

anthro notes

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LIBRARY

MAN THE SCAVENGER

For several decades now, long enough to have influenced generations of students, the most familiar picture of early man has been that of the hunter, whose very instincts, social behavior, and mating patterns were all honed by the stringent demands of a predatory existence. This preoccupation with hunting as the "master behavior pattern of the human species" (Laughlin 1968 in Man the Hunter, edited by Lee and DeVore) has been fueled by many factors: by the indisputable evidence of large-scale big-game hunting in Upper Paleolithic Europe, by the visible archeological

record with its emphasis on stone "weapons" and animal bone fragments, and also (perhaps somewhat subliminally) by the high value accorded meat and hunting as a leisure activity in Western society.

But is it really true that hunting is the primary human adaptation? Some new research answers, "Maybe not." Given the widespread influence the "hunting hypothesis" has had in shaping our thoughts about human evolution and psychology, some careful rethinking of the work of the last several decades is in order.

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If the hunting proclivities of early hominids were interesting only for the evidence provided about diet and food acquisition, then changes in the portrait of early man would scarcely be noted beyond the ivy-covered walls of academic research. But of course, our interest in what early humans ate and how they obtained it has far wider implications. How any animal makes a living in large part determines many other aspects of its behavior, reproduction and social organization. The question of human hunting moreover, invokes larger and more philosophical questions about the very essence of human nature. Since the discoveries of early hominids in South Africa, it has suited those impressed by the evil capabilities of mankind to find the roots for this darker side of human nature in the adaptations of the earliest hominids. It was Raymond Dart, the discoverer of the Taung baby, who in a 1953 article first characterized Australopithecus as a "confirmed killer" who bore the "mark of Cain."

Evidence from Bones

The physical evidence he used to support this contention, the fragmented animal bones found with hominids in South African cave sites, has since been reexamined, and his claims refuted. Yet, the image of early man as a predator who killed his food and occasionally his conspecifics has persisted in popular literature such as African Genesis and The Hunting Hypothesis, by Robert Ardrey. As a result, human hunting has been equated with innate aggressiveness, and aggression in modern man has often been seen as an unfortunate but probably unavoidable consequence of this earlier reliance on predation.

However, new evidence and theories proposed in the last few years are dramatically altering the way in which paleoanthropologists currently reconstruct early hominid diet and behavior.

The strongest evidence comes from finds of flaked stone tools with quantities of animal bones. East Africa has produced many such sites, from as early as 2 million years ago. The tendency among paleoanthropologists has been to assume that these accumulations of bone were the end-product of hominid hunting. Although it now seems to most workers indisputable that early man was involved at some level in transporting or processing animal carcasses, recent work has challenged the idea that human hunting was responsible for acquiring the animal parts.

A survey of animal bones from hominid-bearing deposits at Olduvai Gorge and Koobi Fora showed that a number of them bore surface markings which looked very much like damage done by stone knives or flakes (Bunn 1981; Potts & Shipman 1981). These scratches, or cutmarks, could be proof that early hominids were cutting up animal carcasses. The purpose of this is not as obvious as it looks at first glance, however. Potts & Shipman's survey of Olduvai bones showed that cutmarks frequently occurred in locations where little or no meat is found, such as lower limb bones and feet. They speculated that sinew and hide might have been what the hominids sought, rather than meat. In addition, they found some bones showing the gnawing marks typical of carnivore chewing as well as cutmarks from stone edges. The cutmarks were often made after the gnaw marks, suggesting that carnivores had first possession of the carcass, and hominid utilization came later.

Modern Scavengers

The idea that early humans might have obtained meat by scavenging rather than hunting is not a new one. But the recent evidence from cutmarks has produced a spate of new studies exploring this idea. Prominent among

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"THE OLD RED BRICK": INSIGHT FOR THE LIVING

The Civil War was one of the most devastating periods in American history. The maiming and destruction of human life left both armies medically unable to cope with soldiers' wounds and resulting infections. Without antibiotics, infection and the accompanying disease were untreatable. Once gangrene set in, there was little option but to amputate. As a result, more soldiers died from post-wound infection and disease than from injury itself.

William A. Hammond, Surgeon General of the Army, realized the need for organized military medical research and in 1862 formed the Army Medical Museum. How else best to study war wounds than in a laboratory setting? His directive to all medical personnel stated:

"As it is proposed to establish in Washington an Army Medical Museum, Medical Officers are directed diligently to collect and to forward to the Office of the Surgeon General all specimens of morbid anatomy, surgical or medical, which may be regarded as valuable; together with projectiles and foreign bodies removed; and such other matter as may prove of interest in the study of military medicine and surgery. These objects should be accompanied by short explanatory notes...."

Anatomical specimens, packed in barrels of confiscated whiskey, were sent to Washington.

In 1862 the concept of a "museum" was very different from today. Museums were Institutes where specimens were collected for original research, just as the Smithsonian was created for the purpose of the "increase and diffusion of knowledge...." Museums were not initially showcases to educate the public. In fact, many of our current

fields of study had not been established or were in their infancy. For example, there was no organized field of pathology. The causes of disease were as much unknown as were the antibiotics with which we now cure them. The Army Medical Museum was established to document the causes and processes of disease; only later did it become a public showcase.

Although occupying several homes during the late 1800's (including Ford's Theater after Lincoln's assassination), the Army Medical Museum was situated on the Mall for 80 years where the Hirshhorn Museum sits today. It was on the Mall that the Museum became so familiar to Washington residents and visitors, averaging one million visitors per year, and becoming affectionally known as "the Old Red Brick."

Throughout its early history, the Medical Museum's pioneering research contributed to our current knowledge of



disease and to our nation's history. It was Army Medical Museum physicians who attended Lincoln as he died and who performed his autopsy. Surgeon J. J. Woodward was the first in the United States to take photomicrographs, while Curator J. S. Billings put together the world's most comprehensive collection of microscopes (dating to the 1600's) documenting their evolution. The Museum was one of the first United States institutions to use the x-ray clinically, just months after Roentgen's discovery. In 1908, the first mass inoculation in the United States took place within the museum's rotunda. As curator, Walter Reed discovered the causative agent of yellow fever. In later years, the Museum gave rise to the Armed Forces Institute of Pathology, while its library became the nucleus of the National Library of Medicine.

Because the Smithsonian Institution decided to build a museum of modern art on the Mall, the Army Medical Museum was moved, in 1969, to the grounds of the Walter Reed Army Medical Center. There, the specimens collected during the Civil War and the years following remain available for study, and many are still on exhibit.

At the Museum, one can see nearly all the organs of the human body and many diseases affecting them. Exhibited are specimens of heart disease; tumors of the brain, heart, colon, and lung; congenital anomalies; elephantiasis; syphilis; gall stones; a stomach occluded with hair; coal miner's lung; fragments of Lincoln's skull; and John Wilkes Booth's vertebrae. Also displayed are specimens depicting embryonic and skeletal development, bone fractures, plastic surgery, as well as a large collection of medical instruments. As one reporter stated, the Museum offers a place where disease, deformity, and death are straightforwardly presented. Here, one is able to comprehend his or her own mortality.

Several educational programs for school groups benefit teachers. Guided tours may be arranged, which include a medical film on a topic of your choice. Teachers are advised to prepare a questionnaire for their classes before a tour or to request one available from the Museum. Otherwise, students may take only gory memories with them rather than an understanding of the medical significance of what they have seen. Every visitor to the Museum hopefully will gain an appreciation of the importance of maintaining his or her own best health.

To obtain tour information, receive a film list, or schedule a visit, write: Tour Coordinator, Armed Forces Medical Museum, Armed Forces Institute of Pathology, Washington, D.C. 20306; or call (202) 576-2348.

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A new volume, Archeology and Education: A Successful Combination for Precollegiate Students, edited by Karen Ann Holm and Patricia J. Higgins, is now available for \$5.00 from the Anthropology Curriculum Project, University of Georgia, Athens, GA 30602. This excellent volume includes several case studies of exemplary programs at both the elementary and secondary levels.

SUMMER FIELDWORK OPPORTUNITIES

Are you looking for a unique opportunity this summer for adventure, discovery, and learning? Experience being a member of an archeological excavation team, a scientific expedition, or a field program in the United States or abroad. With a little research you might be surprised at the opportunities available to you even within your own community. As teachers you can share your findings with your students; many programs will take young people 16 years of age or older. In most cases the cost of such experience is tax deductible as either a business expense for teachers or a charitable contribution to a non-profit organization.

Anthropology departments of local universities and colleges, state historic preservation offices, and state archeological societies often engage in local archeological excavations and frequently accept volunteers with no previous fieldwork experience. The Archaeological Institute of America (AIA), P.O. Box 1901 Kermore Station, Boston, MA 02215; 617-353-9361, provides a listing of state archeologists associated with the national organization. The AIA also produces a yearly field school listing (see below) for the U.S. and abroad. In addition, the AIA publishes Archaeology magazine that each year features an archeology travel guide to sites open to the public in the Old World (March/April issue) and the New World (May/June issue).

For a comprehensive listing of fieldwork opportunities in the Washington, D.C. metropolitan area, the Smithsonian Institution's Department of Anthropology distributes A Guide to Resources on Local Archeology and Indian History, which includes a listing of museums and organizations, anthropological and archaeological societies, fieldwork opportunities, and a list of professionals involved in



local archeology and Indian history. For a copy of this free Guide, write: Public Information Office, Department of Anthropology, Smithsonian Institution, Washington, D.C. 20560; or call (202) 357-1592.

Below is a list of a few organizations that conduct summer field programs in the United States and abroad:

British Archaeology, sponsored by The Association for Cultural Exchange of Cambridge, England, offers a four-week (June 25-July 24) comprehensive introduction to British prehistory, including lectures at Christ's College, Cambridge; tours of major archeological sites; and archeological excavation. Write: Association for Cultural Exchange, Babraham, Cambridge CB2 4AT, England.

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University of California Research Expeditions Program offers volunteer opportunities for individuals (16 to 75 years of age) to become a member of a small university field research team. Studies in the areas of anthropology/sociology, archeology, animal behavior, ecology/botany, and marine studies take researchers to all parts of the globe. Write: University Research Expeditions Program, University of California, Berkeley, CA 94720; (415) 642-6586.

Earthwatch, a non-profit, tax-exempt organization, invites the public (minimum age 16) to join scientific research expeditions throughout the world with museum and university scholars of various disciplines. Write: Earthwatch, 10 Juniper Rd., Box 127, Belmont, MA 02178.

Human Origins and Prehistory in Kenya: The Koobi Fora Field School is offered by Harvard University Summer School and the National Museums of Kenya. The field school consists of two six-week training sessions (June 15-July 30 and July 27-September 8) with four weeks at Koobi Fora on Lake Turkana, a well-known site of fossil hominid specimens, and two weeks to visit other archeological sites. Write: Harvard Summer School, Department 008, 20 Garden St., Cambridge, MA 02138; (617) 495-2921; 495-2494 (24 hour open line for catalogue and application requests).

Kampsville Archeological Center, named a National Exemplar in science education by the National Science Teachers Association, conducts educational research programs for junior and senior high school students, college students and the non-professional, and separate workshops for teachers. The long-range goal of the program is to record a comprehensive history of 12,000 years of human life in the lower Illinois River Valley. Write: Admissions Office, Kampsville Archeological Center, Kampsville, IL 62053; (618) 653-4395.

Landscape and People, a summer field program offered by the School of Arts and Sciences in Berkeley, California, gives students 16 years of age and older an opportunity to learn about the environment, history, and life today in Ireland (June 16-July 11) and England (July 7-August 15). Each program includes lectures by local and university scholars. Academic credit can be arranged and financial assistance is available. Write: School of Arts and Sciences, Summer Programs, P.O. Box 5545, Berkeley, CA 94705; (415) 549-1482.

Northwestern University's Ethnographic Field School (June 17-August 10) offers students of all disciplines an opportunity to experience another culture. Students design their own independent research project to learn about the Navajo or Hispanic cultures in New Mexico and Arizona. Write or call Professor Oswald Werner, Department of Anthropology, Northwestern University, Evanston, IL 60201; (312) 492-5402 or (312) 328-4012 evenings.

Smithsonian Associates Travel Program offers a week-long archeology field program (August 11-18) in the Mesa Verde region of southwest Colorado, once inhabited by the Anasazi 6000-1000 B.C. Participants learn field methods, survey techniques, and lab analysis under the leadership of the archeological and educational staff of the Crow Canyon Campus of Northwestern University's Center for American Archeology. To apply, as well as receive information on other foreign and domestic study tours, write: Smithsonian Associates Travel Program, Capital Gallery 455, SI, Washington, D.C. 20560.

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TEACHER'S CORNER: BIOLOGY AND ANTHROPOLOGY DUET

Editor's Note: Cam Griffiths shares "Animal Behavior; Behavioral Anthropology," an innovative course she designed. The George Washington University/Smithsonian Institution Anthropology for Teachers Program inspired her to unite biology and anthropology into an evolution of behavior course, in lieu of Advanced Biology for high school seniors. The class meets six hours each week with two two-hour blocks allowing time for essential field trips. Ms. Griffiths has taught the course for the last three years at Stone Ridge School in Bethesda, Maryland. After teaching for 18 years, Griffiths and her husband are off to Jamaica this June for two years of community work with the Peace Corps. "It is the only thing that could make me leave teaching," she says.

"Animal Behavior; Behavioral Anthropology" is based on the belief that behavior in the animal kingdom forms a continuum. The first semester traces behavioral evolution from one-celled organisms to non-human primates; the second semester focuses on similar behaviors in humans. Students' involvement, intensive observations, and original research make the course especially exciting and academically challenging.

- I. First semester: Animal behavior
Text: John Alcock. Animal Behavior 3rd edition (Sunderland, MA: Sinauer Associates, 1984).

The premise of this text is that evolutionary theory is the key to understanding animal behavior. In this context the author presents, with well-documented examples, such topics as migration/territoriality; cyclical changes; parent-offspring relationships; the ecology of feeding behavior, reproductive behavior; and

predator/anti-predator behavior; and the evolution of societies.

The observations from films, video tapes, and field trips described below correlate with the readings and are organized so that students' learning moves up the phylogenetic ladder.

- A. Microscopic and Other Simple Animals. Students observe behavior through films on animals such as amoeba, planaria, and hydra.
- B. Insects: The Insect Zoo (Museum of Natural History). Using an ethogram (see sample), each student observes for one hour the behavior of an inhabitant in the Insect Zoo. Students work in 15-minute segments with the aid of a stop watch and are able to complete four sequences. Good quantitative data, rather than superficial impressions, result from this method.

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C. Marine Animals (Baltimore Aquarium). Students select one animal to observe and complete an ethogram.

During class, films give students additional practice observing and analyzing animals in action.

D. Birds to Non-Human Primates (National Zoo). For about ten two-hour sessions, students observe, in evolutionary order, the reptiles, birds, hoofed animals, small mammals, and non-human primates. Students choose a particular behavior to observe such as play, grooming, submission/aggression, locomotion, parent/infant behaviors, or communication, noting when and how this behavior is expressed. For example, one student may observe the otter at play. Her observations of other animals (parrots, lizards, elephants, spider monkeys), made throughout the semester and recorded in her ethogram, allow for a comparison of time spent at play. Note: an absence of play is significant.

Each student's observations (collection of ethograms) are recorded and analyzed in a major paper incorporating not only her original research but also information gleaned from supplemental readings. The paper constitutes 55% of the semester grade.

Text: Konrad Lorenz. On Aggression (San Diego, CA: Harcourt Brace Jovanovich, 1974).

II. Second Semester: Behavioral Anthropology

The students scrutinize human behavior in different cultural settings through four different learning units. Students focus as much as possible on the same behaviors they observed in the first semester. Museum visits, readings, films, video tapes, and classroom activities rather than ethograms are the primary sources of information. Instead of tests, weekly essays synthesize the students' readings and activities.

E. A Behavioral Bridge from Non-Human Primates to Humans (Museum of Natural History and the National Zoo). The course phases into the second semester's focus on humans with the three-part Smithsonian program "Monkeys, Apes, and Humans." (This free program is available from Friends of The National Zoo, c/o The National Zoo, 3001 Connecticut Ave., N.W., Washington, D.C. 20008, or call (202) 673-4955.)

A. Archeology Unit

Film: "4 Butte 1: A Lesson in Archeology"

Activity: The Bethesda Meeting House, the landmark from which Bethesda got its name, is a five minute walk from school and provides our archeological site. The pastor talks about the history of the church and the cemetery "talks" about the community's past. The students conduct a cultural study from the information they can find on the gravestones. (For an article on graveyard study write: Ann Bay, ART TO ZOO, Office of Elementary and Secondary Education, A&I 1163, Smithsonian Institution, Washington, D.C. 20560.)

Text: Jane Lancaster. Primate Behavior and the Emergence of Human Culture (NY: Holt, Rinehart, and Winston, 1975).

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Students write essays to define the culture of the people buried here and the relationship of the community to the Meeting House. Students also consider what the building might represent if they were archeologists excavating it 3,000 years from now.

B. An African Setting

Readings: Colin Turnbull. The Forest People (NY: Simon & Schuster, Inc. (Touchstone Books), 1968). Richard Goldsby. Race and Races, 2nd edition (NY: Macmillan, 1977).

Film: "Pygmies of the Ituri Forest"

Activity: Bafa Bafa, A Cross-Cultural Simulation (available from Simile II, P.O. Box 910, Del Mar, CA 92014).

Tours of the National Museum of African Art and the Africa Hall in the National Museum of Natural History.

Students look at such human behaviors as play, parent/offspring relationships, and territoriality in Turnbull's study of the BaMbuti Pygmies.

C. Native Americans

Readings: Ethnographies on the Kwakiutl.

Teaching Kit: Indians View Americans, Americans View Indians by Rachel Reese Sady, Olcott Forwad (Educational Audio Visual Inc., Pleasantville, NY 10510).

Film: "Ishi in Two Worlds"

Activities: Field logs are kept by students visiting the Indian and Eskimo Culture Halls in the National Museum of Natural History.

D. Anthropologists Look at America
Readings: Brenda Mann and James P. Spradley. The Cocktail Waitress: Woman's Work in a Man's World (NY: John Wiley, 1975). John A. Hostetler and Gertrude Huntington. The Hutterites in North America (NY: Holt, Rinehart, and Winston 1980). Carol Stack. All Our Kin: Strategies for Survival in a Black Community (NY: Harper and Row, 1974).

Films and video tapes: Films are available on the Amish, Hutterites, and Shakers. Many of the films listed above may be rented from Pennsylvania State University, Audio Visual Services, Special Services Bldg., University Park, PA 16802 (free catalogue available).

Activities: Students write their own "Nacirema" essays modelled after "Body Ritual" by Horace Miner. Field logs are kept for the Nation of Nations exhibit at the Museum of American History. "Let's Celebrate" slides from the Celebration exhibit at the Renwick Gallery.

This is an exciting course to teach; the students become very involved. Leaving campus curbs "senioritis" and the students evolve into a tightly knit group from weekly field trips.

Because the course deals directly with two disciplines, biology and anthropology, as well as indirectly with history, geography, social science, and religion, it provides a good interdisciplinary approach for seniors and gives them an opportunity to correlate a number of courses they have taken for four years. It was important to include anthropology in the title of the course, because colleges are pleased to see that

students had anthropology in high school. It is a definite enrichment course from the colleges' perspective.

Procedure for Using Ethogram:

1. Students do a recognizance of about 5 minutes. From this they determine what might be logical headings under the solitary and social parts of the ethogram such as the ones I have chosen.
2. Students form teams of two: one member holds the stop watch while the other records.
3. Recorder puts a check in the box to indicate the first time that activity happens in that minute but does not repeat the checks if that activity occurs again in that minute.
4. When timekeeper indicates the end of a minute, the recorder circles the check of the activity taking place at that time.
5. To determine the percentage of time each activity occurs in a 15 minute period, total the circled checks in each column, multiply by 100 and divide by 15 minutes.

Note on the ethogram:

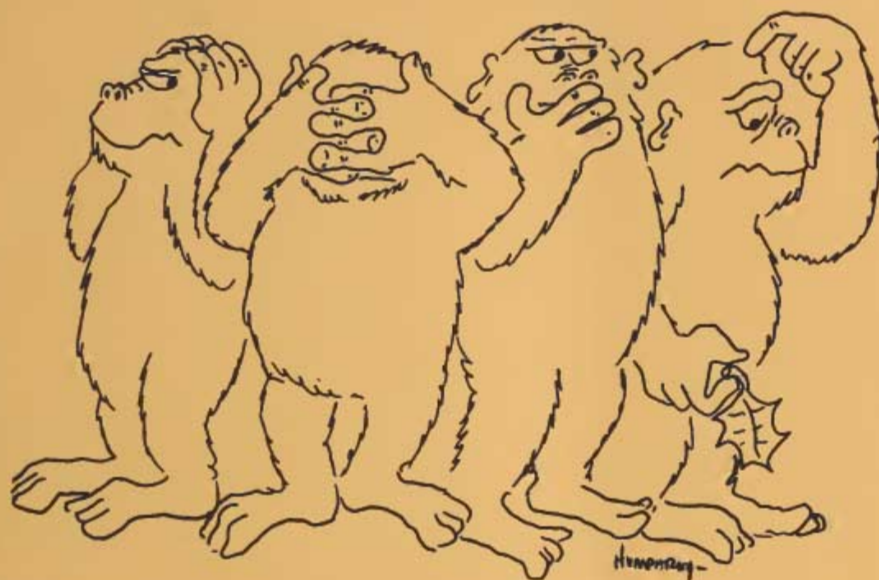
"NV" means not visible.

The "other" category is to include any activity not represented by a column heading. It should be described under "comments."

The students were able to complete four to six ethograms in any one weekly observation period. They were encouraged to continue their observation on the same animal, rather than sample a variety of individual animals, for a more complete data base. Each team observed a different animal.

Time (minutes)	Solitary						Social				Comments		
	groom- ing	walk	run	eye movement	head mvt.	other NV	groom- ing	biting	nursing	chasing play		other NV	
1													
2													
↓													
15													
Total													
% (min.)													

Sheet Number _____ Date _____
 Time _____ Weather _____
 Focal Animal _____ Team _____ Name _____



Do You Know?

● that a recent survey of biology textbooks, conducted by Wayne A. Moyer, former director of the National Association of Biology Teachers, and William V. Moyer, professor emeritus of biology at the University of Colorado, called "A Consumers Guide to Biology Textbooks, 1985" found that the general quality and accuracy of biology textbooks have declined drastically in the past 15 years, with treatment of evolutionary theory suffering particularly. Three textbooks cited by the study that do not even mention evolution are Life Science (Scott, Foresman & Co.), Living Things (Holt, Rinehart & Winston), and Biology for Living (Silver Burdette). On the other hand, three texts were singled out for their excellent presentations in the fields of biology and evolution. They are Biological Sciences: An Ecological Approach (Houghton Mifflin Co.), Biology (Macmillan), and Biology (Addison-Wesley).

- that "African Masterpieces from the Musee de l'Homme" is on exhibit from Paris at the National Museum of African Art until June 9. The 100 works of art from West and Central Africa include ceremonial masks and figures, sacred ritual objects, utilitarian objects, and musical instruments. Arthur Bourgeois, professor of art history at Governors State University, will give a free lecture at the museum on "Reliquary Cults from Gabon and Beyond" on May 22 at 7 p.m.
- that new evidence reveals an earlier age for the Taung child, at death, based on recent studies of facial architecture as well as a possible younger age for the fossil in "Surprise Findings in the Taung Child's Face" by Roger Lewin in Science (April 5, 1985).
- that archeologist John Yellen, Anthropology Program Director at NSF, gives an account of his observations, since the 1960's, of the changing values of the Bushmen and the demise of their hunting/gathering tradition, in the May issue of Science 85.

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- that John Marshall and Alison Brooks will discuss the film "N!ai, the Story of a !Kung Woman" following its showing on June 5 at the Smithsonian. For ticket information call the Smithsonian Resident Associates Program Office at 357-3030.
- that the Land & People series, produced by the ILEA in association with the Royal Anthropological Institute, is designed to enrich students (11-14 years of age) in their understanding of other cultures. Three units produced include: 1) The Kalahari: Kung Bushmen, 2) Papua New Guinea: the Trobriand Islanders, and 3) Peru: the Quechua. Each unit consists of a description of the people and country, case studies, a student's study guide, and teacher's notes. Write: ILEA Learning Materials Service, Publishing Centre, Highbury Station Rd., London, N1 1SB, England.
- that Francine Patterson has written a book, The Education of Koko (Holt, Rinehart, and Winston, 1981) that recounts her experience teaching the gorilla Koko sign language. The book describes Koko's effective use of sign language to communicate emotion and thoughts and to joke, tease, argue, and insult.
- that the "Ancient Art of the American Woodlands" exhibit is on view at the National Gallery of Art's East Building until August 4 and includes such objects as bannerstones, effigy pipes, gorgets, figurines inset with pearls, and copper spear points.
- that a well-preserved settlement in Chili dates to at least 13,000 B.P. revealing a New World Pleistocene culture earlier and more advanced than has been thought (Scientific American, October 1984).
- that "Maya--Treasures of an Ancient Civilization" will be on exhibit at the American Museum of Natural History in New York until July 28. The 275 artifacts include massive carved stone stelae, jade and shell jewelry, golden figurines, and painted ceramics. April's issue of Natural History contains "The Maya Enter History; Ancient Hieroglyphs Reveal the Life Stories and Power Politics of a Ruling Elite" by T. Patrick Culbert.
- the Jefferson Patterson Park and Museum, located on the Patuxent River in Maryland, was created in 1983 as a facility for research, interpretation, and recreation. The park contains a high density of Native American camp and village sites from 7500 B.C. to A.D. 1630, as well as seventeenth century English Colonial sites. A pilot program in archeology for local high school students is scheduled for this summer. A visitors center will open this fall. For further information write: The Jefferson Patterson Park and Museum, Star Route 2, Box 50A, St. Leonard, MD 20685; (301) 586-0050.
- about the Underwater Archeological Society of Maryland (UASM), a newly organized society whose "purpose is to educate the public by knowledge gained through a better understanding of Maryland's submerged resources." The society publishes a quarterly newsletter and sponsors talks, field schools, and workshops. For more information write: UASM, Inc., University of Baltimore, Charles at Mt. Royal, Baltimore, MD 21201.

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A Summer Institute in Historical Archaeology (July 7-August 10) at Flowerdew Hundred Plantation on the James River in Tidewater Virginia is sponsored by The Flowerdew Hundred Foundation and the National Endowment for the Humanities. This program offers high school and college history and social studies teachers an opportunity to incorporate an archeological perspective into their teaching through firsthand experience in archeology. The Institute will be under the direction of James Deetz. Write: Thomas Young, Flowerdew Hundred Foundation, 1617 Flowerdew Hundred Rd., Hopewell, VA 23860, or call (804) 541-8897.

Thunderbird Programs offer one-week archeological sessions throughout the summer for non-professionals at a major paleo-Indian complex. Camping facilities are available at Virginia's first prehistoric National Historic Landmark. Write: Thunderbird Programs, Thunderbird Museum, 1985 Summer Field Programs & Workshops, Route 1, Box 1375, Front Royal, VA 22630.

Field School Listings in anthropology and archeology:

American Anthropological Association,
1703 New Hampshire Ave., N.W.
Washington, D.C. 20009
(202) 232-8800 \$6.00

Archaeological Institute of America
P.O. Box 1901, Kermore Station
Boston, MA 02215
(617) 353-9361
\$6.00; \$4.00 for members



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these is a survey of animal carcass condition, size, and availability on the modern Serengeti savanna by Robert Blumenschine, a graduate student at the University of California at Berkeley. Though the work is still in progress, he has determined that usually very little meat is left for scavengers on the typical lion kill (Bower 1985). Other edibles, such as marrow, fat and brains, might be more important, he proposes. These results may support Potts and Shipman's speculations that meat was not the only possible attraction for early hominids. Blumenschine has also discovered that the best opportunities for scavenging today occur in wooded patches near water sources, which is the very same type of geological setting where most East African hominids, tools and fossil bone sites have been found.

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While Blumenshine tests the possibilities of making a living by scavenging on a modern savanna, Shipman (1984) has been exploring the theoretical needs of scavenging as a way of life. By surveying modern scavenging birds and animals, she has found that a successful scavenger has four special qualities: first, the ability to cover large distances searching for carcasses; second, a way of improving its vantage point to locate carcasses; third, a strategy for dealing either with the primary predator or other competing scavengers, in order to gain possession of a carcass; and fourth, when times are lean, an adequate fall-back diet. Shipman suggests that bipedal locomotion would have satisfied the first two requirements. Because of their small body size, early hominids probably relied on stealth rather than direct confrontation to get hold of carcasses and ate fruits and insects when they couldn't. Although the model does not fit everything we now know about early hominids (for instance, some hominids were considerably bigger than her estimates, as the recent find of a 1.6 million year old Homo erectus from West Turkana shows, and other types of plant food may have been more important than either fruits or meat), Shipman's scenario provides paleoanthropologists with an important new hypothesis to test.

In sum, evidence is accumulating that scavenging was at least a feasible strategy for early hominids. It may have been from gleaning bits of meat and other animal protein from carrion that humans first acquired a taste for meat and later developed the means to obtain it more regularly.

Lessons from Lions

Although this revision of early man's food habits is bound to distress some, it should be pointed out that the lion, an animal we often endow with human-like qualities and refer to as the "greatest hunter" and the "king of

beasts," has also been revealed recently as somewhat less "noble" than was thought before. Ironically, lions in East Africa scavenge or steal other hunters' kills at least as often as they kill themselves, and by such behavior they fall into Shipman's "bully-scavenger" category.

Perhaps it is time to demythify hunting and its purported influence on human psychology, and recognize that as there is more than one way to skin a cat, so are there several ways to bring home the bacon. Hunting is merely a somewhat more reliable way of acquiring the bacon in the first place, and although armed hunting certainly represents a quantum leap in terms of foresight and strategy, it does not necessarily imply a major change in human psychology or aggression.

Bower, B. (1985) "Hunting ancient scavengers." Science News 127:155-157.

Bunn, H. (1981) "Archaeological evidence for meat-eating by Plio-Pleistocene hominids from Koobi Fora and Olduvai Gorge." Nature 291:574-577.

Potts, R. & Shipman, P. (1981) "Cutmarks made by stone tools on bones from Olduvai Gorge, Tanzania." Nature 291:577-580.

Shipman, P. (1984) "Scavenger Hunt." Natural History 93(4):20-26.

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Smithsonian Institution

ADITI: THE FESTIVAL OF INDIA

The Festival of India, a year-long cultural exchange with India, is being celebrated across the United States in 1985-86. The Smithsonian Institution has planned a major celebration of Indian culture, calling it Aditi: The Festival of India. "Aditi" is a Sanskrit word which denotes the creative force and power--joyful, unbroken, and limitless--that sustains the universe. The creative power implies the joy of "doing": of a mother nurturing a child's growth; of craftsmen and musicians sharing their skills; of scientists searching for new understandings. Several Smithsonian museums and bureaus are taking part in the festival. Four events that may be of particular interest to teachers are:

Aditi: A Celebration of Life exhibition at the Museum of Natural History, from June 4-July 28, 1985. The Evans Gallery will be transformed into rural Indian settings with 18 exhibit sections representing courtship, marriage, pregnancy, birth, infancy, childhood, initiation, learning, maturation, and so on. The exhibit, containing over 2000 artifacts, will come to life with the contributions of 40 folk artists, including children, who will perform and demonstrate. In conjunction with the exhibit, free films on India will be shown Fridays at noon in the Baird Auditorium.

Teacher Seminar/Workshop (June 26-28) sponsored by the Office of Education, Museum of Natural History for elementary and secondary school teachers. This free course provides scholarly talks on Indian history, geography, religion, culture, and art; and an educational materials workshop. Washington area teachers can obtain a newly developed multimedia resource kit for their classrooms during 1985-86 developed by the Smithsonian. For further information, write or call the Office of Elementary and Secondary

Education (OESE), Room 1163, A&I Bldg., Smithsonian Institution, Washington, D.C. 20560; (202) 357-2404.

The Canvas of Culture: Rediscovery of the Past as Adaptation for the Future, a symposium sponsored by the Office of Smithsonian Symposia and Seminars, is open to the public from June 21-25. Participants from India and the United States will explore critical questions of loss, continuity, and change as they apply to interrelated aspects of Indian life: folk traditions, contemporary fine arts and letters, religion and ritual, women and the family, the natural and built environments, and science and technology. For further information call 357-2328.

India at the Smithsonian's annual Festival of American Folklife, National Mall from June 26-30 and July 3-7, 1985. A five-acre area of the Mall will come alive with the sights, sounds, tastes, smells, and textures of an Indian "mela", or fair. Participants from India will include acrobats, animal and human impersonators, fortune tellers, musicians, folk dancers, and ritual artisans.



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ANTHRO.NOTES STAFF: P. Ann Kaupp, Ruth O. Selig, Alison S. Brooks, JoAnne Lanouette, editors; Robert L. Humphrey, artist. Illustrations © Robert L. Humphrey 1984-85.

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