DIGGING HARVARD YARD

No smoking, drinking, glass-breaking—what? Far from being a puritanical haven, early Harvard College was a colorful and lively place. The first Harvard students did more than worship and study: they smoked, drank, and broke a lot of windows. None of which was allowed, except on rare occasion. In the early days, Native American and English youth also studied, side by side. Archaeological and historical records of early Harvard bring to life the experiences of our predecessors, teaching us that not only is there an untold story to be unearthed, but also, that we may learn new perspectives by reflecting on our shared history: a history that reaches beyond the university walls to local Native American communities.

The Fall 2005 course Anthropology 1130: The Archaeology of Harvard Yard brought today’s Harvard students literally in touch with the fragments of their shared past by providing hands-on experience in the historical archaeology of Harvard Yard. Twenty-four Harvard College students enrolled in the course, which was taught by William Fash, Howells director of the Peabody Museum, and Patricia Capone and Diana Loren, Peabody Museum associate curators. They were assisted by Molly Fierer-Donaldson, graduate student in Archaeology, and Christina Hodge, Peabody Museum senior curatorial assistant and graduate student in Archaeology at Boston University.

Archaeological data recovered from Harvard Yard enriches our view of the seventeenth- through nineteenth-century lives of students and faculty living in Harvard Yard. In the seventeenth century, Harvard Yard included among its four buildings the Old College, the first university building in the country, and the Harvard Indian College. The University recently commemorated the

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ALEXANDER MARSHACK ARCHIVE DONATED TO THE PEABODY MUSEUM

The Peabody Museum has received the generous donation of the photographs and papers of Alexander Marshack from his widow, Elaine.

Alexander Marshack, a self-taught anthropological researcher, pioneered the analysis of the earliest calendars and notation systems dating back more than 30,000 years. His lifelong research on Paleolithic cave art also provided evidence that early humans communicated using highly complex intellectual processes in the form of small incisions on plaques of bone dating to the Upper Paleolithic period, the latter part of the last Ice Age. Marshack's research also pointed toward the emergence of recording systems almost 20,000 years prior to the rise of

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350th anniversary of the Indian College, which was constructed in 1655 to train Native students at Harvard. Though short-lived as an institution, the legacy of the Indian College persisted, like its bricks—appropriated, fragmented, partial, and largely unrecognized, but integral to Harvard’s past, present, and future.

This field season, the class focused on two excavation areas: one at the foot of Massachusetts Hall and one near present-day Matthews Hall. Both areas are located in the oldest parts of Harvard Yard. Matthews Hall is the conjectured site of the Indian College and is near the site of the Old College. Course participants were hopeful of finding some artifacts associated with the original Indian College. Numerous historical artifacts were recovered at both sites, including ceramic plates, animal bone, glass, and smoking pipes. Objects found near Massachusetts Hall dated from the seventeenth through the nineteenth century, while the majority of objects recovered near Matthews Hall dated to the eighteenth and nineteenth centuries. Unfortunately no evidence of the Indian College came to light because of a massive refuse deposit dug into this location in the nineteenth century.

The course’s research this fall was guided by the frameworks of historical archaeology, regional history of Native American education, research design, and involved hands-on practice in surveying, archival research, stratigraphic excavations, artifact analysis, and public archaeology. All of these were carried out in the famed Yard, an area traversed by students and visitors alike on a daily basis. Thus, students obtained a broad understanding of the nature of archaeology and the relationship among archaeology, history, and the public, while contributing to our understanding of Harvard life from its earliest days. Student projects contributed to envisioning exhibitions of Harvard’s material history and creating a web site chronicling the course’s progress.

The course emphasized public archaeology, especially given the course’s relationship to the commemoration of the 350th anniversary of the Indian College. An excavation opening ceremony took place on October 3, 2005 in partnership with the Harvard University Native American Program and the Wampanoag Tribe of Gay Head (Aquinnah), and cited the project’s intentions to proceed in recognition of its many stakeholders.

Benedict Gross, dean of Harvard College, offered remarks in support of this opportunity presented to students, and Carmen Lopez, executive director of the Harvard University Native American Program, spoke of “indigenizing Veritas” and imbuing the Harvard community with the legacy of the Indian College. Furthermore, a Results Day and excavation closing ceremony gave students an opportunity to share their findings with the public. The closing event also was conducted in partnership with the Harvard University Native American Program, the Wampanoag Tribe, and descendants of the Massachusetts people. Ancestors of both these communities would have been students at the Indian College and neighbors of the community. Local officials including representatives of the Cambridge and Massachusetts Historical Commissions took part, and the efforts and cooperation of Harvard Yard Operations and Harvard University Archives were gratefully recognized.

The resulting collections have been accessioned by the Peabody Museum and are available for research and teaching. We anticipate future research and analysis on this season’s archaeological findings, as well as on material from previous excavations in Harvard Yard and intend to spotlight archaeological and historical research on the Harvard Indian College in the Peabody’s Hall of the North American Indian in late 2006. It is also our hope, in the fall of 2008, to conduct excavations on the east side of Matthews Hall, to search for the actual foundation walls of the Indian College.

Through this course and its findings, the Peabody Museum seeks to make the Harvard Indian College, in Fash’s words, “part of the living history of Harvard College.” For an illustrated glimpse of what this Fall’s project accomplished, visit the student-generated course web site at: http://www.peabody.harvard.edu/harvardyard/.

Contributed by Patricia Capone and Diana Loren, Associate Curators
In 2002, the Peabody Museum received a grant from the Institute for Museum and Library Services to support an ambitious and much-needed conservation project to stabilize and rehouse nearly 1,600 metal artifacts in the Central and South American collections. The affected artifacts were drawn from general Meso- and South American collections that are of archaeological and ethnographic significance, including precious metals from the Sacred Cenote at Chichén Itzá, and unique early silver-alloy metalwork from Panama and Peru. This article describes a small, but significant part of the larger project: 165 gold-copper alloy (tumbaga) figures, of which sixty-five were of primary concern and are the subject of this paper. The tumbaga first came to the museum ca. 1935 as new excavations along the Pan-American highway yielded fresh evidence of prehistoric cultures at several sites including Sitio Conte. The tumbaga figures are representative of metalwork dating from preconquest Panama, 1300-1500, and are indicative of a high level of technical sophistication and skilled craftsmanship.

As a result of explorations in Panama by Peabody Museum archaeologist Samuel K. Lothrop, new accessions of tumbaga figurines continued through the 1940s and 1950s. Cast in zoomorphic and anthropomorphic forms (Fig. 1) from alloyed gold and copper, the artifacts were extensively restored and mounted shortly after the collection was acquired and some time during the early 1940s, prior to being placed in exhibit cases. The unstable nature of the “modern” plastics and adhesive materials used for restoration and conservation of the objects were not well understood at that time. The pendants were on display for more than three decades until the late 1970s when they were de-installed and placed in plastic bags. Creating a confined airspace, accelerated the corrosion caused by the unstable cellulose nitrate.

The process of organizing the collection and stabilizing their condition began in 1996 with efforts to identify the constituent materials and arrest their active deterioration. Earlier storage methods presented unique problems including housings made of unsound materials such as matchboxes, cigarette boxes and peanut cans; dense packing of artifacts with little or no cushioning; and housings that limited the accessibility of the objects to researchers. The tumbaga collection became a focal point because of the obvious evidence of conservation issues related to unstable mount materials and adhesives. Treatment methods and protocol were modified several times over the course of the project as the conservators became more informed about the fragility of the tumbaga figures.

Manufacturing Techniques
Most of the tumbaga pendants have an open back, but others are hollow and could have functioned as bells or rattles. Tumbaga figures were cast using a lost-wax method (cire perdue). The form was modeled in wax including all details, while the reverse or “hollow” sides were left rough. The wax model was encased in a clay mold that was fired to bake the clay and melt the wax form, leaving a void to be filled with molten metal. Once the metal had solidified, the clay casing was broken, and the object cleaned. With each result, there was a unique and individual casting.

A process called depletion-gilding (mise-en-couleur), a gold surface-enrichment technique, modified the surface color of the objects. Treatment either with salts or acidic plant extracts to remove the base metal from the surface of the object gave the finished piece the appearance of high-purity gold. Depletion-gilding produces a well-bonded, but porous and spongy layer only a few microns thick, which was then burnished. The final surface color varied with the alloy content: higher copper content would result in a reddish color; a higher gold content, a yellowish color.

Historical Perspective and Current Condition
Non-gilded archaeological metals with a high percentage of copper survive in better condition than gilded metals in a damp burial environment. The less noble copper will also eventually corrode: the resulting corrosion products will undermine the gilding, and the thin gilded layer will eventually detach from the heavily mineralized base alloy.

Earlier experimental treatments in the 1930s and 1940s for copper alloy artifacts at the Peabody Museum...
followed procedures that were in common use at the time. A Fogg Museum materials scientist, Rutherford Getten, prescribed methods for cleaning bronze antiquities using solutions of sodium sesqui-carbonate. Another treatment for removing extraneous burial accretions was sodium hexametaphosphate (Calgan), referred to by Frederick Orchard, Peabody Museum restorer, in a 1938 communication to curator H.J. Spinden at the Brooklyn Museum: “The thin plated copper objects [tumbaga] were boiled in Calgon to remove all possible corrosion.” The entire artifact was then, according to Orchard, “dipped into a 5% solution of Alvar 7-70 in acetone.” The same product in a higher concentration was used for reattaching extant fragments and affixing the figurines to the mounts. Joins were often reinforced with cellulose nitrate strips. During the recent condition assessment, we found that the heavily applied Alvar resin had turned deep yellow to brown in color and had shrunk, resulting in a mechanical “pulling away” of the original gilding from the base metal (Fig. 2).

Over time, the Alvar had become increasingly brittle and less soluble in organic solvents.

Most of the tumbaga were glued to celluloid (cellulose nitrate) mounts. Wax, plaster, and possibly cellulose acetate were also used, but infrequently. The condition of those figurines adhered to the celluloid mounts was of primary concern. Cellulose nitrate is inherently unstable; it deteriorates over time regardless of environmental conditions, controlled or uncontrolled. Negative byproducts released by degrading cellulose nitrate include nitrous and nitric acid, that, when combined with high humidity, react with copper alloys to form bright blue-green basic copper-nitrate salts. Typical characteristics of cellulose-nitrate deterioration include dimensional change, warping, embrittlement, cracking, sticking, and color change.

Since the mid-1970s, when the tumbagas were taken off exhibit and placed in polyethylene bags for storage (Fig. 3), they had been trapped in a micro-environment subject to acid off-gassing from the celluloid mounts. Corrosion of the alloy was more prominent at points in contact with the aging celluloid mounts. There were many breaks where the celluloid sheet had warped, and the brittle metal had failed at stress points (Fig. 4).

A Conservation Strategy
In 1996, a pilot research project to determine an appropriate conservation strategy for the collection focused on several tumbaga figurines. A protocol of treatment was established to address seven goals:
1. removal of the artifacts from the destructive celluloid mounts,
2. reversal of excessive coatings and adhesives as possible,
3. reduction of nitrate corrosion,
4. reattachment of extant fragments,
5. reclaiming of detached gilding from the old mounts and re-adhesion to the artifacts,
6. consolidation of friable core material and delaminating gilding, and
7. preparation of individual housings to provide safer access for researchers.

The first action was to remove the objects from their encapsulating plastic bags, slowing the rate of corrosion. Then, corrosion products and support material were examined and identi-
Gold was one of the most important "riches of the Indies" sought by early European explorers and conquerors in the New World. It is well known how peoples from modern Mexico through Peru fed the foreigner's appetite for the precious metal. Cortés told Moctezuma's envoys that the Spanish suffered from a disease that only gold could cure. In Peru, the Inca emperor, Atahualpa reached high in a room in the city of Cajamarca and told Pizarro that he would fill the chamber with gold if he were released from captivity. In these lands, temples were stripped of gold sheets, and precious ornaments were brought to the Spanish who melted most of them down to be recast in ingots. Only a few pieces were saved as curiosities from the crucibles.

Although tales of gold fill accounts of the Spanish conquests of the Aztecs and Incas, for these peoples, gold was important, but for neither was it the most precious substance. Instead, green jade, the color of growing maize plants, held the highest value in Mexico, while beautifully made textiles and a red-colored shell, *spondylus princeps*, were both considered more valuable than gold in Peru. And while the greatest amount of gold production in the sixteenth century may well have been in the Andes, it was in the region between central South America and Mexico that gold was ubiquitous.

The region that today comprises the modern nation states of Colombia, Panama, Costa Rica, Nicaragua, and most of El Salvador and Honduras is known as the Intermediate Area. Despite the rather awkward designation, it was here that Ancient America's "kingdoms of gold" truly existed. In Colombia, the highest chief was coated in a resin, which was then covered in gold dust. Ferried to the center of a lake inside an extinct volcano, he would dive into the water, to emerge, gold-free as an offering to the gods. Thus was born the legend of El Dorado, "the golden-one."

During his fourth (1502–1504) and final voyage to the New World, Columbus sailed down the Caribbean coastline from Honduras to Panama. In one region, he saw so many people—young, old, male, and female—with gold jewelry that he named the land the "rich coast," and Costa Rica retains the name to this day.

The objects that those people were wearing almost certainly resembled the ornaments in the Peabody Museum collections that Scott Fulton and Sylvia Keochakian have recently restored. As they note, the technical skill with which such objects were made was impressive. The lost-wax casting procedure was complex and required great skill to be successful. It also required the pooling of many different resources, from the special wax to make the models of the cast jewelry, to the clays for covering the wax model, to the gold and alloy metals that would be melted and poured into the molds.

The technology of the casting process required a complex organization of labor. In these societies, sometimes known as chieftoms, it is likely that the secrets of gold casting were held by relatively few people, perhaps chiefs themselves, or members of their elite families. In addition to the technological aspects, however, there was also the symbolic role of gold as a special, even divine, substance.

None of the societies of Ancient America had monetary systems. The preciousness of gold was tied to its symbolic value as a material that did not degrade, that was malleable and fluid yet could be hardened, and that was distinctive in scent. The yellow color we associate with gold was probably less important than its general luminosity, which partook of the power of the sun. The concept of light as a conveyor of cosmic energy was a

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**Reducing Corrosion**

X-ray diffraction analysis conducted at the Department of Earth and Planetary Sciences, Harvard University, first identified the blue-green corrosion as basic copper-nitrate salts mixed with copper carbonates. Corrosion was locally treated by combining mechanical and chemical treatment methods. To keep disruption of the gilded surface to a minimum, a dilute formic acid was combined with synthetic gel materials for better control in application to the surface and to limit the acid's contact with the metal surface. Areas of corro-

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**Figure 5: Reclaiming gilding from old celluloid mount. PM 39-90-20/6462.**

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**Kingdoms of Gold**

Jeffrey Quilter

Deputy Director, Curatorial Affairs, and Curator Intermediate Area

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Reconstruction and Reclamation
Extant fragments were reattached and flaking gilding and brittle core material were consolidated with acrylic resins to improve strength and integrity. Some joins were reinforced on the reverse side of the gilding with a backing strip of sheer nylon fabric (Cerex) adhered over the break edge. Gilding material that had become detached from the core material was reclaimed from the mount and reattached to the figurine (Fig. 5). In preparation for reattaching the gilding, sheer nylon fabric was temporarily adhered with methylcellulose to the reverse side of the gilding. The mount with the gilding was placed in an acetone chamber for about 12 hours. An island around the gilding was cut out of the softened mount and placed into an acetone bath for several hours to dissolve remaining mount material. Excess fabric material was then cut away and the backed gilding fragment was positioned and reattached with Paraloid B72 over the area of loss.

Storage Mounts
After stabilization and treatment, the tumbaga were placed on custom-made mounts of archival corrugated board and nested in position between inert polyethylene foam bumpers (Fig. 6). If extant fragments or gilding could not be reattached, they were stored in vials, labeled accordingly and stored with the artifact on the same mount. Condition and treatment reports were entered into the Peabody Museum's relational database while the artifacts were returned, in new housings, to collections storage (Fig. 7b).

All of the Peabody Museum tumbaga artifacts have now been stabilized, repaired, and returned in new housing to storage; the entire Latin American metals collection is now safely open to future analysis and study.

Acknowledgements
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- Institute for Museum and Library Services;
- Straus Conservation and Analytical Lab, Fogg Art Museum, Harvard University;
- Department of Earth and Planetary Sciences, Harvard University.

Bibliography


Figure 6: New storage mounts. PM39-90-20/6465.

Figure 7: Before and after images of tumbaga tray storage.
widespread notion in the ideologies of New World peoples. The majority of gold objects usually have some alloy in them, partly to prevent the metal from being too soft and therefore easily bent or damaged. Gold-copper alloy is sometimes known as *tumbaga*, a Philippine word adopted by the Spanish. Among the Taino of the Caribbean, the alloy was called *guanin* (pronounced gwan-ineen). As Columbus sailed down the coast he complained that the first peoples he met had gold of low quality, due to its high copper content. In more southern areas, which he named the “rich coast,” he found peoples with higher grade gold. But the first peoples he met may not have thought of their gold as lesser quality.

One theory for the use of gold-copper alloy suggests that the process was not intended to dilute the gold with a baser material but, rather, to enhance the copper with the “essence” of gold running throughout the cast object. But there also is evidence that such alloys were valued as much or even more than higher-grade gold objects in many places.

The percentages of copper in alloys of various peoples of the New World were not apparently tied to the relative availability of gold versus copper. Rather, early historic accounts suggest that gold alloys with high-copper content (sometimes referred to as “red gold” because of its darker color) were highly prized in some places, because of the distinctive scent emitted by the metal. While Europeans thought of gold primarily for its monetary value and secondarily for its power as incorruptible and unchanging, New World peoples appreciated gold more for its tactile and olfactory qualities when alloyed with copper.

Currently, the earliest evidence for metallurgy in the New World is in coastal Peru, dating to some time between 1400 and 1100 B.C.E. The technology appears to have gradually spread northward, reaching the Intermediate Area somewhat before C.E. 700. Although gold working arrived late, it became popular very quickly. It is likely that, at first, only high-ranking chiefs could wear precious metal ornaments. By the time of Columbus’s visit, however, in some societies, everyone could wear gold, although there were probably differences between rich and poor in the quantities and perhaps the ornamentation that could be worn.

Other than the shininess of the metal itself, the most striking aspects of these objects to modern eyes are the representations of animals and other creatures in these miniature works of art. The symbolism of these objects is perhaps the most intriguing aspect in their study and also the most difficult to understand. In the earliest gold objects from Colombia and southern Central America, there is a widespread common suite of objects and images, including bells and animals such as long-tailed felines, frogs, and other creatures. Later, regional styles developed of which we still know very little. Many of the images consist of composite animals, especially raptorial birds and bats, which likely combined various powers desired by chiefs. Other animals, such as frogs and toads were references to rain and therefore fertility, while anthropomorphic figures depicted gods or mythic heroes of whom we know very little.

Safeguarding, conserving, and preserving collections such as those in the Peabody Museum ensures that future study of such objects will inform us regarding many aspects of the peoples who made them, from technology, to social systems, to aesthetic preferences, to religious concepts. Gold still holds its fascination, but in scholarly pursuits its riches are much more than monetary.

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*TUMBAGA continued from p. 6*

Orchard, F. 1938. Correspondence with Brookline Museums related to use of “Calgon” for corroded copper alloy. Unpublished typescript from archives, UAV 677.62, Box 4, Peabody Museum of Archaeology and Ethnology, Cambridge, MA.


During the first half of the twentieth century, several institutions undertook large-scale excavations of archaeological sites throughout Central America and Mexico. In addition to leading efforts by the Peabody Museum and the University of Pennsylvania, the Carnegie Institution of Washington (CIW) sponsored excavations at nearly 1,000 archaeological sites for over thirty years. These excavations were supervised by notable archaeologists such as Alfred Kidder, Sylvanus Morley, Harry Pollock, Eric Thompson, Ledyard Smith, Edwin Shook, and Tatiana Proskouriakoff. When CIW closed its anthropology division in 1958, the Peabody Museum acquired the archival records of their excavations, including over 50,000 black-and-white negatives and photographs.

Many of these photographs show the archaeological sites before, during, and after excavations. Contemporary researchers use the images to reconstruct the extent of previous excavations as well as evaluate earlier conditions of the sites. Until recently, access to this important collection of photographs was limited to researchers who could spend days or weeks literally browsing though file-cabinets full of pasted-up photo boards in the Peabody Museum archives.

The Peabody Museum recently completed a four-year cataloging and digitization project sponsored by the Harvard University Library Digital Initiative. During the initial phase of this project, collections staff created 50,000 catalog records in the museum's database, using the old paper catalog cards. Staff subsequently digitized and processed over 40,000 photographs, added enhanced descriptive data, and linked all the information to the database records. The majority of the images came from a series of 35 mm copy-positive projection films which were digitized by a local contactor, Boston Photographic, Inc. Since copy-positive film does not exist for all 50,000 photographs, museum staff are currently using digital cameras to photograph some 15,000 remaining prints that are mounted on photo boards and stored in the Peabody's photo archives.

The processed images are now available on-line at both the Peabody Museum's Collections Online website (www.peabody.harvard.edu/col/default.cfm) and the Harvard University Library Visual Information Access database. In addition to providing a preview-quality image to the general public, researchers who request a password can access the high-resolution images that support zooming and cropping functionality.

Contributed by David Schafer, Senior Collections Manager
During the last two years I have been involved in two field operations at opposite ends of Asia: Kotias Klde in the western region of the Republic of Georgia, and Yuchanyan cave at the southern end of the Yangtze River basin, in Hunan Province, PRC. Both projects, we hope, will enhance our understanding of the transition from hunter/gatherer to early farming societies.

Excavations at Kotias Klde are yielding information on how and when the agro-pastoral economy of the Neolithic Revolution spread from the core area in southeastern Turkey or eastern Anatolia, eastward to the Black Sea area. Kotias Klde cave is located in the rolling limestone plateau of the Caucasus foothills, some 700 m above sea level. The full stratigraphic sequence inside the cave has not been fully recovered. The lowest exposed level is an early Upper Paleolithic deposit, overlaid by a Mesolithic layer followed by a stratigraphic break and a series of Pottery Neolithic occupations on top.

Although the Upper Paleolithic deposit is not yet dated, the lithic industry is characterized by carinated cores from which delicate bladelets were removed. This kind of assemblage is similar to a complex of layers uncovered by our earlier excavations (1996–2003) at Dzudzuana cave, some 10 km north as the crow flies. The radiocarbon dates from Dzudzuana for this industry cluster around 23,000 cal B.P.

The Mesolithic layer is rich in scaplen triangles (microliths that possibly served as hafted darts), imported obsidian blades, small limestone beads, and bone objects. The first four radiocarbon dates indicate an age of ca. 12,000–10,500 cal B.P. This layer was partly disturbed by a Neolithic grave, containing the skeleton of a tall man. The morphological attributes of this fossil are currently being recorded by Dr. Tea Diashashvili, Georgian State Museum, and compared to several rare Pottery Neolithic skeletons found at other Georgian sites.

The Pottery Neolithic deposits preserved a pit-house dug inside the cave, and its fill contained shards and lithics. The most frequent lithic type found there is the transverse (trapezoid-shaped) projectile point and a special type of denticulate, an evenly serrated flake. There were also a few obsidian blades and a “bullet core,” a type of core from which blades were removed by pressure flaking that characterizes the early Neolithic of Western Iran. The animal bones—studied by Dr. Guy Bar-Oz, Haifa University—do not indicate a major change. The hunting of roe deer, red deer, and in particular wild boar continued from the Upper Paleolithic through the Pottery Neolithic. It seems that even if the later occupants were farmers, they originally came to this area as hunters. Farmers as hunters is a well-known phenomenon in Western Asia and elsewhere.

Moving from west to east, the Yuchanyan cave project focuses on determining the possible origin of rice exploitation and eventual cultivation in eastern Asia. According to a currently accepted model, proposed by Prof. W. Yan of Beijing University, it seems that during the Late Pleistocene wild rice grew in the southern reaches of the Yangtze basin. To test this hypothesis, Prof. J. Yuan, director of the Hunan Institute of Archaeology, conducted excavations in 1993 and 1995 at Yuchanyan cave, DaoXian county, Hunan province. Among the rich faunal and artifact assemblages, he found a few rice seeds and rice phytoliths. Ashy deposits in the cave produced a few radiocarbon dates that cluster around 16,000 cal B.P.

The new project aimed to conduct a meticulous study of the cave’s complex stratigraphy. This was done through the collection of hundreds of samples for mineralogical analysis and blocks of sediments for producing thin sections for microscopic examination, known as micromorphology. Micromorphology was originally used by soil scientists to uncover the microscopic composition of soils. It was adopted some thirty years ago to study deposits at archaeological sites. Both mineralogy and micromorphology reveal the microscopic structure and degree of integrity of the stratigraphy of each layer and facilitate tracing residues of charcoal, phytoliths, and seeds. The results obtained after the 2004 season enabled us to improve the selection of the best charcoal samples for radiocarbon Accelerator Mass Spectrometry dating. The newly obtained dates, to be published soon, confirm that the age of the two pots found previously by Prof. Yuan at the site, date to around 16,000–15,000 years ago. In addition, an average date of 14,000 cal B.P. was obtained for the upper portion of the exposed layers.

During the field work in Yuchanyan cave, a series of fire experiments showed that most of the ash lenses inside the cave resulted from the use of wood as the main combustible. A few carbonized seeds of rice retrieved through systematic flotation will be dated soon. The large collection of animal bones found is currently being studied by M. Prendergast, a graduate student at Harvard, and Prof. Yuan. During the last season (November 2005), we had the pleasure of a long visit by Prof. W. Yan, who serves as the overall supervisor of the project. After making his own inspection of the site and discussing the findings with the team, he concluded by encouraging us to continue.
The Moche and the Weekend of the Americas Programs
The museum opened three new exhibitions this past year. The first in October, highlighted the museum's excellent ceramic collections from the Moche culture of ancient Peru. Contemporary with the Maya of Mexico and Central America, the Moche are less known in the United States. The Moche of Ancient Peru explores Moche artistic achievements and their cultural and cosmological meanings, as understood from the extant ceramics, textiles, murals, and metal artifacts. Some 100 ceramic, textile, and metal artifacts will remain on display through September 2007.

The museum continued its exploration of the Moche culture with its annual Weekend of the Americas program and the Founder's Lecture. Seven distinguished scholars presented papers on the Moche and their contemporaries, the Maya, in a public program on October 22 at the Peabody Museum. The weekend program investigated aspects of the art and communication, warfare, and politics of these two societies. As the Peabody's 2006 Founder's Lecturer, Christopher Donnan, professor of anthropology at UCLA, presented an analysis of Moche portrait vessels, convincingly demonstrating that many of the ceramics portrayed real individuals.

A Noble Pursuit
The Peabody Museum, with Tozzer Library, opened its second exhibition based on a new publication from the Peabody Museum Press. The exhibition highlighted thirty-four objects from the Duchess of Mecklenburg collection, the largest collection of excavated European Iron Age (800 B.C.–A.D. 1) objects located outside of Europe. The exhibition is based on the Peabody Museum Collections Series volume A Noble Pursuit by Gloria Polizzotti Greis. The volume and exhibition were both supported in part by the Rendell-Marcus Fund for the Conservation of Slavic Artifacts.

The Korean War in Photographs
In February, the museum opened an exhibition of the work of Roger Marshutz, Reconfiguring Korea, taken during his service in the U.S. military during the Korean war, 1952–1954, where he was assigned to cover Brigadier General Richard S. Whitcomb, commander of the 24th Korea Base Section Pusan Military Post, who was charged with Pusan's reconstruction. Whitcomb ran the local Armed Forces Assistance to Korea and other civic action programs intended to foster good relations with the Korean population and improve the image of the U.S. military. In addition to photographing these U.S. programs, Marshutz wandered the streets of Pusan in his spare time, photographing Korean civilians and their daily life in the city, from street vendors and school children to refugees and prostitutes. Sixty-four black-and-white and color photographs will be on display through September 2006. A lecture by Prof. Hyung Gu Lynn of the University of British Columbia discussed the Marshutz photographs and photography in modern Korean history. The Harvard Film Archive also worked with the Peabody's curators to offer a slate of Korean and American films about the Korean war in March 2006.
PEABODY MUSEUM 2005–2006 EXHIBITIONS AND EVENTS: Highlights

Visitors inspecting one of the altars built for this year’s Day of the Dead. Photos by Jose Falconi.

Dia de los Muertos
The Peabody Museum continued its tradition of celebrating Dia de los Muertos, the Day of the Dead in collaboration with the Consulate of Mexico in Boston. This year, the museum invited Mexican Artist Eric Estrada Gasca of Mexico City to build two altars in the museum’s third-floor galleries. The altars were dedicated to the victims of the many natural disasters of 2005, from Indonesia to New Orleans to Pakistan. The altars were installed for the festivities on November 2, accompanied by traditional marimba music, played by Berklee College students. The event was attended by some 500 students, faculty, and community members. The altars remained on display throughout the month of November.

Marimba music added to the event’s festive atmosphere. Photos by Jose Falconi.

Harvard Museums Host the American Association of Museums
The year 2006 marked the 100th anniversary of the American Association of Museums. During the annual meeting held in Boston, Harvard’s six museums and the Collection of Historic Scientific Instruments invited 600 conference attendees to an open house and dinner on April 30. Guests received a passport granting them access to all venues, where they were treated to varied, multicultural fare, and galleries and treasures galore to peruse.

MARSHACK continued from p. 1
agrarian societies. A skilled journalist and photographer, Marshack developed a method of photography that utilized high-powered microscopes and ultraviolet light to uncover and decipher previously obscured cave paintings. Throughout his life, Marshack traveled the globe to study cave paintings and Paleolithic artifacts in situ and in museum collections. These studies are documented in his epic volume, The Roots of Civilization (McGraw Hill, 1972) and numerous published papers.

Archaeologist and former Harvard faculty member, Hallam L. Movius, appointed Mr. Marshack an honorary Research Fellow at the Peabody Museum in 1966, establishing a long and distinguished association with the museum. Marshack’s field research was supported in part by the American School of Prehistoric Research.

The Marshack collection contains the corpus of Marshack’s research highlighting topics in Paleolithic art ranging from animals to sorcery found in cave paintings and on incised slabs and figurines from open-air archaeological sites in Africa, Europe, the Middle East, and the Americas. The collection includes approximately 20,000 slides and twelve cubic feet of papers. Under the direction of India Spartz, Peabody Museum senior archivist, Güner Coskunsu, Ph.D. student in the Harvard Anthropology Department is processing the slides and photos. In addition, Sarah Bertovich, intern from the Simmons School of Library and Information Science, is sorting and preparing an inventory of the Marshack papers. The museum estimates that the collection will be available to researchers in fall 2006 and may be found under the museum catalogue number 2005.16.

Contributed by India Spartz, Senior Archivist

Lascaux Cave, France. PM 2005.16.57.51. Photo by Alexander Marshack.
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continue the search for early rice exploitation and possible cultivation in other caves of this region.

There is as yet no one model that adequately explains the most important step in human evolution, namely, the emergence of agriculture. While the data sets from southwestern Asia are currently larger than those from eastern Asia, the result of many more years of field and laboratory research, the new excavation and analytical techniques may considerably shorten the time needed to obtain comparable information from the sites in eastern Asia. This will facilitate the testing of alternative behavioral models of how local foragers became the first farmers in both regions.

The excavation of Kotias Kilde cave in western Georgia is a joint endeavor with Dr. Meshveliani, Georgian State Museum, Tbilisi, and Prof. A. Belfer-Cohen, Institute of Archaeology, Hebrew University, Jerusalem, with the participation of Nino Djakeli, Georgian State Museum, Dr. G. Bar-Oz, Institute of Archaeology, University of Haifa, and Z. Matskevich, graduate student at Harvard University.

The Yuchanyan cave Project is being conducted with the participation of Profs. W. Zang, S. Li, X. Wu, and Prof. Xia from Beijing University; Prof. S. Weiner and Dr. E. Boaretto, the Weizmann Institute of Science, Israel; Prof. P. Goldberg, Boston University; Dr. T. Jiao, Bishop Museum, Hawaii, and Dr. D. Cohen (Boston University), as well as several Chinese and American graduate students.

Stairways to Immortality: Ancestors, Heroes, and Warriors

The Peabody Museum Weekend of the Americas

Friday, October 13 – Sunday, October 15, 2006

Lectures Tours Workshops

For Information or to Register:
tel.: 617-495-2269, email: linardos@fas.harvard.edu, or web: www.peabody.harvard.edu/weekend.html


Appointments
Barbara Fash was appointed Director of the Corpus of Maya Hieroglyphic Inscriptions in September 2005. Barbara Fash has worked with illustration, restoration, and conservation of Maya monuments for nearly thirty years. She co-directs the Copán Mosaics Project with William L. Fash, directed the Hieroglyphic Stairway Conservation and Replica Project (1997–2000), the Project for Computerization of the Research Library and Archives at Copán’s Regional Center for Archaeological Investigation (1999–2001), and has conceived, designed and installed the exhibitions in the Copán Sculpture Museum (1993–96). She has been a research associate at the Peabody Museum since 1995 and director of the Mesoamerican Laboratory since 1998. The Corpus of Maya Hieroglyphic Inscriptions project aims to document and publish all the inscribed monuments of the Maya civilization. Scattered throughout southern Mexico, Guatemala, Honduras, and Belize, these many thousands of monuments are endangered and their inscriptions quickly disappearing because of acid rain, erosion, vandalism, and looting. Over the past thirty-five years, the Corpus has published over 700 monument inscriptions in eighteen folio volumes and discovered and documented new monuments and even entire Maya cities. Barbara Fash succeeds the founder of the Corpus project, Ian Graham, who retired last year.

Staff Activities
Esther Chao, Conservator, was invited by the National Palace Museum (NPM), Taipei, Taiwan to participate in that museum’s Scholarly Exchange Program in November 2005. The purpose of this program is to promote scholarly exchange between the National Palace Museum and academic and cultural institutions abroad. During her visit, she gave two public lectures and conducted several group discussions and workshops with the NPM’s Department of Conservation. Her topics concerned storage and display mounts for museum objects and environmental monitoring of museum collections.

Jeffrey Quilter, Deputy Director for Curatorial Affairs, received funding from the National Science Foundation and National Endowment for the Humanities for archaeological field work at the site of Sta. Magdalena de Cao Viejo, a sixteenth-century Spanish Church Complex and Indian Resettlement (Reducción) in the Chicama Valley, Peru.

David Schafer, Senior Collections Manager, worked at the archaeological site of Xaltocan, Mexico, a post-Classic (Aztec) period site north of Mexico City. The excavation is directed by Elizabeth Brumfiel, Northwestern University. Future plans at this site include the creation of a municipal archaeological museum featuring the results of two decades of fieldwork in the town.

Museum Grants and Awards
The Peabody Museum received two grant awards in Spring 2006, both from the National Endowment for the Humanities. The first, from the Preservation and Access Division of NEH, will support the digitizing of a core collection of nineteenth-century photographs. The second, from the Education Division of NEH, will support consultations in preparation for the reevaluation and subsequent reinstallation of the Hall of the North American Indian.

Departures
Rebecca Chetham, Deputy Director, will depart the museum at the end of the summer for a new position as the Director of Administration in the Department of Organismic and Evolutionary Biology and Affiliated Institutions (Museum of Comparative Zoology, Harvard University Herbaria, and Harvard Museum of Natural History) after eleven years with Peabody Museum. Becky Chetham joined the museum staff in 1995 as Assistant Director and was promoted to her current position as Deputy Director in 2003.
The Council of the British Academy named Ofer Bar-Yosef, George Grant MacCurdy and Janet G. B. MacCurdy Professor of Prehistoric Archaeology, a Corresponding Fellow of the British Academy on July 29, 2005. Election to the fellowship is the highest honor awarded by the Academy in recognition of scholarly distinction.

David Carrasco, Neil L. Rudenstine Professor for the Study of Latin America, was on sabbatical this year. His sabbatical research focused on the indigenous religious practices and sacred architecture as narrated in Bernal Díaz del Castillo's five-volume *True History of the Conquest of Mexico*. In the spring of 2005, Carrasco delivered the Americo Paredes Lecture at the University of Texas, Austin on Mexican American art and Precolumbian mythology.

Peter T. Ellison, John Cowles Professor of Anthropology, was on sabbatical this year after completing eleven years as associate dean of the faculty and dean of GSAS. His work this year focused on developing some new laboratory techniques and exploring new research possibilities in the Arctic. Ellison was also honored with selection as a fellow in the National Academy of Sciences.

Engseng Ho, Frederick S. Danzinger Associate Professor, spent summer 2005 visiting Arab-Islamic graves in Gujarat, Malabar, Java, and West Borneo. His research focuses on the revival of Malay-Arab-Bugis sul­tanates from Pontianak to Sambas in Borneo, and Arab-Chinese friendships in the region. In December, Ho delivered the Koentjaraningrat Memorial Lecture in Indonesia in honor of the founding figure of anthropology in that country.

Rowan Flad, Assistant Professor of Anthropology, conducted brief exploratory fieldwork during the summer of 2005 in Shandong and Gansu provinces in China in addition to finalizing preparations for a long-term survey project in the Chengdu Plain of Sichuan province in collaboration with scholars from Peking University, the Chengdu City Institute of Archaeology, Washington University in St. Louis, UCLA, and Taiwan National University. Initial fieldwork was conducted during the 2005-2006 Winter Break. Recent field research has been supported by the American Philosophical Society and the Asia Center at Harvard University.

Michael Herzfeld, Professor of Anthropology, was awarded an honorary doctorate at the Université Libre de Bruxelles, Belgium.

Arthur Kleinman, Esther and Sidney Rabb Professor of Anthropology and Chair of the Department, is principal investigator on an NSF grant with health economists William Hsiao and Winnie Yip for field research on the impact of economic change and social capital on health outcomes of people in rural villages in Shandong province, China. He continues as a member of the Advisory Council of the Fogarty International Center, National Institutes of Health.

C. C. Lamberg-Karlovsky, Stephen Phillips Professor of Archaeology and Ethnology, is currently conducting excavations in Central Asia and exploring opportunities for collaboration in the ongoing excavations at Mahram Bilquis in Yemen.

Daniel E. Lieberman, Professor of Anthropology, received grants from the National Science Foundation for research into head stabilization during running and from the L.S.B. Leakey Foundation for research (with David Raichlen) on energetics and the evolution of bipedalism.

Lucien Taylor, Assistant Professor of Visual and Environmental Studies and of Anthropology, together with Ilisa Barbash, Associate Curator of Visual Anthropology, Peabody Museum, are working on a long term, multi-part ethnographic film project about the lifeworld of sheepherders in the American West, concentrating on the ranchers' and herders' hybrid 'naturecultures'. One sequence, "In the Jug," was screened at Amherst in November and at the Dublin Institute of Technology in December.

Jason Ur, Assistant Professor of Anthropology, spent the late summer in northeastern Syria, where he is documenting the history of settlement at Tell Brak, the largest city of northern Mesopotamia in the 4th millennium B.C.

Richard Wrangham, Ruth B. Moore Professor of Biological Anthropology, was named Harvard College Professor this year, an honor recognizing distinguished contributions to undergraduate teaching at Harvard. The five-year appointment provides support for professional development.

Obituary
William W. Howells (Harvard ’30), emeritus professor of anthropology at Harvard, was a leading physical anthropologist who undertook pioneering studies in human cranial variation and the analytical use of multivariate statistical techniques, establishing that modern humans are one species. Howells died on December 20, 2005 at the age of 97. He is survived by two children, Gurdon Metz of Manhattan and William Dean Howells of Washington, D.C., four grandchildren and five great-grandchildren.
NEW IN 2006–2007

Michael Rockefeller: New Guinea Photographs, 1961
Opens November 15, 2006

Next fall, the Peabody Museum will present the first solo show of the photographs of the late Michael Rockefeller. These black-and-white photographs were chosen from the 117 rolls of black-and-white film (approximately 3,500 images) taken during the year that Rockefeller was a member of the Peabody Museum’s New Guinea Expedition. The photographs document the life of the Dani people dwelling in the Baliem Valley, high in the mountains of Netherlands New Guinea, today Irian Jaya, Indonesia. In addition to their rich documentary content, these photographs reveal much about the sensibility behind the camera. Many of the photographs in the exhibition are vintage prints made in the early nineteen sixties. A few of the photographs were published in the volume about the expedition Gardens of War, by Robert G. Gardner (Random House, 1968), but most have never before been published or publicly displayed. This exhibition also celebrates the 40th anniversary of the Michael C. Rockefeller Memorial Fellowship which funds Harvard College graduates to develop their understanding of themselves and their world through involvement with people of a culture not their own.

Vanished Kingdoms: A Woman Explorer in Tibet, China, and Mongolia
Opens April 11, 2007

In spring 2007, the museum will host Vanished Kingdoms, an exhibition of thirty-nine compelling color images of rare colored lantern slides taken by two young Americans, Janet E. and Frederick R. Wulsin, Jr., now in the collections of the Peabody Museum. In March 1923, the Wulsins launched a nine-month Central China Expedition, sponsored by the National Geographic Society. Their assignment was to photograph the people and places of Inner Mongolia and Gansu and Qinghai provinces, where National Geographic Society photographers had never been. During their journey, Frederick established himself as a cultural anthropologist, and Janet came into her own as an explorer. Together, they became accomplished photographers with keen eyes for detail, composition, and mood.

This traveling exhibition was developed by Janet Wulsin’s daughter, Mabel H. Cabot, and organized by the Peabody Essex Museum in conjunction with the Peabody Museum of Archaeology and Ethnology, and the Aperture Foundation.
In April 2006, Painted by a Distant Hand: Mimbres Pottery of the American Southwest by Steven A. LeBlanc, the museum’s Director of Collections, was awarded first place in the New England Museum Association’s Book Prize Design Contest. The award for the third volume in the Press’s Peabody Museum Collections Series recognized Joan K. O’Donnell, project director for the museum, and freelance book designer Tina Kachele of Kristina Kachele Design, Inc.

An announcement of the book award will appear in the summer issue of NemaNews, and the book will be exhibited in November at the association’s annual conference in Cromwell, Connecticut.

Recent Publications
A Noble Pursuit: The Duchess of Mecklenburg Collection from Iron Age Slovenia, the fourth and most recent volume in the collections series exhibition, was launched in April with an exhibit, lecture, and book signing at the museum. Author Gloria Greis spoke about the fascinating life and career of the duchess, a pioneering woman archaeologist in the early years of the twentieth century. Greis and retired museum photographer Steve Burger signed copies of their book at the opening of the exhibit, currently on view in the Tozzer Library Gallery.

The Peabody Press has also begun publication of a series of facsimile reprints of classic volumes in the museum’s Papers series. The hardcover volumes—which so far include Harriet and Burton Cosgrove’s The Swarts Ruin, a catalog of Mimbres pottery designs from that site originally published in 1932, and Watson Smith’s Kiva Mural Decorations of Awatovi and Kawaika-a (1952)—faithfully reproduce the black-and-white and color illustrations of the originals.

Peabody Museum Press books are now marketed and distributed by Harvard University Press (800-405-1619; orders@trilliteral.org).

Book Prize
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