Figure 1. E Bo Tai, the Mound of E Bo, legendary location of the Lord of E, in charge of the Fire Star Calendar for Emperor Yao. City Shang is said to be E Bo’s old city site. (Photo by Robert Murowchick)

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William and Muriel Howells Endow Peabody Museum Directorship
Rubie Watson Appointed First Incumbent

Harvard alumnus and Professor Emeritus William White Howells '30, PhD '34, and Muriel Seabury Howells have endowed the directorship of the Peabody Museum of Archaeology and Ethnology. Rubie S. Watson has been appointed the first Howells Director.

"I am enormously grateful to Professor and Mrs. Howells for their generosity in endowing the directorship of the Peabody Museum, whose affiliated faculty over the past century have made monumental contributions to anthropology, both through their research and through their training of young anthropologists," said Dean of the Faculty of Arts and Sciences Jeremy R. Knowles. "With this endowment, we shall be able in perpetuity to attract outstanding scholars to guide the Museum. How fitting that Harvard can thus honor one of its own most distinguished anthropologists, William W. Howells."

Since its founding in 1866, the Peabody Museum has ranked as a leader in advancing the field of anthropology. According to David Pilbeam, who served as the Museum's director from 1990 until 1996 and is now curator of paleoanthropology and Henry Ford II Professor of the Social Sciences, the faculty affiliated with the Peabody and the Department of Anthropology have made—and continue to make—significant contributions to our understanding of human evolution and humanity.

"Early anthropologists such as Alfred Tozzer, Roland B. Dixon, and Earnest Hooton used the Museum’s collections extensively for their research, and continually strengthened the collections with items found on their own expeditions," explained Pilbeam.

"Equally important, they trained generations of graduate students who then left Harvard, established departments of anthropology in universities around the country, and successively made their own contributions to the field.

"The research findings of the scientists affiliated with the Peabody have in many instances been influential and groundbreaking," commented Pilbeam. "Not the least of these were those of Professor William W. Howells," he added.

Pilbeam noted that Howells's work has included the study of human evolution and human population history, as well as human genetics and human adaptation. "He covered almost the entire field, from human paleontology through to human biology."

Howells's principal teacher and mentor, Earnest Hooton, sought to identify different components of populations. In one project, for example, he excavated hundreds of Native American physical remains from Pecos Pueblos and brought them to the Peabody for study and research. (They are now being repatriated.) Hooton is perhaps best known for training a generation of physical anthropologists who, in pursuing their careers across the country, defined the discipline.

"Hooton’s students, including Howells, honored him by strengthening the discipline," said C.C. Lamberg-Karlovsky, the Peabody Museum's director from 1977 to 1990 and Stephen Phillips Professor of Archaeology and Ethnology. "They made physical anthropology more scientific by incorporating statistical, demographic, and genetic models."

Howells and two of his contemporaries, the late Hallam L. Movius Jr. and Hugh O. Hencken, formed what Lamberg-Karlovsky called the triumvirate that really distinguished the Peabody Museum.

Movius is widely regarded as the most distinguished paleolithic archaeologist of his generation for not only his pioneering research on human evolution, in particular the early cultures of South Asia and Southeast Asia, but also his monumental work at Les Eyzies, France. Lamberg-Karlovsky said: "Movius laid the foundation for modern archaeologists by introducing techniques and methodologies that are used today."

Hencken, the preeminent European prehistorian of his time, excavated in Ireland and Italy. He is credited with defining the Irish Neolithic and Bronze ages, and identifying the nature and origin of the Etruscans.

Howells said his "admiration and affection" for the Peabody began when he was a college sophomore in 1927. He had found the summer reading list for his planned English literature concentration uninspiring, and so chose anthropology as his undergraduate—and ultimately life—focus. "I was captured for good by the essential appeal and viewpoint, both intellectual and aesthetic, of anthropology as a whole," he said. Howells earned an S.B. in 1930 and a doctorate in anthropology in 1934.

In a career spanning seven decades, Howells served as president of the American Anthropological Association and editor of the American Journal of Physical Anthropology.

Among the numerous awards and honors bestowed on him are the Charles Darwin Award for Lifetime Achievement in 1992 and the Distinguished Service Award in 1978 from the American Association of Physical Anthropologists. The Société d'Anthropologie de Paris gave him the Broca Prix du Centenaire in 1980. He has been elected to academic societies around the world, including the National Academy of Sciences and the American Academy of Arts and Sci-

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Rubie Watson
Connecting to the Past in a Personal Way

Rubie Watson’s career to date has well prepared her in many ways for serving as the first Howells Director of the Peabody Museum of Archaeology and Ethnology.

“I have always had an interest in other cultures,” said Watson. She first studied archaeology and anthropology at the University of California, Berkeley, as an undergraduate and then earned a master’s degree in anthropology from Rice University. She received her doctorate in social anthropology at the London School of Economics, and subsequently her focus settled on the examination of family and gender relationships within Hong Kong village communities.

Before coming to Harvard in 1992 as associate curator of the Peabody and senior lecturer in the Department of Anthropology, Watson was associate professor of anthropology and acting director of the Asian Studies Program at the University of Pittsburgh.

Watson has published several books, including a detailed ethnography entitled Inequality Among Brothers: Class and Kinship in South China (1985). She is the editor of Memory, History, and Opposition under State Socialism (1994) and the co-editor of Marriage and Inequality in Chinese Society (1990) and Harmony and Counterpoint: Ritual Music in Chinese Context (1996). Currently, she is working on a book focusing on the 1997 transition from British to Chinese rule in Hong Kong. She was named associate director of the Peabody Museum in 1995. About 10 years ago, while stopping by the newly erected Vietnam Veterans Memorial in Washington, D.C., Watson was struck by the outpouring of grief and emotion among fellow visitors standing before the wall listing the names of the war dead.

“I became interested in how people use memorials, graves, documents, objects—and museums—to connect with the past in a very personal way,” she recalled. “Societies and governments transform spaces for their particular purposes and those places thus reflect much about a culture and its people.”

In one project, Watson explored how the Chinese use palaces built by rulers of previous regimes to create museums that glorify the Communist government. In a complementary study, she has observed in Hong Kong the emergence of museums, restoration projects, and historical preservation. “For years, Hong Kong was a community of refugees, or children of refugees, who thought of it as a way station. Now people regard the place as home and thus are undertaking these historical projects, establishing monuments, and taking pride in a unique Hong Kong history and culture,” said Watson.

She is also continuing her research on women’s roles in Hong Kong village communities. With a grant from the Wenner-Gren Foundation and a fellowship from the American Council of Learned Societies/Chiang Ching-kuo Foundation, Watson spent most of 1996–1997 in Hong Kong exploring the shifts in relationships between husbands and wives and between parents and children as Hong Kongers increasingly focus on nuclear family arrangements. Remarking on the most obvious change, she said: “Grandparents used to be at the center of the family but now children have captured that position.”

At the Peabody Museum, Watson is directing part of her efforts toward defining what she calls the “biography of a thing.” She explained: “By using the Peabody’s extensive archives, photographic collections, and vital records, we can attain new understandings of museum objects. Writing an object’s biography involves a complicated process of contextualization: how was the object made, used, collected, conserved, displayed, researched, reused. An artifact does not—should not—die when it enters the museum.”

Watson collaborated with Castle McLaughlin, Hrdy Post-Doctoral Fellow at the Peabody, on an online Museum exhibition, “The Ethnology of Lewis and Clark: Native American Objects and the American Quest for Commerce and Science.” The exhibition’s introduction explains that the objects “provide valuable evidence of the material culture of many Native American tribal groups and serve as a valuable lens through which to investigate the history of early ethnographic collecting, display, and museum building in the United States.”

Watson adds: “By analyzing these objects, we find out much about Americans’ views of Native Americans and the American West in the early part of the nineteenth century.”

One of her goals as the Howells Director is to develop a series of temporary exhibits on parts of the collection ranging from African masks to North American baskets. “The Museum has excellent permanent exhibits, but there are so many other objects we want to share that are not currently on display,” she said.

According to Watson, the complex of museums that encompasses the Peabody, the Museum of Comparative Zoology, the Mineralogical and Geo-

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Howells, from page 2

ences. The American Anthropological Association’s Biological Section again honored Howells in 1993 by establishing the William White Howells Prize to recognize scholars who make outstanding contributions in biological anthropology.

As professor emeritus and an honorary curator of physical anthropology at the Museum, Howells continues to be involved in the field. He keeps current on the latest research and findings as colleagues from around the world send their notes, reports, and papers to his home in Maine.

After leaving graduate school, Howells joined the faculty of the University of Wisconsin in 1939 where he remained until 1954, except for the World War II period, during which he served in Naval Intelligence in Washington, D.C. In 1954, the Howells family returned to New England, and Howells served as professor of anthropology at Harvard for 20 years.

Howells’s devotion to the University stems partly from family ties. His grandfather, the novelist William Dean Howells, received an honorary degree from Harvard in 1867. His father, John Mead Howells, was a member of the Class of 1891; his late brother, John N. M. Howells, graduated from the College in 1934; and his son, William Dean Howells II, is a member of the Class of 1954. Howells’s daughter, Muriel Gurdon Metz graduated from Bryn Mawr College.

In the summers and on sabbaticals, the Howellses traveled widely, measuring skulls as part of a long-term project to understand human variation and population relationships. Muriel Howells accompanied her husband on nearly every trip and always helped him compile the voluminous lists of cranial measurements.

Howells’s statistical analyses of skull measurements showed relationships that, until the application of modern genetic techniques, were not otherwise visible among different peoples. In this way, his career has contributed to clarifying the origins of modern humans, said Pilbeam. “He has consistently provided a sane, lucid, and balanced view.”

Howells conveys enthusiasm not only about his research activities but also his experiences in front of the classroom. Introduction to Anthropology—once Anthro 1A and B—was his favorite course to teach.

“We hope that the endowed directorship at the Peabody will enable Harvard to appoint the best possible directors,” concluded Howells. He expressed hope that the Museum will continue to strengthen the field of anthropology as the discipline changes ever more quickly. “My association with the Museum has been one of the great, good turns of fortune in my life. We are happy to have the opportunity to help sustain its activities into the future.”

Watson, from page 3

logical Museum, and the Botanical Museum attracts an impressive number of visitors. Each year, more than 120,000 people come to these institutions.

Another of Watson’s goals is to expand the opportunities for undergraduates to pursue their own research at the Museum. Former directors David Pilbeam and Irven De Vore, both of whom are now full-time teaching in the Department of Anthropology, were concerned to find ways of involving students in the exhibits and collections. Undergraduates work with faculty and Museum staff on special independent studies, focusing, perhaps, on a special collection for a semester and then writing a research paper, gallery guide, or senior thesis. “We have found that they particularly like the hands-on aspects of their studies here and we are looking for new ways to enhance that experience,” concluded Watson.

Pilbeam added: “With the new endowment, Harvard is not limited to choosing a member of the senior tenured faculty for the directorship—we can hire whoever is best for the job. It is wonderful that the University has in Rubie Watson a distinguished social scientist who is enthusiastic about using the Peabody’s collections and archives. I anticipate that more social and cultural anthropologists will follow her lead and embrace a museum long appreciated by physical and biological anthropologists including Bill Howells, Irv De Vore, and myself.”

Lee joins Department of Anthropology Faculty

Yun Kuen Lee has been appointed Assistant Professor in the Department of Anthropology. He earned a B.A. in 1978 and a Diploma of Education in 1979 from the Chinese University of Hong Kong, the M.Phil. in 1982 from Nankai University, People’s Republic of China, and the Ph.D. in Anthropology in 1993 from the University of Michigan. Before coming to Harvard Professor Lee held Professorships in the Department of Anthropology, California State University, Fullerton, and Lectureships in the Department of Anthropology, Wayne State University, Michigan, and the History Department of Nankai University, People’s Republic of China.

Professor Lee’s research interests include Chinese archaeology, North American archaeology, archaeological theory, evolution of complex societies, tribal social organization, quantitative methods, faunal analysis, and ceramic analysis. Researches in progress include the following: “Reconstruction of Kinship from Human Skeletal Remains,” “Settlement Patterns and the Rise of Chinese Civilization,” and “Symbol and Meaning in Archaeology.” In 1993 he supervised the Van-Hoosen cabin site excavation, Rochester Hills Museum, Michigan, and the Butler (MI) Paleo-Indian site excavation, Wayne State University.

Publications in press include “Status, Symbol, and Meaning in the Dian Culture” in Festschrift in Honor of the 65th Birthday of Kwang-Chih Chang; Robert Murowchick, et al., (eds.); “Rabbit Hunting as a Procurement Strategy of Farmers” (co-authored with John D. Speth), in Farmers as Hunters in the Pecos Valley, John D. Speth and Alison Rautman (eds.).
Looking For City Shang of the Shang Dynasty in Shangqiu:
a Brief Report of a Sino-American Team

KWANG-CHIH CHANG, CHANGSHOU ZHANG

Kwang-chih Chang, John E. Hudson Professor of Archaeology, Emeritus, has been a member of the Dept. of Anthropology since 1977, and has also maintained an ongoing relationship with the Academia Sinica in Taipei, Taiwan, where he recently served as vice president for academic affairs. Before coming to Harvard, Chang taught anthropology for 18 years at Yale University. Professor Chang was the recipient of the Association for Asian Studies 1996 Award for Distinguished Contributions to Asian Studies in April, 1996.
Changshou Zhang is a senior archaeologist and professor at the Institute of Archaeology, Chinese Academy of Social Sciences, Beijing.

China boasts the longest continuous historical record of any civilization, yet before the early decades of the 20th century when modern archaeology was introduced from the West and began to build an authentic series of early civilizations, our understanding of the beginning of Chinese history was all legendary. In 1899, inscribed oracle bones of the late Shang dynasty were accidentally found and in 1920 intensive efforts to look for their source led archaeologists to Yinxu ("the Ruins of Yin"), near Anyang, Henan province. From 1928 on, Yinxu has been extensively excavated by archaeologists of the Academia Sinica and yielded an enormous amount of inscribed bones and archaeological remains, authenticating the existence of the Shang dynasty and its capital, Yin, from the 19th king, Pan Geng, to the 30th and final king, Zhou. These remains also provide the actual sites and artifacts of a splendid civilization, whose beauty cannot even be imagined in mere historical texts. Then, in 1950, Shang remains were found 170 km. to the south in Zhengzhou, Henan. Here, both pottery and bronze vessels were antecedent to those of Yin in form, as well as time. Due to its size, the site at Zhengzhou could have served as another royal capital with the Shang state; some scholars believed it to be the city Ao, capital of King Zhongding, the 10th Shang king, while Zou Heng in a series of papers insists that it was Bo, the capital of the dynasty's founder, Tang.

In recent years, Zou's identification has gained popularity, and our knowledge of the Shang civilization could be said to go as far as King Tang, i.e., to the beginning of the dynasty. But about the period previous to Tang, referred to as predynastic Shang, little is known. According to the traditional legends as summarized in the historical text Shi ji, written ca. 100 B.C., the political line of Shang began with a person named Xie, who built his capital city at Shang, from which the dynasty's name was derived. Shang, according to a recent theory, is a pictographic character referring to ancestor worship. This town continued its capital status during the next two predynastic kings, Zhaoming and Xiangtu. Then the royal capital moved to several other sites until it settled at Bo for a time. But City Shang had remained in place as the ancestral cult center until the dynasty's fall under King Zhou. The predynastic segment of the Shang civilization would have been revealed with the discovery of City Shang, but City Shang is not yet archaeologically known. As early as 1936, in the middle of the Yinxu excavations, Li Jingdan, a member of the Yinxu team, was sent to Shangqiu, in the eastern end of Henan province, to investigate. In local traditions, the city of Shangqiu, literally "the Ruins of Shang," was the location of City Shang. It was also the seat of E Bo, an official of great antiquity in charge of regulating the calendar according to the Fire Star Antares of the constellation Scorpio (Fig. 1). King Zhaoming, local traditions say, took over E Bo's town and made it City Shang. But during Li's investigations, all Li encountered were sands and silts, several meters deep, deposited over the surface of the whole region by the Yellow River floods well recorded from later historical periods. A few earthen mounds dotted the landscape, where small sites of Longshan and a few other "Neolithic-looking" cultures were found.

Although Li failed to find any pre-Yinxu Shang dynasty sites in Shangqiu, assemblages of gray cord-marked pottery similar to the pottery of Zhengzhou and Yinxu in form and in decoration have been unearthed from seemingly earlier layers in northern Henan and southern Hebei, in the Zhang River valley, since the 1970s. This has led many archaeologists, above all Zou Heng, to believe that here is the home of the pre-dynastic phase of the Shang civilization. In 1959, Xu Bingchang led an archaeological team to northwest Henan and southern Shanxi to look for Xiaxiu, the Ruins of Xia, the former capital of the first of the Three Dynasties (as the Xia, Shang, and Zhou are often called). Xu and his team excavated Erlitou, an old site located between the towns of Luoyang and Yanshi, and found many potsherds similar to the Nanguanwai sherd, the oldest from Zhengzhou, but Erlitou seemed still older. Subsequent excavations disclosed a settlement of at least four cultural layers, the third and the fourth layers containing remains of palatial foundations raised from the ground floor and also...
bronze ritual vessels such as jue, ding, jia, and he, typologically and technologically a giant level below the same types of vessels at Zhengzhou. Undoubtedly, Erlitou and predynastic Shang are contemporary and may be similar. If this is predynastic Shang, then the Shang sequence would be complete. But Chinese scholars spent a better part of two decades, i.e., the 1970s and 1980s, arguing whether Erlitou was Xia or predynastic Shang. At the present time, the Xia identity seems to have gained ground. Thus, the only archaeologically identifiable predynastic Shang remains are those gray cord-marked pottery assemblages in northern Henan and southern Hebei. Unfortunately, there is no trace of the culture of the elite rulers. The Shang ruling class, the dynasty, who possessed the rammed-earth town walls and house foundations, bronze vessels and weapons, writing, and other items of wealth and objects of artistic value, is nowhere to be found in the Zhang River valley.

In recent years, with the great progress made in the archaeological study of the eastern coastal areas of China, it is increasingly clear that Shang’s royal house and its elite culture must have come from the east. During the key period from 2500 to 2000 B.C., according to currently available data on the east coast, we can identify at least two clusters of regional cultures. One is a “typical” Longshan Culture in Shandong and northern Jiangsu, and the other is the Liangzhu Culture of the Yangzi River delta and the Lake Tai basin. We cannot yet draw a minutely detailed map of these two cultures, nor do we know if there were other contemporary cultures along the east coast and if so what were their similarities and differences. What is by now agreed upon is the recognition of the Longshan and the Liangzhu Cultures of the second half of the third millennium B.C.—in other words, during the several centuries prior to the Three Dynasties—had attained a high degree of cultural achievement and social complexity, certainly qualified to play the role of the aforementioned conquering dynasty of predynastic Shang. In the meantime, there are many stylistic similarities between the Neolithic Longshan and Liangzhu, on the one hand, and the Bronze Age Shang on the other. Thus, archaeology has given us a very solid and clear clue to justify the hypothetical scenario that a group of predynastic Shang warriors came into the heartland of Henan from the east coastal area via what is now the Gansu-Lianyungang Railway, marching from northern Jiangsu through Xuzhou and arriving in the neighborhood of Shangqiu. There they conquered the natives and established the Shang city.

To place Shang in Shangqiu is, actually, an old consensus in traditional Chinese historiography. The Confucian classic Zuo Zhuan twice mentioned the Fire Star calendar official E Bo and that Shang’s King Zhaoming took over his capital at Shangqiu. Wang Guowei, probably the greatest sinologist in the twentieth century, in his essay “Shuo Shang (A Discussion of Shang),” concluded that the city Shang was located in Shangqiu of the present day, citing every citable bit of convincing textual evidence. The clinching proof came from Dong Zuobin, whose reconstruction of a military campaign during the 10th and the 11th years of King Di Xin, i.e., King Zhou, against enemies in the east, largely in the Huai River region, included a town-to-town itinerary based upon the records of divination. It contains the names of the towns and the days it took to travel from town to town. The names Shang and Da Yi Shang (Great City Shang) are both there, and by reckoning days it took to travel and other towns passed, Dong placed them in the exact location where Shangqiu stands today.

Notwithstanding the consensus, after Li Jingdan’s unsuccessful investigation, it was not until the 1970s that archaeological surveys were resumed in the Shangqiu area. Small sites of the Longshan, Yueshi, and Shang (Zhengzhou and Yinxi phases) Cultures have been brought to light, but of City Shang there has been no trace. No one we knew of even had a plan to go to Shangqiu to look for any Shang city. In May, 1988, Xu Pingfang, a distinguished historical archaeologist who just the month before had taken over the Directorship of the Institute of Archaeology, Chinese Academy of Social Sciences, in Beijing, the flagship of China’s archaeological institutions, wrote a letter to invite the American author of the present report to Beijing to discuss archaeological collaborations between his institute and Harvard. The author (Chang) went to Beijing in October to meet with Xu and Deputy Director Xu Guangji. Deputy Director Gao Guangren and Institute Secretary Wu En also participated. In the end, among the topics considered for joint excavation was the search for City Shang. Realizing it must be the most difficult archaeological project ever proposed in China, we decided to do this first.

There are several reasons that can possibly explain the absence of archaeological findings of City Shang in the Shangqiu area thus far. The most obvious is that the ancient landscape of the Shangqiu area has been covered by sands and silts brought in by the repeated Yellow River floods, and we can no longer recognize the low plains, where ancient Chinese capital cities were invariably located, and the hills. The landscape of a vast plain is interrupted here and there by small mounds, which are the tops of the former hills and were inhabited by smaller towns and villages. Since earlier archaeologists explored only on the surface, they missed any city by a good many meters in depth. To have any hope of locating a buried Shang city or other related sites, we had to change our strategy from ground survey to underground survey. We decided to investigate Holocene stratigraphy of the area first of all, and during the first three years of the project (1990–1993) the American team consisted mainly of geologists and geophysicists: George Rapp, Jr., of the University of Minnesota (Duluth); Jing Zhichun, his graduate student; Vincent J. Murphy of the Weston Geophysical International Corporation; David Cist of MIT; Denis Reidy of Boston; Robert Regan of Pittsburgh; and Robert Murowchick of Harvard. Chinese participants in this part of the project included Gao Tianlin, Tang Jigen, Wang Zenglin, and Gao Libing. By 1994, it had become abundantly clear that the richest cultural layer was about 10–12 meters beneath the present land surface and
that from that depth cultural layers from the Neolithic to Tang Dynasty (A.D. 618–907) were deposited in relatively thin layers. Beginning just after the Song Dynasty (A.D. 960–1279), the Yellow River floods became suddenly severe and from then on the repeated floods were responsible for most of the ten meters below the present ground surface where we should be looking for City Shang. But the Shangqiu District of Henan is a large area. Where can one begin, when one cannot see the ancient landscape, not even knowing where are the plains and where are the hills?

Our strategy was two pronged. One was to begin small scale excavations on the mounds, and two was to concentrate manpower at a single spot very carefully selected and to saturate that area with geological corers, “Luoyang spades,” and all the geophysical instruments at our disposal (including proton magnetometers, ground-penetrating radar, and electromagnetic field generator). Just then, in the spring of 1993, Ren Shinan was elevated to the Institute Directorship, and Wu En became the deputy director. On our joint behalf the Institute applied to the National Bureau of Cultural Relics for permission to excavate three sites in Shangqiu District: Panmiao (in Shangqiu county), Mazhuang (Yucheng county), and Shantaisi (Zhecheng county), and to test excavate within the region near E Bo Tai, or “the Mound of E Bo,” just southwest of Shangqiu Xian. We used the E Bo legend as our anchor for the survey because the legend is localized and because his connection to Shang was twice mentioned in Zuo Zhuan, the most reliable of the Confucian classics. After permission was granted, archaeological fieldwork began in the fall of 1993. As of the fall of 1997, we have undertaken nine seasons’ work. The archaeologists in this phase of the work were, on the Chinese side, Zhang Changshou (who also serves as director of the excavations on the Chinese side), Gao Tianlin, and Tang Jigen, and, on the American side, Robert Murowchick (Harvard University), Leng Jian (University of Missouri at St. Louis), David Cohen (Harvard), Li Yung-ti (Harvard), Yeh Wei-p’ing (Minnesota), and Kwang-chih Chang (Harvard, also director of the excavations on the American side).

The three sites turned out to be rich and complex. Together they exhibit a cultural stratigraphy of the Shangqiu area, spanning from early to late as follows:

- Yangshao Culture (Mazhuang site)
- Longshan Culture (Shantaisi, Mazhuang, and Panmiao)
- Yueshi Culture (Panmiao and Shantaisi)
- Erlitou-type pottery (Panmiao)
- [Erligang, or middle-period Shang remains, from Mengzhuang site, Zhecheng]
- Yinxü, or late Shang (Panmiao, Mazhuang, and Shantaisi)
- Eastern Zhou (Panmiao, Mazhuang, and Shantaisi)
- Han (Panmiao)

The only layers pertinent to our discussion here are the Longshan and the Eastern Zhou Cultures. The Longshan Culture found at Shantaisi is of unexpected importance, because in addition to seven exceedingly well-built rooms (Fig. 2), we also found a large round pit in which were buried nine complete skeletons of cattle and a deer skull (Fig. 3). This is obviously a ritual scene and it suggests either the great importance of
the ritual and the presiding person or persons, or the great importance of the ancestor to whom the cattle were offered. At Yinxu, many cattle burial pits were found as ritual relics,9 and in Shang and Zhou rituals the most important domestic animal used for sacrifices were, again, the cattle. The most telling point may be that in many Eastern Zhou texts, of all dynasties the predynastic Shang ancestors—Wang Hai in particular—were the only ancestors who were credited as the first to domesticate cattle.10 A ritual cattle pit of the scale found at Shan-tai is has never been seen before at a Longshan Culture site and may indicate the Longshan Culture of this area had a particularly close relationship with the Shang royal house. This must count as a major archaeological discovery of 1996 in China.

Another major discovery also occurred in the spring of 1996: the discovery of a vast Eastern Zhou city near the Mound of E Bo by the survey team. As has been said repeatedly, the prime objective of this project is to find the buried city of Shang. But before City Shang could be found, we speculated that two other later cities may have to be located first, namely, Suiyang of the Tang Dynasty, and Song of the Zhou Dynasty state of Song. According to the Han Dynasty historian Sima Qian, when King Wu of Zhou defeated Yin and took the head of the last Shang king, King Zhou, he did not harm the crown prince, Wu Geng, but left him with several of his uncles to continue to rule the much diminished Shang state from Yin (near Anyang). Several years later, King Wu died. His son, King Cheng, was still very young, so one of his father’s brothers, the famous Zhou Gong, or Duke of Zhou, assumed the responsibility of the Grand Regent. Wu Geng, allied with a few of his uncles and the Yi states, mostly in the Huai River valley, staged a rebellion, hoping to reclaim the Shang Dynasty’s supreme status. He failed, and Zhou Gong killed him and his uncles, but enfeoffed another of his uncles, Wei Zi, to be the Lord of Song, with a city named Song as his capital, placed at the site of City Shang, so that he and his descendants could continue to worship the ancestors of the Shang people. The historical texts do not give the precise location of the city Song, but we know it is somewhere at or near Shangqiu. In the Shang oracle inscriptions, there is a state called Song, but definitely this new state was not the same.10 There is a slight chance the new state of Song used to be the city named Sang, or the Mulberry Tree, but it would be four days’ walk from Shang according to Shima Kunio’s reconstruction and would be a bit too far for Wei Zi’s role as the keeper of his ancestors’ temples.11 The most likely location of City Shang would seem to be under the ritual and political center of the Song city.

The Song city went to ruins after Song’s fall, and during the Tang Dynasty at the site was built the city of Suiyang, which General Zhang Xun made his reputation defending to his own death. We were concerned that we may have to excavate two large historical cities before reaching our goal, City Shang. Now it looks as though we may need to dig away only one. But this Song city is an important city in its own right. Song was a small state, but it was a state with moral authority. Confucius was born at Song, and the Duke Xiang of Song was one of the Five Hegemonies of the Spring-Autumn Period of the Eastern Zhou. We hope to bring to light the city’s layout and its major parts—political center, ritual center, markets, workshops for bronze and iron casting and other handicrafts, burials, and streets and buildings.

Our surveys in 1996 and 1997 have revealed the full extent of the huge rammed earth wall that surrounded the city Song. From the hundreds of deep cores drilled along and across the buried walls, we now know that the length of the west wall is 2950 meters, the east wall 2850 meters, the north wall 3520 meters, and the south wall 3600 meters, enclosing an area of nearly 11 sq. kilometers (Fig. 5). Several gaps in the walls have been detected in the western end of the north and south walls, and at the southern end of the western wall; their placement suggests that they are probably city gates. Many parts of the buried city walls are still well preserved: the tallest portions are only two meters below the present ground, while the top of the less well preserved sections are eight or nine meters deep. The city wall’s base is approximately 10 to 12 meters beneath the present surface. The thickness of the wall varies from 12 to 15 meters, reaching 20 meters across in some places (Fig. 6). The earth of the wall was rammed into layers 11 to 30 cm. thick, and the impressions of the stamping tools are clear and sharp, roughly round, and approximately 7 cm. in diameter. The walls were broken and repaired in places, and the only potsherds retrieved from the rammed earth are of Eastern Zhou period vessel types. The walls in places were intruded into by ash pits dating from the Han Dynasty. We tentatively identify this city as that of the Spring-and-Autumn Period (770-450 B.C.) of the Eastern Zhou. We cannot find mention of any city of this date and size in the area of Shangqiu other than the city Song, and the likelihood of this being city Song is great. We cannot be certain, however, until the identification is backed up by archaeological evidence.

The above are the major results of our team’s work thus far. Short of hand and short of money, we nevertheless have made some very important and promising discoveries. The next steps are obvious: to track the cultural development from Longshan to the climax of Shang, Western Zhou, and Eastern Zhou. We believe early Shang and predynastic Shang will be coaxed to appear before our eyes in the form of finely crafted art objects, bronzes, jades, palace and altar foundations, and—the primest of our prime goals—the archives in the ancestral temples of the Shang dynasty. All such yields are, we judge, possible, even probable, but it will be many years and many million yuan later before we see any of them. Up to this point, we have received the generous support of the Henry Luce Foundation (New York), the National Endowment for the Humanities (Washington D.C.), the Wu Foundation (Taipei), and the Chiang Ching-kuo Foundation (Taipei). We owe them sincere thanks for their continuing confidence and support.
Notes


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Figure 6. Cross-sections of the western wall of the Eastern Zhou period city at five points in the southern end. (Drawn by Jing Zhichun)


15. Dong Zuobin, Yin Li Pu (Calendrical Tables of the Yin Dynasty), Lijiuang: Institute of History and Philology, Academia Sinica, 1945.


19. Shiben, an ancient book found in A.D. 280 in the state of Wei along with the famous Bamboo Annals, has a section called “zuo bian,” in which are listed the alleged legendary heroes and their inventions in material culture, social institutions, and signs and symbols. This book has long been lost, but portions survive in quotations in other surviving texts. One such quote says, “[Shang ancestor] Hai made domestic cattle.” Similar statements appear in such other late Zhou texts as Lushi Chunqiu and Guanzhi. In the Yijing, the most sacred of the Confucian classics, and Shanhaijing, there are rudiments of a complex legendary story of the death of King Wang Hai at the hands of people of a certain You Yi Shi in Hebei while Wang Hai was there probably grazing his herds of cattle and sheep.


Tambiah named winner of Huxley Medal

Stanley Tambiah, the Esther and Sidney Rabb Professor of Anthropology, was elected the Huxley Memorial Lecturer and Medalist for 1997. The award is the highest honor bestowed by the Royal Anthropological Institute of Great Britain and Ireland. The award ceremony and lecture took place last December in London. Tambiah’s topic was “Transnational Movements, Multiculturalism, and Ethnonationalism.”

This was the second major honor Tambiah received in 1997. In November, he was awarded the Balzan Prize, considered by many to rival the Nobel Prize in prestige. The prize committee’s citation reads: “For his penetrating social-anthropological analysis of the contemporary central problems of ethnic violence manifested in South East Asia, as well as for his original studies on the dynamics of Buddhist society, which have opened an innovative and disciplined social-anthropological approach to the internal dynamics of different civilizations.” The prize was also given for Tambiah’s many years of research and voluminous writings on Buddhist society in Thailand, including Buddhism and the Spirit Cults in Northeast Thailand (1970); World Conqueror and World Renouncer: A Study of Religion and Polity in Thailand Against a Historical Background (1976); and The Buddhist Saints of the Forest and the Cult of Amulets: A Study of Charisma, Hagiography, Sectarianism, and Millennial Buddhism (1984).

Catherine Linardos is the Editor of Symbols
American Archaeology, 1931–1996: A Personal Perspective*

GORDON R. WILLEY

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American archaeology, or at least an interest in the ancient past of the native peoples of the New World, goes back to the Columbian discoveries of these continents in the late fifteenth century. But such early archaeological interests were largely speculative and often of a very fanciful nature (see Willey and Sabloff 1993). The emergence of something like a disciplined field of study, with more carefully recorded descriptions of the natives and the monuments and artifacts which they or their ancestors had constructed or fashioned, did not appear, at least in any very systematic or comprehensive way, until the nineteenth century. Here in this country, a man named Samuel F. Haven wrote and published the first sensible, non-fanciful general account in his Archaeology of the United States, in 1856.

Another 10 to 20 years were to go by after that before museums devoted to American antiquities, such as the Peabody Museum, founded in 1866 here in Cambridge, were established (Willey and Sabloff, 1993). F.W. Putnam (1886), one of its early directors, was a leading archaeologist of his time; and at the Smithsonian Institution in Washington, D.C., Cyrus Thomas (1885, 1894) and W. H. Holmes (1888; see Meltzer and Dunnell, eds., 1992) were two of his outstanding contemporaries. These were the first Americanist professionals, in the full sense of that term, being paid salaries for carrying out their museum curatorial and research duties and their field explorations. Their writings were essentially systematic descriptions of monuments and artifacts.

In the early twentieth century, this descriptive systematization of the data of American archaeology was expanded to include the chronological dimension (Willey and Sabloff, 1993). That is, attention began to be given to the relative chronology of Pre-Columbian remains. This was initiated in various parts of the New World: most notably, in Peru, with Max Uhle (1903); in Mexico, with Manuel Gamio (1913); and in the Southwestern United States, with N.C. Nelson (1914) and A.V. Kidder (1924). Relative sequences of Pre-Columbian cultures were established through seriations and stratigraphic procedures. Also, some absolute dating was achieved, as in the Maya region of Central America, with studies of the ancient native calendar (Goodman 1905), and in the Southwestern United States by means of tree-ring chronologies. It was during the middle-to-latter part of this period of “chronology building,” that I came into American archaeology, and so I will begin my story from there. Now let me make clear at the outset that, as my title indicates, my account tonight is a highly personalized one rather than a critical scholarly presentation; and, as in any personal story, my adventures, while following along in the trends of the times, had their inevitable idiosyncratic aspects.

I selected February 1931—the month and the year in which I went off to the University of Arizona as an undergraduate to study archaeology—as the beginning date for my narrative; and after I had done this, I realized, as one does in old age, that this was quite a long time ago—65 years to be exact. Now if we take the founding date of the Peabody Museum in 1866 as an approximate starting point for American archaeology as an organized profession, my 65 years of association are exactly half of that. In other words, however long or short a time this may seem to the individual, American archaeology, as a formal discipline, is a relatively recent enterprise.

My own youthful decision to study archaeology—something that I decided when I was 16 years of age—hardly derived out of any knowledgeable or profound considerations of the subject, or through any particular encouragement from my elders. My motivations were simply those of a romantic enthusiasm for the unknown and the mysterious. What little I knew came from the popular press, from stories about such things as the tomb of Tut-anhk-amen; and I certainly knew nothing of the Americanistic aspects of archaeology.

My selection of the University of Arizona as the place to go to study archaeology came about fortuitously and haphazardly. I lived in California, where I had gone to high school, and the University of California, at Berkeley, where many of my high school friends were going, was my first choice for a college; however, on consulting the catalogue for that institution, I could find no listing for a “Department of Archaeology.” I did not know at that time that archaeology often was subsumed academically under Classics, Fine Arts, or Anthropology headings. So, not finding what I wanted in the Berkeley catalogue, I turned to the one from the neighboring University of Arizona and found that they did list a “Department of Archaeology.” Thus reassured, I set off for Tucson, Arizona that early Spring.

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In those days, the University of Arizona's Department of Archaeology was headed by a Professor Byron Cummings, assisted by two young lady instructors. Professor Cummings specialized in the local archaeology of the Southwestern United States, but general anthropology courses were also offered in the department, and I was enrolled in such an introductory course in my first semester. Later, I had courses in Southwestern archaeology with Professor Cummings who may rightfully be considered as one of the founders of that field (see Willey 1988). Originally trained in the Classics at Rutgers, he had gone to the University of Utah in the 1890s to teach Classics; but in this new ambience he became interested in the local Pueblo ruins and set out to explore them.

In 1915, Cummings left Utah for Arizona where he set up a Department of Archaeology and also became Director of the State Museum. He kept up his summertime Southwestern field explorations from this new post, and he also had a season of fieldwork in the Valley of Mexico where he excavated at the famed pyramid of Cuicuilco (Cummings 1933). As a result of this latter experience, he developed an interest in Mesoamerican archaeology, and one of his very best seminars was on that area. I should pause to add that it was in this seminar, which I took as an undergraduate and, again, as a beginning graduate, where I realized the "romance" of New World archaeology, when viewed from the perspective of the ancient Mexican and Maya civilizations, might be as great as that surrounding Tut-anhk-amen.

One of the things that I became aware of in those first years as an archaeology student, was that the field was not always one of benign and unruffled amity and cooperation. While Cummings overlapped in time with the early stratigraphers and chronology builders, such as Nelson and Kidder, in outlook he belonged essentially to the earlier exploratory, descriptive era. The early 30s were only a few years after the Pecos Conference of 1927, with its establishment of cultural classification and sequence periodization for the Southwestern area. While Professor Cummings had attended the conference, he was not in agreement with its findings and conclusions; nor did he have much agreement with his age-mate and fellow exploratory pioneer in the Southwest, one Edgar Lee Hewett.

All of this is, however, a part of life in our profession; and, in retrospect, I am very happy to have been a student of Cummings's. I think he had his reservations about me, at least for a while. I remember when I went on my first summer field season with him, into the White Mountains of eastern Arizona (Cummings 1940), I was the one selected to dig the latrine on our first day in camp while some of my student associates were assigned to more directly-involved archaeological digging. Still, I must have passed this character-building test in proper fashion, for, a year later, after graduation, I was Cummings's first choice for a Laboratory of Anthropology Field Fellowship. In those days of very few jobs—not only in archaeology but in almost anything—such a Fellowship was a considerable prize, even if it did only put off the finding of a paying job.

This particular Fellowship took me to Macon, Georgia in the summer of 1936, where I worked under Dr. Arthur Kelly (1938) as one of a group of six students. This was to be my introduction to Eastern United States, or "Mound Area," prehistory. It was at the height of Federal Relief-supported archaeology, and Kelly had a crew of 700 WPA workers under his command. Today we say that one trained archaeologist can adequately supervise no more than a dozen diggers, but Kelly was the only archaeologist on the job when we arrived in Macon that summer. This was not his choice, but the primary objective of Federal-Relief archaeology in those days was to take care of the unemployed; the niceties of archaeology came second. Fortunately, there were a good many educated people on the relief payrolls then—bank clerks, insurance salesmen, and others who could read and write and act as cataloguers and recorders; and best of all, Kelly had two college-trained civil engineers on his staff whose surveying skills were all-important.

We in the student group enjoyed our summer, even though most of it was spent excavating a small mound located on the edge of a foul-smelling swamp a dozen miles outside of Macon. About 30 workmen were assigned to us. These were mostly older men: local textile mill laborers who had lost their jobs in the Great Depression or tenant farmers who...
could no longer make a living that way. In spite of their misfortunes, they maintained quite an esprit de corps on their relief job. Unused to the New Deal initializing designations for government agencies, they fell back on the kind of initials they were used to, those of the railroads, and referred with pride to the organization that had embraced them as “the W. P. & A.” Most were illiterate, and the quality of their life was reflected in the fare that they brought along in their field lunches—usually home-made biscuits and fried slabs of salt pork. One day I offered one of my Macon restaurant ham-on-rye sandwiches to one old man who seemed to be on particularly short rations. He gratefully accepted it, but later I noticed that he picked out the ham and ate it but threw the bread away. When I asked him what was wrong with the bread, he told me, quite respectfully, “Mr. Willey, that there bread was all full of weevils.” His reference, I suppose, to the little rye seeds, which he had never seen in bread before. Forsaking my Republican upbringing, I think I became a confirmed New Dealer and a Liberal that summer, and have remained so ever since, one of the guys that more recent Georgian, Newt Gingrich, is so worried about now.

After the summer was over, and financially unable to enter graduate school, Dr. Kelly was kind enough to hire me as his assistant, my first paid job in archaeology. I was to continue in that role for the next two years, first with the WPA and later with a Civilian Conservation Corps work force. I began to learn something about archaeology and, in particular, Georgia archaeology. In so doing, I entered into the archaeological spirit of the times, carrying out classificatory and taxonomic research and, above all, addressing myself to chronological problems through stratigraphy and seriation. In the course of this I met James Ford, who frequently visited Macon from his base in Louisiana where fall of 1938 I went off to join him in the Lower Mississippi Valley.

On a more personal but highly important note, I married Katharine Whaley, the daughter of a Macon businessman, just before my departure for Louisiana. A former Sweetbriar student, Katharine also had studied at the Art Students League in New York City. After we were married, I took advantage of her skills as an artist in drawing potsherds for me.

In 1939 Katharine and I moved to New York City where I took up residence as a graduate student in the Department of Anthropology at Columbia. Duncan Strong was my principal professor there, and he encouraged me in my Southeastern States archaeological interests, making it possible for me to spend the summer of 1940 doing archaeology on the Florida Gulf Coast. I did this accompanied by a fellow graduate student and friend, Dick Woodbury, and we had a successful season of digging, classifying pottery, and chronology building in a region where this had not been done before (Willey and Woodbury, 1942; Willey, 1949).

Back at Columbia in the fall, a seminar in Peruvian archaeology with Duncan Strong prepared me to take part in a field expedition to that country in 1941. This was an enterprise funded by the U.S. Department of State through their Office of Inter-American Affairs as a part of a Latin American “good will” effort at the beginning of World War II. Archaeology “lucked” into this windfall through the efforts of George Vaillant who happened to be a personal friend of Nelson Rockefeller, then an Assistant Secretary of State. Archaeologists from the United States were sent to work in collaboration with colleagues in various countries along the Pacific, from Mexico to Chile. Strong was in charge of one of the parties destined for Peru, and he chose me as his assistant. As a result, Katharine and I spent a year in Peru.

Based in Lima, we carried out surveys and excavations in some of the Peruvian coastal valleys. This was our first time in Latin America, and we both enjoyed it. Despite the fact that my Spanish had progressed little beyond excavation instructions to the workmen to “diggé un holo aquí,” the Peruvians were very tolerant. In passing I should add, shamefully, that my control of the language is still not an awfully lot better. After Strong had returned to Columbia in September, I was fortunate to have the assistance and companionship of John Corbett, an archaeologist who happened to be in Peru at that time, and of Marshall Newman, a Harvard physical anthropologist from one of the other State Department projects who was, fittingly, at least for a physical anthropologist back in those days, a first-class burial excavator.

So I continued with my potsherd stratigraphy and was able to build at least a piece of the ceramic chronicle for the Central Coast of Peru. We were all down there, digging away, at the time of Pearl Harbor and the United States entry into the war. I

Figure 1. Professor Gordon Willey, Viru Valley, Peru.
remember being quite touched when one of my workmen told me, in effect: “Not to worry, Doctor. Things look bad now, but the United States, led by President Roosevelt, will win out over the forces of darkness.” It so happened that Corbett, Newman, and I were staying in a hotel in Huacho at the time of Pearl Harbor and the subsequent declarations of war with Japan, Germany, and Italy. This hotel was owned and operated by two brothers, Italians. They ran an excellent house, and the food was superb Italian cuisine. My initial misgivings that we might become persona non grata, with the food poisoned and Mussolini’s picture suddenly appearing on the wall in the dining room, turned out to be unfounded, and we finished our stay in comfort.

My Peruvian field results of 1941–42 became my doctoral dissertation, and it was published the next year with project funds (Willey 1943). This was a very lucky break for me because in those days Columbia University had the horrible rule that all doctoral dissertations had to be published and 75 copies of the aforesaid deposited in the Columbia University Library before the degree was granted. While I managed to scrape up the money to purchase the 75 copies from the Columbia University Press, I could never have gotten together enough to pay for publication costs as well.

On my return from Peru, I taught at Columbia for a year as a young Instructor. Then, from 1943 until 1950, I was on the staff of the Bureau of American Ethnology, of the Smithsonian Institution in Washington, D.C. My first duties were to serve as Julian Steward’s assistant on another State Department-funded project, the multivolumed Handbook of South American Indians; but in early 1946, I was able to return to Peru for more archaeology, this time as a member of what became known as the “Viru Valley Project” on the north coast of that country. A number of institutions and archaeologists participated in that venture, a first attempt to concentrate research on a single small Peruvian valley. While I was all set to continue stratigraphic digging and chronology building, Julian Steward talked me out of this, arguing that there would be enough of my project colleagues pursuing these goals. Why didn’t I try to broaden my interests? He suggested “settlement patterns,” something he had once pursued in the North American Southwest (Steward, 1937). I followed his suggestion.

Steward never gave me much specific advice on just how one might go about studying “settlement patterns.” His own “settlement” investigations had been directed largely toward site location, as this reflected natural environmental subsistence sources. While this approach obviously had some pertinence in a Peruvian coastal desert valley, there were other aspects of Viru ancient settlement that intrigued me more. We were obviously dealing with what had been large and densely settled populations. The Viru, a triangular patch of green on the narrow desert Pacific Coastal Plain, measured about 7 km wide near the immediate coast and narrowed inland, into the foothills, where cultivable land was less than a kilometer across. In this small space and its immediately bordering desert, we eventually estimated that in its heyday Viru had a population of at least 25,000 persons. Ancient remains were everywhere. Not only had the populations been large, for at least the first millennium-and-a-half of the Christian era—as exhibited by dwelling sites, pyramidal mounds, castillo-like fortifications, and irrigation canals and intricate garden networks—but we were faced with the complex problems of occupations and contructions that had been built, one on top of the other, for this long period of time and even longer.

Now “settlement pattern” studies can’t proceed in a vacuum; there has to be some “chronology building” to precede or at least go along with settlement investigation, and I was fortunate to be aided in this by my several archaeological colleagues in the Viru venture: Wendell Bennett, Duncan Strong, James Ford, Clifford Evans, Donald Collier and Junius Bird. They set up the detailed ceramic sequence through stratistest diggings and seriations of surface collections. Thus the Viru settlement pattern study, which was essentially an attempt to say something about social groupings and politics as revealed in archaeological data, went forward on the wheels of “old-fashioned” archaeology. Or to put it another way, the search for context and function, so strongly advocated in Walter Taylor’s A Study of Archaeology (1948), had to be first underpinned by “potsherd chronicle.” After all, there is nothing inherently wrong with “potsherd chronicle” in itself; it just doesn’t go far enough.

Most of us in the Viru program published our results reasonably promptly. My settlement pattern study came out in 1953, and I suppose I received more than my share of the acclaim given to the Viru enterprise because of my innovative interpretive treatment of the valley’s archaeological remains. As an aside, I remember that right after I had completed the Viru fieldwork and before we left Peru, I was feeling so “innovative” that I thought I might show the “practical world” how archaeology could make a contribution to modern life and the Peruvian social economy. I was particularly proud of my mapped record of the Viru irrigation canals and their associated garden plots, so after leaving the field, I took some of my maps around to the appropriate government ministry in Lima to inform them of my discoveries.

“Here,” I told them, “you see the present day systems of irrigation and cultivation, and now here are the old systems at the peak of Viru’s Pre-Columbian occupation. “Today,” I went on, “only about two-thirds, or maybe only one-half, of the land once cultivated is now in farmland. By expanding to the old limits of cultivation, the population of the valley could be greatly increased, maybe doubled.”

I was met, however, with something less than enthusiasm for my attempt to show what archaeology could do for the modern world. “My dear fellow,” they replied, “we are already quite aware of what you are telling us; but, you see, we are not interested in growing maize and beans in these valleys, nor in increasing their present-day populations. You must realize that the important commercial crops for that region today are sugar cane and cotton,
which take more water than those edible staples you mention. Besides that, there are not enough jobs for the people living in those valleys now, let alone what the situation would be if we increased the population.” So ended my attempt to demonstrate the practical uses of our profession to what is known as the “real world.”

But to get back to the more comfortable world of archaeology, I did some survey and digging in Panama (Willey, 1951) after Viru. Panamanian and Lower Central American archaeology was hardly ready for “settlement patterns” at that time. The prerequisite “potsherd chronicle” was largely lacking and much needed there. Parenthetically, we still need basic chronological information for much of Lower Central America. But to go on with my story, this 1948 foot in Panama archaeology made me eligible for consideration for the post of Bowditch Professor of Mexican and Central American Archaeology here at Harvard, in its Peabody Museum and Department of Anthropology; and I was fortunate enough to be chosen for the position, coming here in 1950. After my arrival, I went to Panama again, in 1952, taking a graduate student, Bob McGimsey with me, and our work resulted in The Monagrillo Culture of Panama, the first substantial report on the early shellmound ceramics from that part of the world (Willey & McGimsey, 1954).

I was all set to return to Panama and continue with my sequence-building or “potsherd chronicle,” but fate intervened, this time in the person of my distinguished predecessor here at Harvard, the late Alfred Marston Tozzer, who told me in no uncertain terms that Mr. Bowditch, in setting up the Bowditch Professorship had not intended for the incumbent to spend his time in such out of the way places as Panama. The Maya were the ones Mr. Bowditch had in mind, and I had better get to them forthwith (see Willey 1988). I took his advice.

To do Maya archaeology, even then and certainly now, literally forces the researcher into something more than “potsherd” or whatever kind of “chronicle.” For one thing, basic chronologies for the Maya area were reasonably well in hand by the early 1950s so that this was no longer the main focus of research for a Mayanist; he or she would have to go beyond this. They would have to confront the extraordinary richness of Maya culture: its magnificent architecture, its art and iconography, its hieroglyphics and calendrics, and all the questions posed by these. How could I, given my non-Mayanist background and my lack of anything more than a passing familiarity with all of these things, make any kind of serious contribution to Maya studies? After considering this, I decided to lead from what strength I had. I would launch into a study of Maya settlement patterns and settlement systems, returning to the kind of thing I had done in the Viru Valley but this time in a completely different setting.

My new colleagues, the Mayanists, were not altogether sanguine about such a line of investigation—at least at first. I remember the late Sir Eric Thompson, in his time undoubtedly the world’s leading Maya archaeological scholar, and who then had his office with the Carnegie Institution of Washington’s Mayanists just across the alley from the Peabody Museum, thought that I would, in his words, “be wasting my time.” He felt that we knew enough about Maya settlement already. While it was true that a little was known about Maya small sites and house mound structure—Oliver Ricketson (Ricketson & Ricketson, 1937) had done some house mound counting and mapping at Uaxactun, Robert Wauchope (1934) had dug some of these mounds, and Thompson (1931, 1939) himself had explored and excavated two small ceremonial centers in British Honduras—this was only a beginning in comprehending the full range and nature of ancient settlement in the Maya Lowlands.

I think Professor Tozzer had some misgivings about my “settlement pattern departure” in Maya studies; he was, nevertheless, supportive. He suggested that I communicate with Linton Satterthwaite, the distinguished Mayanist then at the University of Pennsylvania. I was gratified when Satterthwaite turned out to be enthusiastic about the idea. He was ending his field career at that time; otherwise, he told me, he would pursue such investigations himself. He invited me to come with him to British Honduras in the winter dry season of 1953. He was planning a dig at a particular large ruin down there; however, before starting on this, he would take me around to some smaller sites in the Belize Valley, where he had worked in the previous season, and where, he thought, would be a good place to make a start on my settlement pattern program. I took him up on this generous offer and, in his company, had a close-up look at that region.

One of the first things that impressed me after I had a look at the Belize Valley was that systematic settlement investigation in the Maya bush was going to be a lot harder than in the Viru Valley in Peru. The bush was dense; in a lot of places you couldn’t see more than two or three meters in front of you; and you couldn’t recognize a small mound—one, say, of a meter or even two meters in height—until you were almost on top of it. Maya Lowland settlement exploration was going to involve a lot of time-consuming trail, or breccia, cutting. I had a break, though, in the Belize Valley, in being shown an agricultural clearing in the river bottoms about eight kilometers to the east of the town El Cayo, now called San Ignacio. Some two-square kilometers of land had been cleared here for the growing of the fibre plant, ramie. Usually ramie grows to something more than the height of a man’s head, but it had been discovered that here in the Belize Valley, unless expensive fertilization was maintained, the ramie stalks stopped growing down around knee-high. This is what had happened at the Barton Ramie Estate, as the property was known; it was unfortunate for ramie production but splendid for archaeology. The entire two-square kilometers was dotted with readily visible small ancient Maya house mounds. We eventually were to count and map 260 of them.

Our work at Barton Ramie and other nearby river bottom locations was maintained through the 1954–1956 seasons. We excavated several of the mounds. Many of them showed con-
continuous, floor-on-floor, construction ranging from the Middle Preclassic through the Late Classic Periods, or a span of at least 1500 years. These mounds proved to be the dwelling-places of the Maya who had grown their crops nearby and who had constructed the many ceremonial centers of the valley, centers ranging in size from the single plaza-and-pyramid unit at Barton Ramie to the multi-plaza ruin of Xunantunich several kilometers farther west, near the Guatemalan border. This attempt to sort out the relationships between, and the significances in the differences among, the ceremonial centers of the Belize Valley, was the beginning of Mayanists’ concern with what we eventually were to call “macro-settlement patterns,” or those of territorial political units, in contrast to the “micro-patterns” of house-mound clusters.

I had been fortunate in obtaining a National Science Foundation grant for this fieldwork, one of the very first ever given for archaeology, and such a departure for that organization that my grant was designated as one given for “Prehistoric Demography” rather than archaeology. Preliminary accounts were published (Willey, 1956 a,b), with the final report appearing some years later (Willey, Bullard, Glass, & Gifford, 1965). As I look back on it, I think because settlement pattern studies were such an obvious and necessary idea—rather than a methodological or ideological scolding—they were rapidly and quietly assimilated as a standard part of Maya field research, and indeed archaeological research elsewhere in the Americas, and have continued so ever since.

After the Belize Valley, I excavated two major Maya ruins in the Pasion River drainage of the southern Department of Peten, in Guatemala—Altar de Sacrificios (Willey & Smith, 1969; Willey, 1973) and Seibal (Willey, 1990). Altar de Sacrificios is particularly memorable for its long Preclassic and Classic construction sequence, and, in its low-lying riverine location, for the frequent appearance of crocodiles and canoe-cruising tourists. Both of these last were something of a nuisance during our stay there. Seibal, which was situated on higher ground, and back away from the immediate river banks, had neither of these disadvantages. Seibal was of especial interest and archaeological importance because of its rare Terminal Classic (ca. A.D. 900–1000) architecture and stelae.

At each of these sites, large-scale digging in the centers themselves was combined with settlement surveys in the surrounding areas. For both I was fortunate enough to have that outstanding architectural excavator, Ledyard Smith, of Carnegie Institution Maya fame (see Smith, 1950, 1972, 1982), as my close colleague. In addition, there were a series of other scholars who had important roles in these endeavors, including my colleagues here in the Museum, Tatiana Proskouriakoff (see Smith, 1982) and Ian Graham (1971; Willey, Smith, Tourtellot, & Graham, 1975), as well as former graduate students such as John Graham (1972, 1990), Richard E.W. Adams (1971), Jeremy Sabloff (1975), Gair Tourtellot (1988, 1990), and Norman Hammond (Tourtellot, Hammond, and Rose 1978; Hammond 1982), all now well-known in their own right, as distinguished Mayanists.

My final Maya fieldwork, at Copan in the 1970s, again focused on settlement dispositions; my field and laboratory cohorts were Richard Leventhal, Arthur Demarest, and my successor as Bowditch Professor, William L. Fash (Willey, Leventhal, Demarest, & Fash, 1994).

Let me also add here that all of these excavation and survey activities were staunchly supported by the Directors of the Peabody Museum here at Harvard. These were, in chronological order: J.O. Brew, Stephen Williams, C.C. Lamberg-Karlovsky, and David Pilbeam. This is also the point at which to say that I had intellectual and moral support here at the Peabody and in the Department of Anthropology during those years. This came from both my archaeological and non-archaeological colleagues, including especially the social and biological anthropologists such as Clyde Kluckhohn, Douglas Oliver, Bill Howells, K-C. Chang, David Maybury-Lewis, Stanley Tambiah, and Evon Vogt. I single out particularly Vogt (1961, 1964 a,b), or “Vogtie,” who, more than anyone else, has shown how many aspects of ancient Maya life can be understood through present-day ethnographic knowledge and insights.

Not all of my research and writing here at Harvard derived directly from my fieldwork. In those months when I was not in the field, during the 1950s, I collaborated with my very old friend and Peabody Museum archaeological colleague, Philip Phillips, in writing a book, Method and Theory in American

Figure 2. Temple excavated and partially restored by Harvard’s Peabody Museum at the Maya site of Seibal, Guatemala. (Photo by Ian Graham)
Archaeology (Willey and Phillips 1958). This was an outgrowth of many discussions which we had had together. It stirred up a modest amount of discussion although nothing on the order of Walter Taylor's (1948) earlier, or Lewis Binford's (1962, 1965; Binford and Binford, eds. 1968) later critiques. In a sense ours wasn't a critique at all but a sort of synthesis in which we tried to factor out what we thought had been best in the way American archaeology had been done over the previous 30 years or so and how this could be combined for the future.

In the 1960s I wrote a two-volume textbook, An Introduction to American Archaeology (Willey, 1966-71), which covered the entire New World. I took two sabbatical leaves, both spent in Cambridge, England, to do this. These volumes summarized the substance of what was known, or at least what I thought was best known, about the Precolumbian culture history of the western hemisphere. My approach was a Culture-Historical one. It seemed to me that we needed to lay out, for the student, a panorama of the developments in the New World, one that could be compared to a similar panorama for the Old: the Early Lithic understructures; the Post-Pleistocene adaptations; the core areas of farming and the Neolithic arts; the diffusions of such traits from these cores; and the subsequent rise of civilization and city life in the cores.

One of the things you learn from attempting such a textbook synthesis is how very fast the superabundance of new archaeological data from the field out-dates what you have written. Your colleagues will tell you: “Well, parts of your book are all right, but there are recent things in my area that you’ve missed completely.”

Beginning in the 1960s younger scholars, and especially Lewis Binford (1962, 1965), advocated a new outlook in archaeology, one directed toward understanding the processes of culture change as the essential desideratum. While I was enthusiastic about such a goal, and so expressed myself in the book, A History of American Archaeology, in which I collaborated with Jeremy Sabloff (Willey & Sabloff, 1974), I felt that this “New” or “Processual” archaeology did not necessarily mean a rejection of all that had gone before in taxonomic and chronological studies, any more than I had felt that Taylor’s A Study of Archaeology (1948) rendered all that had gone before his call for a more richly textured image of the past as being without some merit. Furthermore, it seemed to me that the Americanist field had been moving in these directions—toward context, function, and process—for some time before the 1960s (see Willey & Sabloff, 1974). Settlement pattern study and analysis, for example, would be a case in point. But not surprisingly, some of my younger colleagues did not agree with this, and looked upon my statements to this effect as a belated attempt to “climb aboard” the “New Archaeological” bandwagon when I didn’t really understand what it was all about.

Clearly, though, and the confrontations between youth and old age aside, American archaeology—and archaeology in general—is in flux; nor do I think that any of us can deny that this is a good thing. It not only shows that our profession is alive, but it reminds us that any view of the past, given to us by archaeology or history, is always conditioned by our views and attitudes of the present.

Within the last decade or so, a number of opinions and points of view have been raised to dispute those of “New” or “Processual Archaeology.” These have sometimes been grouped together as “Postprocessual Archaeology” (see Willey & Sabloff, 1993). Ian Hodder (1985), a young British archaeologist, has been an exponent of these views, and others, in Britain (Shanks & Tilley, 1987), the United States (Leone, 1982, 1984), and Canada (Trigger, 1991) concur. They question what they consider the extremes of the “scientific” outlook of Processual Archaeology and advocate a tempering of this by more “humanistic” points of view. They argue for a return to specific historical contexts in our attempts to understand any particular archaeological past. They also advocate a widening of our perspectives through such things as “gender archaeology.”

This “scientific” versus “humanistic” dichotomy is, of course, an old one in archaeology, going back to the very beginnings of the field in the European late Middle Ages and the Renaissance (Trigger, 1989); and I think it, and the tensions it creates, will continue to be with us as archaeology goes forward into the twenty-first century. It will create controversies, for in a very real sense, these are two different ways of looking at the world; still, and in the long run, I am optimistic enough to believe that it will give us a better and more enriched understanding of the past.

To return to, and emphasize again, the personal perspective, I find myself feeling, like many oldsters, bemused and perplexed with many of the things going on in archaeology and in our Americanist part of it today. For the past fifty years or more, my own researches and those of my immediate students have been in the Latin American countries. As a result, I have not kept up with the great volume of “contract” or “public archaeology”—that work, here in the United States,
generally subsumed under the label of "Cultural Resource Management" (see Lipe & Lindsay, 1974; McGimsey and Davis, eds., 1977). Obviously, this is an important branch of our field; literally millions of dollars are spent on it annually, and hundreds of our colleagues are involved with it. My only advice, given as one coming to the end of a career in archaeology, is for those so involved in such archaeology to do everything they can to maintain a record and produce a literature—and one more widely available than is now the case—of your surveys and excavations. In this connection, I remember my own engagement with what were, at least to some degree, related programs back in the Federal Relief days of the 1930s. In many of these, publication plans were let slide; records and collections tended to become scattered; and, as a result, important parts of our archaeological past were lost forever. Try not to let it happen again.

But I have never been one for issuing admonitions and advice, so I won’t say anything more about Cultural Resource Management Archaeology, about which I know very little, nor about the problems of Repatriation of Archaeological Collections, about which I know even less.

Instead, let me close by saying that I have enjoyed my long life in archaeology. It has turned out to be as "romantic" as I imagined it sixty-five years ago—but in a deeper and richer way.

Literature Cited


Cummings, Byron 1933 Cuiculco and the Archaic Culture of Mexico. Social Science Research Bulletin No. 4, Univ. of Arizona, Tucson.


Haven, S.F. 1856 Archaeology of the United States. Smithsonian Contributions to Knowledge, Vol. 8, Art. 2. Washington, D.C.


Shanks, Michael and Christopher Tilley 1987 Re-constructing Archaeology. Cambridge Univ. Press, Cambridge.


Continued on page 36
Native American agricultural traditions have a long and complex history. Mesoamerican peoples in Oaxaca, Mexico, may have begun to domesticate squash as early as 10,000 years ago, and within several millennia they had learned to cultivate maize (Zea mays; hereafter referred to as corn), beans, peppers, and squash. The intensification of prehistoric agriculture, involving an expanding array of crops, technologies and control mechanisms, is associated with the emergence of complex societies throughout the hemisphere. Agricultural knowledge and crops diffused from Mesoamerica into southwestern and eastern North America, where in some areas they supplemented and then partially supplanted the cultivation and use of seed plants and gourds.

Indian people in what is now Illinois were planting squash by 5000 B.C., and corn was being grown in the prehistoric southwest by 1000 B.C. By 1000 A.D., farming was practiced extensively across North America. While corn, beans and squash became the staple cultigens, native peoples also developed and grew varieties of melons, peppers, gourds, potatoes, sunflower, avocado, pumpkins, tomatoes, cotton, and tobacco. European explorers and colonists transported these plants to the Eurasian continent; within several hundred years potatoes and corn had become staple foods for an expanding global population.1

The diversification of types (often called “folk varieties”) developed by Native American farmers from single species was remarkable. For example, regional and local varieties of corn proliferated as they adapted to local environmental conditions and evolving cultural preferences. Diversity also emerged within local communities, as individuals, families, and social institutions such as clans selectively curated plant varieties with particular properties and uses. Multiple cropping, or growing several plants in association with one another, produced co-adapted complexes of food crops, or agricultural ecosystems. Such cultural practices shaped the natural world hunting mammals and collecting wild plants. The cultivation of the Missouri River flood plain enabled these peoples and their ancestors (known archaeologically as the Plains Village tradition) to construct densely populated, semi-permanent earth lodge villages. Corn and bison jointly permeated the economies and belief systems of these peoples, but it was the surplus production of corn and other cultigens and the development of storage techniques that positioned them at the center of an extensive inter-tribal trading network that became the foundation for the Anglo-European fur trade. Lewis and Clark, among others, relied on Plains Village produce during their winter sojourn near the villages in 1804-1805, exchanging metalwork and metal tools for corn and squash.

The Upper Missouri region is characterized by extreme climatic conditions, including a short growing season, little rain (an average of 15" annually west of the river, but often much less) and long, bitter winters. Consequently, the corn varieties (especially flint corns) developed by Plains Village farmers were hardy, frost and drought-resistant plants capable of maturing in as few as 60-70 days after planting. In contrast, Anglo-American homesteaders who began settling the region in the late nineteenth century found that their eastern dent corns could not adapt to these environmental conditions. By the late nineteenth century, both private parties and state-operated institutions such as the Montana Extension Service had begun to collect Indian corn and other cultigens and to experiment with the production of hybrid varieties that would present higher yields than the native stock while retaining their vigor.

Field portrait of George F. Will (Photo by Russell Reid, former superintendent of the State Historical Society of North Dakota) Courtesy State Historical Society of North Dakota

While encouraging the preservation of genetic variation, an important resource for farmers in unpredictable environments, such as on the Northern Plains.2

The Mandan, Hidatsa and Arikara, among the northernmost horticulturists on the North American continent, grew at least nineteen named varieties of flour and flint corn, in addition to
One such individual was Oscar H. Will of Bismarck, North Dakota, who in 1887 established the first seed house and nursery in that state, which his family continued to operate until 1959. Will collected corn from throughout the United States, but specialized in producing cultivars adapted to the Northern Plains, which he marketed through catalogue sales under the name “Will’s Pioneer Brand.” The Will Company offered both native Indian garden seed (promoted under the category “Pioneer Indian Collection”) and hybrid commercial varieties developed from the same stock. Oscar Will obtained his first Indian corn, an Arikara mixed flint or “sow corn,” from a Hidatsa woman in the early 1880s. He subsequently acquired additional varieties of corn and other cultivars from Mandan, Hidatsa, and Arikara people (now known as the Three Affiliated Tribes) on the Fort Berthold reservation. One of his most notable achievements was the promotion of the Great Northern Bean, which he developed from beans provided to him by Son of a Star, a Hidatsa man. The hybrid varieties developed from regional Indian corns by Will and others provided the basis for the commercial corn industry on the Northern Plains.3

Ironically, at the same time that nurserymen like Will were collecting, preserving, and utilizing indigenous cultivars, the Office of Indian Affairs (OIA) was encouraging reservation residents to abandon native farming methods and crops in favor of “mainstream” agricultural practices. During the late nineteenth and early twentieth centuries, the OIA advocated commercial field farming and ranching on Plains reservations as a mechanism for assimilating residents into rural American society. Since many ceremonials, social institutions and native languages were discouraged or prohibited, knowledge about and the use of native crop varieties began to decline. Native corns were enduring; George F. Will found Fort Berthold families still harvesting traditional varieties up through World War I. However, federal policies during the New Deal years of 1933-1945, during which the OIA collaborated with other government agencies attempting to redress rural “underdevelopment,” further undermined native agricultural systems. During this time family subsistence production was emphasized, but reservation extension programs promoted the adoption of new vegetables such as tomatoes, cucumbers, lettuce and carrots, which were often supplied by the government. In addition to reorganizing agricultural production, the OIA’s Division of Extension and Industries also sought to inculcate new methods of crop preservation, consumption and exchange. Following the 1954 construction of the Garrison Dam, which inundated the river bottoms and forced the relocation of 85% of the population, few Fort Berthold families continued to plant gardens, and even fewer conserved traditional cultivars. This history was repeated on reservations throughout the country, resulting in the loss of considerable biological and cultural diversity.

Between 1914-1917, Oscar Will’s Harvard-educated son, George F. Will (1884-1955) donated to the Peabody Museum approximately seventy ears of Native American corn. These include samples of types then still being grown by Algonkian, Athapaskan, Siouan, Caddoan, and Iroquoian speakers throughout the North American continent. Upper Missouri varieties (Mandan, Arikara, Assiniboine, Sioux, Pawnee, Omaha) are well represented, but the collection also includes specimens obtained from the Ojibwa, Navajo, Hopi, and Iroquois, among others. Recently conservator T. Rose Holdcraft supervised the rehousing of this collection, as well as other indigenous corn specimens at the Peabody, some of which were recovered from archeological contexts. While it is unlikely that any of these have retained their generative capacity, they constitute a rare and valuable research collection. They are also of

Upper Missouri River corn varieties donated to the Peabody by George F. Will. Left to right: Mandan yellow flint, Arikara mixed flint; Mandan blue; Mandan soft red flour. The O.H. Will Company of Bismarck, North Dakota developed two commercial corn varieties from the mixed flint obtained in 1882: a hearty white flint marketed as “Pride of Dakota,” or “Dakota White Flint,” and “Gehu,” a yellow flint. Those two varieties dominated non-Indian corn production on the Northern Plains for several decades. George F. Will reported that Mandan people considered yellow flint to be their original type. (Photo by Hillel Burger)
significance to Indian people, many of whom are today attempting to revive traditional cultigens, using heirloom seeds curated by tribal members, botanical gardens, and organizations such as Seed Savers Exchange.

In 1905, while still undergraduates at Harvard working under the direction of Roland Dixon, George F. Will and Herbert J. Spinden conducted what is considered to have been the first modern, systematic archaeological excavation of a Plains Village site. The Double Ditch site (32BL8), the remnants of a large protohistoric Mandan village, yielded significant macrobotanical remains—several types of charred corn, beans, sunflower, squash, and chenopodium seeds. These remain among the few archaeobotanical samples ever recovered from a village site in the Dakotas.

In 1917, George Will and ethnologist George Hyde published *Corn among the Indians of the Upper Missouri*, which they dedicated to Oscar H. Will, "who in 1881 first perceived the value of the native varieties of corn from the Upper Missouri Valley." That work remains the definitive source on the corn culture of Plains and prairie tribes. Oscar Will died in the same year (1917), and George Will took over the family seed business, while remaining an avid archaeologist, ethnologist, and naturalist. He expanded the company's interest in native cultigens and agricultural practices, collecting information, seeds, and objects directly from Indian people and from other anthropologists working in the region. Under his direction, the company offered not only 19 varieties of Indian corn and several types of beans, but squash, pumpkins, watermelon and sunflower varieties grown by the Three Affiliated Tribes. In addition to prehistoric materials and contemporaneous corn specimens, George Will also presented to the Peabody several ethnographic objects collected from Plains peoples, including a dog travois, a model bull boat, and agricultural implements. Noteworthy among these is a carrying basket made by the Hidatsa woman Buffalo Bird Woman, an individual made famous through the publication of Gilbert Wilson's *Buffalo Bird Woman's Garden* (first published in 1917 as *Agriculture of the Hidatsa Indians: An Indian Interpretation*).


Gary Paul Nabhan has emerged as one of the most eloquent proponents of biodiversity, and has written extensively on Native American heritage resources. See, e.g., Nabhan, 1989, *Enduring Seeds: Native American Agriculture and Wild Plant Conservation* (San Francisco: North Point Press).

Oscar H. Will Company Seed House Catalog Cover, 1928. Many of the company's catalog covers depicted Indian agriculture, visually stressing the ancient origins of their seed stock. (Courtesy State Historical Society of North Dakota)

Information on the Will family and their agricultural experiments has been drawn in part from "Seed Development in North Dakota: The Oscar H. Will Seed Company," an unpublished manuscript provided by Prof. Fred Schneider, Dept. of Anthropology, Univ. of North Dakota. Prof. Schneider has been instrumental in the preservation of cultigens grown by the Three Affiliated Tribes and is currently researching the history of the Will Company. A biographical essay by Harlow Leslie Walster, "George Francis Will, 1884-1955: Archaeologist, Ethnologist, Naturalist, Nurseryman, Seedsman, Historian" (North Dakota History, January 1956) was also helpful.

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"Rainmakers From the Gods": Hopi Katsinam at the Peabody Museum

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According to tradition, the supernatural beings called katsinam once visited the Hopi in person, but now they come as clouds down from the mountains or up from the earth. The katsinam begin arriving in late December, at the time of winter solstice, and depart in July. While they are present masked and ceremonially dressed Hopi men assume their powers and prestige during ceremonies and dances. During these ceremonies, small wooden effigies of the katsinam called tithu are given by the katsinam to infants of both sexes, young girls, and women. Tithu are usually given to marriageable women and girls, although husbands may also present them to their wives. A woman who receives a tithu treats it with great respect, hanging it from a beam or wall in her house where it will not come to harm and can benefit her and her family. The tithu are said to be important in teaching children and young people to recognize the katsinam and what they represent.

I first became aware of the Peabody Museum's collection of tithu in 1994, several months after I began working as a Curatorial Associate for the Ethno-graphic Collections. I learned that the greatest number of tithu housed at the Peabody Museum were collected by Thomas Fewkes who had purchased them from Thomas V. Keam during expeditions (1886 and 1894) to the American southwest financed by Mary Hemenway. Upon the death of Mrs. Hemenway in 1894, the Keam Collection—including the tithu—and the expedition's archaeological collection were donated to the Peabody. More than a century later during my research work at the Peabody I came to appreciate how important tithu are for understanding Hopi beliefs and practices and how effective they might be in teaching non-Hopi people about Hopi culture. An exhibit seemed a good idea and "Rainmakers from the Gods" was born.

The exhibit involved an intensely collaborative six-month effort that would not have been possible without the creative design work of Noelani Crawford and Sam Tager. Collections managers Susan Haskell and Gloria Greis, and conservators Scott Fulton and T. Rose Holdcraft worked overtime preparing the tithu for the exhibition, and many other friends and colleagues gave helpful advice and encouragement throughout the process. I was particularly fortunate to have Alph H. Secakuku, a Hopi scholar and author who had curated an exhibit on tithu at the Arizona State Museum and was a tithu carver himself, as an adviser throughout the writing and exhibit design process.

It was evident from the start that an exhibit of such visually stylized and colorful objects would be particularly appropriate for the World-Wide Web. Lara Greenwood, assisted by Ellie Swain, put together a site (http://www.peabody.harvard.edu/katsina/) with the design assistance of Noelani Crawford, that used text and illustrations from the exhibit and photographs by Hillel S. Burger to vastly expand the size of the audience to Internet users, including the Hopi themselves.

In its final form, "Rainmakers from the Gods" is a curtain call of fifty-seven tithu posed on our designers' impressionistic miniature replica of a Hopi village that aims to communicate the close relationship between the Hopi religion and their way of life in the high desert environment of northeastern Arizona.

The Hopi have traditionally lived in several small villages built on top of three rocky promontories called First, Second, and Third Mesas. Each village has its own plaza where ceremonial dances are performed. The land around the mesas is dry, vegetation is sparse, the soil is sandy with large deposits of alkali, and the climate is extreme. The winters are cold, often with heavy snowfalls, and the hot summers are often punctuated by powerful thunderstorms that drench everything in their path. The sporadic rainstorms usually last less than an hour and only moisten a few square miles at a time. Strong southwest winds prevail and droughts can be frequent.

Hopi practice dry-farming at the foot of the mesas, in places where floodwater from the washes has moistened the ground. Corn is the main crop, although small quantities of beans, pumpkins, gourds, muskmelons and watermelons are also planted. A schedule of field preparation, planting and harvesting is carefully followed every year in accordance with the sun's progress and attendant climatological changes. The fields are prepared in February or early March shortly after the winter snow has melted; planting occurs as soon as the weather warms in April or May and lasts eight to ten weeks. When the first shoots of corn appear, work in the fields begins to keep the plants free of weeds, protect young plants against the wind, and capture moisture from rainstorms or run-off from higher ground. The June 21 solstice marks the beginning of the end of the growing season, when the days begin getting shorter. By October,
most Hopi crops have been harvested. The Hopi recognize several hundred katsinam. Some originated at other pueblos but have come to look like Hopi katsinam as they became integrated into Hopi culture. Katsinam can be male or female, and can also represent plants, animals, insects, human qualities, the creative force of the sun, and even death. Others are demons who frighten children into behaving properly; still others are clan ancestors and beneficent beings. Most are spirits of the dead. Like the living, they do not eat food but only absorb its essence or its odor. As a result, they are very light and can change easily into clouds and act as benefactors to the Hopi by helping to bring moisture down to the earth. They do this by accepting Hopi gifts and prayers for health, fertility, and rain and carrying them back to the gods. Among the agricultural Hopi their role as rainmakers is particularly important.

Katsinam can be recognized by their names, their unique songs and dance steps, and the decorations and symbols on their masks. The masks are redecorated by their owners each time a different katsina has to be impersonated. By wearing masks the Hopi men transcend themselves, becoming the katsinam whom they represent. There are two types of masks: one entirely covers the head, while the other covers only the face. Sometimes the latter is fringed with horsehair at the bottom that hides the lower part of the face. Much attention is given to the manufacture and the preparation of masks. Masks used to be made out of buckskin or cotton cloth stretched over a willow frame, but now they are most often made of leather. Each man prepares his own mask for the ceremonies by first scraping off the old paint. He then paints ornamental and symbolic designs on it using several colors that indicate the four cardinal directions as well as up and down. The mask is then decorated with feathers and arrangements of Douglas fir twigs that are worn by many katsinam as collar-like ruffs. The selection, amount, and arrangement of the feathers and the objects the katsinam carry such as rattles, bows and arrows, staffs with crooks, lightning sticks, flower flutes, yucca whips, butcher’s knives, and baskets depend upon their roles and ceremonial duties.

Despite the wide variety of katsina types, they can be loosely grouped into two main categories: the chief katsinam and the non-priest or dancing katsinam. The chief katsinam are believed to be ancestor spirits of the Hopi clans. Thus each grouping is associated with a specific clan and can only be impersonated by members of that clan. Chief katsinam do not dance in the plazas but only participate in the three most important katsina ceremonies: Soyalangwu, Powamuyna, and Niman. The men who impersonate them use masks handed down by their clan and cared for by the clan matriarch.

Three main ceremonies are performed by and for the katsinam during their stay in the villages: Soyalangwu, a winter solstice ceremony in December; Powamuyna in February, when the katsinam are asked to appear; and Niman, the home-going ceremony, after the summer solstice. Between Powamuyna and Niman, katsinam perform several dances that help bring rain, promote the growth of crops, and increase the number of animals the Hopi depend on for survival. Early in the year ceremonies are held in underground ceremonial chambers called kivas. As spring arrives, the dances move out onto the plazas, where they last from morning until dusk. At the end of Niman, the katsinam return to the spirit world.

One of the approximately thirty chief katsinam is Angwuvnasomtaqa, or Crow Mother katsina, who appears during the Powamuyna ceremony in February and is featured in the exhibit. The mother of all katsinam, she performs during the Bean Dance and, when children are initiated into the Katsina Society. Masawakatsina, another chief katsina, also featured in the exhibit, is ruler of the underworld; keeper of the dead and an earth god; a giver and caretaker of life; owner of the lands, fire and crops; and maker of all things. During certain ceremonies he is primarily associated with the dead. He performs without a mask in the plaza during the daytime and in the late afternoon, and also during night dances. He is the only katsina to remain in this world after the Niman ceremony concludes. Muyingwa, the germination god katsina, appears during the Powamuyna ceremony wearing a headdress with two horns that curve back and cloud symbols on each cheek.

The dancing katsinam featured in the exhibit include runner or racing katsinam such as Koonza, a very famous, fast runner who appears in the villages in April to challenge men and boys to foot races. Other dancing katsinam are warriors such as the powerful Hee’e’e, who with other warrior katsinam protects the Powamuyna procession. Dancing katsinam also include disciplinary and female katsinam. Ogres or disciplinary katsinam appear during Powamuyna and threaten to harm children if they don’t behave. Female katsinam, among them a snow katsina, Nuwaktsina, lives on top of the San Francisco peaks and brings cold weather and snow to moisten the ground for spring planting. A number
of other dancing katsinam are animals who advise, doctor, and otherwise assist the Hopi. *Honkatsina*, for example, a bear that appears during night dances and dances on the plaza, knows all the medicinal roots and herbs and how to administer them. Still other dancing katsinam represent birds, insects, reptiles, plants, and even the sun and stars.

One group of impersonators that performs during the katsina ceremonies are the clowns. Unlike the other katsinam, who are perfect spiritual beings, the clowns play the role of men trying to travel from death into the spiritual world but are not ready to make the journey. In the villages, they travel across the rooftops making noises and performing all sorts of antics and buffoonery, then make their way to the plaza with much difficulty, jumping from roof to roof and descending ladders head first.

There are several different types of clowns. The *Payakyamu* are a combination of jester, priest and shaman who act out humorous scenes to demonstrate improper behavior. The fathers of all katsinam, they inhabit both the underworld and the upper world and serve as interpreters between the two worlds. The fourth type, the *Piptuyakyamu*, are most often unmasked with their faces painted white. Finally there are the *Tqatsiqto*, best known as *Kooeggies*, or Mudheads, which are not clowns per se, although they often entertain the crowd with their antics. The Mudheads are healers, messengers, warriors, and magicians, who came originally from the Zuni.

As noted above the katsina season begins in late November when a chief katsina, Soyalkatsina, walks into the village like a weary old man, singing sacred songs in a low voice. He then opens the main kiva, signaling that it is time for the katsinam to come out. Their emergence reenacts the arrival of the Hopi into the “fourth world.”

The structure of the kivas symbolizes the three other worlds that all beings, including the Hopi, passed through. Beneath the floor level is a small hole in the ground called *sipaaapuni* which comes up from the first underworld of fire. The floor level represents the second world of air, the breath of life. A raised seating area is the third world, the world of water, the blood of life. A ladder goes up through the roof to the fourth world.

December is a sacred month when the gods return and the sun turns back towards summer. Prior to their arrival Hopi respectfully prepare for the

Katsina “Koyaala,” Hano Clown, Hopi. (Photo by Hillel Burger)

return of the katsinam with storytelling and the Soyalangwu ceremony. During this ceremony the dead come to the villages to get the essence of the prayer-offerings, which are feathers upon which the Hopi have breathed prayers.

The first few katsinam of the new year appear at the beginning of Soyalangwu, the winter solstice ceremony which may last up to nine days, and concludes with a feast. The prayers and rituals help the Hopi to turn the sun toward its summer home and begin giving strength to all life for the growing season ahead. Two *Sivukitsinawit* katsinam representing fertility, procreation, and renewal approach females of the village and simulate copulation to symbolize the fertilization of the new growing season. Prayers are offered during Soyalangwu and are meant to bring snow and frost that will saturate the ground and serve as a reservoir from mid-March to the end of June, the driest period of the year.

Following Soyalangwu, social dances called *Paamuya* are held in homes and the kivas at night, and in the plazas during the day. The dances, depicting animals that live in the mountains now covered with snow, are prayers for snow to fall on Hopi fields and for successful hunting. As the social dances conclude, the *Paamuya* ceremony begins in February. It is at this point that the katsinam arrive in force to help the Hopi prepare for the next growing season and to initiate children into the Katsina Society. This most important of katsina ceremonies is a series of rituals that promote fertility, germination, and the early growth of seeds. It also initiates children between the ages of six and ten into the *Paamuya* Society. After initiation the children are allowed to participate in katsina performances.

An important event during Paamuya is the planting of beans. Within the kiva, men under the supervision of *Paamuya* officers plant fifty to a hundred beans in a bucket filled with earth. A fire is kept going day and night to help the beans germinate and grow. The planting and growth of the beans inside the warm kiva is seen as a good omen for the success of the coming harvest. The beans are also grown as prayer offerings for *Eototo*, the chief and father of all the katsinam who controls the seasons. On the sixteenth day of Paamuya, the katsinam give away mature bean sprouts in a public ceremony that is followed by a procession of many katsinam who dance and give away *tithu*, dancing.
Scholars, symposia, and seminars

Department of Anthropology Faculty

Ofer Bar-Yosef, George Grant MacCurdy and Janet G.B. MacCurdy Professor of Prehistoric Archaeology, completed three seasons of excavations at Hayonim Cave (western Galilee, Israel) which were jointly conducted with Dr. Liliane Meignen (CNRS, Valbonne), Prof. B. Vandermeersch (Laboratoire d’Anthropologie, Université de Bordeaux I), and Prof. B. Arensburg (Tel Aviv Univ., School of Medicine). This project concerns the “Origin of Modern Humans in Western Asia” and is funded by NSF and the French Ministry of Foreign Affairs. Short term field work in other sites included Theopetra Cave, Thessaly, Greece (excavation directed by Nina Kyparissi (Ephory of Speleology and Paleoanthropology, Athens)) where, together with Prof. S. Weiner, (Weizmann Inst. of Science) they collected samples for the study of site formation processes.

In May of 1996 and 1997 there were two field seasons in the famous “Peking Man Site,” Zhoukoudian, China, with Prof. Xu Qinji (IVPP, Academica Sinica, Beijing), Prof. P. Goldberg (Boston Univ.) and Prof. S. Weiner (Weizmann Inst. of Science, Israel). The study aims to illuminate site formation processes as well as aspects of fire use by early hominids, ca. 500,000 to 200,000 years ago. In the summer of 1997 a joint project was begun in Štránská Skála (Czech Republic) with Dr. J. Svoboda (Czech Academy of Sciences) with the participation of G. Tostevin from Harvard and G. Monnier (Univ. of Pennsylvania). The site, located near Brno, contains remains of the Bohunician, a transitional Middle to Upper Paleolithic industry, and in some areas an Aurignacian assemblage. During the last two summers Prof. Bar-Yosef developed the project of excavations in Dzudzuana, an Upper Paleolithic cave site in the Republic of Georgia, and Ortvale Klde, a Middle Paleolithic rockshelter. This project is done jointly with Dr. A. Beller-Cohen (Hebrew Univ.), Drs. T. Meshveliani, D. Lordkipanidze, and N. Tushabra-mashvili from the State Museum of Georgia (Tbilisi).

He was keynote speaker in a conference in Nice (October 25-29, 1996) organized by B. Vandermeersch and H. Delporte on the subject of “Exchange and diffusion in the Mediterranean Basin,” as well as the symposium “The Late Quaternary in the Eastern Mediterranean” organized by the INQUA subcommission for the Holocene in Ankara, Turkey, April 1-4, 1997.


Prof. Byron J. Good was on research leave in the spring semesters of 1996 and 1997 at Gadjah Mada University in Yogyakarta, Indonesia, funded by a Fulbright Fellowship and an NSF research grant to conduct studies of mental illness and psychiatric practice in Indonesia. Prof. Good’s current work focuses on major mental illness and its treatment in Central Java in Indonesia. He is studying persons with psychotic and depressive illnesses, focusing in particular on psychoses that appear as relatively brief psychotic episodes that resolve after either medical or religious treatment, and that often recur.

Prof. Arthur Kleinman gave the William James Lecture at Harvard Divinity School in the spring of 1997 on the transformation of moral commitments and practices in a globalized world. In October he gave a talk on the same subject to the undergraduates at Duke University and in November to the Townsend Humanities Center and Dept. of Anthropology at Berkeley. This is also the theme for the Westermarck Memorial Lecture that he gave to the Finnish Society of Anthropology in December and is the subject of the Tanner Lectures he will deliver at Stanford in April 1998. Dr. Kleinman received an Honorary Doctor of Science Degree from York University in Canada in June 1996. He is chairing the Technical Advisory Committee on the “Nations for Mental Health of Underserved Populations” Program at the WHO in Geneva. This fall his co-edited volume, Social Suffering, was published by the Univ. of California Press.

C.C. Lamberg-Karlovsky, Stephen Phillips Professor of Archaeology and Ethnology, became a Trustee of the Institute for the Study of Long-Range Economic Trends (ISLET) and delivered a paper at its conference on “Urbanization and Land Use in the Ancient Near East,” held in St. Petersburg, Russia from May 21-25. An earlier conference brought together a working group of economists, classicists, anthropologists, archaeologists, historians, and philologists at New York University. The results of that conference have been published recently by the Peabody Museum: Privatization in the Ancient Near East and Classical World, edited by Michael Hudson and Baruch Levine. In that volume Lamberg-Karlovsky addresses “The Archaeological Evidence for International Commerce: Public and/or Private Enterprise in Mesopotamia?,” In the spring of 1996 Prof. Lamberg-Karlovsky was invited to serve as a Visiting Professor at the University of Sydney, Australia. This past summer he attended the Conference on South Asian Archaeology in Rome and the Rencontre Assyrologique Internationale which was held in Venice. Among his most recent publications are the book Beyond the Tigris and Euphrates—Bronze Age Civilization published by Ben Gurion University Press, 1996; “Our Past Matters: Materials and Industries of the Ancient Near East” in the Journal of the American Oriental Society, vol. 117, No. 1, pp. 87-102, 1996; “Ancient Persia” in the Oxford University Encyclopedia of Archaeology in the Near East, edited by Eric M. Meyers, vol. 4, pp. 1-14, Oxford University Press, 1996; and “Sir Aurel Stein and was there a Bronze Age Silk Road?” in The Review of Archaeology, Fall, Vol. 10, no. 2, 1996. Last year Prof. Lamberg-Karlovsky was elected an Honorary Lifetime Trustee of the American Schools of Oriental Research.


David Maybury-Lewis organized and chaired a conference sponsored by the David Rockefeller Center for Latin American Studies on “Violence in Brazil” in preparation for a major conference on a similar theme to be held in a year’s time. “The state against indigenous autonomy in the Americas” was the title of a lecture given in the Harvard-MIT Joint Seminar in Political Development (JOS-POD). Prof. Maybury-Lewis lectured at Utah State University on “Tribalism, multiculturalism and the future” and on “Indigenous peoples in the twenty-first century” at Trinity University, Texas. Recent publications by Prof. Maybury-Lewis include Indigenous Peoples, Ethnic Groups and the State, Allyn and Bacon, Boston, 1997; Indigenous theories, anthropological ideas: The view from Lowland South America, in Miguel Leon-Portilla, Manuel Gutierrez Estevez, Jorge Klor de Alva and Gary Gossen (eds.), Indagaciones sobre el Otro: Aportaciones de los Americanistas (1998).
Treasure-Trove of Peabody Museum History Open for Research

SARAH DEMB

Sarah Demb, Peabody Museum Archivist, received her B.A. in Anthropology from the Univ. of British Columbia in 1992, and holds a Master of Library and Information Science with a specialization in Archival Enterprise from the Univ. of Texas at Austin. She is active in the Society of American Archivists’ Museum Archives Section and the SAA Native American Archives and Archivists Coalition.

In December 1996, the Peabody Museum hired its first full-time archivist to administer its archival collections which date to before the establishment of the museum in 1866. Prior to Sarah Demb’s appointment there had only been one other professional archivist, Beth Sandager, (1993-95) who worked part-time on the archives. The hiring of a full-time archivist shows a renewed commitment to the preservation of the Peabody Museum’s historical record and to the needs of all researchers who require access to that information.

The archives of the museum, collected assiduously from the founding of the museum in 1866, were for a long time housed in what is now the mail-closet in the main lobby. Later directors like Donald Scott and Prof. John Otis Brew continued the museum’s tradition of culling the offices of former anthropology department members and museum staff members to preserve a record of the work they and the museum had done in the past. Unfortunately, the materials were not organized in an archival manner and thus were not very accessible to either staff or outside researchers. In the 1970s, under Director Steve Williams’ enthusiastic guidance, the Archives were housed near the Museum Library in the basement. During the Peabody Library’s move to its new home next door at the Tozzer in 1974, some archival collections also migrated to reside in its Rare Book Room, but the majority stayed in the basement under less than ideal environmental controls and without an archivist to administer their use.

In 1977 the basement space was renovated for Williams’ National Endowment for the Humanities Film Library and archives in the basement of the museum during the 1970s. (Photo by Hillel Burger) Continued on next page Current archival stacks, climate controlled and accessible. (Photo by Hillel Burger)
Sandager completed the heroic task of boxing up the loose collections into proper cardboard, and creating preliminary inventories so that researchers could have access to the wealth of information. Sandager also catalogued a portion of the archival holdings in the Harvard Libraries on-line computer database system, HOLLIS, which made the collection more available to the Harvard community. After Sandager left in 1995, Ethnological Collections Manager Susan Haskell served as Acting Archivist. Susan coordinated the many researchers who came to use the archives and spearheaded further cataloging and preservation efforts.

Researchers now use the Collections Department reading room to conduct archival inquiry, and can use finding aids prepared by the archivist and work-study students or volunteers. In addition to the archives, materials in the museum’s accession files (yes, they were the “x-files” long before the television series existed!) are available to staff and outside researchers. The accession files document the acquisition of each museum object and/or collection and are a fascinating history of the museum in and of themselves.

In archival parlance, the Peabody Museum Archives should more correctly be called the Peabody Museum Archives and Special Collections—the archives are those materials generated by the museum which document the museum’s administrative functions. “Special Collections” include all other records the museum has collected pertaining to its work and the field of anthropology in general. “Special Collections” include the personal (research) papers of Harvard anthropologists and archaeologists, the persons with whom they worked, the records of their projects, and the papers of other anthropologists working in the areas of the Peabody Museum’s collection and the Department of Anthropology’s strengths. Naturally, the early records of the museum reflect a melding of these two types of materials, as the first directors not only administered the museum but carried out their own research—often in the same letters and reports. Today Peabody Museum Directors’ records would be separate from their personal (research) papers.

The Peabody Museum Archives is a treasure-trove of information on the history of the museum and its staff, and of American anthropology in general. One of the oldest anthropological institutions in America, the museum can boast of many firsts in the field by its pioneering archaeologists and anthropologists. Their expeditions and other research work are documented in the Archives “Special Collections” in copious fieldnotes, diaries and journals, correspondence, site maps and plans, manuscripts drafts, notes and ephemera. Expedition records include the Canon de Chelly Records, the Chichen Itza Expedition Records, the Coxe Expedition Records, the more recent Southwest Africa Expedition Records, and the Lower Mississippi Survey. Among its many collections the Archives holds the papers of early directors like Frederick Ward Putnam and Jeffries Wyman; Harvard’s first African-American female graduate student, Caroline Bond Day; anthropological greats like Charles Bowditch, Alfred Tozzer, and A.V. Kidder; drawings by Tatiana Proskouriakoff, and the records of the Carnegie Institute of Washington, a co-sponsor of many southwest expeditions in the first half of the twentieth century. Records relating to collectors like Mary Hemenway and David I. Bushnell provide both anthropological data and important information about the museum’s relationships with collectors.

The archives also holds some of the papers of the Peabody Family, mostly pertaining to George Peabody, the founder. The archives of Peabody departments like Registration, Collections, and Exhibits are also maintained and preserved.

A complete list of the Peabody Archives’ holdings can be found on the Archives’ web page at the Peabody web site: http://www.peabody.harvard.edu/archives/.

Currently three special archives projects are underway. Two are preservation projects, made necessary by the extreme old age of many of the museum’s records. The Institute of Museum Studies (IMS) Accession Files Re-housing Project has just been completed. This grant enabled us to rehouse the museum’s 100 linear feet of accession files, many of which date back near the museum’s establishment to 1867. The grant has also allowed us to reformat the museum’s catalog cards, which date back to 1932, and contain unique data and metadata relating to the museum’s acquisition history. Both the accession files and the catalog cards continue to be used daily by staff and researchers.

To date, all of the 49,000-plus catalog cards have been microfilmed by Harvard University’s Imaging Services Department. The accession files have been refoldered from acidic envelopes to clearly labeled archival quality folders and placed in archival document boxes in new cabinetry. Fragile items have been sleeved in mylar, and some items have been transferred to the

Continued on next page
archives from the Collections Department Reading Room. New and/or improved finding aids to the accession files are being produced, and folder and box labels were generated from a database. The IMS grant enabled the Archives to hire two to three work-study students per term for the duration to rehouse materials under the supervision of the Archivist, who worked in tandem with T. Rose Holdcraft, Peabody Museum Conservator.

The Ledgers Project will ensure that the museum’s vital accession ledgers, dating to 1867, will remain viable artifacts. Due to their constant use by staff and researchers, the ledgers had to undergo expert conservation work at the Northeast Document Conservation Center in Andover, Mass. Upon completion of the conservation work, high quality bound color-photocopy surrogate volumes are being made from the originals. The use of these surrogate volumes will ensure that no more information is lost due to the fragility of pages and constant use. The original volumes will be housed in the Archives stacks, and the surrogate volumes, with their stronger paper and clarity will be available for regular research use.

The Digital Finding Aids Project is a Harvard-wide effort to make archival repositories’ finding aids to collections available on the Web in a standardized format which will withstand constant computer hardware and software upgrades, and which will be easily searchable by researchers. The Peabody Archives has recently joined the project and will make our finding aids available on the project’s server (http://hul.harvard.edu/dfap/) in the near future.

The Archives is open to researchers (all students, scholars and the general public with a serious research interest) by appointment. Call Sarah Demb at (617) 496-2994 or e-mail to sdemb@fas.harvard.edu to schedule an appointment.

The author would like to thank Prof. C.C. Lamberg-Karlovsky and Prof. Stephen Williams for their generous assistance.

Katsinam, from page 24

In April, when the Hopi start preparing and planting their gardens and fields, katsinam are called upon to help the plants sprout and grow. Many katsinam represent seeds and different kinds of sacred corn, or blooming plant life; others represent rain, or game animals hunted by the Hopi. Katsina dances are performed in the plazas. Racer katsinam appear and challenge men and boys to foot races, thus blessing them with strong and healthy lives. “As the men race, so the water will rush down the arroyos,” the Hopi say. A “mudhead” katsina leads the racers, carrying prizes in a blanket. During these kvuamuya races, two katsinam who are female fertility figures force men and boys to the ground and make copulatory movements that symbolize procreation.

WuKo’uyis, the main planting season in early June, is an important time when the first corn is planted and young people and children are taught how to farm. Katsinam appear at sunrise in all twelve Hopi villages and proceed in single file to the plazas. The dances conclude at sunset with prayers and blessings.

Shortly after the summer solstice, the sixteen-day Nimian (or “homegoing”) ceremony celebrates the departure of the katsinam to their spirit world in the San Francisco mountains. After eight days of sacred activities in the kivas, the katsinam perform a public dance. They enter the plaza at sunrise with their arms full of the first green corn stalks of the year, bringing presents, including tithu, for the children. Toward the end of the evening, they reenter the kiva, where an altar has been set up. There they dance for the last time and receive prayer-offerings or breath feathers carrying the wishes of their makers for rain. The father of the katsinam gives a farewell speech, thanking them for past favors and praying for their continued help. He then sprinkles them with corn meal and spreads corn meal on a path for them to follow to the west. The katsinam slowly leave the village following the trail marked by corn meal to return to the gods with the Hopi’s gifts and prayers-offerings.

As noted above, throughout the ceremonial cycle described above the katsinam give tithu (or “katchina dolls”, as they are more commonly known) to the children in attendance. Carved from cottonwood root by Hopi men, they are tangible evidence of the katsinam’s power and wisdom. Whereas traditionally they were used entirely within Hopi culture, since the late 1800s many have been carved as art objects and sold to the general public. Market demand has since increased Hopi production of the dolls while adding new technical skills and styles to the carvers’ repertoires. Some are quite different from tithu carved before the turn of the century. Comparisons between them and the tithu in the Peabody Museum collections (produced before 1900) thus provide valuable insights into the dynamic nature of Hopi culture and religion.

Hopii katsinam image from polacca polychrome tile.
Conservation Notes

T. ROSE HOLDCRAFT

T. Rose Holdcraft (M.A. Art History, Univ. of Cincinnati) serves as Conservator and Administrative Head of the Conservation Department with responsibilities for museum-wide conservation services. Her recent research interests focus on the bark cloth collections from the Pacific and South American regions as well as specific collections of archaeological Maya and Andean textile materials.

The Conservation Department of the Peabody Museum is pleased to announce an award from the Institute of Museum and Library Services for the preservation of its extensive bark cloth (tapa) collections. The collections from Polynesia, Micronesia, Melanesia, and Australia are important both because of the age and rarity of many pieces.

The Museum's earliest bark cloths were accessioned in 1867 and 1869 through donations of the Boston Athenaeum, the Massachusetts Historical Society, the Smithsonian, and the Boston Marine Society. Bark cloth specimens from the Boston Museum collection originated in the Gilbert (Kiribati), Caroline, Hawaiian, Easter and Marquesas Islands. Eight of these cloths are believed to have been originally collected during the U.S. Exploring Expedition of 1838-1842. Early collecting efforts of Alexander Agassiz (1884-85) and Wm. McM. Woodworth have provided rich ethnographic and photographic collections from islands such as Cook, Tonga, Fiji, Samoa, Tahiti, Ellice, Horne Society and islands of Micronesia. Other donations include several bark cloth coats from Borneo collected by W.H. Furness III in 1897; and bark cloths from New Guinea and eight pieces from Madik Australia collected in 1938 by C.D. Crockett.

Bark cloths range from the thinnest and most finely pounded, translucent off-white flat cloths to heavier roughly pounded medium brown toned cloths. They may be small in size (4 x 6 inches in some cases) or large ceremonial.

Barkcloth on exhibit in the Oceanic Gallery, fourth floor. (Photo by Hillel Burger)
cloths reaching 136 feet or more. There are several Hawaiian bedding cloths, composed of multiple pieces affixed across one end with cordage; other cloths have been constructed as dresses, shirts or breech cloths. Cloths may be decorated on one or both sides and may have thin or thick applications of pigment and/or dye; some are oiled and/or glazed. The collections serve an important research function given that many of the 19th century bark cloth manufacturing techniques and related traditions are now no longer practiced.

In 1989-90, more than 30 bark cloths were conserved as part of the new installation in the Oceanic Gallery. T. Rose Holdcraft, then Associate Conservator, completed the documentation, cleaning, humidification and tear repairs for these selected cloths; and in collaboration with Noe-lani Crawford and Sam Tager (from the exhibit design department) developed and fabricated exhibition mounts. This treatment effort essentially served as a pilot project to understand the scope of future conservation of the entire collection of nearly 300 cloths.

In 1996, a collection condition survey was initiated: to provide updated information on the current condition of the folded and stacked bark cloth in the museum’s collection; to identify preservation problems; to develop a treatment plan; and to review use of physical storage space. The survey reestablished the urgency to improve storage methods in order to facilitate efficient, safe research accessibility to these important collections.

The IMLS award will fund an Assistant Conservator for 15 months and will cover some of the expenses of conservation and restorage. This project will involve written and photographic documentation, surface cleaning with low suction vacuum, and humidification techniques appropriate to these paper-like cloths to soften/reduce fold lines and creases. Stabilization of the most problematic structural and edge tears will involve the use of acrylic-toned Japanese paper mulberry tissue repairs. Approximately 150 to 180 pieces can be incorporated into rolled storage subsequent to conservation treatment; many others too fragile to be rolled will be stored flat. Additional funding is being sought to support the cost of material analyses important to understanding construction components (oils, pigments, etc.) and the preservation or deterioration effects on the bark cloth substrate; as well as to provide funds for future publications of results from this conservation study.

The fourth floor Oceanic gallery currently displays twenty-four bark cloths from various islands of the Pacific. Please stop by for a visit.

HOLD THE DATE

Thursday, May 7, 1998
8:00 p.m.

PEABODY MUSEUM
FOUNDER’S LECTURE

The Culture of Some Objects
in the Peabody Collection

MARSHALL SAHLINS
Charles F. Grey Distinguished Service Professor Emeritus
University of Chicago

Yenching Institute
Harvard University
2 Divinity Avenue
Cambridge, Massachusetts

Further information will follow
Judicial Injustice,” to appear in Richard Werbner (ed.), *Postcolony: African Anthropology and the Peoples of the Americas*. Prof. Maybury-Lewis was awarded the Grand Cross of the National Order of Scientific Merit by the government of Brazil in 1997, and will be awarded the Retzius Gold Medal by the government of Sweden in 1998. In 1996 he delivered the keynote addresses at the International Conference on Socioeconomic Development in Tokyo and at the New England Anthropological Association’s Annual Meeting.


**Nikolaas J. van der Merwe**, Landon T. Clay Professor of Scientific Archaeology, recently published the following works: “Stable isotope analysis of bone collagen and apatite in the reconstruction of human diet: A case study from Cuello, Belize,” in M.V. Orna (ed.), *Archaeological Chemistry V: Organic, Inorganic, and Biochemical Analysis*. Washington, DC: American Chemical Society, pp. 355-365, with R.H. Tykot and N. Ham mond; “New paleoanthropological discoveries and tests of hominid land use models in the Western Lacustrine Plain of the lowermost Bed II Olduvai Basin, in *Journal of Human Evolution* 32: A5, with R.J. Blumenschine, F.T. Masao, G.M. Ashley, R.J. Clarke, J.I. Ebert, C.R. Peters, and N.E. Sikes; “Vanadium concentration variability in Plio-Pleistocene cave deposits at Kromdraai, South Africa, in *Annals of the Transvaal Museum* 36 (20): 253-256, with S.M.M. Young and J.F. Thack eray. Prof. van der Merwe participated in a Rutgers/University of Dar es Salaam field expedition to Olduvai Gorge, Tanzania, and did carbon isotope analysis of tooth enamel from fossil fauna found in lower Bed II, 1.75 mA. He completed the second year of NSF-sponsored research on metabolic pathways in pigs (as analogues for humans), and collaborated with the staff of the National Gallery of Art to characterize the isotopic source signature of marble used by Jean-Antoine Houdon (to sculpt Washington and Jefferson).

**Prof. Emer. Evon Z. Vogt, Jr.** is researching Maya ethnographic data in preparation for a book he is writing with David Stuart on “Maya Cosmology.” He has just completed a working paper on “Maya Souls” and is currently writing another working paper on “Maya Sacred Mountains.” “For another chapter in this forthcoming book I returned to the Highlands of Chiapas in February 1997 to undertake field research on Zinacanteco astronomy. For this research I utilized EZCosmos on my computer which permitted me to display images of the night sky to Zinacanteco informants and question them about their views of the constellations and the movements of the sun, moon, the planets, and stars. Use of this program had advantages over viewing the night sky with informants because (a) I did not have to wait for a cloudless night, and (b) the program had a pointer which

Prof. Emer. Gordon R. Willey attended the meeting of the Society of American Archaeology in New Orleans in April, where he presented two papers titled “Viru Valley in Retrospect” and “Writing of Archaeological Syntheses.” Recent publications include “Lower Central American Archaeology” in Paths to Central American Prehistory, F.W. Lange, ed., Univ. of Colorado Press, Boulder, 1996; and “Archaeobotany: Scope and Significance” in EthnoBotany: Evolution of a Discipline, R. Schultes and S. Von Reis, eds., Timber Press and Dioscorides Press, Oregon, 1995. The Society for American Archaeology has organized a symposium to be held in alternate years, begun in 1996, on the History of American Archaeology, to be named the Gordon R. Willey Symposium. The American Anthropological Associate has scheduled a prize of $1000 to be given annually by the Archaeological Division of the Association, for the best article with an archaeological theme published in the AA, to be named the Gordon R. Willey Prize.

Museum curators and staff

Dr. Monni Adams, Associate, Ethnology and Art, was an Instructor on “Current Issues in African Art” at the Harvard Extension School this past spring, and on “Native American Art” this fall. Recent publications by Dr. Adams include the following articles: African sculpture at the Peabody Museum, in Arts d’Afrique Noire (Paris), 1997; Kuba textiles for a book to be published by Abrams, New York (in print); East Sumba ethnography for an exhibition and catalogue by the Museum of Ethnology in Rotterdam (in print); book reviews for the International Journal of African Historical Studies, (Boston), Anthropos (Germany), Museum Anthropology, and African Arts; (UCLA) exhibition review for African Arts on the Baule exhibit at Yale University. Her current research focuses on Kuba textiles and the Liberian collections at the Peabody Museum.


Dr. Lawrence J. Flynn, Assistant Director, attended the Biochrom ’97 conference on evolutionary biochronology held April 14-17 in Montpellier, France, and presented a paper titled “Late Cenozoic Mammalian Events in North China.” As a member of the Executive Committee, he attended the annual meeting of the Society of Vertebrate Paleontology in Chicago in October. The executive topic was “Crafting a policy of protection of vertebrate fossils from U.S. federal lands.” Recent publications by Dr. Flynn include the following; with Iqbal Umer Cheema and S. Mahmood Raza, “Note on Pliocene small mammals from the Mirpur District, Azad Kashmir, Pakistan, in Gobios, 30(1):115-119; with J.C. Barry, W. Dons, J.A. Harrison, E.H. Lindsay, M.E. Morgan, and G. Pilbeam, “Only ochootonid from the Neogene of the Indian Subcontinent, in Jour. Vert. Paleontology, 17(3):627-628; with Wu Wenyu and William R. Downs, “Dating vertebrate microfaunas in the late Cenozoic record of northern China, in Palaeo-geogr., Palaeoclimat., Palaeoecol., in press.


Barbara Isaac, Assistant Director and Coordinator of Repatriation, attended meetings of the National Review Committee for NAGPRA (Native American Graves Protection and Repatriation Act) in Myrtle Beach, SC, November 1996, and Oklahoma, March, 1997, and was invited to make a presentation at the southwestern Tribal Peoples NAGPRA Conference in Santa Fe in October in the session titled “The Legal Status of Collections in Museums.” The repatriation staff of the museum has been effective in procuring grants from the National Park Service each year since grants have been awarded: 1995, Consultation and Inventory Completion

Continued on next page
Consultation for Collections from Central and Southern New England at the Peabody Museum, Harvard University; 1996, Continuing Consultation for Pecos Pueblo; 1997, Consultation and Inventory Completion for Collections from New York and the Mid-Atlantic States. This past June Volume V of the Koobi Fora Research Project: Plio-Pleistocene Archaeology edited by Glynn Ll. Isaac with her assistance was published by Oxford University Press. In June of 1995 Mrs. Isaac spent three weeks in the Republic of Georgia, working with Prof. Reid Ferring of the Univ. of North Texas and Georgian colleagues excavating sites in the Diliska Gorge area. For the purposes of NAGPRA, field visits were made to Hopi in August 1996 and May 1997, and to Hoopa Valley and the Karuk Reservation in September 1996 together with Drs. Anne-Marie Victor-Howe and Patricia Capone in order to work with the three tribes on claims for sacred items and items of cultural patrimony.

Dr. Castle McLaughlin, Hrdy Fellow in North American Ethnology, represented the Peabody Museum at a meeting of the Lewis and Clark Advisory group held at the Missouri Historical Society in February to discuss the development of a national collaborative exhibit commemorating the bicentennial of the Lewis and Clark expedition. In May she presented a Peabody Museum luncheon lecture, “Lewis and Clark: Looking Back Down the Trail.” Dr. McLaughlin conducted field work in June in North Dakota, where she is tracking the history and politics surrounding wild horses. She participated in an invitational seminar, “Exhibitionary Moments: The Display and Meaning of Native American Art,” at the National Gallery of Art’s Center for Advanced Study in the Visual Arts, October 2 - 3, and gave a paper titled “Picturing the Indian New Deal: Nationalism and the Decade of Documentary” at Harvard’s Center for Literary and Cultural Studies on October 14. McLaughlin was recently elected to the Council of the New England American Studies Association.

The Peabody Museum of Archaeology and Ethnology is pleased to announce an updated and expanded website featuring its Conservation Department <http://www.peabody.harvard.edu/conservation/>. The Conservation Department serves the museum’s programs and staff to facilitate ongoing research access to, and public exhibit, proper care, and long-term preservation of the anthropological collections. The department advises on collections care, provides environmental monitoring, initiates collection condition surveys, and implements conservation treatment and material analysis to support preservation initiatives. The website, developed in-house by T. Rose Holdcraft of the Conservation Department and Lara Greenwood of the Office of Information Services and Technology, reflects this broad purpose.

The website includes descriptions of recent grant proposals initiated by the department and awarded to the museum and provides links to descriptions of these projects on the museum’s archival and photographic collections web pages. There is also a description of the recently awarded Institute for Museum and Library Sciences (IMLS) grant for treatment and rehousing of the museum’s bark cloth collections from islands of the Pacific.

Several recent treatment and research projects are described and illustrated; updates on these projects will be made on the website periodically. One of these, a technical study of a mica serpent from Turner Mound (a Hopewell site) includes a brief description of the excavation history, interpretation, and recent conservation analysis of the fragile object. Another project described is the documentation, cleaning, and containerization of paper molds in the Peabody Museum collection. These were produced in situ at Maya archaeological sites, and the site features images of paper molds from Quirigua.

Web pages on preventive conservation and integrated pest management are linked to other helpful conservation web sites for further reference. Visitors are welcome to contact any member of the Conservation staff with questions about the programs and services described on the site. This website will serve as a model for further development of Peabody departmental web pages.
Web Site Developments

Over the last year the Peabody Museum web site has been redesigned and expanded to include Special Projects, Peabody Profiles, additional on-line exhibits and finding aids to some of the Peabody’s collections. An exciting new feature is the on-line exhibition created by Lara Greenwood, web manager at the Peabody, with the assistance of Ellie Swain, of the Peabody’s Katsina collection (see Rainmakers from the Gods: page 22) (www.peabody.harvard.edu/katsina).

In anticipation of the upcoming bicentennial of the Lewis and Clark Expedition, the Peabody launched a special project on its collection of Lewis and Clark ethnographic material in June (www.peabody.harvard.edu/Lewis&Clark). “The Ethnography of Lewis and Clark: Native American Objects and the American Quest for Commerce and Science,” showcases a selection of Native American objects that were collected by Lewis and Clark on their epic expedition of 1804-1805 and provides information about that venture and its participants. The objects in the exhibition are among the few surviving materials gathered by Lewis and Clark and their Corps of North West Discovery. Their collection represents one of the earliest attempts to systematically gather materials from North American Indian cultures. Included in the exhibition is a painted bison robe secured from the Mandan that has been described as the earliest known example of Plains Indian biographical art.

The exhibition includes scholarly text and images of the objects from the Peabody’s collection; the introduction provides background information and links to biographies and portraits of Lewis and Clark. Supporting imagery from other institutions, links to relevant Lewis and Clark resources, and a bibliography are also included.

The initial launch includes introductions to the material by Dr. Rubie Watson, Director of the Peabody Museum, and Dr. Castle McLaughlin, Hrdy Fellow. The web site, developed by Ms. Jesse Taggert, will expand as research progresses.

New features based on the work of faculty and staff include Altar Q and Copan, an experimental section using Apple QuickTime VR to explore the glyphs found on Altar Q, an altar from the archaeological site of Copan (www.peabody.harvard.edu/Copan), and an article by Dr. David Stuart on the meaning of the glyphs and the site of Copan.

Two new finding aids are Photographic Collections: David Ives Bushnell, Jr. Collection, and Guide to the North American Collection. The Bushnell collection includes photograph albums of archaeological and ethnographic expeditions, daguerreotype portraits of Native American chiefs, and photographs and glass plate negatives which record Bushnell’s personal life. The finding aid to the North American Collection includes listings of museum history and general study collections such as physical [biological] anthropology, cultural anthropology, and archaeology.

The Arnold Arboretum and the Peabody Museum have worked jointly over the last ten months to survey East and Southeast Asian photograph collections at Harvard and in the greater Boston area. Andrew Hubble (Arnold Arboretum) and Kathy Jones-Garmil (Peabody) are also working with Sheila Connor and Carol David of the Arboretum to create an on-line database for 50 photographs from the Arboretum’s E.H. Wilson archival collection. This will serve as a prototype and feasibility study for on-line access to the larger group of Asian photographs using the Worldwide Web, and will include images from Burma, China, Indonesia, Japan, Korea, Laos, Malaysia, Thailand and Vietnam.

Over the last year, the Office of Information Services and Technology has been converting electronic files from existing databases throughout the museum into a format compatible with EmbARK. The Peabody’s on-line inventory and catalog have developed over an almost twenty-year period, and due to the diverse nature of the collections, several of the individual on-line databases have been somewhat idiosyncratic in nature. The task of the conversion project is to formulate a standard that will accommodate all the different types of data needed to be stored. The biggest challenge by far is that of mapping the Osteological Collections data fields to the greater EmbARK data structure. That process is on-going but very near completion. As of this writing, over 170,000 records have been transferred to the new system. Lee Ann Kalwat, Peabody Systems Administrator, has overseen the conversion project.
Willey, from page 18


Tourtellot, Gair III


Tourtellot, Gair III, Norman Hammond, and R.M. Rose


Trigger, B.G.


Uhle, Max


Vogt, E. Z.


Wauchope, Robert


Willey, G.R.


1949 *Archaeology of the Florida Gulf Coast*. Smithsonian Miscellaneous Collection, Vol. 113, Smithsonian Institution, Washington, D.C.


Willey, G.R., W. R. Bullard, J. M. Glass, and J.C. Gifford


Willey, G.R., R.M. Leventhal, A.A. Demarest, and W.L. Fash


Willey, G.R. and C.R. McGimsey


Willey, G.R. and Philip Phillips


Wille y, G.R. and Sabloff, J.A.


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