Institute Leaders and Scientific Associates Participate in Once-In-A-Lifetime Exhibit of Ancient Fossils

The American Museum of Natural History in New York will bring together for the first time more than 50 of the world's most scientifically important fossils in a six-month exhibition, "ANCESTORS: FOUR MILLION YEARS OF HUMANITY". The exhibition, open to the public from April 13 to September 9, marks the first time many of these fossils have ever left their 'homes' in some 25 institutions around the world. Together the specimens tell the story of mankind's evolution from earliest pre-human forms to modern Homo sapiens. "ANCESTORS" gives scientists an unprecedented opportunity to compare actual fossil evidence rather than secondary plaster casts or photographs. For the general public, it is a chance to experience the excitement of discovery, the controversy surrounding anthropological theory and the mystery of fossil legend.

Dr. Donald Johanson, Director of IHO, has been invited to give the keynote address on Monday evening, April 9, "Our African Ancestors: Four Million Years of Controversy". In this public lecture, which will be held in the Museum's main auditorium, Dr. Johanson will examine the battles which have frequently erupted in the search for our human ancestors beginning with the 1924 discovery of the Taung Baby by Dr. Raymond Dart up to recent finds in East Africa.

Ten Institute-affiliated scientists are participating in workshops and symposia at the museum which precede the opening of the fossil exhibit. IHO scientists from overseas include Phillip V. Tobias, Elisabeth Vrba, C.K. Brain, Chris Stringer and Teuku Jacob. IHO experts from the U.S. include F. Clark Howell, Tim White, David Pilbeam, Eric Delson and Donald C. Johanson.

Taung Diamond Jubilee To Honor Professor Raymond A. Dart

The Institute has been invited to participate as an Organisational Patron of the Taung Diamond Jubilee International Commemorative Symposium in Southern Africa marking the 50th anniversary of the 1924 discovery of the Taung Baby by Professor Raymond A. Dart. The Jubilee is chaired by IHO Scientific Associate, Professor Phillip V. Tobias.

The program for this historic convocation will be held at the University of the Witwatersrand, South Africa, January 28 through February 4, 1985. During this period, Professor Dart will celebrate his 92nd birthday.

Part of the meetings will include visits to the Krugersdorp Valley sites of Sterkfontein, Kromdraai and Swartkrans, and a visit to the Taung site in Botswana where delegates will be shown the position of the Australopithecus and the Hrdlicka caves. It is hoped that a beacon and plaque will be erected and unveiled on that occasion to mark for posterity the site of Professor Dart's remarkable discovery.

Other organizations participating with the Institute of Human Origins as patrons of the Jubilee include the University of the Witwatersrand, the University of Botswana, the Institute for the Study of Man in Africa, and the L.S.B. Leakey Foundation.

Continued page 6
Director’s Report

It’s difficult to surpass the romanticism of fieldwork. It’s hard to match the thrill of discovering fossils at remote field sites. But the real revelations, the real breakthroughs about our ancestry come about with detailed and extensive laboratory analysis.

When the excitement of discovery dies down, the scientists begin the long, painstaking process of gleaning from the fossil valuable clues as to its importance. In the laboratory the fossil must be prepared for study by removing the stone matrix which often hides the detailed anatomy. Sometimes months of working with the fossil under a microscope, using special tools and chemicals, are required to fully expose the bone surface. Specialized methods may be required to repair damaged portions. Detailed photos must be taken of the specimen for publication, presentations, and a permanent record. Since the original fossils are the property of their country of origin, molds and casts must be made. These virtually identical replicas become part of a permanent study collection here at the Institute.

Xeroradiographs are useful for revealing important details locked inside the fossil. Finally, the fossil must be compared with other similar fossils and with collections of recent primate populations before it can be published in a scientific journal.

With decades of fossil finds still awaiting detailed laboratory investigation and with new finds looming on the horizon, it is imperative that we continue to develop our Institute laboratories. The important information resulting from such laboratory analysis permits scientists to ask new questions about our ancestry and to be fully prepared for a return to the field in various parts of the world to make more discoveries.

You can help us develop these laboratories—paleoanthropology, archaeology, casting, biomechanics and photo. You can add to the Institute’s unique complement of laboratories designed for enriching the knowledge of our origins. Join us! Become part of the search.

Dr. Thalas

The Institute of Human Origins

2453 Ridge Road
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(415) 645-0333 / (415) 645-0344

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9th Pan-African Congress Convenes in Nigeria

By John W.K. Harris, Ph.D.,
Department of Anthropology,
University of Wisconsin—Milwaukee

The 9th Congress of the Pan-African Association for Prehistory and Related Studies was held in Jos, Nigeria, December 11 and 17, 1983. Dr. Ekpo Eyo, Director-General of Antiquities for the Nigerian Government, organized the Congress which meets once every five or six years and serves as an international forum where African and foreign scientists meet to discuss current research endeavors.

His Excellency, Mr. Solomon Daushep Lar, Governor of the Plateau State, welcomed the visiting participants during opening ceremonies, held in the new wing of the National Museum.

Attendance by visiting participants was somewhat smaller than usual. The majority were from Nigeria and the surrounding West African countries with only a small contingent from Western Europe and North America. Papers were presented during sessions lasting over four days and as might be expected West African archeology and more particularly Nigeria was the focus of attention.

Papers on West African archeology focused on Late Stone Age and Iron Age; other papers highlighted the evidence for the rise of towns and trading networks which were the outcome of the "Neolithic Revolution".

During sessions on Paleolithic prehistory, Drs. J. Desmond Clark and J.W.K. Harris presented the results of archeological research in the Middle Awash, Ethiopia, and described the earliest traces of hominid use of fire in West Africa. Harris also presented a paper co-authored by Drs. Donald Johanson and Maurice Taieb, co-directors of the International Afar Research Project, which discussed the earliest stone artifacts from Hadar, Ethiopia.

During the concluding Plenary Session, Dr. J. Desmond Clark, IHO Scientific Associate, and Dr. T. Shaw were honored by election to honorary membership in the Pan-African Association for Prehistory and Related Studies in view of their "outstanding contributions towards the realization of the objectives of the Association."

MEMBERSHIP APPLICATION

PRIVILEGES OF IHO MEMBERSHIP

All CONTRIBUTORS receive the Newsletter and special announcements of Institute activities.
FULL MEMBERS receive an autographed copy of "LUCY: THE BEGINNINGS OF HUMANKIND" by Donald Johanson and Maitland Edesey, (paperback edition)
SPONSORS will also receive a set of 20 color slides of field and laboratory work on hominids.
PATRONS & FOUNDING ASSOCIATES receive additionally a fossil replica and are invited to meet Institute scientists.

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The Archeology of Human Origins

by
Dr. Nicholas Toth,
Research Associate,
The Institute of Human Origins

Culture, or the transmission of learned behavior, was quite likely the major catalyst that transformed us from small-brained, bipedal apes to what we are today—large-brained bipedal apes.

The key to understanding the processes of our human origins lies not merely in the bones of our ancestors, but in the litter that they left behind. These cultural remains give us clues about their lifestyles in the remote past, such as their technology, geographic and environmental ranges, diet, and social organization.

One has to be very careful not to allow personal prejudices about what our ancestors may have been like to influence archeological interpretation of proto-human behavior. At times I envision these creatures to be just slightly sub-human. At other times [in my darker hours] just slightly "super-chimpanzee".

The archeological evidence must be allowed to speak for itself. The prehistorian studying human behavior in the past must be able to identify and describe the physical prehistoric evidence accurately, and then to make valid interpretations about the significance of this evidence. Speculation, as long as it is explicitly stated as such, is an important part of archeological studies as well, since it is often new ideas as well as new evidence that gives us novel outlooks into the reconstruction and explanation of proto-human behavior and adaptation.

Contemporary hunter-gatherer behavior may provide keys to understanding our past

One of the keys to understanding the past is to first gain a sound understanding of the processes of the present. Recent research has been directed towards gaining a better understanding of the prehistoric past by examining modern phenomena have included

The excitement of the chase is properly our quarry; we are not to be pardoned if we carry it on badly or foolishly. To fail to seize the prey is a different matter. We are born to search after the truth; to possess it belongs to a greater power.

MONTAIGNE

studies of contemporary hunter-gatherer adaptation and behavior, primate adaptation and behavior (including tool use), experiments in manufacturing and using stone implements, bone modification by carnivores, rodents, and humans, and setting out simulated archeological sites and observing geological forces at work when a site is buried by floodwaters.

These avenues of research are directed towards identifying evidence that would have archeological visibility in the past—in other words, what evidence could survive over thousands or millions of years for the prehistorian to identify and correctly interpret. The Institute of Human Origins in Berkeley has the potential to become the most important facility in the world for studying the course of, and forces behind, the human evolutionary past. Kathy Schick and I will be conducting archeological research projects through the Institute, designed to refine our understanding of the archeological evidence of our evolutionary past.

Institute studies will explore the origins of human aggression

These projects will include:

1) A detailed study of trauma on early fossil hominid remains to evaluate interpretations concerning the origins of human aggression [with Timothy White at U.C. Berkeley].

2) An excavation of a Miocene (about 15 million years old) paleontological site in San Bernardino, California [where no proto-humans existed] to examine non-hominid modification of animal bones by natural processes (carnivores, etc.). This will be done to see if any of the criteria that archeologists

Continued page 6

Research Associate Nicholas Toth at work in the IHO Archeology Lab.
Institute Board of Directors To Meet in New York

The Institute's Board of Directors will hold the 1984 Annual Meeting in New York in conjunction with the programs which precede the opening of the ANCESTORS exhibition. Recently nominated to the Board are three new Institute Directors, Roderick A. McManigal, R. Thomas Hunt, M.D., and Arnold Travis.

Professor Virendra Nath Misra, IHO Scientific Associate from India, is visiting the University of California, Berkeley, as a Fulbright Scholar. Dr. Misra, currently at Lucknow University, Uttar Pradesh, is a leading archeologist and a specialist on prehistoric settlement sites in India. He is noted for his study of climatic and environmental history in the dune areas of eastern Rajasthan.

Russell Ciochon, whose book, "New Interpretations of Ape and Human Ancestry", edited with Robert S. Corruccini, and recently published by Plenum, has been in residence at the Institute for the past three months. Ciochon is now collaborating with John G. Fleagle on a new book, "Primate Evolution: Collected Readings", which examines the proliferating interpretations concerning human ancestry during the past twenty years.

Institute Director, Donald Johanson, now professor (teaching) of anthropology at Stanford University is conducting a course on Human Origins during the spring quarter.

Institute scientists are presenting a symposium on Human Origins at the meetings of the American Association for the Advancement of Science, Pacific Division, June 14, at San Francisco State University. The program will address recent developments in four key areas: (1) Ramapithecus as an ancestor solely of the orangutan; (2) Australopithecus afarensis as the basal stock of the hominid family tree but not a direct ancestor of later Homo; (3) the question of upright posture and locomotion in A. afarensis; and (4) nature of the transition from Homo erectus to Homo sapiens.

Participants in the program include Russell Ciochon, Donald C. Johanson, Tim D. White and graduate students Gen Suwa and Berhane Asfaw. A limited number of reservations for the symposium will be available to Institute members.

1984 Cave Tour to Include Both Lascaux and Altamira

Noted sculptor Bruce Beasley and Donald Johanson will again lead an Institute-sponsored study tour to visit the finest examples of polychrome prehistoric cave paintings in southern Europe. This third season, the two-week trip will include visits to Altamira and the El Castillo complex in Spain as well as Lascaux and other notable painted caves of the Perigord region in southern France. A portion of each tour registration fee directly benefits IHO.

Although the 1984 study tour is already sold out, future trips are being planned to sites in Africa as well as a return to the painted caves. Information about 1985 tours will be mailed to IHO members in early September.
Jastrow, Ashley Montagu, Paul R. Ehrlich, J. Desmond Clark, Harold J. Coolidge, George V.B. Cochrane, Melvin M. Payne, John S. Schwegge and Phillip V. Tobias.


Institute Board members on the Dinner Committee are Mrs. Charles C. Holt, III and Mrs. L.C. Smull, co-chairmen of the dinner. Mr. and Mrs. Thomas F. Hill and David Koch.

**Archeology From page 4**

use to identify bone modification by humans (striations interpreted as cutmarks from stone tools, fracture patterns interpreted as the product of hammerstone blows, etc.) could be produced by other forces in the environment.

3) Microscopic edge-wear studies of stone tools from early paleolithic sites to determine function, i.e., what excavated prehistoric artifacts had actually been used for by our ancestors. (There is a well-established methodology for this now, a veritable breakthrough in archeological studies). In addition, we will be carrying out explorations into the possibility of detecting organic residues on ancient prehistoric implements (with Vincent Sarich, U.C. Berkeley).

4) Analysis of the stone artifacts from the famous Acheulean site of Ambroña, Spain (about 350,000 years old), where the remains of extinct giant elephants are associated with a range of primitive stone tools. (Research being conducted with F. Clark Howell, U.C. Berkeley).

5) A robust experimental program that would include studies of early stone tool manufacture and use, microwear studies of stone tool edges, bone modification by human and non-human forces, and archeological site formation processes.

6) Excavations at selected Old World archeological sites that have the most potential for yielding information concerning early hominid adaptation and behavior.

Besides field work, extensive laboratory analysis will be a critical aspect of all of these research projects. Microscopic equipment, photographic equipment, storage facilities, measuring devices, casting facilities, computer facilities, and comparative collections, will all be important elements of the analyses to be carried out in the laboratory within these studies.

I find the Institute’s emphasis on both the physical and cultural evidence for human evolution an exciting one; this holistic approach to studying our origins will certainly allow major breakthroughs in the future in our understanding of the processes by which we became the ultimate cultural animal in the history of the earth.