China’s Inner Asian Frontier
—rare photos on exhibit

In 1923 Frederick Wulsin, his wife Janet, and another American couple, Susanne and Harry Emery, set out from Baotou, Inner Mongolia, with a camel caravan to travel across the Alashan desert to Wangyefu, the capital city of the Mongol kingdom of Alashan. From there they went on to northeast Tibet (Qinghai) and the three lamaseries of Kumbu, Labrang, and Choni. Wulsin was sponsored by the National Geographic Society to collect zoological and botanical specimens and to make a thorough photographic record of the people of these regions and their landscape. Wulsin’s remarkable photographs show the Mongols, Tibetans, and Muslims of northwest China in transition, documenting the survival of their traditions and the complex social mixtures under the growing Han Chinese cultural and national dominance. Continued on page 10

Mr. Mung, the postmaster, in all his regalia, with one of the head lamas at Wang Yeh Fu.

Featured in this issue:
Sacred children: twins in the ritual art of the Yoruba of Nigeria
MARIE JEANNE ADAMS

The Peabody returns to Arabia
C.C. LAMBERG-KARLOVSKY

Treasures from the attic
ANNE NOBLES
Harvard College '78

More Peabody Museum treasures are being rediscovered as work continues on the reorganization and study of the Thomas Keam Collection of Hopi Indian artifacts. The collection was purchased from Mr. Keam, a Hopi trader at the turn of the century, and given to the Peabody in 1894. It contains over 3000 baskets, stone tools, Kachina dolls, ceramics, and other Hopi ethnographic and archaeological objects. The historic pottery alone numbers over 1000 pieces and constitutes the largest collection of its kind in the world.

The pottery had remained unstudied until recently when Edwin Wade, the Peabody’s Assistant Director, began to revise the typology for Historic Hopi ceramics dating from A.D. 1600-1900, a time period within which 80% of the collection falls. The pottery collection is valuable not only because of its size, but also because Keam bought both outstanding and poorly made examples of Hopi ceramics. It is also important because it helps document the introduction of Spanish and Eastern Puebloan influence to the Hopi mesas.

Funding provided by the National Park Service and the National Science Foundation is supporting the reorganization of the Keam Collection. Since September 1978, students and volunteers have been recataloging and photographing every artifact. Work has also Continued on page 9
Sacred children: twins in the ritual and art of the Yoruba of Nigeria

MARIE JEANNE ADAMS

Marie Jeanne (Monni) Adams, Associate Professor, has a joint appointment with the Fine Arts Department and the Department of Anthropology at Harvard under a five-year Kress Foundation grant for an academic program in ethnographic art. Dr. Adams teaches African and Oceanic art and also serves as Associate Curator at the Peabody Museum. Her articles on the Peabody Museum collections and her research visits to Africa have been published in African Arts and L’Art d’Afrique (Paris).

Figure 1. Female twin figure. Height: 111/2”. Body color: brown with traces of redwood powder; hairdress dyed with indigo. Hole marking eye pupil probably contained metal peg. Bracelet of blue and striped beads and arm ring of iron. Four horizontal facial scars. William Fagg attributed this style to the Ogbomosho locality in the Oyo region, dating it to the middle nineteenth century. (Peabody Museum 975-12-50/11812. Gift of Donald Deskey). Photo: Hillel Burger.

The Yoruba of Nigeria have many beliefs about the sacredness of children. Nowhere are these ideas expressed more vividly than in the Yoruba’s treatment of twins. In addition to special religious rites, lavish artistic efforts are expended on twins, both living and dead. For example, if one or both twins should die, a mother commissions carved wood statuettes as substitutes, which she “feeds” and cares for until she can no longer bear children. At that time the little figures are stored away on the family altar.

The several million Yoruba living in southwestern Nigeria have the highest twin birthrate in the world, occurring in 45.1 births per 1,000 (compared with 11 per 1,000 in the United States). In response to this frequency and the high infant mortality rate, the Yoruba have commissioned thousands of twin sculptures throughout the years. It is not surprising that twin figures are the most numerous of Yoruba art works.

Although other children represented in Yoruba carving are always shown attached to or dependent upon a mother image, each twin figure is carved separately, free from the mother or the other twin. The parents specify to the carver the sex of the child and the family group’s facial marks. Yet twin figures are readily recognizable as a type because of a consistent form (Figs. 1 and 2). The statues are smaller than other Yoruba figural sculptures, ranging from eight to eleven inches in height. Each figure stands on a base with its arms hanging by its side, the hands touching the thighs. The figures are nude, but display the sexual features of either a mature male or female body. The proportions of the body — especially the large head and headdress — the erect pose, and the clearly indicated segmentation of the body parts are presented in typical Yoruba style. The small size combined with the forthright, independent stance and serious mien create an immediately appealing impression and make the twin figures the most widely liked — by both traveling visitors and serious collectors — of Yoruba sculptures.

The first recorded observation of what were probably twin figures dates from the nineteenth century (1830), when an English explorer, Richard Lander, saw them in use: 2

Many women with little wooden figures on their heads passed in the course of the morning, mothers who, having lost a child, carry imitations of them about their persons for an indefinite time as a symbol of mourning. None could be induced to part with these affectionate little memorials. . .

Whenever the mothers stopped to take refreshment, a small part of their food was invariably presented to the lips of these inanimate memorials.

Unlike many other contemporary European reactions to African sculpture in its original context, Lander’s comments were favorable, perhaps because the maternal sentiments were something he could understand.

Artists in Christian societies have also translated feelings about sacred children into art. A sacred child is usually one with extraordinary powers for good, such as the miracle-working Saint Bernadette. Nevertheless, in contemporary art forms, children with extraordinary powers for evil appear with considerable frequency in works such as in The Turn of the Screw, The Children’s Hour, and The Exorcist, where the children are placed in situations that exacerbate the evil potential they possess. In this tradition, the sacred child has either good or bad characteristics.

Figure 2. Male and female twin figures. Height: 103/4” and 101/2”. Body color: brown, traces of redwood powder in crevices; traces of bright blue powder in hairdress. Metal pins as pupils in eyes. Necklets of green, red, black, and white beads. The male’s necklace has three long, blue beads. Horizontal and vertical facial scars. Style resembles the work of the Iseyin area (compare Figure 1 in Man, 1944:105). (Peabody Museum 60-50-50/10417 and 10418. Gift of Eliot Elisofon). Photo: Hillel Burger.

The Yoruba ascribe both negative and positive powers to sacred children and they focus most of their hopes and fears upon twins. Twins, because they are products of a multiple birth, are held to be potential sources of both blessings and of misfortune.

The prospect of misfortune or loss is real. Because of the extra weight on the womb, twins are often born prematurely, and their small size is a threat to survival. The mother is faced with a dilemma: she must either supply nourishment for two needy infants...
herself or find another lactating woman willing to help. Providing for two growing children weighs heavily on a Yoruba mother because as a rule she is responsible for much of the food and other needs of her child — expenses Yoruba women meet by engaging in petty trading in the weekly markets.

Twins are also thought to be unpredictable and troublesome (see Fig. 3). Not long after their births, and whenever they fall ill, the mother goes to a diviner for guidance. The wishes of the twins, expressed through the diviner, may require that the mother alter her occupation: she might be told to take a basket and go begging for alms by singing and dancing in the marketplace (Fig. 4) or to trade in beans and palm oil. Begging may bring in more money than she had previously earned but even a woman of means would follow this occupation because the Yoruba feel the twins are such a potential source of harm that the community should share the burden of placating them. Trading in beans and oil assures a steady supply of the foods favored by twins.

Food is especially significant in regard to the twins' dispositions because the Yoruba consider the stomach to be the locus of anger. Therefore, the mother likes to be able to feed the twins beans, a bland variety of cowpea, and palm oil to soothe their troublesome spirits. A Yoruba woman of Lagos explains it this way:3

Beans are the special food of twins. Feeding beans to twins is like pouring oil on troubled waters. One eats beans to cool one's temper. So one serves beans to the twins to please them and to cool them down so they won't cause trouble. . . . The beans are cooked with oil. Oil is to pacify trouble and so are beans. Therefore oil and beans cool double trouble. They are a double means of cooling double trouble.

The Yoruba, like many other African societies, rely on seniority or elder-younger relationships to decide the allocation of rights, duties, inheritance, and a host of everyday behaviors. For these societies, the near-simultaneous arrival of twins poses a problem. The Yoruba solve this problem by giving both male and female twins names which fix precedence — albeit in a reversal of the natural order of birth. The firstborn is always named Taiwo, the "taster of the world," and the second, named Kehinde, is considered the elder, not the younger. Thus Kehinde would inherit the property that parents leave to their descendants.

On the other hand what remains disturbing for the Yoruba is that twin births conflict with preconceived notions of the reasonable norm for human reproduction. For the Yoruba, human beings should bear only one child at a time; multiple births are associated with creatures that produce eggs or litters. Twinning, therefore, smacks of animality.

The twins (ibeji, the word for twins) are openly addressed in sacred songs either by the name of the Colobus monkey, (edun) or by the name of the monkey's offspring. This black-and-white monkey gives birth to two infants and carries one on its front and one on its back, in the same fashion a human mother carries her heavy burdens. The Colobus monkey is sacred to twins, who must avoid eating its flesh and the fruits of its favored tree.

Most important of all, the Yoruba believe the twins share the capricious and active spirit of the Colobus monkey. This association illustrates something of the presumed extraordinary powers of twins. Both twins and monkeys are said to escape to the "above" whenever they choose. Monkeys can run up into trees, and twins can die at will. A Yoruba father of twins explained this similarity:4

Edun (Colobus monkey) and twins are the same in that edun will come down to look at you and watch you and when you go toward them they fly up into the trees, they ascend. Then as you walk away they will come down again to watch you and when you look, they will go up again. So it is like twins who come down again and go up again. They keep being born and dying again.

To avoid the misfortune and loss that the twins might bring about, the Yoruba mother undertakes a complex set of obligations toward the twins, involving considerable expense. We can sum up the family's efforts in this way: the twins must be treated well, and they must be treated alike.

At their birth, the mother sets up a shrine in the house, consisting of two small pots. She learns to chant special lullabies for the infants and, later, acquires a repertory of songs of praise to honor them in public. Each week she must offer a little feast of several foods for the twins and their neighborhood playmates. Once a year she will honor them with a more elaborate ceremony. Ibeji means literally "twice-born." Twins are also called ejeji, "the two who are one." They are held to be "counterparts of each other." Everything done for one must be done for the other. Unequal treatment would arouse their resentment and conspiratorial action.

Equal treatment is extended even after the death of one twin — a substitute "child" is created by means of a wood statuette (ere ibeji, twin figure). The mother or the remaining twin periodically wash the little figure, adorn it with cosmetics, add articles of clothing, and on festival days offer it bits of food. The face and parts of the body may be worn smooth by this handling. If the family fortunes rise, the figure is adorned with sumptuous miniature garments and with gold and silver jewelry. To declare the precious, sacred character of the twin figure, the parents may add a blouse decorated with colored beads and white shells, like the one worn by the priest of the thundergod.

The wooden image (ere ibeji) is usually kept in the mother's sleeping room or placed on the twin altar. Whenever the mother dances in the market for alms, she carries the surviving twin and tucks the ere ibeji in her wrapper to identify her appeal. If any of these equalizing rites are neglected, the surviving twin will be lured away to the spirit world by its mate.

If both twins die, the mother continues to honor them at weekly ritual feasts and attends special rites where she dances with the figures and sings their praises (Fig. 5). She will not

Continued on page 11

Figure 3. Twins with mother. Note bodies rubbed with chalk powder, a white substance believed to be "cooling" in effect. Photo: Marilyn H. Houlberg, 1971.

Figure 4. Mother of twins in the market place. Ogbagba, Oyo region. Photo: Marilyn H. Houlberg, January 1971.

Symbols • Winter 1980 • 3
"... but few are chosen"
New faculty appointments

Peter S. Wells has been appointed Assistant Professor of Anthropology and Assistant Curator of European Archaeology in the Peabody Museum. Prof. Wells received his undergraduate (1970) and doctoral degrees (1976) from Harvard. He spent a year at the University of Tübingen, West Germany, in 1971-72. A specialist on the Late Bronze and Iron Ages of Europe (a period from 1200 B.C. to the birth of Christ), Prof. Wells has done research on processes of trade, culture contact, culture change, social structure, settlement organization, and economic systems.

In 1978 Prof. Wells began the archaeological excavation of an Early Iron Age site (800 B.C.), the settlement of Hascherkeller near Landshut, Bavaria. A number of objects from the Mediterranean world have been excavated from Iron Age graves in Germany, including Greek pottery, Etruscan bronze artifacts, gold jewelry, etc. With the Hascherkeller excavation Prof. Wells hopes to gain insight into the economic organization that brought about this international commercialism between Europe and the Mediterranean world during the Early Iron Age. Along with gaining an understanding of the trade systems involved, Dr. Wells will be examining the subsistence patterns of the settlement and the manufacturing activities of the area. A substantial portion of the settlement has been exposed during the first two seasons of excavation and an abundance of cultural remains have been recovered. Prof. Wells's excavations at Hascherkeller will continue in 1980 and 1981.

Prof. Wells is also doing research on preparing publications of the Peabody's Mecklenburg Collection, consisting of Iron Age grave groups from Austria and Slovenia. The Duchess of Mecklenburg, an amateur archaeologist, excavated nearly 1000 graves between 1905 and 1914. The collection includes many important objects, such as the bronze figure from the cemetery at Hallstatt currently on display in the "Masterpieces of the Peabody Museum" exhibition.

John E. Cronin, a Phi Beta Kappa graduate of the University of California at Berkeley, is a native of Philadelphia. He received the Ph.D. degree from Berkeley in 1975 and joined the faculty of Harvard University in the Department of Anthropology in January 1979 following a postdoctoral fellowship at the Neuropsychiatric Institute at U.C.L.A.

Cronin's fields of specialization include human and primate genetics, population genetics and evolution, and human variation.

Cronin writes, "My particular interests center around human evolution and genetics. I am currently engaged in a study that suggests that humans and chimpanzees are very similar at the genetic level. Each gene is, on average, about 99% identical. This suggests that humans and chimps, our closest evolutionary neighbors, are very recently separated, quite possibly only 4-5 million years ago. Some 5 million years ago on the savannah of East Africa, there existed a creature very much similar to the living pygmy chimpanzee (Pan paniscus). Only recently discovered by Dr. Harold Coolidge of Harvard in 1925, and still poorly known, this small chimp closely resembles the common ancestor of man, chimpanzee, and gorilla. The genetic studies reveal that there must have been a common ancestor to all these species. The pygmy chimp is remarkably similar to the first true humans that we find in the paleontological record, named Australopithecus. It was but a short step, in evolution, from a protohominid like the pygmy chimp to the fully erect bipedal early humans that we find preserved in 3.0-4.0-million-year-old deposits in both the Afar area of Ethiopia and the Laotoli beds near Olduvai Gorge, Tanzania. What is exciting for those of us who pursue this work, is that each animal, including human beings, has locked away in each and every cell of the body, an evolutionary history. This history is encoded in the genes, and only recently have we been able to 'crack this code' and reveal by modern molecular studies, these pages of previously encrypted history. We have discovered our 'rosetta stone' and are busily engaged in the translations. In some real sense, our work in these laboratories is like a window to the distant past."

(Prof. Cronin writes about the new biological anthropology laboratories on page 12.)

Jonathon Edward Ericson joined the Harvard faculty as Assistant Professor of Anthropology and Assistant Curator of Scientific Archaeology at the Peabody Museum in 1978. Born in the Bronx, New York, Prof. Ericson attended Marietta College in Marietta, Ohio, and received his undergraduate (in Earth Exploration Geophysics), masters and doctorate (Anthropology) degrees from the University of California at Los Angeles. From 1970 to 1976, Prof. Ericson held research and postgraduate positions at U.C.L.A. in the Institute of Geophysics and Planetary Physics (Isotope Laboratory), the School of Engineering and Applied Sciences (Glass and Ceramics Laboratory), and the Department of Anthropology. From 1976 to 1978 he was a Conservation Chemist at the Los Angeles County Museum of Art.

Prof. Ericson's areas of specialization include: applications of scientific techniques, including radiocarbon and obsidian hydration dating and chemical tracing methods to archaeology, environmental reconstruction, and works of art. Ericson also lists North American archaeology (California) and economic anthropology, particularly ex-
change systems among prehistoric hunters and gatherers, among his research interests. His current research involves the use of stable isotope geochemistry and heavy metal biogeochemistry to discern patterns involving diet, the origins of agriculture, prehistoric mining, and social structure. He is co-editor and co-author of a volume entitled Exchange Systems in Prehistory, Academic Press (1976).

Ericson's fieldwork includes excavation and consulting work at various archaeological sites in California, Arizona, Mexico, and Peru. He has recently been selected as a Senior Fulbright-Hayes Scholar to study in India.

Dr. Ericson's article on the new Scientific Archaeology Laboratories at the Peabody Museum appears on page 10.

Three people have been appointed Lecturers on Anthropology for the current year. They are: Dr. Russell Barber, Research Director of the Institute for Conservation Archaeology; Dr. Marjorie Elias, a specialist in human development; and Dr. Wanda Minge-Klevana, an Economic Anthropologist who is teaching Method and Theory in Social Anthropology. Dr. Thomas Kiefer is a Tutor in Anthropology and Law.

Film series

Over 1500 people have attended the first three (of eight) ethnographic films from the Japanese-produced series called "MAN." Jointly sponsored by the Peabody Museum Association, Cultural Survival, Inc., and the Japan Institute at Harvard, the films provide a unique opportunity to see how a Japanese ethnographic filmmaker portrays the indigenous peoples of the world. The films are being shown, one each month, from October 1979 to May 1980.

African art lovers reception

Museum Director, Prof. C.C. Lamberg-Karlovsky and Marie Jeanne (Monni) Adams, Associate Professor of Art and Anthropology, were hosts for a gathering of African art lovers at a special reception in the Peabody in November. An exhibition of exceptionally interesting objects was prepared for the group to review. The guests were allowed to visit the recently renovated African storage areas in the Museum where thousands of objects, most of which have never been on exhibit, could be seen.

Summa Cum Laude

Gordon R. Willey, Bowditch Professor of Mexican and Central American Archaeology, gave the Huxley Lecture and was awarded the Huxley Medal on November 7, 1979. This was held under the aegis of the Royal Anthropological Institute of Great Britain and Ireland, with the lecture being given at the Archaeological Institute in London. Professor Willey spoke on "Toward an Holistic View of Ancient Maya Civilization."

Prof. Stanley Tambiah gave the distinguished Radcliffe-Brown Memorial Lecture at the British Academy in March 1979. His lecture was entitled "Performative Approach to Ritual." Given biennially, previous lecturers have been: Sir Raymond Firth (1973), Prof. Max Gluckman (1975), and Sir Edmund Leach (1977).

Three anthropologists were elected to the National Academy of Sciences in 1979, and all three are current (or retired) members of the Department of Anthropology at Harvard. They are Prof. K.C. Chang, Prof. Evon Z. Vogt, and Prof. Emeritus Douglas Oliver.

Prof. David Maybury-Lewis was elected to the Royal Danish Academy of Science and Arts, and President of the American Ethnological Society.

Prof. Emeritus John O. Brew was honored by the American Anthropological Association as the recipient of a 1979 Distinguished Service Award for extraordinary service to the profession. Prof. Brew is the second member of the Harvard Anthropology Department to receive this award since it was established in 1976. Prof. Emeritus W.W. Howells was so honored in 1978.

The Maya Journey

The Maya Journey, a special project of the Peabody Ladies Committee, began with a series of four luncheons and lectures. Seventy-five subscribers to the series enjoyed four luncheons served in the Lower Central American Gallery on the third floor of the Peabody Museum, each of which was followed by a lecture. Lecturers were: Gordon R. Willey, Bowditch Professor of Central American Archaeology at Harvard, whose lecture was entitled "The Ancient Maya, a General View"; explorer and Curator of Maya Hieroglyphics, Ian Graham of the Peabody Museum gave an illustrated lecture called "Discoverers of the Maya"; Dr. Clemency Coggin, an Art Historian and Associate in Pre-Columbian Art at the Peabody, discussed "Temples and Tombs of Tikal"; and Robert Sharer, Professor of Anthropology at the University of Pennsylvania, lectured on his excavations at the site of Quirigua, Guatemala.

The Maya Journey continued with an evening lecture by Prof. Evon Z. Vogt on The Modern Maya. The final leg of "The Maya Journey" will be a tour of Guatemala and Honduras led by Prof. and Mrs. Vogt. The trip will take place at the end of January.

Peabody Museum Association

You are invited to join the Peabody Museum Association. As a member of the PMA, you will be part of both a famous teaching and research institution dedicated to the study of man and culture and a Museum whose unique collections include works of primitive art and archaeology from all over the world. PMA members are friends of the Museum and support it with their annual membership. Members are invited to exhibition openings, receptions, special events, lectures, films, etc. They enjoy special privileges at the Tozzer Library and a discount on Museum publications and at the Peabody Museum Shop.

Categories of membership are: Student ($15), Individual ($20), Family ($30), Contributing ($50), Sustaining ($100 or more), Fellow ($500 or more).

All gifts to the Peabody Museum are tax deductible within legal limits. Please make checks payable to the Peabody Museum Association.
The Peabody returns to Arabia

C.C. LAMBERG-KARLOVSKY

C.C. Lamberg-Karlovsky has been the Director of the Peabody Museum since 1977 and Professor of Anthropology since 1969. From 1967 to 1975 he was the Director of the excavations at Tepe Yahya, a Bronze Age site in Iran with major links to the Mesopotamian and early Indus civilizations. In 1976 he began participating in the first systematic surveys of the Kingdom of Saudi Arabia. His recent books include Ancient Civilizations: The Near East and Mesoamerica (with J. Sabloff) 1979, and Hunters, Farmers, and Civilization, ed., 1979.

"And when the Queen of Sheba heard of the fame of Solomon concerning the name of the Lord, she came to prove him with hard questions." (Kings 1, 10). Much of the art of South Arabia is religiously inspired. This alabaster head, used as a votive piece, was made in honor of the gods and either dedicated to a temple or used as a memorial stela in honor of the deceased. Dated to the last centuries B.C., it could have belonged to the Sabaens over whom Sheba reigned.

In the past decade the Arabian peninsula has become an area of intense archaeological research. This was not always so. The first person to be given permission to undertake archaeological research in Saudi Arabia was Dr. Henry Field, Research Fellow at the Peabody Museum.

In the early 1950s Dr. Field was permitted to begin archaeological exploration through a direct appeal to King Abdul-aziz bin Abdulrahman al Saud, founder of the Kingdom of Saudi Arabia. The King qualified this permission, however, by permitting Dr. Field's excavations to proceed only to a depth of four fingers! Henry Field’s archaeological surveys in Arabia were subsequently published by the Peabody and were followed by two decades of unsystematic amateur archaeology conducted largely by foreign residents in Saudi Arabia doing work for the Arabian American Oil Co. (ARAMCO).

The limited access to, and knowledge of, the antiquities of Saudi Arabia were dramatically altered in 1973/74. In that year Dr. Abdullah Masry, an archaeologist trained at the University of Chicago, drafted the first formal antiquities laws for Saudi Arabia. These laws were directly approved by King Faisal who appointed Dr. Masry as the first Director General of Archaeology and Museums in Saudi Arabia. Dr. Masry immediately launched an extremely ambitious program which included a five-year comprehensive archaeological survey of the Kingdom, the construction of a National Museum in Riyadh, the capital, and the development of six regional museums responsible for the preservation of antiquities and monuments throughout the Kingdom. Additionally, foreseeing a need for an adequately trained staff, Dr. Masry sent a number of students to universities in Europe and the United States for graduate training. This full program, recently reported in the New York Times, was funded by the Saudi government with the comfortably round figure of one billion dollars. It represents one of the most ambitious archaeological undertakings of any nation at any point in history. Dr. Masry was clearly up to the challenge. Under his perceptive guidance, Saudi Arabia has in less than a decade moved from a country whose archaeological past was only dimly understood to one in which the broad outlines of its past, from 30,000 B.C. to Medieval Islam, are slowly emerging. The results of these archaeological explorations are being published in the new Saudi journal, Atal, The Journal of Saudi Arabian Archaeology.

This Portuguese fort stands atop one of the most important sites in the Eastern Provinces of Saudi Arabia. Beneath the fort one can see protruding walls which belong to Hellenistic and earlier periods. The site is located on the small island of Tarut where substantial evidence for third-millennium trade with Mesopotamia has also been recovered. A Women's Bath, immediately adjacent to the site has constrained our ability to fully examine its nature.

In 1975 Dr. Masry invited me to participate in his five-year program of archaeological survey. In accepting this invitation Harvard joined the University of Chicago and the Institute of Archeology, University of London, as the principal institutions involved with archaeological explorations in Saudi Arabia. And so, a quarter of a century after Henry Field had first worked there, the Peabody Museum returned to Arabia. In a personal communication, Dr. Field expressed both his interest and pleasure in this renewed program. I anticipated positive results in this collaboration with Dr. Masry for it was my good fortune to know him prior to his assuming his present position. In 1971 as a graduate student at the University of Chicago, Abdullah Masry spent three summer months working on my earlier research project—the excavation at Tepe Yahya in southeastern Iran. Dr. Masry's innate ability set him apart as a graduate student and it was clear even then that someday he would play a principal role in systematizing an approach to the understanding of Saudi Arabia's past.

This is the final year of the five-year program of archaeological survey. In the past three years a number of graduate students departed in January for a three-month period to survey specific regions of Arabia. In the three seasons of Harvard's participation, our team has discovered over 250 archaeological sites ranging in date from 5000 B.C. to A.D. 1400 in regions of the Eastern Province adjacent to the Gulf and in central Arabia. It is clearly not possible to review the entirety of our results here. Instead, I shall concentrate on two distinctive aspects which are of principal significance: the Ubaid Culture of Arabia and our preliminary excavations at Taima.

The Ubaid Culture of Arabia

In 1967 I attended an International Conference on Bahrain. It was rumored just prior to this conference that two American women, amateur "pot-hunters" from Aramco, had discovered a number of Ubaid settlements (ca. 4500 B.C.) in the eastern provinces of Arabia. One of them, Mrs. Marny Golding, attended this conference with a suitcase of broken ceramics. Before an assembled group of archaeologists she dumped out the contents of her suitcase on a bed.
The rapid development of Saudi Arabia is a potential threat to the archaeological sites of the country. The bulldozers of industrial development too often do not stop before an archaeological site but pass right through it. In recognition of this, Dr. Masry keeps a watchful eye on the known great sites of Arabia. Last spring he sent our group out to look over one of Arabia's greatest archaeological sites: Taima. Under the field direction of the Peabody's Dr. Garth Bawden, one month was spent mapping and excavating a single restricted area of this large city, a city whose walls still stand to a height of over ten feet and extend for about two miles.

By far the greatest fame of Taima rests in its identification as the city to which King Nabonidus, the last king of the Neo-Babylonian Empire, fled. This enigmatic man was elevated to kingship in 556 B.C. by the priests of Babylon who had tired of the endless wars of Nebuchadnezzar. Nabonidus, credited with building the first museum of antiquities in Babylon, conscientiously excavated sites to collect antiquities and in so doing is known to history as the first archaeologist. His handiwork of the images of the old gods from other cities brought him into conflict with the very priests that elevated him to kingship. His feud with the priests disaffected the entire Babylonian nation. Leaving his son Belshazzar, of biblical fame, to rule in Babylon he departed, and on an inscription ascribed to Nabonidus himself we read: "I hid myself afar from my city of Babylon on the road to Taima." (The ancient city of Babylon, located near the modern city of Baghdad, Iraq, was about 500 miles from Taima.) At Taima he apparently conquered the local ruler and "He made the town beautiful, built there his palaces like the palaces of Babylon." Nabonidus's departure from Babylon led to a resultant instability in that kingdom and eventually to the conquest of Babylon by the Persian King Cyrus the Great and the consequent eclipse of the Babylonian Empire.

Our excavations at Taima, though of limited exposure and duration, were extraordinarily successful. A part of a single building was recovered which had all the symbols of Nabonidus's presence. A large stela was found in this building with a long Aramaic inscription, comparable to the famed Taima Stone recovered there by the explorer Huber in 1884 and presently in the Louvre, portions of stone furnishings, ceramics, and in the corner of one room a cube of stone approximately three feet square. This stone, carved in relief on two sides, depicts Hathor, the Egyptian moon god, the symbol for Sin, the Babylonian moon god, and the South Arabian moon god as well as Marduk and Inanna, the principle deities of Babylon. It represents an unparalleled depiction of religious ecumenism wholly uncharacteristic for this period of time but a trait so characteristic of Nabonidus.

Whether it is the recovery of an Ubaid sherds or a major Aramaic inscription (as at Taima) archaeological research in Saudi Arabia promises to add a most significant chapter to our understanding of the civilizations of the ancient Near East.
Scholars, symposia, and seminars

The faculty and students in the Department of Anthropology at Harvard have been the beneficiaries of the scholarship and friendship of a number of visiting scholars this year: Dr. Mary Catherine Bateson, former Prof. of Anthropology and Dean of Northern Iran University, has been at Harvard preparing materials on Iran for publication and writing a biographical essay on her parents, Margaret Mead and Gregory Bateson. Prof. Ben Finney, University of Hawaii, is doing research on “Oral Tradition and Polynesian Migrations” through a fellowship from the National Endowment for the Humanities. Prof. Lina Fruzzetti of Brown University is collaborating with Associate Prof. Akos Ostor of this department on a volume about caste, kinship, and marriage in India. Mellon Fellow, Prof. Katheryn Linduff, a specialist in Chinese Art History in the Department of Fine Arts at the University of Pittsburgh, is studying with Prof. K.C. Chang. Dr. Frederique Marglin is a Postdoctoral Fellow working under Prof. Stanley Tambiah’s supervision on women’s studies and Indian classical dance. Prof. Walter Sangree, from the Department of Anthropology at the University of Rochester, is doing research on polyandry in Africa and Asia. Dr. Ananda Wickremesinghe came to Harvard’s Department of Anthropology and Center for World Religions from the University of Sri Lanka to do research in Theosophy under the sponsorship of the Kern Foundation. Prof. Ernestine Friedl, Department of Anthropology at Duke University, will be a Visiting Professor during the Spring semester. She will teach a seminar on “The Anthropology of Modern Greece” through the sponsorship of the George Seferis Chair of Modern Greek (Department of Classics, Harvard).

The Department of Anthropology Seminar Series provides a forum for both visiting scholars and members of the Harvard faculty to discuss their current research with students and colleagues. The scholars represent the three divisions of Anthropology: Archaeology, Social Anthropology and Biological Anthropology. During the Fall semester we were privileged to welcome fourteen international and American scholars to the Peabody Museum.

Visiting Scholar Dr. Mary Catherine Bateson opened the Series with a symposium entitled “Reflections on the Iranian Revolution.” Nine lectures on the Han Dynasty of Ancient China (206 B.C. – A.D. 220) were given at Harvard with the support of the American School of Prehistoric Research of the Peabody Museum. The lectures (two of which were part of the Seminar Series) were presented by Prof. Wang Zhong-shu, Research Fellow and Deputy Director of the Institute of Archaeology, Chinese Academy of Social Sciences and Secretary General of the Archaeological Society of China. Prof. Wang and his associate Prof. Xu Ping-fang are visiting the United States under an arrangement between the Committee on Scholarly Communication with the People’s Republic of China (in Washington, D.C.) and the Chinese Scientific and Technological Association (in Peking). Prof. K.C. Chang (Department of Anthropology, Harvard) served as chairman of the committee that planned Prof. Wang’s U.S. visit. Disney Professor of Archaeology at Cambridge University and editor of Antiquity, Prof. Glyn Daniel of St. John’s College gave a seminar on “Archaeology and the Invented Past.”

Prof. D.P. Agrawal of the Physical Research Laboratory, Navrangpura Ahmadabad, India lectured on the Indus Civilization. Prof. Sherwood Washburn, University of California at Berkeley (and brother of Bradford Washburn, Director of Boston’s Science Museum), gave a lecture entitled “Physical Anthropology in America: The View from Harvard.”

Prof. Geoffrey Harrison, Oxford University, who was a Visiting Professor in Biological Anthropology last year, returned to conduct a seminar on “Life Styles and Well Being.” Visiting Scholar Prof. Walter Sangree presented a symposium on “Polyandry: Contrasting Forms and Functions,” and Prof. Ben Finney spoke on “Ancient Migration and Modern Experimental Voyages.”

Prof. Jyotindra Jain of the L.D. Institute of Indology at Gujarat University in India, under the joint sponsorship of the Department of Anthropology and the Center for World Religions, lectured on “Jaina Art and Iconography.” Laurence Wylie, C. Douglas Dillon Professor of the Civilization of France at Harvard and an Associate in the Department of Anthropology, gave an informal demonstration on the “Cultural Differences in Non-Verbal Communication.”

Genevieve Dollfus of the Centre National de la Recherche Scientifique, Paris, discussed “Recent Results of the French Mission at Susa.” Though Susa is not being excavated at this time, Prof. Dollfus reported that members of the French Mission remain in Iran. Prof. Edmund Leach, M.B.A., former Provost at King’s College, Cambridge and former President of the Royal Anthropological Institute, gave a lecture entitled “Why Did Moses Have a Sister?” The lecture was sponsored by the Department of Anthropology and the Peabody Museum Association. Prof. Jack Goody, also from Cambridge University, gave a seminar entitled “European and Mediterranean Kinship: Some Remarks”; and Dr. Nancy Howell, Acting Chairperson, Department of Sociology, University of Toronto and author of Demography of the Dobe !Kung, lectured on “Nasty, Brutish, and Short?” Her lecture was jointly sponsored by the Departments of Anthropology, Sociology, and the Center for Population Studies.

U.S.A. – U.S.S.R. archaeological exchange

The Academy of Sciences of the U.S.S.R. and the International Research and Exchange Board of the Social Science Research Council (U.S.A.) have recently agreed to formalize an exchange program involving Soviet and American archaeologists concerned with the ancient Near East and Central Asia. In August 1979, three distinguished Soviet archaeologists, Professors R. Munchaev, V. Masson, and N. Merpert arrived at the Peabody to negotiate details of the proposed exchange. Prof. Munchaev served as chairman of the Soviet group. The Americans involved with formulating protocol for the exchange are Professors C.C. Lamberg-Karlovsky (chairman), Robert McC. Adams (University of Chicago), and Philip L. Kohl (Wellesley College). It was agreed that in the Spring of 1981 a group of Soviet archaeologists will attend arranged meetings and tour the U.S. for a period of two weeks. This will be complimented in 1982 by a group of American archaeologists meeting in Samarkand and subsequently touring relevant archaeological sites in the Soviet Union. This is the first and most extensive exchange program undertaken between archaeologists of the U.S. and U.S.S.R.
The Archaeology of the Peabody

CURTIS M. HINSLEY, JR.

Curtis M. Hinsley, Jr., Assistant Professor of American History at Colgate University, will be in residence at the Peabody Museum as Visiting Scholar from January through May 1980, undertaking research on the history of anthropology at the Peabody from its founding in 1866 to 1930. The project is funded by grants from the National Science Foundation and the Colgate University Research Council. Mr. Hinsley comes to the project from recent work on government anthropology in the nineteenth century. His forthcoming book, Savages and Scientists: The Smithsonian Institution and the American Indian, 1846-1910, will be published in 1980 by the Smithsonian Institution Press.

The history of the Peabody Museum offers an opportunity to reach well beyond traditional institutional histories, which often lean toward anecdotal reminiscences or relatively narrow institutional concerns. The central questions for the nineteenth-century Peabody revolved around the permeability of the scientific community of anthropologists by the surrounding social community of the Boston area. American anthropology in the last century was not a closed circle of university-trained scholars nor an accepted university discipline, and it lacked both rigor and (more importantly) recognized utility for the society at large. For these reasons anthropologists were constantly dependent on the favors of friends and patrons. Anthropology was in a real sense a luxury in nineteenth-century American society.

One fascinating question that consequently arises is whether and to what extent scientifically external influences determined the direction and substance of Peabody anthropology. It is clear, for example, that Frederic W. Putnam, Curator of the Museum from 1876 to 1915, had great difficulties raising enthusiasm and funds for his researches in the Trenton gravels or in Madisonville, Ohio, whereas Charles P. Bowditch in the early nineties readily found local subscribers to support the first Copan expeditions. Part of the explanation certainly lies in the fact that Bowditch was independently wealthy himself and far more prominent socially than Putnam. The more significant factor, however, is that Central American archaeology promised more exciting—more civilized—works of art than the sherds, pipes, and bones of the northeastern United States. Anthropological investigations, especially archaeology, found favor and funds as much for their artistic value as for the scientific puzzles they addressed. Museum anthropology has by the very nature of the institution been closely tied to aesthetic interests.

The Peabody archives are rich in material—especially letters to and from the field—which demonstrates that before 1900 relationships between the Museum and its archaeological field-workers were highly personal, ambivalent, and volatile. This was so because the lack of a clear hierarchy and process of accreditation in archaeology made it difficult for men to know where they stood in the scientific community. Thus a man originally hired to collect—such as E. O. Dunning in Tennessee in the early 1870s or Charles C. Abbott in Trenton between 1876 and 1890—might soon express a desire to generalize from his findings, a function usually reserved for the curator. The phenomenon of divided functions was hardly unique to the Peabody—the Smithsonian of the same period exhibited similar patterns—but it was supremely frustrating to men with aroused ambitions and no ladders to climb.

Another aspect of early Peabody history which is more familiar to us today involves financial restrictions. The sons of New England who constituted the original Peabody Board of Trustees took the solvency of their trust very seriously, since they anticipated—quite correctly—that they could expect little help from the Harvard Corporation. From the beginning, in fact, University officials treated the Museum as a bothersome stepchild—further sign of the lack of status of ethnology or (New World) archaeology a century ago. Every purchase was closely scrutinized for market value; field agents were paid subsistence wages; Putnam himself held more than one job most of his life.

With the new century, formal connection with Harvard and the beginning of academic anthropology, these patterns (except the shortage of money) altered markedly, since essential purposes of the Museum switched, under the older Putnam and the young Alfred Tozzer, to training new generations of anthropologists and archaeologists. But the early years remain essential in comprehending the Peabody as it is today.

Keam Collection, continued from page 1

began to relocate the entire collection on the second floor of the Museum. The improved storage areas will better protect the objects and make them more accessible to scholars. Badly needed conservation of pottery and wooden objects is also under way.

In conjunction with the Keam research project, an exhibition, organized by students, on the Hemenway Southwest Archaeological Expedition, 1888–1894, was installed on the second floor of the Museum. Jesse Walter Fewkes, who was the second director of the expedition, had focused his attention on the Hopi, and it was through his efforts that the Keam Collection was purchased.

The exhibition concentrates on the expedition's research in the Hopi area and includes letters, excerpts from an unpublished manuscript written by Keam's associate, Alexander Stephens, paintings of the Hopi, and artifacts from Keam's collection. Highlights of the exhibit include Fewkes's eyewitness account of the conflict between Hopi elders and the U.S. Army over compulsory education of Hopi children. Stephens recorded the myths associated with certain pottery designs in his manuscript, and several of these accounts accompany objects from his collection. The letters and many of the artifacts are on exhibit for the first time.

During the past three years the significance of the Keam Collection has become nationally recognized. Requests from anthropologists, art historians, and native Americans to study and exhibit the collection have increased dramatically. As a consequence the Peabody Museum and the Heard Museum of Anthropology and Primitive Art in Phoenix are jointly preparing a major exhibition of the 150 most important pottery objects from the collection. The exhibition, which will open at the Heard in September 1980, has received the full support and cooperation of the Hopi Tribal Council. This program has been officially designated a Tricentennial Event, celebrating the three-hundredth anniversary of Hopi participation in the Pueblo Revolt of 1680.

An expanded version of the original Keam Collection catalog is being prepared by Dr. Wade. The catalog will include both Stephens's observations on the Hopi Culture made in 1890 and comments by Dr. Wade on the new discoveries and insights gained since that time.
New facilities for scientific archaeology

JONATHON E. ERICSON

The laboratories of the newly-established Center for Archaeological Research and Development located in the Peabody Museum will be completed in the spring of 1980. The Center will integrate a number of laboratories which will contain state-of-the-art systems capable of analyzing most archaeological materials.

CARD will be involved mainly in ongoing research projects of the staff, faculty, and students within the Museum. CARD also has an organization affiliation with the Center for Material Research in Archaeology and Ethnology, MIT and Associated Universities, Inc., Brookhaven National Laboratory. The Center, combined with the Program in Scientific Archaeology, will definitely strengthen the analytical capabilities of the Peabody Museum and provide a new focus for conducting research.

Over the last decade the curators of the Peabody Museum became increasingly aware of the need to establish a center for scientific research on archaeological and ethnographic materials. The move in this direction began with the establishment of the Putnam Laboratory within the Peabody by the past Director, Prof. Stephen Williams. The Putnam Laboratory grew in scope from providing laboratory space to the incorporation of rudimentary equipment. The Putnam Laboratory has served numbers of researchers and graduate students alike in providing space and equipment for ongoing research projects. Beginning in 1977 with the current Director, Prof. C.C. Lamberg-Karlovsky, plans were laid for the development of the analytical capabilities of the Museum by developing a Program in Scientific Archaeology which included the creation of a joint curatorship and junior faculty position in the Department of Anthropology. With this position secured, the Program in Scientific Archaeology was begun with the development of new courses, plans for research projects, and the construction of wholly new laboratories. Learning of these developments Nobel Laureate Prof. Willard F. Libby, the discoverer and developer of the radiocarbon dating technique, donated his University of Chicago system to the Peabody Museum. This stimulated other donations and support from the Department of Anthropology, Faculty of Arts and Sciences, Harvard Gordon McKay Laboratories, Botanical Museum, Harvard University Herbaria, and Department of Geology. A generous donation was received from Landon T. Clay which provided for the purchasing of all of the laboratory equipment. In turn, the Faculty of the Arts and Sciences allocated an area, exceeding 3000 square feet, and support for renovation of the space into laboratories. The laboratories will occupy the west wing of the fifth floor and basement of the Peabody.

Research in the new facilities will be conducted by members of the Peabody Museum staff and by students and faculty of the Department of Anthropology, Harvard. The laboratories include the Harvard radiocarbon lab, microscopy lab, x-ray lab, photography lab, sample preparation lab, a combined chemical and biological lab, the instruction lab, originally the Putnam lab, and an administrative office.

The laboratories form an integral research center in which both organic and inorganic materials can be analyzed and dated. The date of organic and inorganic materials will be determined in the radiocarbon and thermoluminescence laboratories. Preliminary or detailed microscopic analysis of materials will be conducted using the sample preparation and microscopic facilities. Major, minor, and trace elemental analysis will be undertaken using the x-ray fluorescence system. Mineral and pigment identification will be accomplished by x-ray diffraction analysis. The photography lab will provide excellent facilities for photography, developing, and copying. The chemistry biological lab combines a number of apparatus such as an infrared spectrometer and thin-layer chromatograph for conducting chemical and biological analysis. Remote sensing systems are limited to an electrical resistivity instrument and stereoscopes for aerial photography. Systematic collections of scientific standards are being compiled and will provide comparative material for the analyst. In all, CARD will have both research versatility and analytical depth for the student and professional researcher alike.

China's Frontier, continued from page 1

This record has lain all but forgotten in various archives for over 50 years, and now a grant from the National Endowment for the Humanities has made it possible for the Peabody Museum to exhibit Wulsin's photographs, documented by his and Janet Wulsin's letters, notes, and diaries. The exhibition will run from November 9, 1979, to May 4, 1980.

Frederick Wulsin received his B.A., M.A., and Ph.D. in Anthropology from Harvard. He was assistant to the Director and Assistant Curator at the Peabody Museum in 1928-1929.

In 1980 "China's Inner Asian Frontier" will be on exhibit at the Peabody Museum of Salem and will travel to the Pacific Asia Museum in Pasadena, California.

The project was under the direction of Mary Ellen Alonso, who also edited the 108-page catalog. The catalog contains 101 photos, maps, and a historical text by Prof. Joseph Fletcher. The exhibition and catalog were designed by Donald Freeman.

Mongols at a desert well.
Sacred Children, continued from page 2

describe the twins as dead but will say simply they have “gone away” or “gone
to Lagos [the capital] to bring back
wealth.” By continuing her special care,
she hopes the twins will be attracted
back and be reborn to her. Although
deceased at a young age, the twins are
represented in their statuettes as adults,
a stage, it is hoped, they will reach
when they return. The figures thus are
the means the mother uses to fulfill her
desire for more children and they
represent the end result — mature
children — that she desires.3

the twins at birth or to send them out of
the domestic group altogether, to serve
in a chief’s or king’s household or to be
sold as slaves outside the society.

Why then do the Yoruba take their
chances? The Yoruba believe that if
properly directed the twins’ power can
bring positive rewards to the family.
The family gains a domestic shrine, an
additional access to benefits for family
members. If the parents fall ill or suffer
property losses, the twin shrines are
actively worshipped with rituals of
offerings and invocations in order to
recover health and riches. More
religious attention is directed to dead
twins because the dead, in contact with
the spirit world, seem more powerful
than the living.

Rites for dead twins are performed by
parents, as one Yoruba explained: “so
that if they [the parents] ask the images
to do something for the family, the
images will do exactly as they say.”6 As
children, the twins should do their
parents’ bidding.

But the twins, dead or alive, can bring
good luck only through careful ritual
attention. The painstakingly repeated
rituals represent efforts to manipulate
the twins’ powers to bring the family
good fortune rather than bad.
Ultimately, if the twins survive to
adulthood, there will be two persons to
work in the fields and two adults to give
refuge to their mother.

Although ways of life for the
prosperous and modernizing Yoruba are
changing rapidly, the belief that twins
need to be controlled is still prevalent.
Rituals designed to placate twins
continue even among those who have
adopted Islam and Christianity; neither
religion offers any alternative to the
problem of the twins’ powers. In the
Igbomina area, it is now an established
practice for Muslim or Christian parents
who have lost one twin to arrange for
the surviving twin to be photographed.
The negative is printed twice in such a
fashion as to simulate the pair sitting
together (Fig. 6). If the twins were of
opposite sex, the survivor is first
photographed dressed in its own clothes
and then in the clothing of the opposite
sex. The two negatives are then printed
side by side and the twins are together
again.

These photographs are venerated with
food sacrifices much the same way as
the wood images. Similarly the life of
the survivor is believed to depend on
the existence and veneration of the
photograph.

Faced with the ambivalent potential
attributed to twins, the Yoruba solution
to this problem is well stated by a
Yoruba priest in another context: “We
must pamper them and be living.”7

Figure 5. Mother dressed to dance with twin
figures. Photo: Marilyn H. Houlberg.

Observing economic and social factors
in Yoruba society, we can see that more
than personal sentiment is attached to
this concern for the survival of children.
Men in Yoruba families perform most of
the agricultural labor and place a high
value on expanding the number in their
kin group. Women also depend on
children, especially to maintain their
social positions. A wife leaves her place
of birth to reside with her husband’s
family. The continuance of the marriage
and the wife’s status and authority
within her husband’s kin group depend
on her surviving children. In addition,
they are the mainstay of her old age.

The elaborate rituals for both living
and dead twins are based on a belief
that the power of twins goes beyond
effects on their own survival.

Dissatisfied twins, living or dead, are
believed to be able to cause the sickness,
even the death, of parents and siblings
as well as of themselves. If twins are not
properly honored, the mother will be
unable to bear more children or will fall
ill. Because of similar beliefs in the
disturbing potential of twins, a number
of other African peoples have thought it
better for the human community to kill

Figure 6. Taiwo, age eight, with what
appears to be a photograph of her sitting
with her deceased twin sister, Kehinde, who
died at age two. Actually, it is the same
photograph of Taiwo printed twice
(December 1969). Igbomina area. Photo:

With all this care and attention afforded
them, twins did have a better chance for
survival among the Yoruba, and they, in
turn, produced more twins. The
“affectionate memorials” point to the
custom of nurturance of twins which
may indeed have fostered a
better-than-normal survival rate and
contributed to the Yoruba’s high rate of
twinning.

NOTES

field information derives from the work
of Marilyn H. Houlberg ("Ibeji Images of
the Yoruba," African Arts 7:1:20-27, 1973 and
9:3:15-19, 1976), Robert Thompson ("Sons of
Thunder, Twin Images Among the Oyo
and Other Yoruba Groups," African Arts
4:3:6-13, 77-80, 1971), William Bascom (The
Yoruba of Southwestern Nigeria, 1969, New
York: Holt, Rinehart and Winston), and
research by Leon Siroto ("Twins of
Yorubaland," Field Museum Bulletin
38:4-8, 1967).

5. See discussion of the meaning of ashes
in twin rituals among the Labwor, Northern
Uganda, by R.G. Abraham, in The
Interpretation of Ritual, 1972:115-133, edited
by J.S. Lafontaine.
6. Recorded by R. Thompson in 1964
(1971:11).
7. Quoted in "Gelede Dance of the Western
Yoruba," by Margaret and Henry Drewal,

We are grateful to Marilyn H. Houlberg for
giving us permission to use her field
photographs.

Symbols • Winter 1980 • 11
New Laboratories for Biological Anthropology

JOHN E. CRONIN

The recently opened Biological Anthropological Laboratories on the fifth floor of the Peabody Museum place the Department of Anthropology and the Peabody at Harvard in a unique and enviable position. No other Anthropology department in the country has the capabilities to perform such modern studies in biochemistry, genetics, hormonal physiology, and neurobiology. Facilities such as these are usually found associated with either medical schools or Biochemistry departments. The new laboratories give professional researchers and students the opportunity to perform, entirely within the department, what is truly forefront research. In light of the fact that this Biological Anthropology program has always been conceptually integrative and on the leading edge of new areas in human biology, genetics, and evolution, these new labs only but confirm this position.

There are a number of projects ongoing in the Biological Anthropology Laboratories that center around human and primate evolution. These projects have implications for general evolutionary hypotheses. We are investigating the phylogenetic relationships in the primates using the techniques of immunology, chromosome banding, and primate electrophoresis. Three groups of higher primates are being intensively surveyed. The first group is the chromosomally highly diverse genus Cercopithecus. The second is the moderately diverse group of gibbons and seangs. The third chromosomally more diverse group is the baboon complex. For these groups we will analyze both blood proteins and chromosomes. The genetic based phylogenies will be compared with phylogenies based upon traditional comparative anatomical or fossil data. Studies of protein and chromosomal differences among species allow us to test aspects of the genetic models of speciation. For example, does protein diversity reflect chromosomal diversity? Secondly, does any aspect of either gene or chromosome change occur rapidly, that is, in a punctuated manner? Or are these changes gradual?

At another level we are currently involved in surveying blood samples from over 500 East African baboons to determine the extent of genetic diversity. This information will allow us to estimate the migration rate between groups, gene-environment interactions, the degree of genetic relatedness in a troop, and whether behavioral parameters correlate with the degree of relationship of individuals.

In the future we hope to investigate the genetic structure of the pygmy populations in Zaire, much as has been done by Neil’s group at Irven DeVore’s (Prof. of Biological Anthropology, Harvard) ten-year study of these African peoples. We also hope to begin a project involving somatic cell genetics. The results of the projects will have significant medical and evolutionary importance.

In conclusion, while these projects are centered around human genetics and evolution they are in reality one facet of the central core of the field of Human Biology. And these new laboratory facilities give us the capability to investigate many of the other core areas of Human Biology, such as growth and development neurochemistry, hormone-behavior interactions, and nutrition. Thus, the traditional questions of Biological Anthropologists can now be approached by novel and modern methods. I have a feeling that the New Physical Anthropology as described eloquently by Dr. S. L. Washburn in 1950 has finally come of age.

Computing the Peabody

SALLY BOND
Collections Administrator

During the one hundred and fourteen years of its existence, the Peabody Museum has accumulated over two million artifacts, stored throughout its seven floors.

Although documentation of these collections is excellent, it is not always easy to locate the artifacts themselves because of inefficient storage methods and insufficient efforts to keep track of the whereabouts of the artifacts. The results: an excellent resource in need of a standardized record-keeping system.

In 1975, Museum staff members first began to consider using computer technology to modernize and standardize our records. But computers were very new to the museum field, and little or no information was available on their potential application to an institution such as the Peabody.

Last year, I decided it was time the Peabody took the plunge into the twentieth century in its record-keeping. We had encouragement from various individuals in the museum field, and I began to seriously outline the needs of the catalogue department.

Our oldest records are to be found in handwritten ledgers and are not cross-indexed in any way. Newer entries, although on catalogue cards, are insufficiently cross-indexed and provide at best a clumsy research tool. My first goal is to standardize these existing records. Let me hasten to explain, however, that this does not mean that old records will be lost, altered, or considered obsolete!

My second goal is to inventory the collections. Obviously, the inventorying of two million artifacts is a gargantuan task, but it has not been done in the Museum’s history, and I feel that it will be worthwhile to locate as large a portion of the collection as possible and to record the discovered storage locations. Our standardized catalogue system will provide us with a logical place to record storage information. When the project is completed, we will be able to ask the computer to sort the catalogue data by storage location, thus producing shelves. This system will help us not only with inventory control, but also with the daily tasks of locating artifacts as requested by researchers.

A two-year plan was drawn up, and federal support was sought for the project. In February, we learned that funding was available to us for the first year of the program, through the National Endowment for the Arts. It was decided that during this first year we would concentrate on our North American collections, about one half of our total holdings. Using a PDP/11-70 computer located at the Children’s Museum in Boston, with terminals at the Peabody, input was begun in July.

In July, we applied for the second year’s funding, again to the National Endowment for the Arts. By January, we will know if this additional funding will be forthcoming.

It is my hope that within two years, we will have systematically cross-indexed the collections, geographically and typologically.

Subscription to SYMBOLS

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