Peabody loans *Sacred Cenote* artifacts for major exhibition

This cast gold bell was crushed before it was thrown into the Well of Sacrifice at Chichen Itza. The monkey, which holds two symmetrically curling tails was imported to Yucatan from Panama between A.D. 900 and 1100. Peabody Museum 10-71-20/7713, H. 3.1 cm. See Page 16.

Clay Professorship announced

A professorship in scientific archaeology, the use of procedures developed in the natural sciences to date and identify archaeological materials and artifacts, has been established at Harvard by the gift of Landon T. Clay of Boston. Mr. Clay, a 1950 graduate of Harvard College, is chairman of the board of the Eaton, Vance Corporation of Boston.

Linking archaeology with the physical, chemical and geological sciences, the Landon T. Clay Professorship of Scientific Archaeology is the first chair in the country established specifically for this purpose.

"The discovery after World War II by Willard Libby of carbon-14 dating was a true watershed in archaeology," said Mr. Clay. "For the first time, by means of repeatable, scientific procedures, it became possible to affix dates to archaeological artifacts and materials with known degrees of confidence. The technique has been subse-

*Continued on page 9*

Featured in this issue:

Hominoid evolution: Harvard's program and field research in Pakistan
DAVID PILBEAM

Nomads
THOMAS J. BARFIELD
Hominoid evolution: Harvard’s program and field research in Pakistan
DAVID PILBEAM

Born in England, David Pilbeam holds a B.A. from Cambridge University and earned the Ph.D. degree from Yale. He taught at Cambridge University before joining the Anthropology faculty at Yale in 1968. He was appointed Professor of Anthropology at Harvard in 1981. A paleoanthropologist, Prof. Pilbeam has done fieldwork in Egypt, Uganda, Spain, and Greece, and more extensively in Kenya and Pakistan. He is a consultant to the government of Kenya on human origin research, a Director of the Foundation for Research into the Origin of Man, and currently leading an excavation at a fossil site in the Potwar Plateau of Pakistan. Prof. Pilbeam is the author of The Evolution of Man and The Ascent of Man and a frequent contributor to academic journals.

For most of my research career I have been interested in the evolution of the hominoids, the group of Higher Primates including the apes, humans, and our ancestors. In particular I have focused on the very earliest stages of the evolution of the hominids — humans and our direct ancestors and relatives after the split from our closest ape relatives.

There are fewer species of ape living today than five to ten million years ago, when the first hominids evolved. The living apes are in fact now quite localized. The so-called great apes are found only in tropical West and Central Africa, and in East Asia. The gorilla, regular chimpanzee, and pygmy chimpanzee or bonobo are inhabitants of African forest and woodland. They spend time both in the trees and on the ground. Like all hominoids they climb adeptly, using their long arms to pull themselves through complex networks of branches. On the ground they are quadrupeds, walking on flat feet and knuckles. Orangutans are the sole surviving large apes of Asia; only a few are left in Sumatra and Borneo. These tree-living contortionists show no specializations for ground walking like African apes. Small apes, the gibbons, also live in the Asian forests although they are more successful and widely dispersed than orangutans: small and highly acrobatic, these are among the most spectacular of all living primates, hurling through the trees propelled by their long arms, leaping and whooping as they defend their tiny territories.

These species, or their immediate ancestors, have probably lived in their present areas for at least the last 3 or 4 million years; this is the time called by geologists the Pliocene and Pleistocene, best known for the periodic spectacular ice ages that saw the growth of enormous northern icesheets and the virtual disappearance of the world’s tropical forests. We have some late fossils from Asia to document the presence of early orangutans and gibbons but sadly we completely lack fossils that might tell us something about the three African apes. We do have information about another set of African hominoids, the early hominids known as the australopithecines.

Species of Australopithecus lived in Africa from at least 4 million years ago, perhaps 6 million, until around 1 million. They are, like us, upright bipedal walkers; like us too they have small canine teeth that are like chisels rather than tusks (as they are in the apes); however, like apes they had small brains, no more than about one third the volume of ours. Australopithecines lived in more open, less wooded environments than the apes, although they were probably in many ways basically apelike. I doubt they had human language; they were probably basically vegetarians.

How did this pattern arise? Briefly, the story seems to be approximately as follows. The earliest hominoids evolved in Africa more than 20 million years ago, having split away there earlier from their close relatives the Old World monkeys (living examples would include macaques, baboons, and colobines). By 10 million years ago several critical events had happened. Small apes — ancestral gibbons — had split from precursors of the living large apes and humans. And the large hominoids themselves had split into two great groups: one leading to a group of mainly Asian ape species that first flowered and then withered, leaving only the living orangutan as sole survivor, and the other leading to the precursor of the African apes and humans (Fig. 1). The Asian ape radiation contains forms called Ramapithecus and Sivapithecus (as well as others that need not concern us), and I like to use my colleague Andrew Hill’s term “ramamorphs” to label them. It is this group on which I have focused most of my attention during the past ten years.

We have a lousy African fossil record between 14 million years and 4 million years when we pick up the first
unarguable hominids. As I mentioned earlier, no chimp or gorilla ancestors are known, but it looks as though hominids may finally have split from the African apes only 6 or 7 million years ago, perhaps from protochimpanzees with gorilla ancestors diverging still earlier, perhaps 9 or 10 million years ago. Hominids, then, are African hominoids and one can look at the australopithecines as "odd African apes". The hominids did not disperse from Africa until long after they began to make tools and their brains increased markedly in size, perhaps only 1 million years ago. The earliest hominids and their African ape cousins diverged then in the late Miocene, 10 to 6 million years ago, probably in tropical Africa. Exactly where is unclear. Why is unclear too, although we are learning more and more about the geological and climatic instability of Africa during that time, instability that might have effected changes in plants and animals, including our long distant ancestors.

These new and surprising ideas, that hominids are peculiar African apes that diverged only recently from ancestors of chimps, flow directly from exciting work in molecular biology that has flowered during the last two decades. More and more molecular systems are being looked at closely, proteins, the chromosomes, DNA itself, for clues to relationships. If we want to understand the evolutionary history of any group, in this case the hominoids, we need a "branching sequence" (the order in which species split off), dates for the branching events, some notion of what possible ancestors looked like, some ideas about their important adaptations, and knowledge about their environments and environmental change. Molecular comparisons seem to provide the best branching frameworks. Although anatomical comparisons suggest to most primatologists that orangutans are to be linked with the African apes, it now looks as though oranges diverge early on from all other large hominoids, while hominids split much more recently. (This must mean that small genetic differences between humans and chimps get translated into apparently large anatomical differences — big brains, hairlessness, long legs, short big toes, etc. Our challenge now is to understand how that happens, and how to look at the anatomy with fresh eyes in order to see underlying similarities). It looks now too as though rates of molecular evolution fluctuate much less than rates of anatomical characters like brain size, tooth length, and so on. They can, with appropriate caveats, be used as approximate clocks. The ideal is to match the timed patterns of branching discerned from the two different records, molecular and fossil. We are beginning now to be able to do that.

I began work in Pakistan in 1973, starting a joint project when still at Yale with the Geological Survey of Pakistan in an area known as the Potwar Plateau (Fig. 2). The Plateau is near Rawalpindi and contains rocks outcropping on the surface that range from almost 20 million to less than 1 million years old. They were deposited by rivers and streams flowing down the southern flanks of the rising Himalayas, the Old World's largest mountain chain formed by the collision of India with Asia. A series of low hills 20 million years ago, by 10 million years they were a significant height (certainly several thousand meters).

These rocks are highly fossiliferous and have been known for more than one hundred years to contain mammals, including apes. The best known is Ramapithecus believed by many, including me in 1973, to have been a likely early hominid (a view which I no longer hold). Ramapithecus and its "big brother" Sivapithecus are known in Pakistan, and elsewhere in Asia, between 14 or more and 8 or less million years ago. It was in search of Ramapithecus that we went to Pakistan, "we" being a research group that began small but which has exploded into a large and heterogeneous group of scholars. In particular, Dr. John Barry, a postdoctoral Research Associate at the Peabody, and Dr. A. Kay Behrensmeyer now of the Smithsonian Institution, have been instrumental in making the project a success. Many others have also been involved, and I am specially indebted to my Pakistani collaborators, Dr. S.M. Ibrahim Shah and Dr. S. Mahmood Raza (who recently returned to Pakistan after completing his doctoral studies at Yale and recently at Harvard). One of the great pleasures of this kind of work, challenging though it is, is the network of relationships one develops.

Our project has been a success; it continues and we can expect to discover much more. We have built up a reasonable knowledge of the history of the mammal communities — including hominoids — in Pakistan from 20 million years on. This can be very quickly summarized as follows. A large turnover in animals in South Africa around 17 million years ago signals the influx of new species consequent to major geographical events — the "docking" of Africa-Arabia against Asia and the closing of the ancient Tethys seaway that had separated the two continents. New fossil forms appear in many parts of the Old World, and faunas from as far apart as Southwest Africa and east Asia bear an uncom-

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Symbols • Fall • 1983 • 3
Scholars, symposia, and seminars

Faculty of Anthropology

Dr. Garth Bawden conducted preliminary survey and excavation in the Moquegua Valley of the southern Peruvian highlands.

Commemorating the 50th anniversary of the Peabody Museum's excavations at Alkali Ridge in southeastern Utah, the annual Pecos Archaeological Conference held in Bluff, Utah in August, honored Prof. Emeritus J.O. Brew, who directed the excavation in 1931, 32 and 33.

Dr. Ian Brown published a monograph entitled The Southeastern Check Stamped Pottery Tradition: A View from Louisiana.

Prof. Kwang-chih Chang served as chairman of an International Advisory Committee for the city of Venice for an exhibition of Chinese artifacts which opened in June. Prof. Chang was the guest lecturer on a trip to China sponsored by the Peabody Museum in May. He returned to China in August to take part in the Seminar on Archaeological Studies in Asia, held in Peking and Sian which was sponsored by UNESCO, The Archaeological Society of China and the Institute of Archaeology of the Chinese Academy of Social Sciences. In September Prof. Chang gave a paper entitled: "Ancient Chinese Society: A Review of Recent Archaeological, Epigraphical and Textual Studies" at the second USA-USSR Archaeological Exchange held in Soviet Central Asia. Chang’s The Chinese Bronze Age has been published in Chinese in Hong Kong. Art, Myth, and Ritual: The Path to Political Authority in Ancient China will be published by Harvard University Press this fall.

Prof. B. Irven DeVore was elected Chairman of the Advisory Council of the Wenner Gren Foundation. DeVore gave a lecture entitled "The Hunter-Gatherer: Past, Present, Future" at a conference sponsored by the L.S.B. Leakey Foundation in San Francisco.

Prof. Jane I. Guyer is a member of the Joint Committee on African Studies of the Social Science Research Council and the American Council of Learned Societies. She organized a seminar — "Kinship and Capitalism: Women in African Rural Economics" sponsored by the Committee.

Prof. Dorinne K. Kondo gave a paper entitled “Inside and Outside: The Fieldworker as Conceptual Anomaly” at the annual American Anthropological Association meetings in Washington. The title of a paper presented at the annual meeting of the Southeast Conference of the Association for Asian Studies, Durham, N.C., was “Self and Family: Some Key Oppositions in Japanese Thought.” Prof. Kondo organized and chaired a panel on “Women and Work in Japan” at the annual meeting of the Association for Asian Studies, San Francisco.

Prof. C.C. Lamberg-Karlovsky attended a conference in Dushanbe, Tajikistan, SSR in April on "Origins of Agriculture" sponsored by UNESCO. He gave a paper entitled: "V.C. Childs: Reflections on the Neolithic Revolution after Fifty Years." In May Prof. and Mrs. Lamberg-Karlovsky traveled in China on a Peabody Museum sponsored tour. Lamberg-Karlovsky returned to the USSR in September as the leader of a delegation of American scholars attending the second USA-USSR Archaeological Exchange (the first was held at Harvard in 1981)

Meetings were held in Samarkand and Bokhara, Uzbekistan, SSR. Members of the delegation visited Bronze Age. Iron Age and medieval archaeological sites. The Exchange is sponsored by the International Research Exchange Board (IREX), New York, and the Institute of Archaeology (Moscow) of the Academy of Sciences, USSR.

Prof. Robert Maddin presented a paper entitled “Beginning of Metallurgy in Thailand” at the Pacific Sciences Congress in Dunedin, New Zealand. “Cayonu Copper” was the title of a paper given at the Archaeometry Symposium held in Naples. In August Prof. Maddin collected the largest existing corpus of copper artifacts from the 8th millennium levels at Cayonu, Turkey for metallurgical analysis. 7th and 11th century A.D. iron samples were collected from anchors of ships in Bodrum, Turkey as well as samples of metal from the Middle Bronze Age — Iron Age site of Kommos in Crete. Beginnings of Metallurgy in Cyprus: 4000 B.C. -500 B.C. with J.D. Muñiz was published by Pietriedes, 1982.

Prof. David Maybury-Lewis was on leave in the fall of 1982 and taught briefly at the University of Brasilia before going with Pia Maybury-Lewis and William Crawley, a photographer, to revisit the Shavante Indians, the first time in twenty years. Maybury-Lewis reports that since he last "worked among the Shavante they have gone from hunting and gathering to tractor-based dry rice farming and have passed through a period of intense hostility to the ranchers who were surrounding them and threatening to take their lands.” The Maybury-Lewis were able to assist the newly-forming Union of (Brazilian) Indian Nations on behalf of Cultural Survival and also to interview the Shavante Indian, Mario Juruna, the first Indian in Brazil ever to be elected as a deputy to the Federal Congress. This past summer Maybury-Lewis convened a conference in Jerusalem on "The Meaning of Dual Organization." In press is a volume edited by Maybury-Lewis entitled The Prospects for Plural Societies, in which fourteen international scholars examine the current state of theory concerned with multi-ethnic systems.

Prof. Sally Falk Moore was elected President of the Association for Political and Legal Anthropology. She was named 1982 Alumna of the Year at Barnard College. Prof. Moore gave a paper entitled "Reorganizations inclusive and divisive: Kilimanjaro 1880-1980" at the annual meeting of the American Anthropological Association. "Law, Development and Social Change in Tanzania" was the title of a paper presented at Wellesley College in the spring.

Construction of the Musée Hallam L. Movius was begun this fall by the French government. Prof. Emeritus Hallam L. Movius began excavations at the site of Abri Pataud, Les Eysses, France in 1958. Excavations were completed in 1964. The museum being built at the site will incorporate the cave which Prof. Movius excavated, and will house the artifacts, papers, field reports, files and publications of this major paleolithic site. The museum will be completed in 1985 when it will be officially dedicated in Prof. Movius' honor.

Prof. David Pilbeam gave the 1983 distinguished Silliman Lectures at Yale. Titles of the lectures were: "Hominid evolution and the fossil record"; "Clades, clocks, and hominin origins"; "Early human ancestors: patterns and reflections"; and "Inductions dangerous: the search for our past." "Becoming Human: Reflections from the Pleistocene" was the title of a series of lectures he gave as the Harvey Lecturer at the University of New Mexico.

Prof. Stanley Tambiah gave a paper entitled "Famous Buddha Statues and the Legitimation of Kings" at the Conference on Legitimacy and Descent, Maison des Sciences de l'Homme.
Paris. "The Institutional and Reflexive Achievements of Early Buddhism" was the title of a paper presented at the Conference on the Axial Age, Werner-Stimers Stiftung, Bad Homburg. Tambiah gave the Radhakrishnan Memorial Lectures at Oxford University, and the Kingsley Martin Memorial Lecture at Cambridge University. He received the Distinguished Scholar Award by the Association for Anthropological Diplomacy, and was elected a member of the Executive Council of the American Institute for Indian Studies. In July Tambiah attended the Third Decennial Conference of the Association for Social Anthropologists at Cambridge University and delivered one of the keynote addresses entitled "An Anthropologist's Manifesto for the Eighties." Prof. Tambiah chaired a section ("Theatricality in the Political Process in Asia and Africa") and read a paper, "The Theatre State in Southeast Asia" at the XXXI International Congress of Human Sciences in Asia and North Africa held in Tokyo and Kyoto in September.

Prof. Evon Z. Vogt was on leave last fall and conducted field work in Mexico and the American Southwest. He is chairman of the Anthropology section of the National Academy of Sciences. Vogt is the editor, with Richard M. Leventhal, of Prehistoric Settlement Patterns: Essay in Honor of Gordon R. Willey, University of New Mexico Press.

Prof. Emeritus John W.M. Whiting is a staff member for a project involving ten post-doctoral fellows who have completed field research for a study of adolescence and are writing and analyzing their results. Field sites for the project include: Australia, Canada, Romania, Morocco, Nigeria, Kenya and Thailand.

Prof. Gordon R. Willey gave a paper entitled "The Maya Postclassic Period" at a seminar at the School for American Research, Santa Fe. He gave the Memorial Address in honor of the late Junius B. Bird, in New York City. During the summer Prof. Willey visited Chichen Itza, Yucatan, where one of his graduate students, Charles Lincoln, is mapping and looking forward to excavating. Willey was elected an honorary member of Phi Beta Kappa, Harvard chapter, and elected to honorary lifetime membership in the International Congress of Archaeological and Ethnological Sciences. Prof. Willey was named Senior Professor in Anthropology on becoming Bowditch Professor Emeritus in July.

On April 26, 1983 a celebration took place at the Harvard Club of Boston in honor of Gordon R. Willey. The occasion marked three milestones in the long and distinguished career of Prof. Willey — his 70th birthday, his joining the emeritus ranks, and his being named a Senior Professor of Anthropology.

Prof. and Mrs. Willey were joined by colleagues, students and friends who came from all over the United States and abroad. Prof. Evon Z. Vogt served as Master of Ceremonies for the evening. "I rise," he said, "to open the celebration for a colleague who is really an athlete at heart but who has become the world's foremost Maya scholar. Some of you may not realize that the high point of Gordon Willey's early career occurred when his train from Los Angeles reached Tucson and he was greeted by the University of Arizona Band which had marched to the station to meet this Freshman Track Star from Long Beach, California.

Despite an undergraduate career devoted mainly to track and fraternity activities, Gordon did enroll in courses in archaeology and anthropology and before long he was on his way to field work in Georgia, where he met the lovely Katharine Whalley, and Louisiana, and then to Columbia University for his Ph.D.

"Gordon's first long-term post was with the Smithsonian Institution which became the sponsor of his many field expeditions to Peru and to Panama. In 1950 he was called to Harvard as the Bowditch Professor of Central American and Mexican Archaeology and Ethnology to initiate teaching and research in the Maya field from a base of operations in the Peabody Museum.

"Gordon Willey is still on track — running the 100 and the 220!"

Continued on page 13
Faculty appointments

Thomas J. Barfield was appointed Assistant Professor of Anthropology. A social anthropologist, Mr. Barfield's research interests center on the study of pastoral nomadism in the Near East and Central Asia. His work includes both ethnographic and historical studies of the peoples of these regions.

Mr. Barfield is a graduate of the University of Pennsylvania (1972) and received his M.A. (1974) and Ph.D. (1978) from Harvard. Before coming to the department Mr. Barfield was an Associate in Research at the Fairbank Center for East Asian Research at Harvard and taught anthropology at Wellesley College.

Thomas Barfield

Prof. Barfield conducted field work among the nomads of Kunduz and Badakhshan provinces, Afghanistan, in 1973-74 and 1975-76. His research included the investigation of the adaptation of pastoral nomads to a changing environment and a developing regional economy, nomadic pastoralism and its development into market oriented ranching, the relationship of nomads to the state, and ethnic identity in a plural society. The results of this research have been published in a book entitled The Central Asian Arabs of Afghanistan: Pastoral Nomadism in Transition, University of Texas Press, 1981.

Prof. Barfield's current research is on the history of China's northern frontier from the establishment of the Hsiung-nu empire in the third century B.C. until the end of the nomads' control of the steppe in modern times. The basic problem he is addressing, "is to explain the rise of nomadic states, their internal structure, and the political relationships they established with China." "The great nomadic states of Inner Asia," he said, "were stable only to the extent that they could exploit resources from outside the steppe. Two factors made this difficult: an ecological boundary that separated the pastoral economies of the steppe from the agricultural economy of China; and the Great Wall along China's political frontier—well-posted with soldiers to keep nomads from trading with local farmers. In order to force China to recognize their interests, the nomads resorted to extortion, raiding, and extreme violence." It is not surprising that the Chinese described "such behavior as an inherent part of nomadic life," said Barfield. It was not an innate characteristic of nomadism "but a conscious policy designed to inflate the power of the relatively small nomadic population to a status equal with that of the larger better organized Chinese." Prof. Barfield is nearing completion of a monograph on this research to be published by Harvard University Press.

Peter Ellison

Peter Ellison, a human biologist, has been appointed Assistant Professor of Anthropology at Harvard University. In addition to a Ph.D. from Harvard (1983), he also holds degrees in Zoology (B.A., University of Vermont, 1975) and Wildlife Ecology (M.S., University of Massachusetts, 1980).

Ellison's principal research interest is in understanding the ecology of human reproduction. "As a research problem, human fertility behavior is tailor-made for an anthropologist," he says, "since it requires explanation on so many levels: physiological, developmental, demographic, economic, ideological, etc." Ellison's research to date reflects just such a breadth of approach, including work on physical growth and the initiation of menstruation in girls, the relationship of fatness to estrogen levels in adult women, and the mathematical theory of "optimal reproductive strategies."

Ellison comes to the Anthropology Department from the Laboratory of Human Reproduction and Reproductive Biology at Harvard Medical School where he helped direct the core radioimmunoassay facility. One of his first objectives is to establish a similar facility in the Biological Anthropology Laboratories in the Peabody Museum. The facility will train students in the study of human endocrinology as it relates to behavior, nutrition, physical activity, and reproductive physiology. In addition Ellison looks forward to establishing a coordinated program of field and laboratory research on the determinants of human fertility.

Glynn Llwellyn Isaac came to Harvard as Professor of Anthropology in 1983, after 17 years of teaching at the University of California, Berkeley. In the early sixties his first professional years were spent in Africa, as Warden of Prehistoric Sites in Kenya and Deputy Director to Louis Leakey at the Centre for Prehistory and Palaeontology in Nairobi.

Born in Cape Town in 1937, Glynn Isaac became interested at an early age in archaeology and human origins. He pursued these interests via a B.Sc. in Geology, Zoology and Archaeology (Cape Town, 1958), Archaeology and Anthropology (Cambridge, 1961), and Ph.D. (Cambridge, 1969) reporting on his fieldwork on the Acheulian site of Olorgesailie in Kenya.

His active interest in fieldwork on Africa has continued, with expeditions to the Nakuru/Naivasha basin in Kenya (1969-70), Koobi Fora, Lake Turkana, (Rudolf) Kenya (1970-79), and Lake Natron, Tanzania (1981-82). Of these, the most well known is that of Koobi Fora where, as a co-leader with Richard Leakey of the National Museum of Kenya, he and his team from Berkeley
have been responsible for the excavation of nearly 20 archaeological sites which range in age from about 2 million years ago to 1.3 million years ago. The data from these sites are being used to widen our understanding of the processes of change in behavior and ecology that led to humans as we know them today. More recently, he has become interested in the role that cultural influences on illness and health care in Taiwan and the People's Republic of China. Most recently, he has initiated studies among chronic pain patients in Cambridge and in Hunan, China to test an anthropological theory of how social relationships and personal and cultural meanings amplify symptoms and disability in chronic medical illnesses, and thereby create special problems for the health care system. By studying this question, Dr. Kleinman and his collaborators seek to discover preventive and intervention strategies to improve the treatment of chronic illness.

Dr. Kleinman is the Editor-in-Chief of *Culture, Medicine and Psychiatry: An International Journal of Comparative Cross-Cultural Studies* and Chairman of the Editorial Board of the *Culture, Illness and Healing* Book Series. He has published numerous articles in academic journals and books, on a variety of subjects including: models of medical systems in society, studies of depression and somatization cross-culturally, outcome assessments of shamanistic healing in Taiwan, methods for introducing anthropological concepts in medical education and clinical practice. He has co-edited seven volumes, including *Normal and Abnormal Behavior in Chinese Culture, The Relevance of Social Science for Medicine*, and *Culture and Healing in Asian Societies*. He is the author of *Patients and Healers in the Context of Culture: An Exploration of the Borderland between Anthropology, Medicine and Psychiatry* (University of California Press 1980), for which he was awarded the Wellcome Medal for Medical Anthropology by the Royal Anthropological Institute of Great Britain and Ireland. He is presently co-editing a volume on *Culture and Depression*, and has begun writing a book on *Illness Meanings* and their physiological and social significances.

Dr. Kleinman was elected a member of the Institute of Medicine of the National Academy of Sciences in 1983, and is also the Honorary Founding Director of the Canadian Association for Medical Anthropology.

Dorinne K. Kondo, a social anthropologist, was appointed last year to the post of Assistant Professor of Anthropology. A Phi Beta Kappa graduate of Stanford University, Ms. Kondo received the M.A. (1978) and Ph.D. (1982) degrees from Harvard.

Prof. Kondo's primary research interests are in the fields of symbolic and interpretive anthropology. The goals of her research are twofold: first, to better understand the cultural assumptions by which people in other cultures (in this case, Japan) render their lives meaningful; second, to examine Western
theoretical and epistemological presuppositions. Her dissertation focuses on these issues. Based on two and a half years of field research in Tokyo — including a year’s stint as a worker in a family-owned factory — it examines the domains of self, family, and work that gave meaning to the lives of people engaged in small family enterprise and goes on to trace the implications of an interpretive approach for studies of Japan and for certain Western theories of society.

Prof. Kondo’s current research extends these interests, through an analysis of concepts of selfhood in Japan and the challenge these notions present to biases implicit in much of Western psychological theory. As part of this concern with epistemology, she is involved in “experimental ethnography”: questioning the traditional canons of ethnographic research and writing and attempting to develop a form of ethnography that will be, simultaneously, a self-critical account of the process of understanding and a less ethnocentric interpretation of Japanese culture.

Mark Leighton, appointed Assistant Professor of Anthropology and Social Studies. A 1968 graduate of Columbia College, he received the M.A. (1974) and Ph.D. (1979) degrees from Columbia University. Before coming to Harvard, Mr. Leighton taught anthropology at Barnard and Columbia.

Leighton has travelled extensively in Afghanistan, Pakistan, and India, and conducted field research among the Pukhtun in the Swat Valley of Northern Pakistan. In his book Generosity and Jealousy: The Swat Pukhtun of Northern Pakistan (Columbia Univ. Press 1982), Lindholm “attempts to demonstrate that values of hospitality and friendship in that society are the result of repression of attachment needs in the extremely hostile world of ordinary life.”

A longer range project concerns patterns of emotional structuring cross-culturally. “I should like to see if a similar relation holds in other societies,” Lindholm said, and “link this notion of attachment to a discussion of charismatic leadership and the social conditions necessary for such leadership to arise.”

Prof. Lindholm’s current research concerns the comparison of social organizations of two frontier regions: The Great Wall area of North China and the frontiers of traditional Middle Eastern and North African states. Of particular interest is the relation between kinship and exchange and political organization. Lindholm hopes to expand this research to include an investigation of the “underlying value systems, especially values of equality which I think are characteristic of Middle Eastern peoples.”

Charles T. Lindholm was appointed Assistant Professor of Anthropology and Social Studies. A 1968 graduate of Columbia College, he received the M.A. (1974) and Ph.D. (1979) degrees from Columbia University. Before coming to Harvard, Mr. Lindholm taught anthropology at Barnard and Columbia.

Lindholm has travelled extensively in Afghanistan, Pakistan, and India, and conducted field research among the Pukhtun in the Swat Valley of Northern Pakistan. In his book Generosity and Jealousy: The Swat Pukhtun of Northern Pakistan (Columbia Univ. Press 1982), Lindholm “attempts to demonstrate that values of hospitality...
Sacred Cenote
Lea McChesney
Director, Collection Sharing

The Peabody Museum has just received a major grant from the National Endowment for the Humanities to fund conservation of one of its most famous Mesoamerican archaeological collections in preparation for an extensive travelling exhibition. Organized collaboratively with the Science Museum of Minnesota under the Peabody Museum’s pioneering Collection-Sharing Program,* the exhibition entitled Cenote of Sacrifice: Treasures of the Ancient Maya of Chichen Itza will present 300 of the Peabody’s precious and mostly unexhibited archaeological artifacts from the great ancient Maya city of Chichen Itza located in the Yucatan peninsula of Mexico. The exhibit will open in October 1984 at the Science Museum in St. Paul, Minnesota, and will subsequently travel to six other museums across the U.S. and Canada in 1985-86.

There were two deep natural wells, or cenotes, within the city of Chichen Itza. One, a clear pool, served as the principal source of water for the city. "The other, a weird deep pool of jade green waters, was held to be sacred by these ancient people, and it was this pool, the Chen ku or Sacred Well, that gave to the ancient city its name" (E.H. Thompson, The Sacred Well of the Itzaes).

The Sacred Cenote was some 50 by 60 meters in diameter, with vertical or overhanging walls. From the small temple at the edge, there was a sheer drop of 20 meters to the surface of the water. Chichen Itza was a holy city because of this Cenote and at the height of the Maya civilization, A.D. 900-1200, pilgrims came to consult the gods and make offerings of gold, copper, jade, pottery, and incense to the Sacred Well. Offerings were cast into the Cenote, including living victims who, if they survived were thought to receive prophecies.

In 1904 the Peabody Museum began excavations at the site of Chichen Itza, including the dredging of the Cenote of Sacrifice. The water was about 10 meters deep and covered an equal depth of silt. Ritual offerings, deposited over the course of centuries, were recovered from this silt.

In addition to the gold, copper, jade, ceramics, wood, textiles and other objects dredged from the cenote, the exhibition will include plaster casts and original watercolor illustrations of architectural features at the site.

Dr. Clemency Coggins, Research Associate in Pre-Columbian Art in the Peabody Museum, is writing a full-color catalogue for the exhibition. The catalogue will include an essay by Gordon R. Willey, Senior Professor, and Bowditch Professor Emeritus of Mexican and Central American Archaeology and Ethnology at Harvard University.

*Collection-Sharing is a program developed by the Peabody in 1979 and funded by the National Endowment for the Humanities which makes the unparalleled collections of the Museum renowned as a preeminent archaeological and ethnological research institution, available to the wider national public through cooperatively organized exhibitions.

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, and so forth. They enjoy special privileges at the Tozer Library and a discount on Museum publications and at the Peabody Museum Shop. Membership includes a subscription to Symbols. Categories of membership are: Student ($15), Individual ($20), Family ($30), Contributing ($50), Sustaining ($100 or more), Fellow ($500 or more).

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Around 7 million years ago hominoids disappeared locally, and other faunal changes suggest a shift to more open, grassy, habitats, perhaps following cooler or more seasonal climates. One possibility is that this marks the time when the emerging Himalayas reached a critical height, and the tropical forest and woodland block that had once stretched from Borneo and China to Afghanistan began to shrink east, taking with it the more committedly tree-living forms like apes.

What about the apes themselves? We have been reasonably lucky in locating new material of *Sivapithecus* and *Ramapithecus*, the former being better known. They are more similar to each other than many of us thought; indeed they may represent the same genus although not a single species. We have found many new jaws and teeth, a beautiful face of *Ramapithecus* in most parts preserved) make this pattern more complicated. In several features of the face, *Sivapithecus* resembles the orangutan. It now looks distinctly possible that *Sivapithecus*, *Ramapithecus*, and a number of related genera document an adaptive radiation of apes in Asia between 16 and 7 or 8 million years ago; this once successful group is reduced now to its sole surviving descendant, the orangutan, as a consequence of major changes in the vegetation of Asia. Reduction in forest and woodland in Asia followed climatic changes of the last 7 million years, some of them linked to the rise of the Himalayas, others to more global shifts.

The Pakistan fossils, apes as well as other mammals, have helped clear up a number of issues in human evolution. *Ramapithecus*, although we still need more information on it, is probably not a hominid. It is part of a group that evolved in Asia after hominoids spread from Africa 16 million years ago, a group broadly ancestral to the orangutan. If molecular patterns do indeed tell us something about evolutionary events and their timing, then an Asian-African hominoid split of 17 million years translates into a gorilla divergence of 9 or 10 million, and a chimpan-human divergence of 6 or 7 million. In turn this means that we know well only half of the hominid fossil record, perhaps even less, and none of the African ape record. Until we do — and that will mean searching in West and Central Africa — we will continue to have only the vaguest notions of what the earliest hominids, and their ancestors, were like. The search goes on!

![Figure 3. Reconstruction of Potwar area about 8 million years ago: trees, bushes, shrubs, undergrowth, and many browsing mammals.](image3.png)

![Figure 4. Crania of chimpanzee (left), *Sivapithecus* (center), and orangutan (right). In a number of face and skull features, *Sivapithecus* resembles the Asian orangutan.](image4.png)
Man" held at Cornell in August. Hrdy's book *The Woman That Never Evolved* has been published in Japanese. Dr. Hrdy gave the Commencement address at Reed College, Portland, Oregon.

Dr. Doris Stone organized a symposium: "Pre and Post Columbian Migration of Plants from Amazonia to the Isthmian Region and their Cultivation" at the 44th International Congress of Americanists, University of Manchester School of Geography, England. Dr. Stone gave the commencement address at the 107th graduation of Cushing Academy, Ashburnham, Mass., and an address to graduates at the Escuela Agricola Panamericana, Tegucigalpa, Honduras. She received an Alumnae Recognition Award from the Radcliffe College Alumnae Association.

Visiting scholars

During the academic year 1982-83, a number of visiting scholars gave talks and lectures to students and faculty of the Anthropology Department and at meetings of the Peabody Museum Association. John Pfeiffer, Adjunct Professor of Anthropology at Rutgers University, gave an illustrated lecture on "The Creative Explosion: The Origins of Art and Religion," the title of his most recent book. Dr. Patricia Uberoi of the University of Delhi spoke on "Indian Calendar Art: Symbolic Depiction of Fertility and Sex Roles. " "Molecular Biology and Human Evolution" was the subject of a lecture by Dr. Allan Wilson, Professor of Biochemistry, University of California, Berkeley.

Jean-François Jarrige, Director of the French Archaeological Mission in Pakistan, gave a lecture entitled "Baluchistan from the 7th to the 2nd Millenium B.C.: New Evidence for the Rise of Complex Society from Mehrgarh, Pakistan." Department Seminar speaker, Dr. Veena Das, Reader in Anthropology, University of Delhi, spoke on "Some Reflections on the Mother Goddess Cult in India." Dr. Patricia Anawalt, Consulting Curator in the Dept. of Textiles and Costumes at the Museum of Culture History, UCLA, gave a lecture on "Understanding Aztec Human Sacrifice." "Men in Groups: A Baker's Dozen Years Later" was the title of a lecture by Prof. Lionel Tiger, State University of New Jersey, Rutgers.

Dr. Ryk Ward, University of Washington, spoke on "Genetic Epidemiology of Societies in Transition." Department Seminar speaker Geoffrey Blainey, Ernest Scott Professor of History at the University of Melbourne and Dean of the Faculty; Visiting Professor of Australian Studies, lectured on "The Aboriginal in the Rocking Chair: Being a Look at Oscillating Attitudes Over the Last Two Centuries."

Dr. Katherine Spielmann, Smithsonian Institute Postdoctoral Fellow, at a lecture to the Simian Seminar, spoke about "Energy and Metabolism, Animal Protein and Hunter-Gatherer Subsistence Strategies." A lecture to students and faculty of the Archaeology 'wing' by Dr. Anabel Ford, University of California, Santa Barbara, was entitled "Society and Settlement: From Tikal to Yaxha." Dr. S.P. Gupta, National Museum of New Delhi, gave a lecture to the Peabody Museum Seminar on "Recent Advances in the Indus Archaeology of India." "The Genetic Consequences of Being Social" was the subject of a lecture by Don J. Melnick, Ph.D., Columbia University. The topic of a lecture by Prof. Don Handelman, Hebrew University was "Inside-out, Outside-in: Concealment and Revelation in Newfoundland Christian Mummery." Asst. Prof. Trudy Turner, University of Wisconsin, Milwaukee, addressed members of the Anthropology Department Seminar on "Comparative Measures of Genetic Variation in Primates." Prof. I.J. Gelb, Oriental Institute, University of Chicago, lectured on "The Temple as a Social Economic Organization." Department Seminar speaker Prof. Nissan Rubin, Bar Ilan University, Israel and the U.S. Project for Kibbutz Studies, Harvard, talked on "Mourning Customs in a non-Religious Kibbutz: A Religious Dilemma." "Waiting: Ideology of Identity Among South African Whites" was the subject of a lecture by Prof. Vincent Crapanzano of the City University of New York.

Assoc. Prof. Renato Rosaldo, Stanford University, gave a lecture on "Grief and a Headhunter's Rage." University of Utah Prof. of Anthropology Dennis Heskel spoke on "Cultural Materialism and the Origin of Metallurgy." A department seminar on "Law and Identity in the Southern Philippines" was given by Assoc. Prof. G. Carter Bentley, Washington University, St. Louis. Prof. Derek Freeman addressed members of the Anthropology Department and the Peabody Museum Association on Margaret Mead and Samoa: The Making and Unmaking of an Anthropological Myth. Asst. Prof. Janet Bauer, University of North Carolina, lectured on "Social Relations and Social Consciousness in the Iranian Revolution: Case of Poor Women." Dr. Ashraf Ghani, Dept. of Anthropology and Center for Middle Eastern Studies at the University of California, Berkeley, conducted a seminar for members of the Anthropology Department. "The Early Balkan Village" was the subject of a talk by John Chapman of the University of Newcastle upon Tyne. The University of Durham's Anthony Harding spoke on "Myreanea Cultural Contact in a Pre-pre-Colonial World." Dominic Powlesland, Director of the Hoserton Parish Project for Archaeological Research into the Evolution of the Yorkshire Landscape, gave a lecture on "Recent Work on the Ancient Landscape of Eastern Yorkshire." A departmental seminar was given by Dr. Wesley M. Brown, Division of Biological Sciences, University of Michigan, on "Evolution of Mitochondrial DNA in Primates." "Comparative Functional Morphology of Gape in Primates" was the topic of a lecture given by Dr. Richard Smith, University of Maryland.

Pilbeam, continued from page 3
The goods in the Imam Saheb bazaar, like most bazaars in Afghanistan, represent a wide range of products from all over the world. Afghanistan's liberal import policies allow people to purchase goods that in price and quality are unmatched in neighboring countries. Afghanistan has never been chauvinistic in its trade, a reminder of its former history as a trading center for east and west.

Cloth of all types, cotton, synthetics, silks, velvet, or satins are all available. Shops cater to the tastes of different ethnic groups. Thus velvets and satins are for a Pashtun market; Russian prints are popular among Tajiks and Arabs, while Uzbeks and Turkomans prefer different kinds of silk robes. Purchased cloth is taken to a tailor. Arabs do not sew their own clothes. Other items are purchased from the "used clothes bazaar", a collection of used Western clothes imported into Afghanistan in large lots from Western Europe and the United States. These clothes are usually in good shape and very cheap. Most popular among men are suit jackets worn over traditional clothes. Because of the variety of used clothes it is possible to find shepherds wearing Italian hiking boots or meet a nomad in a full-length camel's wool overcoat. In the last case the nomad asked me if I thought it was really camel's wool, since he said that camel's wool cloaks were very expensive in Afghanistan and he had paid so little. I assured him it was, but agreed 500 Afs. ($10.00) was a bargain. Through these imports Afghanistan has one of the best dressed populations in Asia at a cost far below the production cost of the imports; and these "used clothes bazaars" reach all corners of the country.

Other imported manufactured goods, like razor blades, matches, kerosene lanterns, and unbreakable glasses are found in every household. Modern goods, if useful, are immediately incorporated into traditional lifestyle. Chinese aluminum trays are purchased because they don't rust, tape cassette recorders allow for local music to be recorded in the village and replayed at will. Indeed people rewind the tape cassette by spinning it on a stick because they don't want to waste the batteries. Matches, for example, are vital to any household. When I was travelling through the mountains with a salt caravan we came upon some shepherds who had been without tea all day because they had forgotten to bring matches to start a fire. My companions later commented that only fools travel without enough matches. Hardened glass from France has replaced porcelain cups because unbreakability is a real asset to nomads. Nomads even shop for brand names preferring Russian matches to Indian or Chinese, which they suspiciously examine since the Indians now counterfeit the Russian trademark.

Coming to town means taking time to sit in a teashop to gossip and pick up news of local interest. Village life too takes on energy. After the fall selling, winter is the preferred time for weddings and engagements which are always accompanied by large scale feasts where hundreds of pounds of rice and many sheep will be cooked up for guests, often for days on end.

When the winter eases and the roads turn to mud it is time to think about moving the sheep to the steppe. This is a short move. The sheep often leave while it is still cold and the families will follow by the Persian New Year on March 21. The cycle begins anew.

The Afghan nomads have never been isolated from a larger world economically. Karakul skins (Persian lamb) produced in northern Afghanistan were one of the country's major exports. They were not until recently caught up in the larger world's wars and politics. With the Soviet invasion of Afghanistan the picture I have described has changed. Millions of people have fled the country. Rebellion in the countryside makes the once peaceful mountains centers of modern warfare. Like the British before them the Russians are puzzled by the determined resistance of the people of Afghanistan. Like the British one can only hope the Soviets will eventually prefer a neutral Afghanistan to one constantly at war with its occupiers and withdraw. The nomads could then return to their more pastoral tradition.

**Scholars, continued from page 5**

**Willey celebration**

sometimes think that every time Gordon finishes a 100-yard dash another article appears; when he runs the 220 another monograph appears. But whatever the reasons, it has all resulted in one of the most productive and creative careers in recent anthropological history."

In addition to greetings and congratulations, Prof. Willey was given a parchment scroll inscribed with the names of his many friends and colleagues, a silver tray, and two festschriften, one entitled *Prehistoric Settlement Patterns: Essays in Honor of Gordon R. Willey* was edited by Evon Vogt and Richard M. Leventhal (a former student of Prof. Willey, now on the faculty of SUNY, Albany); and the second, *Civilization in the Ancient Americas*, edited by Richard Leventhal and Alan Kolata (now at the University of Chicago).

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**Museum curators and associates**

**Dr. Monni Adams** organized an exhibition of African art entitled "Private Visions" at the Boston Athenaeum. Dr. Adams wrote the illustrated catalogue on the 44 works of sculpture, all drawn from the collection of Genevieve McMillan, a patron of the Peabody Museum. Adams gave a lecture at the International Folk Art Museum, Santa Fe during the summer.

**Dr. Clemency Coggins** is editing a publication of the numerous non-metallic, non-jade artifacts dredged (1904-11) from the Sacred Cenote, Chichen Itza in time for the 80th anniversary of that event. Coggins was recently made a member of the Foundation of the University of the Valley of Guatamala which is working to endow a University chair in honor of Alfred V. and Madeleine Kidder.

In the course of a visit early this year to the photographic archives of Mexico's Institute of Anthropology and History, *Ian Graham* found the staff there seriously concerned about the future of their old negatives, which are based either on fragile glass or on unstable and extremely combustible nitrate. To safeguard the images, copies were being made on 4x5" film, a procedure that is slow, and as extravagant of labor as it is of photographic film. Because the Peabody Museum had faced the same problems, and had solved them with the economical and technically excellent procedure developed by *Daniel Jones*, the Photogramivist, Graham proposed that the relevant technician of the Mexican 'Fotooteca' visit Cambridge to study our methods. The technician, Alicia Ahumada, was favorably impressed not only with the negative copying process but also by the classifying and computer cataloguing system.

**Dr. Sarah Blaffer Hrdy** was an organizer for a Wenner-Gren Symposium on 'Infanticide in Animals and...
younger sisters will ride on donkeys. A man also has the choice of walking, a woman is not permitted to walk, unless the terrain makes riding difficult.

The final animal found in a camp is the dog. These are vicious mastiffs, with their ears and tails docked. They provide protection, attacking all who approach the camp. For this reason no one walks around without a stick to beat off the dogs. They are not voice trained, if a dog attacks, a member of the family must go out and drive it off. The dogs are quite territorial. On migration trail they are peaceful, but as soon as the tent goes up the dog stakes out a territory and starts to attack people. Dogs provide a large measure of privacy to a nomad family.

In northeastern Afghanistan about 10,000 households and a million sheep are seasonally on the move. In spite of these numbers there is little friction between farmers and nomads. There are two points of tension, however, that inevitably produce some difficulty. Villagers resent the nomads using local pasture even temporarily. "You are here for a day, but we must use this pasture all the time," say the villagers. The nomads get around the problem by moving their sheep through quickly. They also buy fodder from villagers or rent fallow fields. With all the animals on the trails there is some crop damage. Part of the problem is the mountain villagers' tendency to plow the sheep trails which are then trampled by the sheep. Nomads complain the farmers plow too much leaving them too little room to pass. In spite of often harsh words the farmers and nomads need each other. The farmers grow grain which they cannot move over mountain trails. The nomads are willing to travel even to distant villages to buy wheat and carry it away. The nomads pay cash which the villagers need. The exported wool and manufactured goods from distant towns. There is also a lively trade in livestock which the nomads also buy from villagers.

Arrival in the summer camps makes for a period of rest. The sheep graze on the alpine meadows under the watchful eye of a shepherd. Ewes are milked daily and the women make yoghurt which is dried into hard lumps. Lambs are sheared to provide wool for high quality felt. Nomads always establish cordial relations with the village nearest their summer camps. They go to this village to grind their wheat into flour. Usually they have a village friend who will provide hospitality. In return a nomad will agree to bring small items from the lowlands or distant bazaars. The nomads must make periodic trips to buy rock salt to feed their sheep so they will travel to a town at least once during the summer. With its cool weather, fine water and good grazing the summer camp is a pleasant place to be. It is a particular pleasure to be able to escape the heat of the plains. The only thing people really regret is the lack of large sweet melons which come into season while the nomads are still in the mountains. With families scattered throughout the mountains there is little social activity, although with people moving back and forth news travels fast. The summer camp, one nomad told me, was not a good place for an anthropologist to learn much, it was a place to sleep and enjoy "eating air."

When the star Sirius rises the nomads begin to think about leaving the mountains. Most nomads leave by late August. The trip back is less stressful. It is down instead of up and the harvested fields mean there is no problem finding a place to camp. The sheep are in peak condition. The nomads return to the river valleys. Here protected from wind and cold with plenty of grazing the nomads spend fall and winter.

The winter camps used to consist of clusters of yurts but today the nomads live in mudbrick houses. The nomads started building these houses after they were given the land. They see no conflict between their solid villages and life as nomads. One only need be ready to abandon the house in the spring and summer. Some wealthier nomads have even built sheep barns and stall feed the animals in the winter. With the tents stored away and the camels behind mud walls who would guess that these people are in other respects nomadic? It may be because of these villages that the nomadic tents seem to pop up like magic each spring, seemingly out of nowhere, like the spring grass itself.

Fall and winter move in a very different pattern than the other seasons. Pastoral work revolves around breeding the sheep in October so all the lambs will fall in the spring. Shepherds can move the sheep out of the village daily to graze, or if camped a distance away they can easily visit home. Fall is also the time most nomads sell their summer fattened sheep in town. They then take the money they get to buy winter provisions. The town's economy depends in large measure on the nomads. In the summer it is quiet, but when the nomads return the twice weekly bazaar days bring the town alive. There is a large "sheep bazaar" where nomads sell their animals.

The Arabs are dependent on the bazaar for all the manufactured goods they use. With only a few exceptions all the equipment a nomadic family needs can be purchased in the bazaar. This was made evident to me when I had to equip myself for the migration. In the company of an Arab we went from store to store until I was completely outfitted. The nomad market is important to the town merchants. They stock goods particularly for the nomad trade from shepherd staffs to camel bells.
been separated from the main body of Arabs further to the west for a long time.

The lack of links with the Near East is most apparent in language. In Afghanistan none of the Arabs I met spoke Arabic, nor did any of them know of any Arabs who did. Arabs in Afghanistan are native Persian speakers while those now living in Uzbekistan S.S.R. are Uzbek speakers.

While language is not a necessary criteria for defining ethnic groups, the inability of the vast majority of Central Asian Arabs to speak Arabic creates a notable confusion about just what kind of Arabs they are. This confusion is compounded by the racial and political connotation given to the term Arab in the late 19th and 20th centuries in response to western imperialism. Before that time “Arab” referred to tribes, nomadic Bedouin in particular. Thus nomads of Semitic origin in Central Asia were undoubtedly Arab in the original sense of the word - nomadic tribesmen.

For their livelihood these pastoralists raise fat-tailed sheep. This variety of sheep is large and has the peculiarity of storing all its fat in an oversized tail which alone may weigh between twenty to thirty pounds. This fat is highly prized as a cooking oil. It is to Central Asian cuisine what olive oil is to Mediterranean cooking, or butter, to the French chef. The nomads do not live by eating these sheep but by selling them to urban meat markets. They use the money they get to buy wheat and rice which make up the bulk of their diet. In this region there is a close symbiotic relationship between farmers and nomads. The nomads could not live without it.

Raising large fat sheep requires good pasture. It is true that many nomads do live in marginal areas with poor scattered pastures, but this is reflected in the small size of their sheep or goats. Nomads do not dream fondly of desert wastes but of green grassland. For the nomad northeastern Afghanistan has always been a place with good pasture. The most obvious feature about pastoral nomadism is its movement to these pastures. Why, people ask, are nomads not content to stay in one place? The answer is simple — nomads can raise far more sheep by moving them to lush seasonal pastures than they can by exploiting the grazing year round in one area. Or people ask, why do the nomads leave the green valleys in the spring? Here too the answer is simple. The valleys are green with new wheat and rice plants. The nomads leave this productive land to the farmers to go use the rich grasslands of the plains and mountains where grain cannot be grown. In the fall they will return to the valleys where, after the harvest, their animals can graze freely on cultivated ground. The cycle of pasture use allows the nomads to use the best resources at each time of year and to complement rather than compete with local agriculture.

The migration cycle combines place and time because the nomads can be found in the same places each year. Their pastures are dependable enough to be private property. A nomad family uses three: spring on the steppe, summer in the mountains, fall and winter on the river valley.

Spring on the steppe begins in early March and lasts through early May. Grass and flowers, watered by the melting winter snows and spring rains, turn the steppe into a green carpet plastered with red poppies. Lambing takes place here and the lambs grow quickly on rich milk. Sheep are sheared of their winter wool. There is enough moisture in the green grass and dew so that the sheep do not need to be watered. As the spring progresses and sun grows hotter it burns the pasture brown. When it is necessary to take the sheep to the river to drink the nomads say it is a signal to move to the mountains where they will find a "second spring."

The migration to the mountains is a major event. It takes about three weeks to cover the 150 miles of rugged territory, moving from the plains at about 1000 feet in elevation to mountain pastures at 10,000-12,000 feet. The sheep move separately from the families under the charge of shepherds. Because most of the families choose the same time to move there are camel and sheep traffic jams at bridges and narrow places. It is the need to move the whole household which requires nomads to own baggage animals. Camels carry most of the load and it takes between two and four to move a family.

Riding has its etiquette. The symbolic value of each animal is represented by what is, and is not, proper to ride. A fully equipped Arab family going on migration would be mounted as follows. The male head of household should be riding a stallion. This is more than just symbolic of strength. Since horses are never gelded in Afghanistan, it takes a strong man to make his horse obey. His wife, with the small children, should be on a mare. Men are ridiculed for riding mares, though some put discretion before valor when riding on narrow mountain trails where a stallion's misbehavior could result in a quick fall. Unmarried daughters ride on the top of the loaded camels. To get on they vault to the camel's neck and jump up. This keeps them out of the way and has the secondary purpose of advertising a daughter's availability to other families interested in negotiating marriage. Boys and sometimes their
A string of camels moves quietly down an Afghan road through the predawn darkness. The camels move quickly, their padded flat feet seemingly designed for silent walking. Only the rhythmic clang of camel bells marks their passage. "It is the nomads," the village people say, "going to the mountains with their families and their sheep." The sheep come, a sea of sheep flowing along the road engulfing anything they encounter. An overloaded truck, brightly painted with fantastic scenes of forests, trains, and airplanes lies stalled—a prisoner of the sheep. The driver curses and beeps his horn to no avail. Still, this driver is lucky because he is moving against the flow of the sheep and will soon escape. Trucks moving with the flow are forced to crawl at a sheep's pace like overgrown pack animals. Dawn reveals another group of nomads and in the light one sees the camels are decorated with cowrie shells and multicolored tassels. Their loads are covered with bright geometric carpets and atop them sit nomad women dressed in satin and gold brocade, wrapped in royal blue or burgundy velvet capes. They soon disappear in the dust raised by the multitude of sheep, heading up toward the snow capped mountains off the horizon. Within two weeks the roads and trails will be clear, and the nomads just a colorful memory until they return from the mountains before the first snows.

A migration by pastoral nomads is their most visible aspect to the outside world; yet few people watching are sure exactly where the nomads come from or where they go. To city-dwellers and farmers alike pastoral nomadism is an alien way of life. Nomadism therefore provokes a wide range of responses.

To many people the nomadic way of life appears romantic. The whole idea of folding your tent and stealing away from old places and problems to new pastures has a seductive quality. To others the nomadic life seems precarious and full of trouble, to be doomed to wander forever with only a tent as a home. The work of an anthropologist involves getting beyond these stereotypes—images that even the nomads themselves often cultivate. Nomads move but they do not wander, nomads are free to make many decisions but always within fixed limits. My own research in northern Afghanistan illustrates how integrated the nomadic pastoralists are in the local economy. Their migration reflects the nomads' uniqueness, but it is the uniqueness of an economic specialist. Nomadic pastoralists do not live independently of neighbors, just differently.

The Central Asian Arabs traditionally occupied territory within the old Khanate of Bukhara and the northern plains of Afghan Turkestan. As far as their origin is concerned there are two traditions about the Arabs in Central Asia, "One that they are descendents of the Arabs who introduced Mohammedanism into the country, which they themselves believe, and another that they were settled by Timour after he had conquered the western powers" E. Schuyler, Turkistan. Notes of a Journey in Russian Turkistan, Khokand, and Kuldja. 1876. It is possible that both traditions contain some truth since Tamarlane did deport a large number of Arabs from Damascus to the Samarkand region according to contemporary accounts and these could have augmented any left from the Islamic conquest in the 8th century. In any event the first record of Arabs as an important organized tribe in Central Asia comes from the Baburnama (1495) where the Arabs are reported to be one of the three main nomadic tribes north of Kabul (i.e., north of the Hindu Kush). There is no immediate connection between the Central Asian Arabs and the Arabs of the Near East. Russian physical anthropology supports their claim of a Semitic origin, but they have certainly
taught at Johns Hopkins University (1949-54) and in 1955 joined the faculty of the University of Pennsylvania as Professor of Metallurgical Engineering. He was appointed the Director of the School of Metallurgical Engineering in 1956, and was named University Professor of Metallurgy in 1973.

Robert Maddin

Prof. Maddin's area of research has been concerned generally with the relation of structure to the mechanical properties of metals. These studies involved deformation in various non-ferrous metals, relief of strain produced by the deformation, diffusion and the role played by defects in diffusion, as well as the mechanical behavior of amorphous solids. In recent years Maddin began researching the early use of metals and alloys using excavated metals from Greece, Turkey, Israel, Jordan, Iran, Pakistan, Egypt, India and Northeast Thailand. At Harvard he will be concerned with the Mecklenberg Collection of Iron Age material.

In 1966 Prof. Maddin initiated Materials Science and Engineering, an international journal published by Elsevier and now in its 58th volume. A prolific writer, Prof. Maddin has edited more than 70 volumes concerned with materials science and engineering and published well over 100 papers and books.

Izumi Shimada has been appointed Associate Professor of Anthropology at Harvard. An archaeologist, Mr.

Izumi Shimada

Shimada's research interests include Andean archaeology and ethnography, urbanism, socioeconomic organization, spatial analysis, experimental archaeology and the archaeology of the Southwest United States and Japan.

Prof. Shimada is a graduate of Cornell University (1971) and received the Ph.D. degree (1976) from the University of Arizona. Before coming to Harvard, Prof. Shimada taught at the University of Arizona and at Princeton. Prof. Shimada has conducted archaeological research in Arizona, at the now deserted Papago Indian Reservation, and at the site of Grasshopper. He has also excavated at Chaco Canyon in New Mexico. From 1973-75 he was a member of the Royal Ontario Museum Lambayeque Valley Archaeological Project in Peru. In 1978 he conducted survey mapping and excavations at the sites of Pampa Grande and Batan Grande on Peru's north coast.

For the past five years, Prof. Shimada has directed the interdisciplinary Batan Grande-La Leche Archaeological Project in Peru. He is currently writing a book on this site entitled The Moche Ceremonial City of Pampa Grande to be published by Thames and Hudson, Ltd., London.

Clay Professorship, continued from page 1

quently refined, and new procedures have been developed," he continued. "There have been major advances made that have opened up entirely new possibilities, and the important thing is to expose archaeologists to these very powerful tools. And it is particularly fitting that this work be done at Harvard, which has the tremendous collections of the Peabody Museum and such outstanding faculty in the field."

"Mr. Clay has been a munificent benefactor of this institution," said C.C. Lamberg-Karlovsky, Director of the Peabody Museum and an archaeologist in the Department of Anthropology. "Four years ago he established an archaeological laboratory at the Peabody, the Center for Archaeological Research and Development (C.A.R.D.) and funds for a junior faculty position."

"C.A.R.D.", said Lamberg-Karlovsky, "has instrumentation for dating and for some physical-chemical analytical techniques."

The new Clay Professor, whom the Anthropology Department and the Peabody Museum expect to name in 1985, will be the Director of C.A.R.D. "It will be a person whose training is basically in physics, chemistry, the geosciences," said Lamberg-Karlovsky, "someone who will build bridges with other departments at Harvard and utilize the fantastic resources of this University in the natural sciences."

"Mr. Clay's gift," he said, "has every promise of transforming the manner by which archaeology is taught."

Film series highlights

SUB-SAHARAN AFRICA

The Peabody Museum is presenting a film series on sub-Saharan Africa throughout the 1983-84 academic year. The fourteen films, to be shown from November through May, cover a variety of subjects: history and colonialism, rural and urban societies, art and music, religion and medicine. Tickets available at the Peabody Museum and the Information Center, Holyoke Center Arcade, Harvard Square.

EAST AFRICA

Kenya, Ruanda, and Tanzania will be the destinations of a Peabody Museum sponsored trip to East Africa in July, 1984. Professors Glynn Isaac (see page 7) and David Pilbeam (page 2) will lead the tour which is being especially arranged for the Peabody Museum. Participants will visit the sites where the earliest evidence of human ancestors are being excavated, track gorillas, and travel through game reserves in East Africa's national parks. For information call (617) 495-2269, 495-2248 or write to the Peabody Museum, 11 Divinity Ave., Cambridge, MA 02138.