston area and abroad. Other categories of membership are: Contributing Member, \$50; Institutional, \$50; Patron, \$100; Benefactor, \$500; Corporate, \$1000. Please make checks payable to the Center for Archaeological Studies and send to the Center office at Boston University, 675 Commonwealth Avenue, Boston, MA 02215. Gifts to the Center are tax-deductible.

**Editorial Board:** James R. Wiseman, Editor-in-Chief; Ricardo J. Elia, Creighton Gabel, Frederick P. Hemans, Fred S. Kleiner, and Lucy Wiseman, Managing Editor.

**Faculty and Research Appointments in the Department of Archaeology (1988-89):** Stelios Andreou (research), Kathryn Bard, Mary C. Beaudry, Clemency Coggins (adjunct), Tracey Cullen (research), Ricardo J. Elia (adjunct), Creighton Gabel, Norman Hammond, Julie Hansen, Faith Harrington (research), Frederick P. Hemans (adjunct), Thomas W. Killion (research), Fred S. Kleiner, Patricia A. McAnany, J. Wilson Myers (research), Eleanor Myers (research), George (Rip) Rapp (research), Curtis N. Runnels, Elizabeth C. Stone (research), Lawrence Todd, Tjeerd van Andel (research), Al B. Wesolowsky (research), Gordon Willey (research), James R. Wiseman, Kostas Zachos (research), Paul E. Zimansky.

**Congratulations to....**

*The Department of Archaeology students who received degrees from Boston University at the May Commencement: William K. Barnett and Georgeanna M. Little (Ph.D.); Scott Ceriko (M.A.); Nancy Jane Brighton, Alfred Frank Gal, Jr., Valerie J. McCormick, Kathleen S. Garrigan, Robin Mills, and Mary Ann Sweeney (B.A.).*

*Rick and Casey Elia on the birth of Vincent John Elia on March 7, 1989. Vincent weighed nine pounds, eight ounces.*

*Patricia McAnany and Tom Killion, who were married on April 1 in the Church of Saint Louis de Gonzague in Newburyport, MA. The church has a special meaning for the couple since Tom's grandmother, Jenny Killion, has attended it for the past ninety years, and the ceremony took place on her 98th birthday.*

*Michael Hamilton and Karen Grubb, who were married on April 22 at the Castle at Boston University.*

*Wil and Ellie Myers, proud grandparents of Alexander Millbrook Myers, born to Arthur and Cindy Myers on May 9, weighing in at six pounds, fourteen ounces.*

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