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Center For
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CONTEXT

Figure of Buddha, carved in living rock, in Yungang Grottoes near Datong, northern China. Date: A.D. 460-471. Story on pages 6-7.

INSIDE THIS ISSUE:

Resurrecting Sir Aurel Stein from the Cholistan Desert

by Mohammad Rafique Mughal

*Sir Aurel Stein gained international renown, and a knighthood, as an archaeologist and explorer of South and Central Asia during the early twentieth century. Between 1901 and 1916 he traveled some 25,000 miles by horse and foot in the study of caravan routes and the ancient sites along their ways, while in the service of the Indian Government's Archaeological Survey, which he headed from 1910 to 1929. His exploits included the discovery (for the Western world) of the Thousand Buddha Caves at Dunhuang, at the northwestern end of the Great Wall of China, with its enormous cache of well preserved manuscripts—the library of the monastic community—that had been walled-up in a niche in the eleventh century. He had a special interest in the invasion route of Alexander the Great, about which he published a book in 1929 (*On Alexander's Track to the Indus*), which continued until the end of his life; his final study appeared in the* Geographical Journal *(London) in 1943, the year of his death in Kabul, Afghanistan. During the two years before his death he was engaged in field work in the Cholistan Desert of what is now Pakistan and in the Indian state of Rajasthan. Mohammad Rafique Mughal, in the article that follows, discusses the fascinating story of the exploration of the Cholistan, from Sir Aurel Stein to his own surveys of the 1970s and 1990s, and the contributions of its explorers to the study of the human history of the Indus Valley. —Ed.*

Six decades ago, Sir Aurel Stein (Fig. 1) undertook an archaeological survey in the Cholistan desert of Pakistan, which is located in the former Bahawalpur State in the central Indus Valley (Figs. 2–3). By that time, he had already documented a number of ancient sites and monuments along the dry bed of the Ghaggar-Hakra River in the adjoining Indian territory of Rajasthan, and had traveled up to the border of Bahawalpur State. To continue his survey along the remaining old river course, called Hakra in Pakistan's territory, Stein started his explorations from Bahawalpur on February 14, 1941 (see Fig. 3). He first traveled east along the riverbed and then turned back to explore the

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Figure 1. Sir Aurel Stein in 1929.

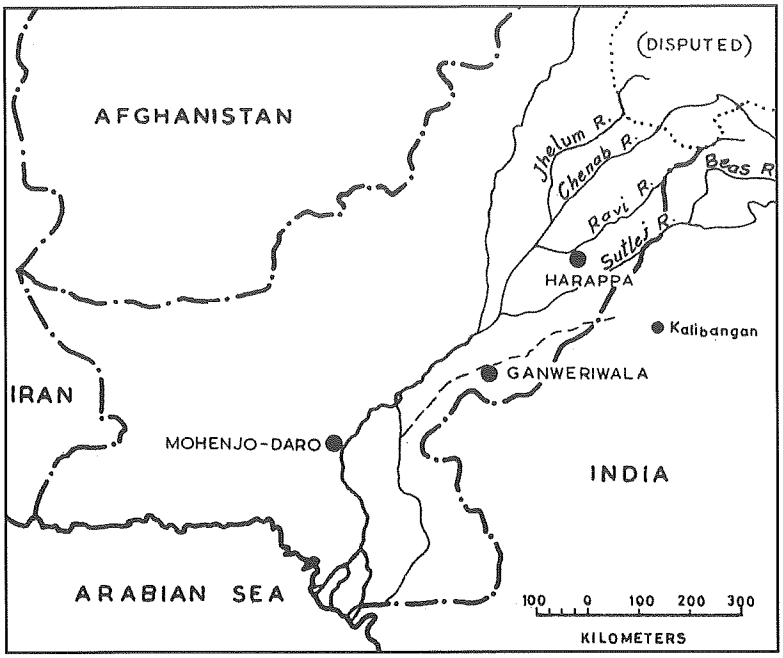

Figure 2. Map of southern Pakistan and surrounding countries. Ganweriwala, a large urban site, lies in the Hakra River valley.

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southwestern area. Finally, he returned to Bahawalpur on March 11 because of excessive heat. He later returned to Cholistan and excavated at three sites: Sandhanawala Ther, Kalepar, and Ahmadwala Ther (not shown in Figure 3). He had intended to return for still more work in the area, but his special interests in the movements of Alexander the Great led him to southern Baluchistan (southern Pakistan, west of the Indus) between January and March, 1943. He then continued on to Kabul, the capital of Afghanistan, where he died at the age of 81 on October 26, 1943, and where he was buried.

Stein had written a detailed account of his surveys before he died, and had sent the manuscript, "An Archaeological Tour along the Ghaggar-Hakra River, 1940-42," to the Director General of the Archaeological Survey of British India at New Delhi. A summary account of his findings also appeared in England (Stein 1942). In 1955, the American archaeologist Henry Field, who conducted archaeological reconnaissance in western Pakistan (1959), happened to see the manuscript of Stein's report in New Delhi, microfilmed it, and sent a copy of it to the Library of Congress in Washington, D. C. (Stein 1943), where I consulted it while writing my Ph.D. dissertation (completed in 1970) at the University of Pennsylvania. The manuscript had no maps, drawings, or photographs to illustrate the text, so that there was no independent way to identify the cultural association of the sites; we had only what was stated by Stein. In one case, the identification of several sites hinged on the identification of a single site, Kalepar. That is, Stein compared a number of sites with a place he called Kalepar, but it was not possible to determine its cultural association without illustrations. By comparing the itineraries of Stein and Field (1959) the mystery of Kalepar was resolved. Kalepar was found to be an old name of Field's "Bhoot," an Early Harappan site (ca. 3,200–2,600 B.C.) Furthermore, other than the sites that Stein identified as belonging to the "Harappa Culture," it was not possible to place the remaining sites within a known time frame on the basis of mere description.

Stein must have prepared illustrations with his report which are still not traceable in India or Europe. Incidentally, it is the only work of that great Asian explorer of the twentieth century that has remained unpublished in its original form.

Following Stein's pioneering survey, A. Ghosh in the early 1950s carried out further reconnaissance within the Ghaggar-Hakra region in Bikaner, India (see Fig. 3). Although he added more sites to the known list, information from the two surveys was not integrated, and a full account of Ghosh's work was never published. Other Indian explorers and excavators who have since worked in or near the area are Katy F. Dalal, B. K. Thapar, B. B. Lal, K. N. Dikshit, J. P. Joshi and R. S. Bisht.

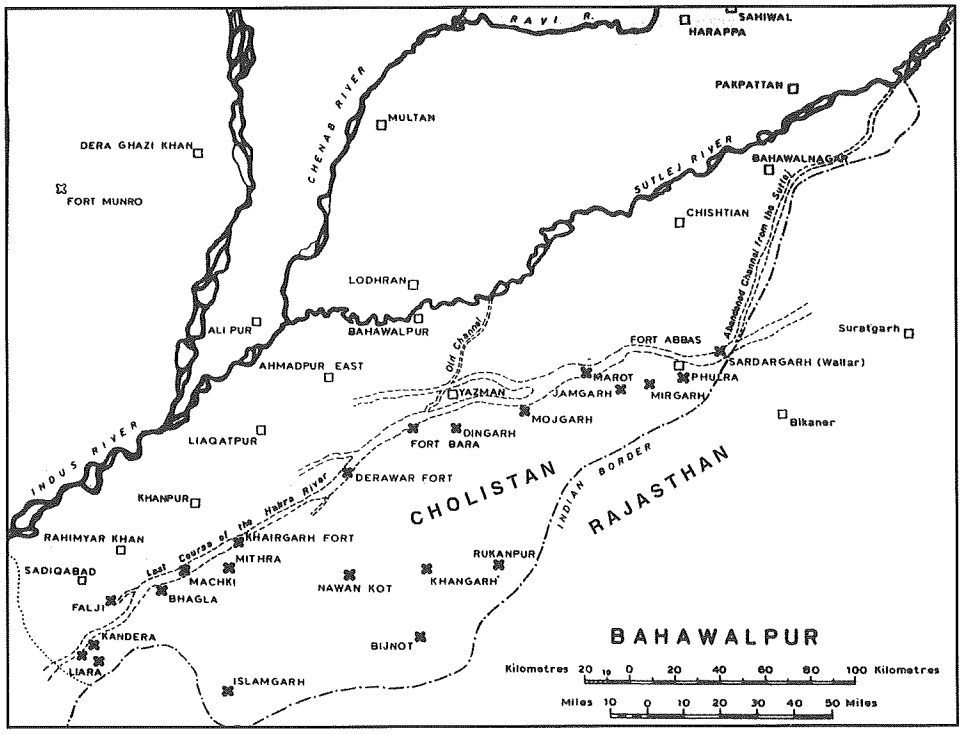

Figure 3. Map showing the former State of Bahawalpur in the central Indus River valley, and the principal course of the Hakra River, which skirts the western edge of the Cholistan desert.

Stein's survey zone in Pakistan was further studied by Field and by F. A. Khan, who visited eleven sites in the 1950s. The first major and comprehensive survey of Cholistan, however, was launched only in 1974, soon after my appointment as Director of Explorations in the Department of Archaeology, Government of Pakistan. Because of the great archaeological potential of this region, the survey under my direction continued for four annual field campaigns all along the old course of Hakra River in Bahawalpur (Fig. 4). More than 400 sites were documented at that time, and 37 sites were added in the 1990s when my research was supported by The World Bank. The sites investigated included almost all the sites named by Stein, and hundreds of others in addition. The strategy and methodology adopted in exploring the desert region produced important results (Mughal 1997), which are summarized below.

(a) A continuous sequence of the Indus civilization from the fourth to the second millennium B. C. was revealed.
(b) A new cultural component of the beginning of the Indus Civilization defined as Hakra Wares added at least five hundred years to the cultural sequence going back to the fourth millennium B. C.
(c) For the first time in South Asia, the archaeological sites were classified into functional categories on the basis of material evidence such as specialized, craft-related industrial sites, as distinct from habitation, multifunctional, and sites of temporary (nomadic) occupation.
(d) Based on size, a four-tiered hierarchy of settlements (defined as cities, towns, villages, and nomadic sites) emerged throughout the life history of the Indus Civilization in this region.
(e) All the sites could be securely dated and related by comparison with known sites in India and Pakistan.
(f) The discovery of another large urban center, Ganweriwala, which covers more than 80 hectares in area, has changed the age-old concept of "twin" capitals of the Indus Civilization. Situated between Harappa and Mohenjo-Daro, it has revealed a pattern of equidistant location of Indus cities in the Greater Indus Valley.
(g) The data from Cholistan pointed to new directions for future research and generated several new fieldwork programs in the Greater Indus Valley, including in India.

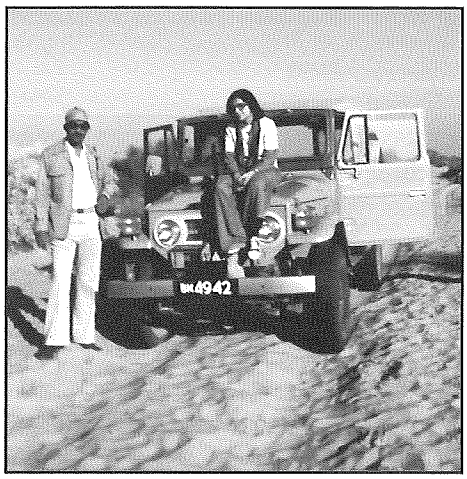

Figure 4. Rafique Mughal and assistant, Shireen Pasha, in the Cholistan Desert.

These new discoveries with their significant implications made it imperative to resurrect Stein's manuscript and publish it with illustrations of pertinent materials collected by him and by his successors in Pakistan and India. What was needed was a fresh interpretation of the sites Stein recorded sixty years ago in the light of the new data now available. In the meantime, we had determined that all of Stein's unpublished materials from Pakistani and Indian territories of the Ghaggar-Hakra River were in New Delhi, India. Impressed with the need for this new research, the British Academy in 2000 awarded a modest grant from the Stein-Arnold Fund to enable me at least to begin the work. The first step to be taken, clearly, was to prepare for publication the relevant material from my own surveys in Pakistan, because large and representative samples from all the sites had been collected, which sufficiently compensated for an absence of archaeological materials in Pakistan from Stein's survey.

The collections made during the survey of 1974-77 had been stored in Fort Lahore, in Lahore, Pakistan, and all were made available for our study through the courtesy of Saeedur Rahman, current Director General of the Department of Archaeology, and Saleemul Haq, then Director of Archaeology at Lahore. A small group of assistants, including some of my former students at Punjab University, and six draftspersons/artists, joined me at the fort in the (sizzling hot!) summer of 2000 to sort, catalog, and draw the artifacts we selected from the survey collections. Fortunately, two large halls of the Pakistan Institute of Archaeological Training and Research at Lahore Fort were provided for our work (Fig. 5). It was easy to select sites visited by Stein because almost all the site names had not changed; the rest of the work was staggering in its scope and detail. In all, materials from 44 sites were studied, selected, and cataloged. Measured drawings of 1,235 specimens of pottery were prepared, inked, and transferred onto large film sheets. In addition, 1,045 other artifacts were cataloged and photographed.

In associating the newly collected and analyzed material with Stein's site descriptions and interpretations, it is important to keep in mind that in the sixty years since he wrote his comments much has changed in our understanding of civilization in the Indus valley; even terminology has changed. When Stein was writing, Harappa and Mohenjo-Daro, still the most famous sites in the Indus Valley, were the two main reference points to compare and date the sites on the Hakra River. The Early Harappan/Indus, an early formative phase of the Indus Civilization, was not defined until the early 1970s. Similarly, our understanding of the so-called "Post-Harappan" period, which was traditionally associated with the last occupation at Harappa, has changed as a result of research undertaken during the past half

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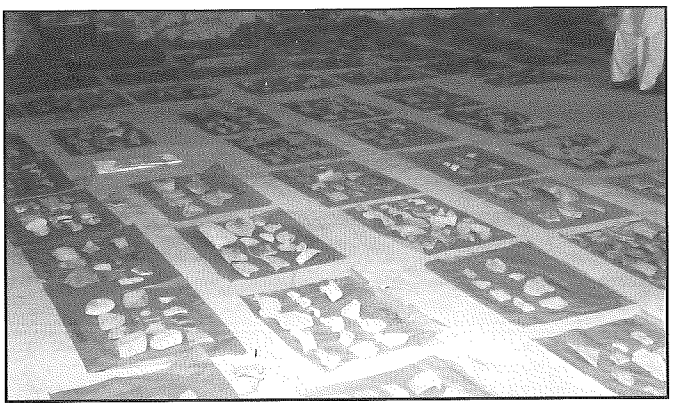

Figure 5. Pottery and other artifacts from sites in the Cholistan Desert region first visited by Sir Aurel Stein were selected for illustrations and cataloging at Fort Lahore in summer 2000.

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century. It has become increasingly clear that the Harappan culture survived well into the middle of the second millennium B.C. in certain regions of the Greater Indus Valley, now recognized by distinctive assemblages of the Late Harappan culture. Stein's identification or interpretations of archaeological materials need, therefore, to be understood within the present framework; what might at first appear to be an error on his part, may be merely the absence at the time of more recently developed concepts. And if Stein's descriptions were sometimes insufficient to identify certain sites, the data gathered during 1974-77 provide a reliable basis for revising his conclusions and placing the sites in their proper context. As examples in line with these observations, a few comments on Stein's manuscript follow.

(1) Of 58 sites mentioned by Stein, ten are architectural remains (forts and tombs) of early historical (fifth century B.C. to seventh century A.D.) and Medieval (eighth to eighteenth centuries A.D.) periods, as understood in South Asian history. The remaining sites include twelve small places marked by scatters of potsherds (camp sites, as identified later in Cholistan). It proved to be impossible to locate these last sites on a map because of the absence of coordinates and adequate description.

(2) Stein's identification of the sites of "Harappa Culture" was correct in a general sense. His list, in fact, includes sites of the Mature and Late Harappan periods, as has now been confirmed by ceramics collected from Stein's sites in 1974-77.

(3) Stein's red "grooved" pottery of "Kalepar" type has now been identified with the more recently designated, and extensively distributed, Kot Dijian wares of the Early Harappan period, about 3,200–2,600 B.C. Field called this site "Bhoot," but his itinerary matches that of Stein. The site still carries its old name, Kalepar, and represents an Early Harappan settlement. Stein correctly observed that Kalepar yielded a "new" kind of pottery, and that it compared with ten other sites. Kot Dijian assemblages were recognized in the 1950s as forming an early developmental phase of the Indus Civilization (Khan 1965).

(4) The Hakra Wares sites, named after their discovery and concentration on the Hakra River, are the oldest known settlements on the Ghaggar-Hakra River, representing a common cultural tradition in the Greater Indus Valley already established by the beginning of the fourth millennium B.C. These wares, handmade vessels with mud and grit applied to the surface, were first identified in 1972 at Jalilpur, about 80 miles southwest of Harappa on the Ravi River (Mughal 1974), where their presence overlapped the Kot Dijian occupation and therefore marked the first settlement of Early Harappan times. More recently typical Hakra ceramics have been found at Harappa dated about 3,400 B.C. and also recognized in contexts of the early fourth millennium B.C. in the Bannu Basin of the Northwest Frontier region of Pakistan (Khan *et al.* 1990); they may be somewhat earlier elsewhere. Stein found six sites distinguished by what is now recognized as Hakra Wares.

(5) Stein commented on the presence at two sites of an important type of pottery that has more recently come to be known as Painted Grey Wares (PGW). Their appearance in Cholistan at the beginning of the first millennium B. C. is now believed to coincide with the arrival of Aryan-speaking people. The PGW also mark a time of environmental change; the Ghaggar-Hakra River dried up completely at about that time, as the environment of the Cholistan region deteriorated to conditions similar to those of the present.

(6) Stein recorded a number of nameless sites marked merely by a scatter of potsherds. As noted above in (1), such sites, in fact, represent temporary nomadic occupations; it has become apparent in recent years that campsites of a nomadic population existed throughout the human history of the Indus Valley. These people effectively utilized the desert environment in the same way as present-day nomads in Cholistan, who raise camels, cattle, goats and sheep. Stein, however, did not discuss the implications of his nameless sites.

In closing, we may note that work relating to Stein's unpublished papers has been completed regarding sites and materials in Pakistan; that work, however, is only half of the task at hand. Data on sites Stein located in Indian territory remain to be studied, and archaeological materials from those sites still need to be cataloged and illustrated. Additional financial support, however, is needed for us to continue the project in India.

Mohammad Rafique Mughal, former Director General of Archaeology and Museums of Pakistan, joined Boston University as Professor of Archaeology in September 2000.

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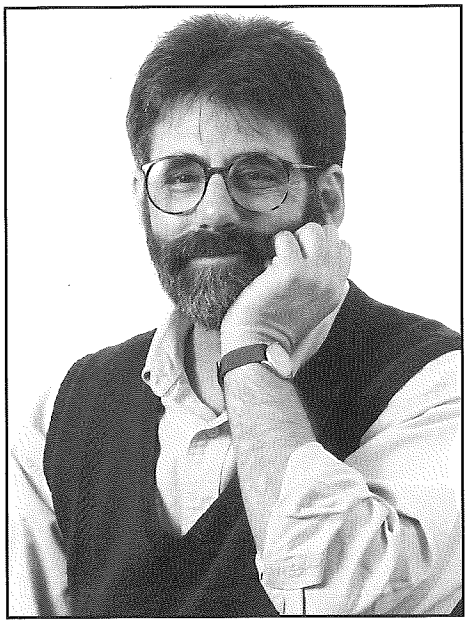
Promotion for Two Faculty Members

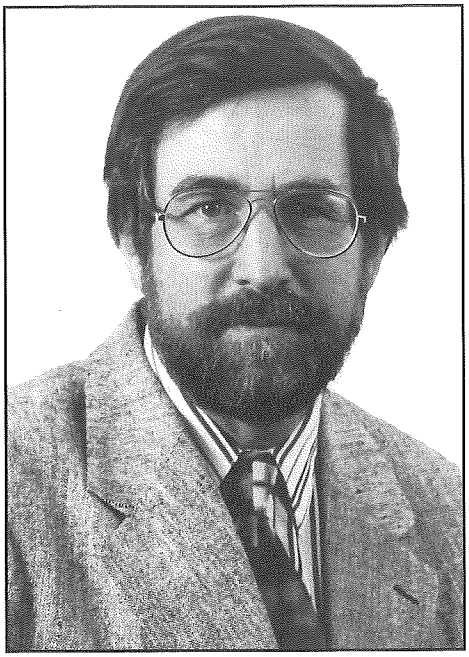
by Julie Hansen

Paul Goldberg and Paul Zimansky have been promoted to the rank of full Professor of Archaeology, effective September 1, 2001.

Professor Goldberg, a geoarchaeologist, joined the Department of Archaeology in 1995 after fifteen years teaching at Hebrew University, Israel, and five years conducting research at the Texas Archaeological Laboratory in Austin, Texas. Goldberg has published extensively on the use of micromorphology, the study of thin sections of sediment from archaeological sites to identify modes of deposition and site formation. He is an internationally recognized scholar who works on palaeolithic cave sites throughout the world.



Professor Paul Goldberg



Professor Paul Zimansky

Professor Zimansky joined the Department of Archaeology in 1984. He is one of the leading experts on the Iron Age of the Near East and has published widely on the Urartian civilization. His archaeological projects include excavations in Iran, Iraq, Syria, and he is currently co-directing excavations at the site of Ayanis near Lake Van in eastern Turkey where he is exploring the remains of the city below an Urartian Palace. Zimansky's work focuses on the integration of both archaeological and textual resources to provide an in depth analysis of the first millennium B.C. in the Near East.

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Student/Alum News

Effective September 2001, **Alexandra Chan** (Ph.D. candidate) has been appointed Visiting Instructor for 2001-02 in the Department of Anthropology, Vassar College. She will teach five courses: in the fall, "Introduction to Archaeology," "Archaeology of Early African America," and "Archaeological Field Methods" (team-taught); in the spring,"North American Historical Archaeology," and a Senior Seminar, "Archaeological Methods and Theory." See also her article in this issue of *Context* on page 10.

Ellen Berkland (M.A. 1999), City Archaeologist for Boston, presented a paper with Professor Mary Beaudry at the World Archaeology Congress Intercongress on the "Archaeology of the African Diaspora" in Chicago in April 2001. Their paper focused on excavations conducted in advance of the recent reconstruction of the African Meeting House on Nantucket.

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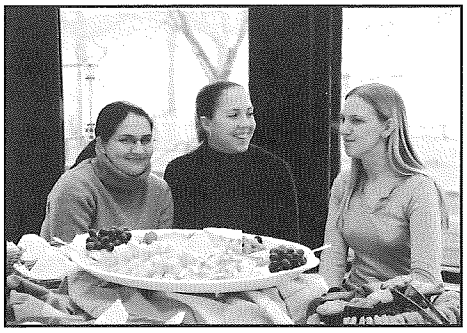
Alums Appointed Professors

Three recent recipients of the Ph.D. from our Department of Archaeology are now in new tenure-track academic posts. **Alan Kaiser** (Ph.D. 1999) in September 2001 joined the Department of Archaeology / Art History at the University of Evansville in Indiana, where he is now Assistant Professor. His department, incidentally, is chaired by **Dr. Patrick M. Thomas**, who received his B. A. (1981) in archaeology at Boston University before doing graduate work at the University of North Carolina, Chapel Hill. **Melissa Moore Morison** (Ph. D. 2000) has been appointed Assistant Professor in the Department of Classics at Grand Valley State University in Allendale, Michigan, as of September 2001. **Akim Ogundiran** (Ph.D. 2000) joined the Department of History at the International University in Miami, Florida, as Assistant Professor of Archaeology in September 2001.

Ancient Marketplaces

The Undergraduate Archaeology Club of Boston University celebrated fifteen years of activities with a special reception and exhibition at The Castle on Monday, April 2, 2001. The focus of the celebration was ancient marketplaces, featuring display dishes that were made by several archaeology students, who also gave short presentations on how these foods were prepared following ancient recipes representing the areas of Asia, the Classical Civilizations (Greece and Rome), the Near East, and Egypt. Professor James Wiseman also presented a talk about wines of the ancient Mediterranean world.



Boston University Archaeology Club members (left to right Korinti Recalde, Krysta Ryzewski, and Karen Mansfield talk about the foods of ancient times while savoring current-day catered appetizers during the celebration.

Professor James Wiseman included quotes from the "Rubaiyat of Omar Khayyam" in his talk about wines of antiquity.

Mohammad Rafique Mughal on ICOMOS Mission to China

Mohammad Rafique Mughal, internationally recognized as an expert in the archaeology of south and east Asia, traveled to China in March 2001 on a special assignment for the International Council on Monuments and Sites (ICOMOS), Paris, and UNESCO, Beijing. His primary mission was to examine and evaluate a Buddhist caves site, Yungang Grottoes in northern China, which is a candidate for inscription on the World Heritage List. Responding to a separate request of the Beijing Office of UNESCO, he also went to Xi'an to monitor progress of UNESCO-sponsored restoration work on an historic building.

The visit to Yungang was an important component in the process by which the site might be designated a World Heritage Site. UNESCO's World Heritage Center processes all nominations for placing new sites on the World Heritage List through ICOMOS. Sites found to be eligible during an initial examination are visited and evaluated by international experts in the subjects and geographical regions of the particular sites. Mughal, the expert selected for the evaluation of Yungang, has previously been sent on such missions of evaluation to Turkmenistan, Nepal, and China.

Professor Mughal wrote the following comments on Yungang for this report.

The grottoes of Yungang contain works representative of Chinese art covering a relatively brief but rich period of 65 years between 460 and 525 A.D. The creation of caves with Buddhist religious and other scenes started first in the middle part of the cliff face. The work was extended to the east in 471-494 A.D., and finally, the carvings continue on the western side of the mountain until 525 A.D. Seen in chronological order, the site vividly portrays changing styles in Buddhist representational art from initial mingling of Gandhara (Pakistan), Mathura (India), and to a certain degree Classical Bactrian (Central Asia) art, to a purely indigenous Chinese development. The earlier, that is, the fifth-century caves were contemporary with two other World Heritage sites in China, at Longmen

M. Rafique Mughal (right) discusses preservation problems in a cave at Yungang Grottoes with Chinese heritage officials. On the left are an interpreter, and Professor Li Zhiguo, Director of the Research Institute.

Conference on Landscape and Digital Technologies

An international conference, "The Reconstruction of Archaeological Landscapes through Digital Technologies," will be held at Boston University, November 1-3, 2001. The conference, with more than 25 participants from Italy and the United States, will be especially concerned with the application of GIS, spatial analyses, and remote sensing in the study of the archaeological landscape as a rich cultural resource. Sponsors are the National Research Council, Institute of Technologies Applied to Cultural Heritage (CNR-ITABC), Rome, Italy, and Boston University's Center for Archaeological Studies, Center for Remote Sensing, and the Department of Archaeology, with the collaboration of the National Aeronautics and Space Administration (NASA). Boston University's President Jon Westling will open the conference, and the keynote speaker is Michael Thomas, Director of Applications for NASA. Organizers of the conference are Maurizio Forte and Salvatore Garraffo (CNR-ITABC); P. Ryan Willams (Field Museum of Natural History, Chicago); and Kathryn Bard (Department of Archaeology), Farouk El-Baz (Center for Remote Sensing), and James Wiseman (Center for Archaeological Studies). The conference is made possible by a grant from the J. M. Kaplan Fund, U.S.A., and the National Research Council, Italy. Members of the Center are invited to attend. For details see the Center's website, http://www.bu.edu/archaeologycenter/lectures/lectures.html.

and Magao. Yungang, therefore, forms an integral and vital part of the developing period of Chinese art that is distinguished by inspirational themes from neighboring regions, but adapted to the indigenous Chinese environment with rich ornamentation and colorful innovations.

Mughal adds that he also visited several monuments in Beijing and Xi'an, and took the opportunity to make many slides for his classes at Boston University. He also lectured on the Indus Civilization at Peking University. For the warm hospitality and cooperation he received in China, he thanks the members of the Bureaus of Relics at State and Provincial levels, several Chinese scholars of Buddhist art, and heritage conservators and educators, especially Dr. Zhang Wenbin, Director General, State Administration of Cultural Heritage; Mr. Xue Rongzhe, Vice Governor of Shanxi Province; Ms. Sun Fuzhi, Mayor of Datong city; and Professor Li Zhiguo, an eminent scholar of Chinese art.

Professor Mughal examines restoration work on a large fresco painting of the late fifth century A.D. at Yungang Grottoes.

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Erika Buatti (B.A. 2001, *magna cum laude*) received a four-year fellowship for graduate work at William and Mary College in Williamsburg, Virginia. Erika is among the first students admitted to the newly founded Ph.D. program in Historical Archaeology and Historical Anthropology at the College of William and Mary.

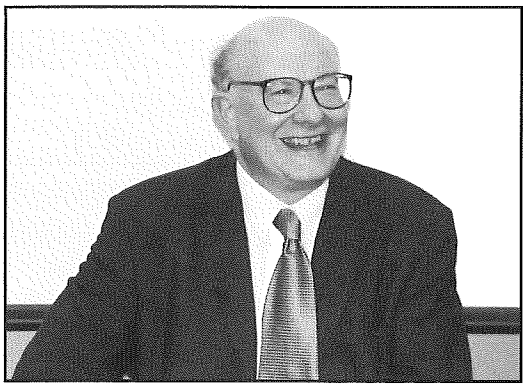
Brendan McDermott, who received his B.A. degree in archaeology from Boston University in 1985, was awarded an M.A. in May, 2000 from the Nautical Archaeology Program at Texas A&M University. His thesis was entitled "English and American Shipboard Carpenters, ca. 1725-1825." Brendan currently works for Mugar Library at Boston University.

On February 13, 2001, **Howard Wellman** (M.A. 1994), Lead Conservator at the Maryland Archaeological Conservation Laboratory, Jefferson Patterson Park & Museum, presented a lecture on "The Opportunities in Archaeological Conservation: Maryland Archaeological Conservation Laboratory," for the Department of Archaeology and Center for Archaeological Studies.

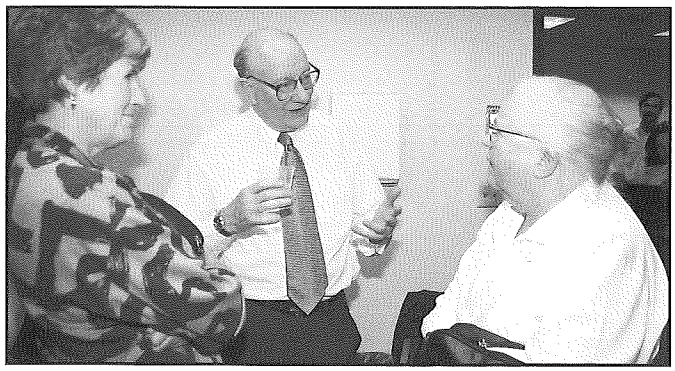
Two Distinguished Visitors

Colin Renfrew on Ethics, Looting, and Collecting Antiquities

One of the world's most distinguished archaeologists, Colin Renfrew (Lord Renfrew of Kaimsthorn), Disney Professor of Archaeology at Cambridge University, presented on April 24 a lecture entitled "Loot: The Ethical Crisis in Archaeology," to an enthusiastic audience of Department and Center members and friends who filled the lecture hall to overflowing. The topic of the lecture reflected a long-time concern of the department, and a lively discussion continued through the reception that followed the lecture. Lord Renfrew, who is also Director of the McDonald Institute for Archaeological Research at Cambridge, has in recent years taken a vigorous public stand against looting and the illicit traffic in antiquities, speaking on the subject in Great Britain, France, and now the United States. He announced the appearance in April of his most recent book, *Loot, Legitimacy and Ownerhsip: The Ethical Crisis in Archaeology* (Focus Publishing: Australia, 2001) which is devoted to the subject of his talk. Following his visit to Boston University, Renfrew travelled to Los Angeles to attend a meeting of the International Standing Committee on the Traffic in Illicit Antiquities, whose members include Ricardo Elia, Associate Professor of Archaeology at Boston University and Vice President for Professional Responsibilities of the Archaeological Institute of America.



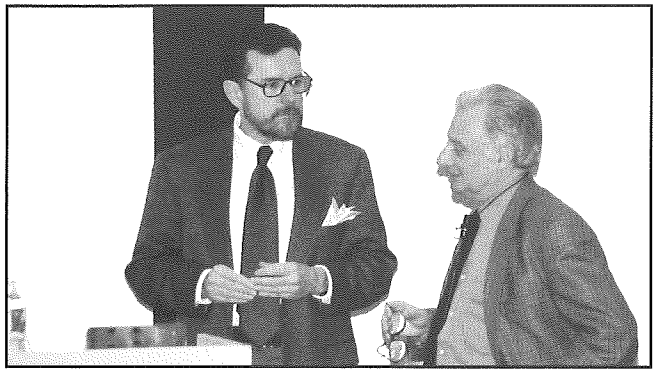
Professor Renfrew lecturing at Boston University to faculty, students and guests.



At the reception held after his lecture, Lord Renfrew speaks with Clemency Coggins (left), Professor in the Department of Archaeology, and Jane Scott, former Director of the Sardis Expedition office at Harvard University.

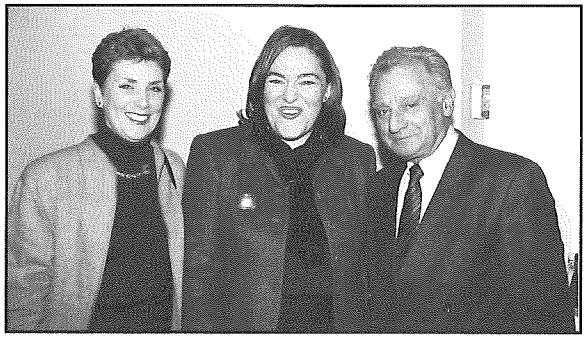
Christos Doumas Lectures on Bronze Age Thera

Christos G. Doumas, Director of Excavations at Akrotiri, the world-famous Bronze Age site on the Greek island of Thera, visited the Center and the Department for a week in March, during his tenure as Onassis Foundation (USA) Senior Visiting Fellow, 2001. Professor Doumas, former Director of Antiquities of Greece and Professor Emeritus of Archaeology at the University of Athens, spoke on "Simple Beauty: Art in the Aegean Bronze Age," to an appreciative audience of more than 200 people. He also lectured on "The Art of Thera" in Professor Curtis Runnels' class, Great Discoveries in Archaeology,



Professor Curtis Runnels (left) welcomes Professor Christos G. Doumas as guest lecturer in his class, Great Discoveries in Archaeology.

which was attended by more than 110 undergraduates, and discussed for the graduate students and faculty of several departments "The Wall Paintings of Thera: from Trench to Museum." At receptions and other social occasions, Doumas and his wife and co-worker, Alex Doumas, took the opportunity for lively conversations with many members and friends of the Center and Department, who were charmed by their wit and good humor. Dr. Anna Stavrakopoulou, Deputy Executive Director of the Alexander S. Onassis Public Benefit Foundation, U.S.A., also came from New York to attend several of the week's events.



Mrs. Alex Doumas (left), Dr. Anna Stavrakopoulou, and Professor Doumas at the reception following his public lecture.

COMMENCEMENT MAY 2001

Bachelor of Arts

Trent B. Bingham, *magna cum laude* * †
Double major with Classical Civilization
Erika S. Buatti, *magna cum laude* †
Double major with Anthropology
College Prize for Excellence
Robin Christine Coleman, *magna cum laude*
Rachel Dawn Dubois
Justin Paul Ebersole, *summa cum laude* * †
Shereif M. Fattouh
Liv K. Fetterman, *magna cum laude* †
Double major with Art History
Departmental Prize for Excellence
Katherine Flagg, *summa cum laude* †
Double major with Art History
Mary Kennedy Hudgens
Double major with French Language and Literature
Michael Rice Jones, *summa cum laude* * †
James Joseph Krajewski
Karen Mansfield, *cum laude*
Christine Marie Ordija, *magna cum laude*
David M. Rich, *magna cum laude*
Krysta Ryzewski, *summa cum laude* * †
Jennifer Wexler, *magna cum laude* †
Departmental Prize for Excellence

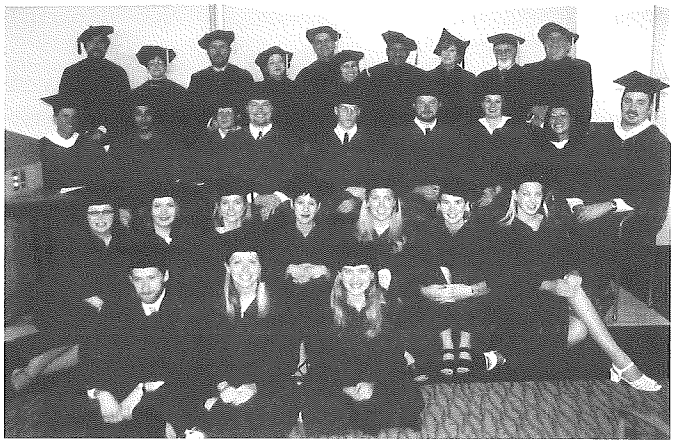
*Phi Beta Kappa
†Independent Work for Distinction

Master of Arts

Douglas Michael Blash
Eleanor Josephine Harrison
Polly Ann Peterson
Gwendolyn Renee Sealey
Daniel Welch

Doctor of Philosophy

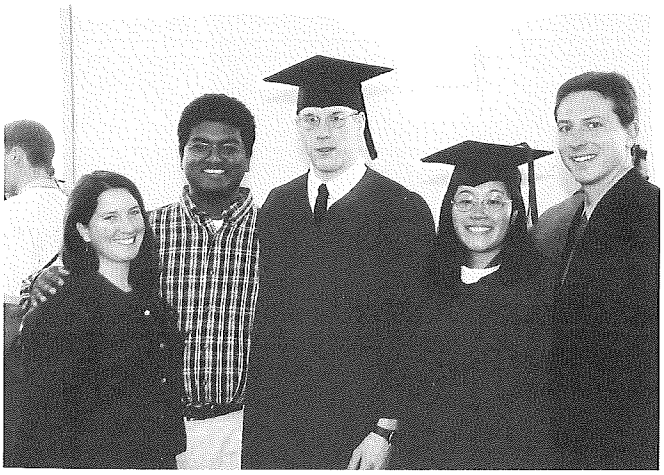
Holly Raab
Dissertation Title: "Rural Settlement in Hellenistic and Roman Crete: The Akrotiri Peninsula"
Turan Takaoglu
Dissertation Title: "A Late Chacolithic Marble Workshop at Kulaksizlar in Western Anatolia: An Analysis of Production and Craft Specialization"



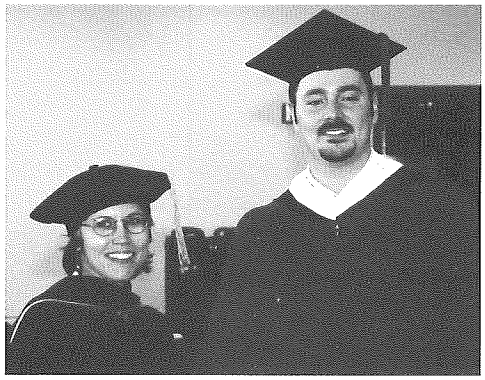
Faculty (back row) and graduating class of 2001.

Erika Buatti and her father look at her graduation gift, a Palm Pilot, at the reception following graduation ceremonies.

Liv Fetterman (left), Jennifer Wexler (second from right) and Krysta Ryzewski (far right), who graduated in 2001, share a moment of joy with Selena Lanza (B.A. 2000).



Graduate Students Kim Berry (left) and Ben Thomas (second from left) and Teaching Assistant Steve Morandi (far right) celebrate with Summa Cum Laude *graduate, Justin Ebersole (center), and Master of Arts recipient Polly Ann Peterson (second from right).*



Professor Patricia McAnany and Daniel Welch, who received his Master of Arts degree, are delighted to pose for a picture after the grduation ceremonies.

The Emerging Face of Northern Bondage

By Alexandra Chan

A conflicting picture of Northern bondage is emerging at the Isaac Royall House in Medford, Massachusetts, as excavations continue at the Slave Quarters there. The Royall family and their slaves, who lived as Caribbean sugar planters on the island of Antigua for over thirty years before moving to Massachusetts to live as merchant farmers for another forty, provide a unique opportunity to compare the Caribbean and New England slave systems on the level of a single family.

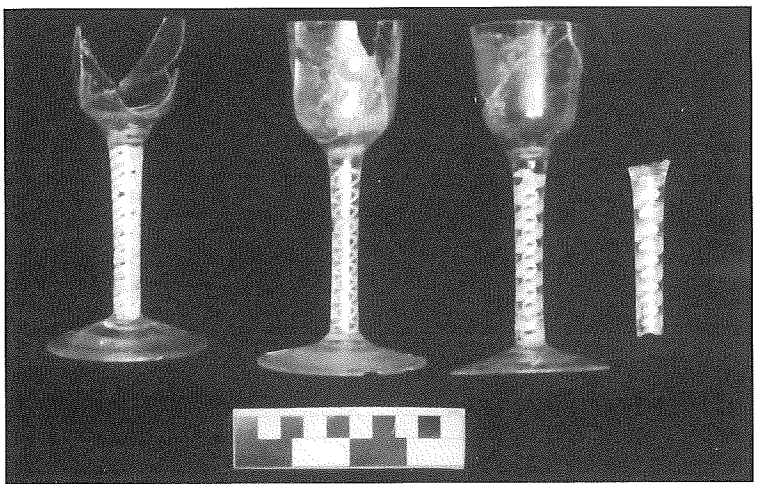
Traditionally it has been held that New England slavery in the eighteenth century was a less harsh form of servitude than that of the American South and the Caribbean. While punishing regimens of unskilled (and easily replaceable) gang labor on vast plantations characterized the latter regions, the complex, often urban, and industrialized economy of the Northeast demanded skilled labor. A Caribbean slave might spend his or her entire short and bitter life in the field, but slaves held on New England farms were expected to be jacks-of-all-trades. A New England slave might be tending livestock one day, pressing cider the next, forging horseshoes the next, and hired out to the town baker the following. This diversity of learned skills was thought to have given slaves more bargaining power in securing better treatment and small freedoms for themselves from their masters, as they were not easily replaced, and frequently were employed in tasks that could not be overseen *en masse*. Thus a task or errand away from the main estate might turn into an excuse for visiting friends or taking care of personal business.

The relatively low numbers of blacks in New England (2-3 percent) in comparison with the South and Caribbean (66-85 percent) were also thought to have mitigated the harshest forms of punishment. Northern blacks were also assumed to have more wholly assimilated into mainstream European culture because of their relative isolation from others of their own kind, and because of the closer working and living conditions with their masters.

What a combination of historical research and archaeological excavation is revealing at the Isaac Royall House, however, is that, far from being a collection of simple oppositions as suggested above, the differences between the Caribbean and New England slave systems were more complex and less clearly defined. We have uncovered evidence for a division in the use of space on the estate that might have reflected and reinforced the social inequalities between master and slave, but also, paradoxically, might have allowed slaves to create and control their own social space. On the other hand, while documentary evidence shows that the Royall slaves *were* engaged in a very different kind of labor here than they had been in Antigua, and that this might truly have improved their condition in significant ways, archaeology at the site suggests that gains would not have been made without concessions. It appears that while Northern slavery was certainly different from Caribbean slavery, it might not have been "better."

A small Boston University team led by the author explored the East and West side yards of the Slave Quarters in the summer of 2000. Preliminary testing from the 1999 season, led by Professor Ricardo Elia, and background historical research had suggested that these areas would be likely places to find evidence of the daily lives and routines of the enslaved Africans who lived there. The 2000 season focused on defining activity areas in the Quarters' side and back yards and on locating features such as outbuildings and trash pits that might shed light on this neglected majority of the inhabitants of the estate. Readers will find it useful to consult the 1999 report, which includes photos and a map of the estate: Marni L. Blake and Alexandra Chan, "Exploring Northern Slavery at the Royall House of Medford," *Context* 14.2 (Fall 1999) 6-10.

The first impression gained from these excavations was that there was a marked functional as well as social division in the use of space surrounding the Quarters and Great House. The Great House was approached by a long carriage drive shaded by stately elms that allowed the approaching visitor to admire three of the four sides of the house before alighting at the doorstep. The drive ended in a large cobbled courtyard that the house shared with the Slave Quarters. Being the receiving area of important and influential guests, this area between the two structures would have been an important part of the Royalls' social presentation of self—the culmination of the entire exalted approach to the house. As one might expect, then, the North yard of the Slave Quarters, which abuts the formal courtyard, seems to have been swept relatively clean. We found no trash pits, and the refuse that has been recovered largely con-



Air-twisted wine glasses, ca. 1730-1755, attest the importance of elegant entertaining at Royall House, as well as the inevitable mixing of trash between master and slave deposits. Photo by Robert Chan.

sists of sheet refuse, recovered from the nooks and crannies between the rounded cobbles. The attention to cleanliness makes sense—one can hardly imagine the Governor or some other luminary being led down a long avenue of elms only to be greeted with stinking piles of rubbish at every turn. Yet this apparent concern with appearances seems to have been only skin deep, for the East and West side yards of the Slave Quarters—just out of sight from the courtyard—show a marked change in the use of space for waste disposal. Occasionally a small pit would be dug to contain refuse, but the general rule seems to have been that broken pots, bottles, personal possessions, rubble from decades-old construction activities, and meal leftovers of meat, fish, fowl, and shellfish would be left strewn across the ground, with little or no care given to appearance (or smell!). The purpose of such a division of space was likely manifold. It would keep the most blatant and unpleasant evidence of human bondage out of sight and perhaps out of mind while the Royalls got down to the serious business of entertaining and lavish living. It might also, however, inadvertently have given enslaved individuals a certain kind of autonomy in these areas, a retreat beyond the watchful eye of the master. Historical research suggests that the Slave Quarters and its surrounding yards would almost certainly have been the exclusive domain of the African-American bondsmen, and that this would have been recognized by black and white alike.

Indeed, although the proximity of the two structures has resulted in an inevitable mixing of trash from the Quarters and the Great House, the side yards of the Slave Quarters have yielded items that can arguably be associated with the work and family lives of slaves. They paint a picture of a culture of hard work and poverty, but also of resilience, "making do," and a determination to make their own lives better in small ways, despite the bitter cup of enslavement. Faunal remains, although yet to be fully analyzed, also suggest a significant point of departure from our expectations when we first embarked on this project, as discussed below. We have recovered an abundance of kitchen utilitarian wares—milkpans, bread pans, storage jars, condiment bottles, and a hand-hewn stone pestle, about the size and shape of a large cucumber—that reflect the arduous task the cook had of preparing meals for upwards of 40 people two to three times a day, every day. The Royall House in 1755 would not have been the quiet, manicured sanctuary it is today, but must have hummed with activity, noise, farm animals, and strong odors.

Artifacts recovered near the Slave Quarters indicate that there would have been quiet times, too, though, perhaps after dark. Alone they may seem rather ordinary: a potsherd reworked into a small circle, hundreds of well-smoked clay tobacco pipes (one with the initial "M" crudely, and repeatedly, scratched on it), sewing equipment, a clay marble, a stone bead, a mended plate, and a non-functional stone point. But from them we might imagine old men and little boys playing checkers with pieces made by hand from colorful potsherds; men and women sitting down with a tobacco pipe to unwind from the day's labor, perhaps telling tales that mocked the system that held them captive; a little boy striking up a game of marbles with an older brother or a playmate; a mother taking advantage of her free time to add some personal touches to the coarse clothing provided them; or a young girl continuing the long arduous task of hand-drilling another stone bead for a necklace that she will eventually wear with pride to signify her womanhood. A fine tin-glazed, hand-painted French plate, likely discarded from the Great House and retrieved (clandestinely?) by a slave, was mended with a thick black substance—perhaps tar—and might have served to brighten a dingy table. The small stone point may belong to the magico-religious realm. It is actually a flake of crude stone, awkwardly and unifacially shaped into the semblance of an arrowhead, complete with side notches, but with no reworked cutting edge. A small groove is scratched between the side notches, perhaps to better secure it to a string or leather thong that would have hung around the neck. Whether this was the product of a lazy afternoon, a protective charm, or was an attempt to make a functional arrowhead may never be known, but the curation of aboriginal

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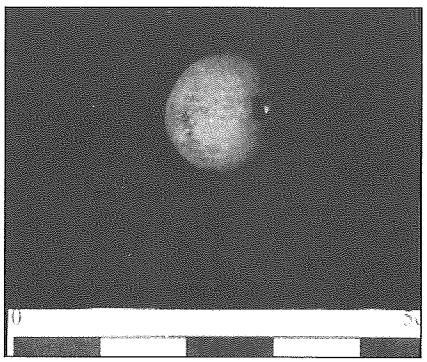

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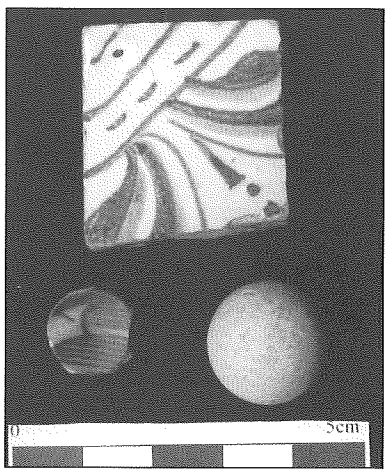

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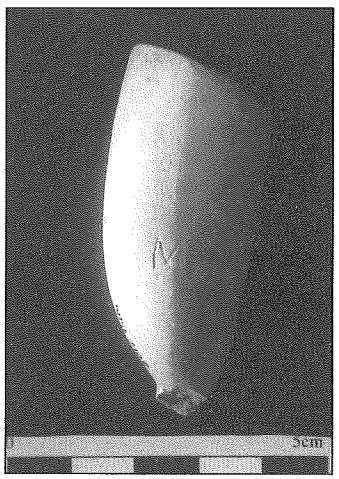

(3)

(1) A hand-drilled quartz bead, probably made and worn by a slave woman as a symbol of her African womanhood. (2) Clay marble and two potsherds, possibly reworked by slaves for use as gaming pieces. (3) A clay tobacco pipe with the initial "M" incised three times into it, perhaps a slave's attempt to mark ownership. Photographs by Robert Chan.

Trent Bingham and Karen Mansfield, who would receive their B.A. diplomas in May 2001, excavating in the dairy house.

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points by African slaves for use as charms and in various rituals has been reported from various slave sites in the American South. Although the original purpose of the object might have different implications for the reconstruction and interpretation of an emerging African-American culture in New England (e.g., Were they simply trying to supplement their diet or engaging in an Afro-Caribbean ritual?), all of them reflect something quite different from the white Patrician culture of the eighteenth century. As such, they constitute a form of everyday resistance, and reflect a personal rejection of the role imposed upon slaves by their white masters, as do the rest of the artifacts presented in this article. They also undermine the notion of greater assimilation being a forced inevitability in the North.

The faunal remains, on the other hand, do suggest that Northern slaves might not have been as "free" as all that. Since the beginning of African-American archaeology in the 1960s one of the observed phenomena that have come to be viewed as truisms on slave sites is the high presence of wild species reflecting a wide-ranging self-sufficiency among slaves in meeting their dietary needs and culinary preferences. As such, slave diet and cuisine have been thought to have been almost universally one of the great arenas for self-definition and everyday resistance. Given the assumptions outlined above about the nature of Northern bondage, one might expect to see this phenomenon exaggerated at the Royall House. The faunal remains here, however, although not yet fully analyzed, do seem to be suspiciously lacking in wild species. They are dominated by standard domestic farm animals: cow, calf, pig, sheep, and chicken. Slaves seem to have been eating whatever was given them, or what they were raising themselves on the farm. One possibility is that, being newly transplanted from the West Indies, they were no longer familiar with the natural environment and how to exploit it. They had come from a part of Antigua characterized by forests and undulating hills, and arrived in a relatively open, tidal marshland environment on the banks of the Mystic River. The low number of blacks in the region, too, would have made it difficult for them to blend into the background and move about the landscape "invisibly." Medford was equipped with a whipping post for slaves caught out after hours without a pass. They were no longer cutting sugar cane, one of the most physically brutal forms of slave labor in the Americas, but they might well have been kept on a shorter chain.

Many of the artifacts were recovered from the cellar hole of a small outbuilding that once stood in the West yard of the Slave Quarters. This structure measured approximately 2 m on a side, and had a stone foundation with a wood superstructure, judging from the number of nails found here. The proximity to the Slave Quarters, or Out Kitchen, suggests that the structure served in some capacity for food storage or preparation. The fact that it was semi-subterranean suggests, too, that keeping food cool was its principal purpose. It is currently interpreted as having been a dairy house, where milk, butter, cheese, and other perishables were processed or stored so they would not sour or decay in the summer heat. The entire cellar hole had been filled with Royall trash. Not only did most of the artifacts date to the mid-eighteenth century, but several bottle seals were recovered with the following inscription: "The Hon. Isaac Royall Esq./Pectore Puro" ("Pure of Heart"). The presence of some later artifacts, such as pearlware ceramics, however, indicates that the hole was not filled until after the Royalls had fled at the beginning of the Revolutionary War. In fact, it was probably not filled before 1779/80, and may have been filled as late as about 1810. A trash deposit of this size and range that is associated with a single family's occupation usually is indicative of a change of household. It is interesting to note, however, that while there is the whole range of household objects, from wineglasses to chamber pots, from fine to coarse materials, and most of them were discarded intact, probably in a single depositional episode, there are no sets. Some of the Royalls' things were probably sent ahead to them first in Halifax, where Isaac Jr. lived for a year in exile, and then to England. But they were forced to leave much behind, from wigs to candlesticks, as a 1781 inventory of the estate reveals.

The slaves continued to tarry at the estate for at least another year after their masters had left, and some maybe much longer, as the elderly Belinda is said to have lived out her retirement there well into the 1780s. Is it possible, then, that it was the slaves themselves who were scavenging the Great House until they were forced to leave by sale or manumission? It would have been a last, and prolonged, act of retaliation for their years of unrewarded labor.

Alexandra Chan is a Ph.D. candidate at Boston University in North American Historical Archaeology. Her research focus is on the archaeology of New England slavery.

The Xibun Archaeological Research Project: Tales from the 2001 Field Season

by Patricia A. McAnany

Previous reports by the author on the field work of the Xibun Project include "Caves, Cacao, and Christianity: Maya Archaeology Along the Sibun River," Context 13: 1-2 (1997) 6-7, including a map of Belize and the region, and, co-authored by Ben Thomas, "Sacred Landscape and Settlement in the Sibun River Valley of Belize," Context *14: 1 (1998/99) 18-22.*

With a mixture of fascination and revulsion, one of the field school students exclaimed, "Yuck!," as she watched Ben Thomas squeeze a translucent, large-fanged beef worm from the arm of a staff member. "No one told us about this!" By "this", she was referring to none other than *Dermatobia hominis*, a tropical fly that reproduces via warm-blooded mammalian hosts by inserting an egg under the skin. Such parasitic interactions are typical of complex tropical ecosystems. This point was not lost on students, many of whom chose to preserve the fledgling beef worms (once extracted from their bodies) in alcohol so that they might regale friends and family with a lesson in tropical parasitology.

Total immersion in tropical biology—while a fact of daily life in Belize, Central America—had not originally motivated students to apply for the Belize Study Program. Offered by Boston University's Division of International Programs in conjunction with the Department of Archaeology, the semester-long Belize Program introduces students to archaeological field methods and Maya archaeology by incorporating them into an ongoing research project. During the spring of 2001, fourteen undergraduate students from Boston University, New York University, University of Delaware, and Grinnell College became part of the Xibun Archaeological Research Project (XARP), which was directed by the author. As overall director of the project, I provided evening lectures, administered a mid-term examination, and dispensed final grades, and students learned the nuts and bolts of archaeological fieldwork from Boston University graduate students. Ben Thomas directed the field work; Kimberly Berry ran the field laboratory; Steve Morandi taught instrument survey and mapping with a Total Station; Polly Peterson directed the cave research, and Ellie Harrison supervised excavations. Additional expertise was provided by David Buck in Global Positioning Systems and Kevin Acone, a graduate of Boston University's Metropolitan College, in archaeological illustration.

During February, fieldwork began in the upper part of the Sibun River Valley where our project headquarters was located at a working citrus farm, restaurant, and large guesthouse called Yam Wits (Mayan for "between the hills"), which is situated at the base of the spectacular Sibun Gorge. Our Belizean hosts, Joy and Rupert Smith and their family, opened their doors and their hearts to us and introduced the younger students who had not previously spent time in Belize to the true meaning of Belizean hospitality. Our beautiful mountain surroundings often were shrouded in fog, however, and the rain god, Chaak, pummeled us with precipitation during the entire month of February. Nevertheless, the crew remained stalwart. With the help of a professional surveyor, Brian Norris, the survey team completed a topographic map of the largest site in the Sibun Valley, the Hershey site. Thanks to the donation of survey software called Survcad and a field visit by one of its chief designers, Dave Carlson, we were able to create almost instantaneously a 3-D computer model of the site. As one may have guessed, the site—including a large stone pyramid over 11 m tall—is located in an orchard of chocolate (cacao) trees once owned by Hershey Foods, Inc. Situated directly on the floodplain, the site likely was surrounded by cacao trees in the distant past also. Cacao was a highly desired luxury item among the ancient Maya who favored imbibing it as a frothy drink mixed with chiles or corn meal.

While mapping and excavation efforts at the Hershey site continued, the cave team, assisted by Allan

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XARP 2001 Field Crew including students, staff, local workers, hosts, and Monkey Bay support staff.

Undergraduate field school students Tara Bermingham and Christa Cesario learn to use a Total Station to map the Hershey site.

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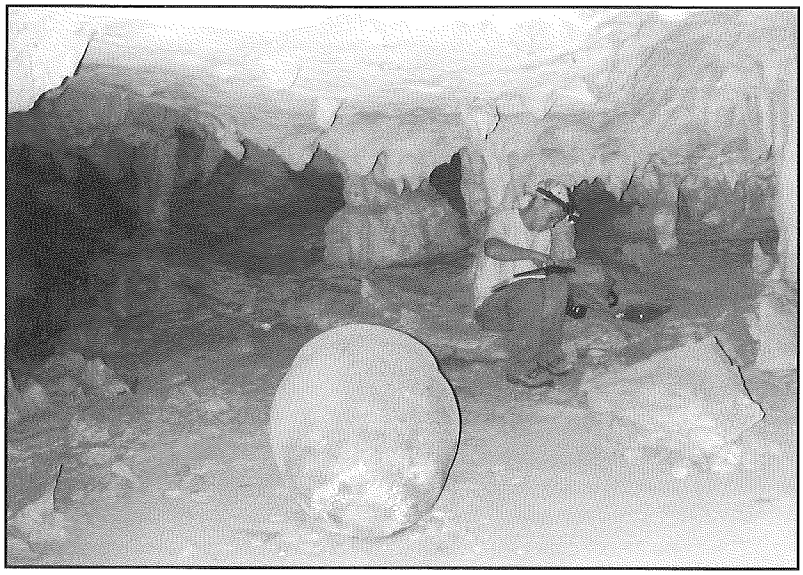
Cobb, a caver from Austin, Texas, ventured into the largest cave of the Sibun Valley. Situated high on the sidewalls of the valley and necessitating a 45-minute hike up a vertical and often muddy slope, the underground caverns of Chanona Cave are vast and awe-inspiring. The eastern mouth is framed by dripping cave formations and to many visitors resembles the fanged maw of an earth monster. To reach the completely dark interior of the cave, one passes by rimstone ponds and massive deposits of breakdown from the roof of the cave. Deep in the heart of the cave a great platform was constructed during ancient times and the blackened walls encircling the platform attest to repeated burning activities that must have filled the chamber with smoke. Here the cave team discovered fragments of a drum, a figurine of a ball-player (ball-players were associated with the Underworld), manos and metates, several complete pottery vessels, and hundreds of sherds. Historical graffiti within the cave were examined by an historical archaeologist, Dr. Daniel Finamore of Peabody Essex Museum, who sought to document post-European presence in the valley, including the whereabouts of a Spanish *visita* or chapel.

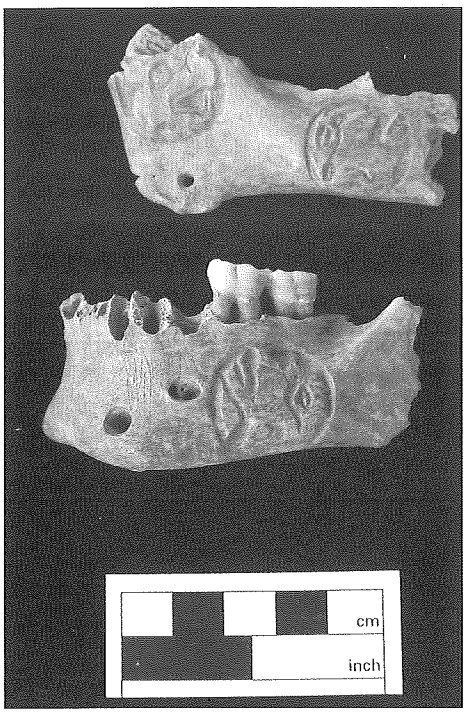
After spring break, the high-spirited and cohesive team moved camp down river to the Monkey Bay Wildlife Sanctuary, the site of previous field camps in 1997 and 1999. We had already mapped many of the settlement sites in the middle and lower reaches of the Sibun River valley and were able to concentrate on collecting information from excavation.

Previous seasons of cave research in the middle part of the valley left only the down-river Gracy Rock karst to be explored, and the cave team turned their attention to this area and to Arch Cave in particular. Toward the end of the 1999 field season, we had placed a test trench in a long linear platform at a settlement site called Pakal Na. The corner of a deep, intrusive pit containing human toe bones was discovered shortly thereafter. Shortage of time forced the closure of this unit, but we returned to complete this excavation in 2001. Without a doubt, the individual interred in this burial feature held a position of prominence in society. Although lacking an articulated cranium, three clusters of human bone were deposited around the extended postcranial remains. One cluster contained a mandible carved with animal cartouches while another contained a cranial cap, carved and drilled with an elaborate mat design. A faunal analyst, Norbert Stanchly (University College, London), identified two large canines positioned to the east of the body as those of a jaguar. Project ceramist Professor Sandra Lopez Varela (Universidad Autónoma del Estado de Morelos) identified the unusual burial vessels (shaped like an Apollo space capsule) that had been placed above the primary individual as datable to the Epiclassic period, essentially coeval with the powerful capital of Chichén Itzá, located far to the north.

Many compelling questions surround this burial interment. Did this individual lose his head in the violence of Maya warfare, or was the head removed after death so that it might be enshrined and honored? Should the associated bones be interpreted as trophies of war or secondarily re-interred ancestral bones? Continued osteological and contextual analysis, we hope, will resolve these issues. Magnetometry research undertaken at Pakal Na by graduate student Dan Welch identified an



Alleen Betzenhauser helping with vessel photography in Arch Cave.



Conjoinable fragments of a human mandible carved with animal cartouches and placed as mortuary offerings at Pakal Na.

anomaly on a small platform located directly north of the burial interment. Follow-up excavation revealed a burned clay platform abutting a magnetically neutral limestone retaining wall. The low, burned-clay surfaces at the sites of the Sibun Valley may be remnants of cacao-drying platforms.

One of the indicators of the Epiclassic period (circa A. D. 700-1000) in the Maya lowlands is the presence of circular nonresidential structures, the most famous example being the Caracol (or observatory) at Chichén Itzá. Considered to be linked to the rising prominence of the highland Mexican feathered serpent deity in his aspect as Ehecatl (wind deity), circular structures communicate the increasingly cosmopolitan character of Epiclassic Maya ritual practice. Among the sites of the Sibun Valley, circular structures take the form of small shrines nestled within major structure complexes. This season we excavated a particularly well preserved example at Structure 402 at the Samuel Oshon site. Of all the known Sibun valley sites, this site is situated closest to the Caribbean Sea. Not only had Structure 402 retained its circular form through two construction phases, but it also had served as the backdrop for two shallowly buried stelae that had been implanted in the plaza in front of the structure. The transplanted stelae and the circular structure, along with ladle censers from the Obispo site and geometric vessel forms from Pakal Na, all indicate that the Sibun Valley was thriving at a time when Classic-period capitals such as Tikal and Copan were collapsing.

We think there is a good possibility that the continued exuberance of the Sibun Valley sites and their associated ritual precincts in nearby caverns is a result of sustained production of a forest-based luxury crop—cacao—coupled with low population levels which helped to minimize local environmental impact. In order to examine this thesis, however, we had to move outside of traditional forms of archaeological inquiry—survey and excavation—and embrace the environmental sciences. Four years of funding from the National Science Foundation has provided financial support to enable such an inter-disciplinary endeavor. Scientists who joined the XARP project during the 2001 field season include soils geographer Dr. Pat Farrell (University of Minnesota, Duluth), geomorphologist Dr. Thomas F. Bullard (Desert Research Institute, Reno, Nevada), palynologist Dr. John Jones (Texas A & M University), and botanist Dr. Kirsten Tripplett (University of California, Berkeley). While Farrell examined local soils and their potential for long-term productivity, Bullard focused on the dynamic hydrology of the river and its effect on livelihood and residential location. Jones drove cores into several oxbows off the main channel (despite the ubiquitous crocodiles) in order to collect pollen from which to construct a vegetation history for the area. Tripplett collected modern plant species and spearheaded an ambitious program of water flotation to collect archaeological plant specimens. In addition to training in traditional archaeological methods, undergraduate students were able to work with the environmental specialists and to learn first-hand how disciplines outside of archaeology can provide information critical to a full understanding of the past.

With the 2001 field season now behind us, we move forward with analyses, dissertations, journal articles, and planning for the 2003 season. As the afterglow of the field season wanes, students file their photo albums on bookshelves next to vials containing their favorite tropical parasite, the beef worm.

Circular stone shrine of the Samuel Oshon site under excavation by the XARP crew. Ellie Harrison trowels behind the repositioned stela.

Patricia McAnany is an Associate Professor in the Department of Archaeology.

Lecture on Maritime Trade

Dr. Ezra Marcus of the Department of Maritime Civilizations and the Leon Recanati Institute for Maritime Studies at the University of Haifa, Israel, visited the Department and Center in April 2001 and lectured on his current research, "Maritime Trade and the Rise of Urban Culture in the Middle Bronze Age Levant."

In the Next issue....

- ☆ Faculty News and awards
- ☆Field School and Research on Menorca
- ☆ Archaeology at Aksum, Ethiopia
- ☆ Profiles of the Past by Ricardo Elia
- ☆And much more!....

CONTEXT

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Faculty and Research Appointments in the Department of Archaeology (2000-2001): Professors Clemency C. Coggins, Norman Hammond, Fred S. Kleiner, Mohammad Rafique Mughal, Curtis N. Runnels, James R. Wiseman. Professor Emeritus Creighton Gabel. Associate Professors Kathryn A. Bard, Mary C. Beaudry, Ricardo J. Elia, Paul Goldberg, Julie M. Hansen, Patricia A. McAnany, Paul E. Zimansky. Assistant Professors Murray C. McClellan, Patrick Ryan Williams. Visiting Assistant Professor Aaron Brody. Lecturer Alan Kaiser. Adjunct Professor Anna Marguerite McCann. Adjunct Associate Professor Robert E. Murowchick, Director of ICEAACH, Adjunct Assistant Professor Michael C. DiBlasi. Distinguished Research Fellow Gordon R. Willey. Post-Doctoral Fellow Michael MacKinnon. Research Fellows Mary Lee Bartlett, William K. Barnett, John Bennett, Miriam Chernoff, Lauren Cook, Tracey Cullen, Rudolph H. Dornemann, Francisco Estrada Belli, Rudolfo Fattovich, Lorinda Goodwin, Alexander Joffe, Donald Keller, Thomas W. Killion, Laura Kosakowsky, Christine Lovasz, Michele Miller, Melissa Moore, Priscilla Murray, Akim Ogundiran, George (Rip) Rapp, Nancy Seasholes, Joanna S. Smith, Elizabeth C. Stone, Thomas Tartaron, Gair Tourtellot III, Tjeerd H. van Andel, Howard Wellman, Al B. Wesolowsky, Anne Yentsch. Associated Faculty, Farouk El-Baz, Research Professor of Remote Sensing and Director of the Center for Remote Sensing; Kenneth Lapatin, Assistant Professor of Art History.

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