ANTHROPOS: The Anthropology Newsletter

Bloomsburg University of Pennsylvania
The State System of Higher Education

Climate & Native Americans of the SW

Using mineral bands in stalagmites from New Mexican caves to track climate changes over the past 4000 years, scientists have found that wet and dry periods helped drive major cultural shifts among ancient people of the American Southwest.

University of New Mexico researchers Victor Polyak and Yemane Asmerom studied cave formations called stalagmites, the columns that grow upwards from the floor of limestone caves. These columns are formed by mineral-enriched water dripping from the ceiling of caves. The stalagmites are stratified into bands of deposits, with thicker bands indicating periods of greater moisture. Using new dating techniques, the researchers were able to reconstruct the region's precipitation record year by year back to 2000 B.C.

When the researchers compared their moisture data to the archaeological record, they found that changes in annual precipitation corresponded closely to changes in the culture history of the Southwest. These included the introduction of new crops, such as corn and cotton, the debut of ceramics, and the abandonment of the famed pueblo cliff dwellings.

For example, the period when Native Americans were making the transition from a nomadic hunting & gathering existence to settled communities and agriculture corresponds with a period of greater moisture about 3000 years ago. Similarly, people began moving from underground pit houses to above ground stone structures during this same wet period. The abandonment of cliff dwellings occurred during a period of prolonged drought around 1330 A.D.

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Special points of interest:

- *BU Anthropology News - p. 3*
- *New Discoveries in Archaeology—p. 3*
- *Anthropology Courses for Spring 2002—p. 6*
- *Circulation news—p. 6*

Inside this issue:

Anthropology Club News

The Anthropology Club has elected officers for the Fall 2001 semester. They are: Lauren Madak, president; Seth Mitchell, senior vice-president; Jon Rhodes, junior vice-president; Marisa Pisano, treasurer; and Kat Yerkes, secretary. The faculty co-advisors are Dr. Dauria and Dr. Ruth.

On October 6, the club sponsored a field trip to the primate facilities at the Philadelphia Zoo; Dr. Wymer joined the students.

On October 24, the club will sponsor a program on "Japanese Martial Culture," by Keith Lutz. That program will be in CEH 239 at 7 PM.

Club members are looking forward to their participation in the American Anthropological Association meetings in November.

The Taliban and Human Rights by Becky Digan

By now, there are very few people reading this that do not know about the Taliban in Afghanistan. The media has kept us abreast of any new information that has come out of Afghanistan about the Taliban. What may not be so widespread are conditions in Afghanistan prior to September 11. The human rights violations that the Taliban has committed and continues to commit are horrendous. Men, women, and children are all subject to these violations. Women have had the most severe restrictions with the most human rights violations committed against them.

Afghanistan has been a country in political turmoil for many years. Since coming to power in 1996 with the intent of uniting Afghanistan under a strict version of Islamic law or Shariah, the Taliban has violated almost all of the human rights of the Afghani people, as human rights are defined in the Universal Declaration of Human Rights. Although the Taliban says that their actions are based on religious doctrine, much of what they do goes against the Koran. My goal is to outline some of these violations of the Koran and the Universal Declaration of Human Rights.

According to the Koran, both men and women should dress modestly. Men are required to wear Islamic clothes and a cap. When out in public, women are required to wear burquas. These are long, head-to-toe coverings with a small mesh opening through which to look. Women must also be chaperoned in public by a mahram or male companion. If a woman exposes more skin than the Taliban finds acceptable or if the woman has no mahram, she may be verbally abused, whipped, or beaten.

According to the Koran, men and women are able to benefit from what they earn. The Taliban has stripped women of their right to work. For some, this means that they have resorted to begging if they have no husband to support them. But, of course, a woman begging is out in public alone, so she runs the risk of being beaten if the Taliban finds her.

According to the Koran, men and women have the right to be educated. In Afghanistan, girls are no longer allowed to be educated after the age of eight. The boys also suffer because a majority of the teachers had been women, and now they are no longer allowed to work. Secret schools have opened at great risk. For a female teacher and her female students, the repercussions for being caught would be grave. It would mean almost certain death for the teacher.

Because women cannot work, there are very few female doctors that the Taliban allows to practice. They tend to be in clinics in larger cities. Women cannot seek medical attention from male doctors, according to the Taliban. Women, therefore, no longer receive proper health care. A fortunate few women have male doctors in their families. Illness and childbirth has taken many Afghani women's lives.

Any show of vanity on a woman's part can bring terrible consequences. Brightly colored clothes, high heels, and cosmetics have all been banned. Women have had their fingers cut off for wearing fingernail polish.

Many men have been tortured and murdered by the Taliban, too. Their women and children are left without much of a way to make a living. With no one to protect them, women and children have been sold into slavery by the Taliban. Young boys may be forced into the military. Some women and girls are forced into marriages with members of the Taliban militia or into prostitution. According to the Koran, a woman should not be forced into an unwanted marriage. Other women have been raped, tortured, or murdered.

According to the Universal Declaration of Human Rights, everyone has the right to: (1) life, liberty ,and security of person; (2) not be subjected to torture or to cruel, inhuman,or degrading treatment or punishment; (3) work; (4) have a standard of living adequate for health and well-being; and (5) education.

Certainly this is a brief overview of just some of the atrocities committed by the Taliban. Initially the Taliban's goal was to restore Afghanistan to being an Islamic fundamentalist country. In trying to do so, they have oppressed, restricted, and stripped the Afghan people of their rights, dignity, and any quality of life. In other cases, they have caused much suffering by torture and murder. In many cases, executions were public so that people could witness the power of the Taliban.

In light of the war currently being waged in Afghanistan, it will be interesting to see what develops within that country regard-

Human Rights Issues (Continued)

ing these human rights violations.

To stay informed on these issues, I suggest that you reference these Internet resources:

www.wapha.org/health.html.

www.msnbc.com/news/638488.asp

www.rawa.org/rules.html

www.unhchr.ch/udr/lang/eng.html

www.ama-assn.org/special/womh/library/readroom/vol_280/jsc80298.html

www.afghan-web.com/woman/talibanwomen.html.

(Editor's note: Becky has applied for a Kozloff scholarship to continue her research into human rights issues.)

BU Anthropology News

Anthropology major Sharon Cabana won Superior Awards in Prose Interpretation and Impromptu Speaking at the 16th Annual "Through the Looking Glass" Novice Speech Tournament at BU in September.

Dr. Dave Minderhout was invited to give a cross-cultural overview of alcohol use on October 17 during Alcohol Awareness Week. Dr. Minderhout noted that brewing and distilling alcoholic beverages is a very old human practice. One of the oldest surviving Sumerian Cuneiform tablets is a recipe for brewing beer. Some archaeologists have argued that wheat and barley were originally domesticated to brew beer, not to make bread. At the beginning of European contact, only Australian aborigines, Native Americans north of the Rio Grande, and a few South Pacific islanders did not produce some kind of alcoholic beverage.

Alcohol was not routinely consumed in traditional cultures. For one thing, it was not as easily available as it is today. Rather, beer or spirits were brewed a few containers at a time and were saved for entertaining guests or for special occasions. People who became intoxicated were not tolerated in many traditional cultures.

Bits and Pieces from Archaeology

Seventy-nine new fossils of Australopithecus robustus have been discovered in a c ave in South Africa. They are between 1 1/2 and 2 million years old. Most of the remains are teeth, but a skull and jaw have been pieced together.

Cave paintings discovered in a cave in northwest Italy have been dated to between 32,000 and 36,500 years old. This would make them the oldest Paleolithic cave paintings to date; the oldest previous find was dated to 32,000 years ago at Chauvet Cave in France. The Italian discovery is of stone slabs with undefined quadrupeds and a human figure with an animal head.

The first evidence of an economy based on dairy cows has been discovered in the Outer Hebrides, Scotland. The discovery is based on milk proteins found on prehistoric vessels. The site dates to 2500 years ago.

The oldest fitted plank boat has been discovered at the site of Abydos in Egypt. Excavations revealed 13 such vessels, each about 75 feet long by 7 to 10 feet wide. They are 5000 years old and are part of a royal burial.

The Ceprano (Italy) Homo erectus was discovered in 1994, but its skull has only recently been reconstructed. It shows a cranial capacity of 1067-1185 cc, a massive supraorbital ridge and a sloping vault side, but no saggital keel. It is the oldest European H. erectus at 800,000 to 900,000 years old.

The Influenza Epidemic of 1918

Next semester, Dr. Minderhout will again be teaching Medical Anthropology (46.350) on Tuesday nights. This course samples some of the topics medical anthropologists look at, and one of the more popular topics is epidemiology. Epidemiologists are the detectives of medicine; when a health condition appears in a population, the epidemiologist is called in to determine what the disease is and how it came to be in that population. Epidemiologists also try to find out what factors are involved in the spread of disease in order to prevent more spreading from occurring. Anthropologists assist medically trained epidemiologists by discovering how human social activities encourage or discourage the spread of disease.

Most people associate epidemiology with "new" diseases, such as the West Nile virus or "Mad Cow Disease" or the mysterious occurrence of an "old" disease such as anthrax. But epidemiologists are also interested in diseases that are no longer active in human populations. Diseases seldom disappear forever from human populations; they may reoccur for any number of reasons. That is why the Center for Disease Control keeps a frozen stock of smallpox virus, though the last reported case of the disease occurred in 1977. That's also why epidemiologists are striving to find out what caused the deadly flu epidemic of 1918.

Every year, influenza spreads across the globe from origins in Asia. Like many human communicable diseases, flu originates with domestic animals, in this case, usually waterfowl. The disease is spread from the animals to their human handlers, where it mutates to a form that infects humans and produces the classic flu symptoms. The influenza virus is highly mutable, and epidemiologists are busy each year in Asia tracking down which strains are emerging so labs in the United States can produce the appropriate vaccine for that year's likely infection. Today, flu remains a deadly disease; around 30,000 Americans die from it each year—mostly children, the elderly, and people with compromised immune systems, so it is important to produce the right vaccine.

In 1918, a particularly virulent form of influenza spread across the world. In the United States, this outbreak coincided with America's preparations for World War I. Called the Spanish flu, the disease was first noticed in the U.S. in training camps for soldiers in Kansas. In the next few months, more Americans died from flu than all the Americans who died in WWI, WWII, Korea, and Vietnam combined. World-wide the death toll for the disease is estimated to have been 40 million people. Unlike flus we experience today, the 1918 flu caused victims' lungs to fill with fluid; they literally drowned with bloody fluid flowing from their noses; Caucasians turned black because of oxygen deprivation. The onset of the disease was rapid; records from 1918 routinely report that people who were healthy with no symptoms of the disease one evening were dead by the next evening. The mortality rate for the disease was very high—in excess of 80% of the people who contracted the disease died from it. The disease spread rapidly and then mysteriously disappeared for a few months, only to reappear for a few months in 1919. It then disappeared again, and that form happily has not reappeared since.

Could this deadly flu come back? Epidemiologists agree that it could, though it is impossible to calculate the likelihood of that occurring. But against that possibility, epidemiologists have been searching for the clues as to the identity of the 1918 strain. The flu virus was not isolated until 1933, and tissue preservation techniques were not as advanced in 1918 as they are today. Tissue samples were taken from soldiers who died from the disease, sealed in wax, and kept in dry storage, but this was done at one time for every military person who died in service. When epidemiologists started searching through those tissue samples, they found that there were no records of what the soldiers died from, making the task the proverbial needle in the haystack.

Then it in 1997, Dr. Jeffrey Taubenberger, a pathologist, reported that he had isolated the Spanish Flu virus in lung tissue of a victim who had died in 1918 in Alaska. The victim had been buried in permafrost, which had essentially freeze-dried the body. Needlesss to say, Taubenberger handled the specimen very carefully, working only on tissue samples preserved in formaldehyde to destroy any living cells.

Thus, it was in September 2001 that an International team of researchers announced that they had succeeded in piecing together the molecular structure of the virus. Researchers were somewhat surprised to find that the virus showed signs of having beern a swine flu, before it infected humans. Swine flus do occasionally mutate directly to humans, though none in recent times had been as deadly as the 1918 virus. The researchers do not know what made this form so deadly from looking at its structure, but they do have the information to build a vaccine for it.

Language Enabling Gene Discovered

Researchers in England have identified the first gene to be linked to human language, reinforcing the long-held theory in linguistics that language abilities in humans are at least partially hardwired. Anthony Monaco of Oxford University announced the discovery in the October 4 issue of Nature. Monaco says that the gene is required during early embryonic development for formation of brain regions associated with speech and language. The gene was discovered through studies of a rare speech disorder in which people are unable to select and produce the fine movements with the tongue and lips that are necessary to speak clearly. Persons with this disorder also tend to be dyslexic. When comparing the DNA of several members of a large family in which this disorder is common, researchers found a visible defect in chromosome 7 attached to one particular gene. Further work narrowed the focus to a mutation occurring in just one protein dyad in a sequence of 2500 in that gene. Monaco believes that mutation prevents the gene, designated as FOXP2, from activating the normal sequence of genes required for early brain development. He says, "It is extraordinary that such a minute change in the gene is sufficient to disrupt a faculty as vital as language." Persons with this disorder have abnormal basal ganglia in the brain—which inhibits the movement of the lips and tongue—as well as aberrant regions in the cerebral cortex where language processing ability is located.

In 1957, Noam Chomsky, a linguist, published Syntactic Structures, a text that revolutionized linguistics and had a great effect on the behavioral sciences overall. In this slim, but powerful book, he theorized that language capacity was innate and that children were born with a Language Acquisition Device (or LAD) that allowed them to process language information around them and construct their own language in the process. Prior to this text, linguists and learning theorists had assumed that children learned language through a process of positive and negative reinforcement. (Ironically, B.F. Skinner's monumental text espousing this theory, Verbal Behavior, was also published in 1957.) Linguists assumed that children heard adults speaking, mimicked what they heard, and were corrected or rewarded by supervising adults. Chomsky argued persuasively that this could not possibly be true, since children constantly produced new and creative utterances for which they could not possibly been reinforced. Rather, he said, it was likely that children were born with a LAD that allowed them to creatively construct their own language from the speech they heard around them. Children were the finest linguists in the world, he suggested, in that in a relatively few months they were able to construct a language that allowed them to communicate with the adults around them; in a sense, they were like cultural anthropologists trying to learn the language of a remote tribe whose language had never been recorded—only the child was quicker and better.

While Chomsky's idea of a LAD was persuasive enough to linguists for them to drop the reinforcement learning model, the idea of a LAD remained a theoretical construct, one that was very difficult to prove. This was a classic "black box" problem: linguists could witness the child responding to language cues in the environment and could also see the child produce speech, but they could not see inside the box to know what was going on there. (Proof for Chomsky's theory was suggested by the discovery that children everywhere seemed to go through the same structural sequence in acquiring sounds, syntax, and semantics, no matter what particular language the child was learning.) Advances in brain mapping in the subsequent years gave some idea of where various language abilities existed in the brain, but little on how they actually worked. This recent announcement of a language-enabling gene is the first physiological proof of what Chomsky suggested 44 years ago.

Please note the word choices being used here by the editor. Most news stories about this discovery have labeled it a "language gene." That is misleading. This is not a gene for language, but a trigger for the development of those areas in the brain where language is processed, stored, and produced. Both Chomsky and the current researchers stress that they are talking about language with a capital "L." That is, neither the LAD or gene FOXP2 are tied to English or any other language in particular, but rather are about a general, innate human capacity for language.

Of interest to anthropologists is the current researchers' intent to study chimpanzee DNA to see whether a similar gene exists in these apes. Decades of work with laboratory chimps and gorillas suggest that they have some small capacity for language, though not for speech; the apes can learn communications forms like American Sign Language. However, ape brains are structured differently from humans in the regions where human language is housed. Fossil brain casts from australopithecines, rare though they are, show that their brains were more like chimps than modern humans. It will be interesting to see what chimp DNA reveals.

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ANTHROPOS: the Anthropology Newsletter, is published six times during the academic year and is mailed to interested students, faculty, administrators, and alumni. It is also distributed in anthropology classes on campus and made available on the department's home page. If you would like to be on the newsletter mailing list, please contact Dr. Dave Minderhout at the address and numbers on the left.

The Department of Anthropology offers a 36 credit B.A. degree and a 18 credit minor in anthropology. If you would like details, please see any of the anthropology faculty.

Anthropology Course Offerings for Spring 2002

MWF:

9—46.200 Principles of Cultural Anthropology—Dr. Aleto

9—46.200 –Dr. Minderhout

10 –46.220 Human Origins—Dr. Aleto

10– 46.390 Socialization of the Child– Dr. Dauria

11—46.101 Intro to Anthropology– Dr. Dauria

12– 46.102 Anthropology & World Problems—Dr. Wymer

12– 46.200—Dr. Minderhout

1– 46.102– Dr. Minderhout

2– 46.210 Prehistoric Archaeology– Dr. Wymer

2– 46.102– Dr. Warner

4-5:15-46.200-Dr. Warner

TuTh:

8– 46.200– Dr. Dauria

9:30-46.312 South American Archaeology– Dr. Aleto

11-46.200-Dr. Dauria

12:30-46.360 Pseudoscience– Dr. Wymer

Evenings:

M– 46.470 Anthro. Thought & Theory—Dr. Warner

Tu-46.350 Medical Anthropology—Dr. Minderhout

W-46.200-Dr. Warner

Th-46.220-Dr. Aleto