The Behavior of Beavers
And the Invention of American Anthropology

John M. Janzen

On a pond of the upper reaches of the Henry Creek, a tributary of the Whitewater and the Arkansas Rivers in South-Central Kansas, a young beaver couple have made their home. Even though the water level was high throughout spring and summer, due to abundant rain, the beavers tried continually to raise the level of the water by stopping up the pond’s 12-inch overflow pipe. This was no mean feat, because the pipe extended about ten feet into the water, away from the dam. To accomplish this, they built an underwater earthen mound of mud and willow switches about five feet high to the pipe’s opening; they also tried to cover the pipe, and seal it permanently to keep the water from running through it. As if this was not enough work for them, they also began to cut down large cottonwood trees around the pond, and to burrow out an underwater tunnel to a nest on the edge of an island in the pond. Atop this nest or hole, they stacked a variety of logs. As the summer progressed, they began dragging sorghum cane stalks to this home from a nearby field.

As the main human responsible for the upkeep of this pond, I was at first intrigued, then upset, at all this beaver activity. A higher level of water than intended would erode the spillway of the pond, potentially destroying it. The loss of some willows and cottonwoods was not of great concern to me, since there were other trees on hand. So I took to cleaning out the overflow pipe as soon as it was stuffed shut. But the beavers invariably would stuff it again within a day or two after my work. Their work was always done at night; mine during the day. I never saw them, and as far as I know, they never saw me. As the summer progressed, this struggle at the dam took on epic proportions. As I write these lines, the pipe is again clogged, and I must go unclog it before the next rain. Who will win this test of intelligence and will is not clear. The human is only a part-time dambuilder, whereas the beavers are full-time.

My curiosity and my dealings with these creatures, led me to want to understand the impulses, functions, indeed reasons behind their actions. I realized I was dealing not with some dumb beasts, but with animals whose intelligence approached my own, and whose persistence and energy certainly were amazing. As an educated, rational human being, I was led to do a library search on beavers. I soon came upon the
FROM THE DESK OF:

THE CHAIR

In the last issue of *ab origine*, I announced that the Department was attempting to set up a development fund to support undergraduate and graduate research projects. Money should be earmarked for Anthropology and sent to the General University Fund (GUF). While I will thank those who donated, I cannot say that we have received a huge outpouring of funds. But, sometimes as happens in life, totally unexpected surprises fall from the sky. About a month ago I was informed by the College office that a fund had been set up for the department by the estate of Folene Eppstein Gartside in the name of Carroll D. Clark. While we know that Dr. Clark was once the chairman of Sociology (and Anthropology) from 1933 to 1962, we know nothing about the donor. Currently, we are trying to get some information about this person who generously set up this discretionary fund. According to the Endowment Association, the fund will generate about $5000 per year which we plan to use for a variety of projects, including student research support. Later this semester, I intend to convene a departmental meeting, which includes faculty and undergraduate and graduate representatives, to discuss uses for this money. Since the money comes from an estate, we cannot personally thank the donor, but this gift to the department was truly needed and will be instrumental in meeting some of our future plans. Folene Eppstein Gartside, where ever you are, we thank you.

Now, I am not a superstitious person, but following the lead of the last chair’s column, I think in this issue of *ab origine* I will ask for someone to donate space and the incentive for the psychologists on the Anthropology floor of Fraser Hall to move elsewhere. With our new faculty and the new graduate students, we are becoming extremely crowded. An additional 5000 square feet on the 6th floor of Fraser would be very beneficial to our program. More on this later, I hope.

Finally, let me just mention that the department welcomes two new members this year. People aware of the history of the department know that it was two decades ago when the department was able to announce the addition of two new faculty. That was in 1975 when Frayer and Stull joined the department as visiting assistant professors. The last newsletter gave information about our newest colleagues, but once more, I want to welcome Jane Gibson-Carpenter and Sandra Gray.

David Frayer

THE GSA PRESIDENT

The leaves are now changing and the semester is in full swing. Presently, the Graduate Students of Anthropology are busy lining up speakers for this year. We have some exciting prospects. We also have been lining up speakers for the weekly Brown Bag Lunches. These are from 12:30 - 1:30 on Thursdays in 633 Fraser. Anyone with an interest in anthropology is welcome.

I would also like to extend the opportunity to become involved in the Graduate Student Association. Through the Association, we give input on issues such as the improvement of the core courses and eligibility for teaching assistantships. Any graduate student in Anthropology is eligible and notice of meetings will be posted on 6th floor Fraser.

I am sure we will have a great year, as we did last year.

Lisa Walawender
classic, *The American Beaver and his Works* (Philadelphia: Lippincott, 1868) by a certain Louis Henry Morgan. At first I thought this was one of those instances of a sound-alike double, you know, of the other Louis Henry Morgan. To my amazement, I discovered that this was the Morgan of *League of the Iroquois, Systems of Consanguinity and Affinity, and Ancient Society*. In *Beaver*, Morgan wrote much as he had in his anthropological writings. He conducted fieldwork in a

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region of Upper Michigan south of Lake Superior, west of Marquette, that contained "sixty-three beaver dams, from those 50 feet in length, forming ponds covering a quarter of an acre, to those which are 350 feet in length, with ponds covering from twenty to sixty acres of land. It also contains many acres of beaver meadows, many lodges, burrow, and artificial canals" (1868: 80). Here he documented a beaver community which he estimated had required several centuries to build an intricate, far-reaching system of dams, lodges, and canals. Like my beaver(s), the beavers of upper Michigan demonstrated great prowess and intelligence. The basis of their society, he wrote, is the monogamous nuclear family, each inhabiting a lodge, within a community of lodges. Beaver children live with their parents for two seasons after birth, at which time they must leave to find a mate, locate on their own streams, and build their own dams and lodges. Those unfortunate ones who cannot find a mate and get established after two years are allowed to return for one more winter. But according to Ojibwa and Iroquois observations, they are assigned all the heavy wood cutting and building. Those poor beavers who cannot make it on their own after three seasons often join strange lodges where they become slaves. Morgan's informants suggested you could identify these slave beavers by the absence of hair on their head, from being beaten so often and having to carry many heavy loads.

As an anthropologist who has now read Louis Henry Morgan on anthropology of humans and beavers, I have come to the conclusion that if he had not invented American anthropology, some other beaver watcher would have.

AN ANTHROPOLOGIST LOOKS AT FAMILY VALUES

Kathleen Fuller

Recently, particularly in the last few months, there has been much verbiage, both in the political arena, and in the various media, devoted to a "discussion" of family values. An acrimonious peak was reached, and fantasy and reality merged and blurred, in the Dan Quayle - Murphy Brown debates.

As anthropologists, these debates should be of more than cursory interest since our field of study is the human organism in its physical and social contexts, of which the family is the ultimate base. The following comments on family values are formed by a physical anthropological perspective.

Humans are primates, most closely related, as a species, to chimpanzees, from whom we differ in only 1% of our genetic material. The basic family unit of all primate species, despite their differing mating structures, is the mother/infant dyad. The mother and her infant are the core unit of each primate species. Although the length of the stage of infancy is highly variable in the different
primate species, in humans it can be defined as the period from birth to toddlerhood, occurring at approximately 18 months of age.

Humans have an extended infancy as compared to other primate species due to the intertwined factors of dramatically increased cranial capacity and bipedal locomotion. There is a limit beyond which the female pelvis cannot be remodeled and still allow for efficient bipedality. In most primate species, the neonate has a cranial capacity about one-half its adult size. In humans, a full-term fetus with a cranial capacity about one-half its normal adult size would be impossible to deliver. Therefore, human neonates are born with a cranial capacity about one-quarter the normal adult capacity. In effect, all full-term human fetuses are born pre-maturely and at a far more helpless stage than in any other primate.

Human infants do not achieve half their adult cranial capacity and relatively competent locomotor abilities until they are approximately 9 - 12 months old. A fetus born after nine months of in utero gestation has generally reached the maximum deliverable size given her mother's pelvic constraints, but is totally helpless and dependent on her mother to sustain her life. The infant then has an additional nine months of ex utero gestation before she is at a stage comparable with that stage which other primate infants reach shortly after birth.

The primary family unit in all primate species, the mother/infant dyad, is of even greater importance in humans whose infants undergo an additional nine months of ex utero gestation. Therefore, when humans speak of family values, they must begin with the primary family unit, the mother/infant dyad. Policies on family values must begin with the determinations on the best ways in which that dyad is to be nourished and sustained physically, psychologically, and socially. Until our understanding of this basic dyad and policies directed towards it are clear and sustaining, time and resources devoted to the extrapolations of family beyond the basic dyad [mother/father/infant/children; father/children; mother/children; two generations of adults/children; two adults/no children; etc.] will be of limited value.

If we are unwilling to provide proper medical care, housing, education, and nurturing for mothers and their infants, our society will decay from within at its most basic level. Defining families at some level above the primary dyad (i.e. mother/father/children) enables policy makers to ignore this fundamental unit. A society cannot be healthy if the most basic needs of the mother/infant dyad are slighted or ignored.

Dan Quayle is representative of that uninformed segment of society that does not realize that the basic family unit—the unit that most needs our support and sustenance—is the unit composed of a woman and her infant. The real threat to family values are those policies and their enforcers which deny mothers and their infants access to those resources that are essential if human developmental potential is to be achieved.

It is to be hoped that defining the primary family unit as the mother and her infant will lead to policies which will value, support, protect, and sustain that unit. When there is adequate public investment in the basic unit, extrapolated and extended versions of the family will have a better chance for success.
DIGGING FOR BISON, OR: BUILDING A LIBRARY OF BONES

Jack L. Hofman

Why dig up bison bones? Why isn’t one comparative bison skeleton enough? What can we learn about prehistoric people from studying bison bones? Why study modern bison carcasses? What is taphonomy anyway? Several KU students considered such questions as these during field work this summer in western Kansas and nearby areas.

During part of May, much of June, and July, archaeology students from KU were involved in a variety of field investigations in western Kansas, Texas, and Oklahoma. If there was a central theme to these investigations it was the focus on recovery and study of bison bones, old or new, at each of the archaeological and taphonomic sites. Prehistoric bison bonebed excavations were conducted at a recently recorded late Paleoindian site in Scott County, Kansas, at the Lipscomb site in the Texas Panhandle, and the Waugh site in northwestern Oklahoma. The latter two sites are of Folsom age (ca. 10,500 years old). The Norton Bonebed is of late Paleoindian age with a date of perhaps 8,000 to 9,000 years ago indicated by a spearpoint found with the bison bones. It is the first Paleoindian bison kill/butchery site to be investigated in western Kansas since the 12 Mile Creek site in Logan County was studied in 1895.

Taphonomic studies of modern bison remains were conducted on the Duff Ranch in Logan County, at the Finney County Bison Refuge near Garden City, and at the Konza Prairie Research Natural Area near Manhattan. Primary concerns of the taphonomic studies have been to develop an improved comparative collection for the analysis of weathering processes on bison carcasses in various natural settings, and to add to the reference collection for bone identification in the Museum of Anthropology.

Excavation at the Norton Bonebed near Scott City, began in May. This site came to my attention through the efforts of Charlie Norton who recognized its significance earlier this year. Matt Hill and I visited the site in April, then returned with the aid of Dean Sather, Jennifer Geisler, and the Norton family (Charlie, Pat, Tanya, Tanner, and Carson) in May to develop an investigation strategy and begin excavation. During June, excavations continued with Matt Hill, Karolyn Kinsey, Shaun Bittikofer, and Josh Kershen from the University of Kansas, and Ed Knell from the University of Alaska. Again, the work was supported in a variety of ways by the efforts of local people including the Norton Family, Pete Bussen, Jerry Christenson, Larry and Bodine Crouch, Kathy and Gabe Lawrence, Charles Duff, and Jack Fritch. Support from the University of Kansas and the Kappleman family is also acknowledged. Larry Todd from Colorado State University and Barry Carpenter from England also assisted in the work.

The bonebed was first exposed more than 15 years ago during sand and gravel quarry operations. How much of the bonebed has been lost due to quarry activity and subsequent erosion is unknown, but present evidence indicates that the deposit is extensive and covers an area of at least 10 by 22 meters. The bones occur at the base and in the fill of an ancient gully which drained to the north. The west side has been removed by quarry activity. The possibility that a camp or processing area occurs on the east margin of the gully is good and needs evaluation. A concentration of bison bones was exposed in the walls of the quarry at depths from one to 3.5 meters below the original surface, but spoil dirt had been deposited on top of the area.

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Background: Research in Golfto began in January 1990 when John Hoopes spent three weeks conducting a pilot study to determine the nature of archaeological resources in Golfto and to visit UCR-KU facilities there.

In June 1990, Hoopes returned to Golfto with two graduate students in anthropology, Byron Loosle and Nason Kloopenborg, to undertake a 10-week survey of archaeological sites around Golfto Bay. This project, funded by the H. John Heinz Charitable Trust of Pittsburgh, resulted in the discovery of 22 locations where archaeological remains were visible on the surface. These sites ranged from ceremonial areas with large stone spheres and sculpture fragments to small scatters of Precolombian pottery on eroded beaches. Among the most interesting sites were those that had remains of ancient shell middens—prehistoric dumps where shell is found mixed together with bone, charcoal, stone tools, and broken pottery. The ancient equivalent of our modern landfills, these features provide information on the daily life and dietary habits of the indigenous inhabitants of the region. Large quantities of shell change the chemical composition of the soil, preserving organic remains that do not usually survive in hot, moist climates like that of Golfto.

For six weeks during the summer, the 1992 Kansas Archaeological Field School conducted excavations at the Town of Kansas, the original town site of Kansas City, Mo. During the course of these excavations, thirteen field school students under the direction of John Hedden, Dr. Mary Adair, and Dean Sather uncovered structural remains representing at least three different buildings. The artifacts associated with these buildings may date to the early period of European settlement in this region.

The Town of Kansas began as a French trading post in the 1820’s. Increased trade, riverboat travel and increased westward migration helped to establish the Town of Kansas as an important commercial center by the mid-1800s. The Town of Kansas was important in outfitting wagon trains moving west along the Santa Fe Trail and providing supplies for the people settling in the newly opened Territory of Kansas.

As the town grew (and acquired the name “Kansas City”) the riverfront area was eventually abandoned because of flooding and decreased riverboat trade. The business district moved away from the Missouri River to higher ground. By the end of the nineteenth century the buildings were no longer in use and had begun to collapse. Today, the only visible evidence of the original Town of Kansas are several
Our work included the removal of this spoil dirt and the partial excavation of about 15 one meter squares. The excavation had to be stepped down to allow access to the deepest part of the bonebed. Excavation also included work on the east slope of the old gully and at the north end of the gully as exposed by the gravel quarry.

The bison bones were mapped and recorded in place including information on side up, orientation, and dip of pieces. This information will be used to help interpret the site's depositional history. In addition to bison, at least one antelope is represented in the bonebed. Lithic artifacts include two small fragments of spearpoints in addition to the complete point originally found with the bones, two scrapers, a flake knife, a small flake tool, and numerous flakes, mostly from maintenance and resharpening of tools. The lithic materials used represent sources from western Kansas, eastern Colorado, central Texas, and perhaps other areas. Details of how the animals were killed remain obscure. It is possible that the animals were cornered at the head of this deep, steep-walled arroyo, or that they were herded into it from above. The variable weathering on bone surfaces, the presence of articulated skeletal units in the east excavation on the slope of the gully, and the differentially weathered and mostly disarticulated bones in the base of the gully provide some important clues. Documenting the history of weathering and movement of the skeletal remains will enable us to outline some of the events which occurred and perhaps to define areas where the kill and butchering occurred, and how the bone deposit has been modified by natural factors. Though we are confident that people were involved in the killing and butchering of these bison, the details remain to be determined.

While in western Kansas, students also participated in sorting and inventorying the Charlie Drew artifact collection in the Finney County Museum in Garden City. This provided an opportunity to learn about lithic materials and artifact types common to the region. Mapping and collection of bison bones in the Finney County Bison refuge was conducted in order to familiarize students with identification, recording, and mapping bison bones. This skeleton also added to our comparative collection for the study of bone weathering and dispersal in natural settings. Our work in the Garden City area was supported by Mary Warren, Mike Gilbert, and Charles Drew. Visits to local sites included El Cuartelejo in Scott County State Park and the Coal Oil Canyon site in Logan County.

The Norton site was revisited briefly in early October to record profile information. William Johnson (Department of Geography at KU) collected soil samples to be used in dating the soil which formed over the gully and the bonebed. The age of this soil will provide a minimum age for the filling of the gully and so for the bonebed buried in the gully floor.

During July the crew, with the addition of Dixie West, moved to northwest Texas and began work at the Lipscomb site. Further assistance there was provided by Dayna Peacock of KU and Jim Cox of Norman, Oklahoma. This work was a continuation of investigations begun in 1988 at the Lipscomb bison Quarry, a site first investigated in 1939 by the University of Nebraska.

Work at Lipscomb this season focused on three problems. The first was continued excavation of a stratigraphic trench connecting the 1939 bonebed to an ancient deep gully found to the east in 1989. At least 55 bison were killed at Lipscomb in a small area, and the circumstances of the kill have remained a matter of speculation by archaeologists for over 50 years. Documentation of how the bonebed relates to the gully may help resolve this problem. Also, defining the limits of the 1939 investigations at Lipscomb is important for relating the results and materials from our investigations to those of half century ago. We were successful this summer in defining the position of the southern and eastern test trenches from 1939.

The third effort was to continue

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The 1992 Field Season: In August 1991, Hoopes received a grant from the National Science Foundation to continue research in Golfito. With the cooperation of the Dept. of Anthropology and the Office of Study Abroad, the research project was combined with teaching to create a semester-long field program of instruction in Spanish and Latin American culture as well as archaeology and anthropology. Students paid a total of $3100 plus airfare to participate in the program. Each received 12 hours of college credit; 4 hours in Spanish, 6 hours in anthropology, and 2 additional hours of independent study.

The project crew consisted of Prof. Hoopes and 17 students. The students included 12 undergraduate anthropology majors (all from KU), Nason Kloppenborg and Enrico Dal Lago (M.A. candidates in KU’s graduate program in anthropology), Cydney Generaux (a student in the MHAMS program), Steve Bozarth (a Ph.D. candidate in geography at KU), and Bill Doonan (a Ph.D. candidate in anthropology from Tulane). In addition to this, we hired 10 Costa Rican laborers, a full-time cook, a housekeeper, and a laundress (bringing the total project size to 30 people). Visitors to the project included archaeologists from the University of Costa Rica and the National Museum of Costa Rica as well as a scuba diver from C.E.D.A.M. (a U.S. organization of amateur divers interested in Conservation, Education, Diving, Archaeology, and Museums).

The project was based in facilities donated by United Fruit and Brands to the University of Costa Rica and the University of Kansas in 1985. Once the headquar-
Akira Y. Yamamoto: Akira is a professor of linguistic anthropology. This summer he conducted the first Oklahoma Native American Languages Development Institute at the University of Central Oklahoma, Edmund, Oklahoma. The Institute was supported with the grant from the Department of Education and will continue two more summers.

The Institute is designed to provide Native Americans with basic knowledge and skills in linguistics and ethnography so that they would be able to continue their own research to produce materials for teaching their respective languages and cultures. Among the 30+ tribal groups, this year’s Institute was represented by Absentee Shawnee, Cherokee, Chickasaw, Creek, Kickapoo, and Yuchi, along with teachers whose first language was English. Two linguistic graduate students participated in the institute as the Institute’s assistants.

During the month of June, the Senate Select Committee on Indian Affairs held a hearing on Senate Bill 2044 entitled “the 1991 Native American Languages Act.” The act is to provide funding for the revival, maintenance, and perpetuation of Native American languages. Yamamoto, with the staff of the Native American Language Issues Institute (headquarters in Oklahoma), wrote a lengthy testimony supporting the bill. The bill was debated in Congress on October 2 and . . .

Akira continues to work on the grammar of the Hualapai Language spoken in northwestern Arizona. He plans to complete the manuscript by the end of the year to be submitted to the University of Arizona Press.

A new work has begun with the Yavapai Indian tribe in central Arizona (Prescott), beginning with the survey of the basic sound system so that the orthography can be developed. This work will be followed by writing a sketch of the Yavapai grammar and developing teaching materials.

An article, “Local Reactions to Perceived Language Decline”, was published in the journal Language (March, 1992). The article describes his long-term work with the Native Americans.

He also completed, along with professors Stephen Addis (Art History) and Fumiko Yamamoto (East Asian Languages and Cultures), a charming book (ideal for a Christmas present!) entitled A Japanese Menagerie: animals, birds, insects, reptiles and fish in Haiku and illustrated woodblock books. The book will be published by Weatherhill this fall.

Bill Angelbeck: I am a new graduate student in Cultural. I spent my summer doing archaeology for the Missouri Highway Department. In my spare time, I love to write little paragraphs about myself and hope that someone will spend time reading it. I also love to think up new Dan Quayle jokes. It’s my worthwhile contribution to the Clinton/Gore campaign. I do nothing else.

Felix Moos: He is a professor in applied anthropology. In June, he made a trip to the Republic of Korea to be decorated by
the South Korean Government for services to the Republic. Dr. Moos made a trip to Austria and Italy in August where he visited Croatian and Bosnian refugee camps.

**Jim Mielke:** I am a professor in Physical Anthropology. This summer, I spent a few weeks doing research in Helsinki, Finland, among the archives. I also took a short trip to Tallin, Estonia, to see the changes that have occurred recently. My research interests include historical demography, population structure, anthropological genetics, and adaptation and disease.

**Enrico Dal Lago:** I am a M.A. Grad student in Archaeology. During Spring, 1992, I was in charge of the excavation of a small shell midden at the Golfito, Costa Rican Field School. This shell midden pertained to the Aguas Buenas culture (700-800 AD) and was located on the other side of the hill from the bigger shell midden that was also being excavated. The site appeared extensively looted. It was characterized by a big “huaquero” or hole overlapping the central part of the midden.

We began excavating in four units of 1m x 1m, but later we extended the operation to include the walls of the big looting hole. Even though it had been heavily disturbed, the shell midden still contained a sample of shells of different kinds that were big enough to be used in comparisons. The patterns in the formation of the site appeared to be very similar to the ones seen in the bigger shell midden: the presence of tons of pottery sherds covered by red clay and deposited over the shells that occasionally had traces of charcoal inside them, indicating some kind of burning activity.

Unlike the bigger shell midden, the smaller one yielded only a few animal bones and almost no lithic tools at all. However, the large amount of decorated pottery that was found will certainly be very useful for future studies regarding the definition of a particular style within the larger culture area.

**Stan Moore:** Stan has been conducting fieldwork in Lexington, Nebraska since July with funds provided by a grant to Don Stull. His research will continue through December.

**Jane Gibson-Carpenter:** I'm now ashamed to admit that I have looked down my nose more than once at superstition and, on occasion, at those who profess it. I am not one to heed the deep-throated bellowing of owls in the night or black cats on the walk (one haunts my house). Yet if ever I had my doubts that omens await discovery in order to warn the observer of impending doom it was on my trip to Kansas.

**Day 1 -** Our late afternoon attempt at leaving Florida brought the first sign. My husband Jim drove the moving van with one child (Joanie) and one bad cat (Bad Cat) up the road and onto the soccer field (that's another story). I followed with the other child (Callie) and a happy puppy (Ellie). We circled the soccer field and prepared to drive through the gate, but the

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tow dolly, which held our Subaru Brat, fell off the trailer hitch of the moving truck. It bent, of course, and, with the delicacy and finesse only raging males can manifest, Jim hammered it (and screwdrivered and wrenched and kicked and cursed it) back onto the ball.

Foolishly undaunted, we left Florida's hot and steamy August climate for Georgia's hot and steamy August climate. We have no air conditioning in our $200 Datsun (why not, you wonder?) so we happily greeted the wind which brought the first scent of rain. Little did we know the pleasant cooling wash we expected would turn into a blinding, crashing, flashing torrential thunderstorm. To make things worse, Georgia has decided to repair or widen every major highway which could conceivably bring Olympic sports fans to Atlanta. As the roads washed away before us, and we lost vision beyond the windshield wipers, one child, one puppy, and I got separated from our leader with other child and bad cat. But did we read the signs? Did we turn back to the safety and security of the known world? Well, the puppy was still happy, even after the next blinding rainstorm drove us off the highway and apart a second time.

At last we found a restaurant which we hoped would be able to accommodate the needs of our vegetarian daughters, Jim the carnivore, and me. I just wanted a bowl of soup. It was one of those Country Cookin' kinds of places and I know I smelled my grandmother's peach cobbler baking in the kitchen. The waitress even talked like all the southern women who raised me. We seemed to have rounded some mysterious bend after which things would come together and all would be well with the world. Then Joanie took a healthy gulp of her iced tea. "Mom," she said with a question in her voice. "Something smells funny in this glass." RAID!!! The Ant and Roach Killer!!! In My Daughter's Stomach!!! The waitress reassured herself that it wasn't her fault; we took down all the necessary details of the event and checked into the nearest motel. Poison Control had never heard of the little town we were in, but they told us what symptoms to watch for should we need to rush the child to the emergency room. Did we turn back? Did we read the signs? Joanie's stomach hurt, but she experienced none of the dangerous symptoms, and the next morning we moved on.

Day 2. We bid a not very fond farewell to Georgia and enjoyed the beautiful climb up the mountains into Tennessee. The air cooled the happy puppy and the happier people, but could not console the bad cat. Evening brought a magnificent sunset over towering pines and blue-gray mountains. It also brought a very sick child, not the one who would be roach-free for millenia. It was Callie whose stomach ache had a different etiology. I should note that Callie has a poor record when it comes to making it to the appropriate spot to vomit. So when she warned us of this inevitable outcome, we raced to the nearest motel and checked her directly into the bathroom. There we stayed and waited and waited for the intestinal storm to pass. I quickly calculated that day two was statistically better than day one, a definite upward trend. It was too late to turn back now anyway, and Lawrence was surely just
Day 3 - Jim loves landmarks and he talked well in advance of the famous arch over St. Louis. As we approached the city, whose temperature by this time made Florida’s hot wet wind seem inviting, we all eagerly anticipated the sight of this remarkable construct. We were not to be disappointed because we arrived in time for St. Louis’ rush-hour, construction-exacerbated traffic jam. We looked at that arch for over an hour, studied it in fact, from virtually every angle.

The last leg of a long trip is without a doubt the longest and the hardest, especially in a small, hot, sweaty car in which the treasured traveling cookies have turned into soggy, broken pieces, and the excitement of the adventure has been twisted by unheeded omens. We stayed the course as we knew we must and by mid afternoon arrived at the empty parking lot of the company which managed our house. No parked cars, however, meant no manager and, more importantly, no key. We consoled ourselves with pizza and waited for the manager’s wife to relay the proper information to the Man With Our Key. We drove to the house and waited on the porch. Finally a carpet cleaner arrived with one of the several keys he said had been distributed around the city (anyone reading this with my key in your pocket, please return it to 617C Fraser).

At last we were in through the front door. Ellie, the happy puppy, celebrated by christening the carpet in my bedroom. The bad cat hid himself out of reach in the wall of the house. Jim and I returned to the moving truck with the intention of driving it up the ski-slope driveway to unload. Somehow—we still don’t know how it happened—Jim wedged the moving truck down into the asphalt, perpendicular to the street, and onto the chain which attached the tow dolly to the van. We met many people that day as we directed traffic away from the catastrophe. The police came. A tow truck came. After six hours, we finally arrived at the top of the drive, traffic began to flow normally down the street, and we began to unload. This may sound like the happy ending to a long and miserable tale, but in spite of the wide distribution of keys to various subcontracted employees whose income turned, at least for a time, on preparing our house for occupation, there was no hot water that night for a shower.
Update - The hot water is on and we've enjoyed the house for about ten weeks now except for the day a torrential rain flooded the ground floor. The puppy is still happy; the bad cat has agreed to come down out of the wall on a trial basis; the kids are settled into a routine whose organizing principle is homework. Jim continues his career pursuit, and I have discovered that teaching is really hard work, filled with exciting challenges, and rewarded by interesting people and learning (mine as well as that of motivated students). I hope to continue my research into alligator hunting and management programs next summer in Louisiana where I hear some of the folks pay close attention to "the signs." It's clear to me now that I could use a few reading lessons.

Bradley Borchardt: Although I am now working on my M.A. in Cultural Anthropology, I am sorry to say I did nothing related to anthropology this summer: I worked construction and industrial maintenance in Chicago. My research interests include Scotland's outer Hebridian Islands, Marxist anthropology, and cultural ecology. I studied two years at the University of Maine, one year at the University of Stirling, Scotland, and received a B.A. in Philosophy (minor in Religious Studies) from KU in Spring, '92.

Celia Daniels: This Fall I am teaching Museum Public Education with Ruth Gennrich. My summer doesn't really start until after the Anthropology Museum's June workshops for children. This year's workshops covered such diverse topics as being human, Ukrainian egg decorating, Native Americans, and Carribean music, and were carried out with much appreciated help from Kathleen Fuller. July was spent recovering from June. I went on a family vacation in August to visit museums and drink $3 Cokes in England returning braced for the Lawrence Indian Art Show and the fall pollen count. I find time to write an occasional poem (which are published even more occasionally.)

Don Stull: Dr. Stull is a professor of applied socio-cultural anthropology. He has written several recent articles and papers on the meat packing industry and produced the Gallery Guide for "I Born Again in America," a travelling photo exhibit based on the Garden City Changing Relations Project. The exhibit will come to the Watkins Museum in Lawrence in November.

He was co-organizer of "Accountants Die In Bed: Papers in Honor of Robert A. Hackenberg," at the meeting of the Society for Applied Anthropology, March 26. Dr. Stull also co-organized a national conference on New Factory Workers in Old Farming Communities held in Queenstown, MD and Washington, D.C. April 11 - 15, where he presented a paper on Beefpacking's
Impact on Garden City, Kansas. This conference was cited by Meat and Poultry magazine as "...one of the most fascinating conferences ever organized on the subject of labor in the meat, poultry, and seafood industry"; Don's work was highlighted in the first of a three-part series in the magazine.

Dr. Stull was also one of 13 participants (from over 100 applicants) selected to attend the 6th NSF Summer Institute on Research Methods in Cultural Anthropology, the results of which he will be happy to share with interested faculty and students. His work has been supported by grants from the Ford Foundation/Aspen Institute and the University of Kansas General Research Fund.

**Jay D. Germano:** He is working with Dr. Michael Crawford on his M.A. in Anthropological Genetics. The research for his thesis, which he hopes to complete in December, 1993, concerns the genetic components of the upper palate in Black Carib, Mexican, and U.S. populations. Jay is currently the Editor-in-Chief for Esoteria, a newsletter published by the Institute of Comparative Constitutional Research.

He graduated from the University of South Florida, Tampa in 1991 with a B.A. in anthropology and is in his second year here at K.U.

**Yvette Robeson:** This summer, first I went to my cousin's wedding in Denver, CO. (in a rental car), then attempted to get my car fixed by Virgil in Barstow, California and failed. Then I drove at a rate of 63 mph (because the car can't go faster) to New Mexico, then up to Lawrence. I dropped off a carload of stuff and made it to Chicago by 1:00 pm on my birthday. I spent the next two weeks visiting friends in Chicago. I came back to KU for three weeks of job training for Student Housing, where I work now as a Graduate Resident Hall Director in Lewis.

Having travelled in Mexico in the summer of 1991, I am interested in Central American culture—more specifically the dynamics of the family and the Catholic Church vs. the people. I would like to chronologically examine the evolution of the pre-Columbian family and how it arrived at the modern family of Mexico.

I am from Elgin, Illinois and graduated from Loyola University in Chicago with a philosophy major and an anthropology minor. I work for two years in Redlands, California as a Resident Director in a residence hall on the campus of the University of Redlands, and now I finally decided to get my Master's in (socio-cultural) Anthropology at K.U. (getting a job on campus helped my decision).

**Christina Lohn:** I am a physical therapist and worked as such during the whole summer in Germany. I would like to use my "western standard medicine knowledge" in combination with medical anthropology in order to analyze and hopefully solve critical health problems. Although I can imagine going back to India in order to assess the appropriateness of some developmental aid projects in the future, I would like to focus my work first on a comparable U.S. setting, where poverty-related conditionas are just as bad as in parts of India.

I visited the Cheyenne Indians this summer; all of the people said that diabetes is the largest health problem and that they are really scared of diabetes-related amputations. They want me to investigate this problem, so that is what I will do.
I am German and have travelled throughout Western Europe and North America. I have also spent several months in India, Australia, New Zealand, and Alaska. I am a Ph.D. student interested in medical anthropology, international health, and rural health.

Mary Lee Robbins: I spent part of my summer researching and writing the Native American chapter for a multicultural substance abuse training manual for counselors which was commissioned by Life Span Studies. Don Stull has agreed to lend his expert editorial skills to this project. Considering the complexity and seriousness of the subject, this chapter has proved to be a real challenge.

I am primarily interested in U.S. Indian policy and contemporary Indian affairs. Currently, I am working on my Master’s thesis in Cultural Anthropology, the subject of which is the Bureau of Indian Affairs’ tribal recognition process. The Snohomish and Samish tribes in Puget Sound have allowed me to research their recognition attempts for about a year. Their legal and political maneuvers have received recent national media attention.

Allan Hanson: My summer was spent in writing a couple of articles and preparing the index and attending to other final matters for my book Testing Testing: Social Consequences of the Examined Life, which will be published in early 1993 by the University of California Press.

The highlight of the summer was a trip to Japan in August. My wife and I attended the International Amateur Theatre Festival in Toyama City, where we saw something like 25 plays in 8 days and I participated on a symposium on humor in theatre. It was our first trip to Japan, and in addition to the festival we were able to hit some of the main highlights, such as Tokyo, Kyoto, and Hiroshima.

This semester I’m enjoying teaching History of Anthropology with Anta Montet-White and Jim Mielke, and I am looking forward to being a visiting professor in the Law School during the spring semester. I am also looking forward to the visit this spring of Michal Buchowski, a Polish anthropologist who shares interests with me in anthropological theory and the philosophy of social science. In addition to conducting research while he is in the department, he will teach Magic, Science and Religion during the spring semester. His dissertation was on this topic, and it promises to be a very interesting course.

Joe McComb: I am working on my M.A., more in genetics than anything else. I did some lab work in genetics this summer. I also went to England to set in motion my plan for world domination. My research interests include genetic diversity, genetic engineering, and lots of other genetic things, too!

I graduated from the University of Colorado with a degree in Biochemistry and Anthropology (one B.A., but two majors). It took me four years to complete the requirements for both degrees. I also graduated with honors (so there!!). In other news, I also fence (that is sabre, and not chain-link) and ponder Hamlet.
Bruce Zimmerman: Bruce is working on his M.A. in Archaeology. In June, 1992, he was a participant in the Kansas Archaeology Training Program sponsored by the Kansas State Historical Society and the Kansas Anthropological Association. The dig in Lindsborg, KS concentrated on a 15th to 16th century Great Bend Aspect site. So far, his research interests are in local historic and prehistoric archaeology. He received his B.A. in Anthropology in May, 1992, from Washburn University in Topeka.

Nason Kloppenborg: I'm working hard to finish my M.A. My wife wants her turn at grad school.

Eva Cook: This summer I attended the Kansas Field School. This year’s site was the “Town of Kansas”, the original settlement of Kansas City, Missouri. I did archival work for the first time and found that I really enjoyed the subject. I am planning to do my thesis on the Town of Kansas and am looking forward to it very much. In addition, I enjoy research involving prehistoric art. I received my B.A. in Anthropology here at K.U. in 1991, and am a second-year M.A. candidate.

Sandra Gray: Sandra is our new professor of biological anthropology. Her research interests include maternal and child health practices and systems of infant care and feeding, and east African nomad health and nutrition. She has conducted research (1988, 1989-1990) among the Turkana pastoralists of Kenya which concerned an investigation of the effects of breast-feeding practices on infant health and women’s fertility. Her summer was spent “Moving, moving, moving... keep them doggies moving.”

Mary Ann Domico: Gardening, painting, home renovation, and other forms of semi-pro, competitive procrastination took up a lot of my summertime. I spent a week in the Washington, D.C. area fishing in the Potomac, walking along the canal and visiting museums. I didn't go sailing and didn't play tennis.

I am working on my M.A. in Cultural Anthropology. I really am finishing up my thesis (and those nasty Incompletes) — REALLY I AM!! In addition to that and being a T.A., I'm pursuing an interest in multi-cultural education. PERSONALS: SWF; cohabitating; Aquarius; chocoholic; loves to cook, hates to clean up. If you're going crazy, follow me; I know the way...

Kathleen Fuller: I spent the summer polishing my thesis on species identification at the australopithecine sites of Swartkrans and Kromdraai, and anxiously awaiting the return of my committee members from far-flung regions of the globe (Finland, Central Europe, Israel, western Kansas, and Oklahoma). Once everyone reassembled in September, I defended my thesis, and am now happily embarked on the journey to obtaining the Ph.D.
Brad Logan: My summerfall activities included archaeological fieldwork in north-central and southcentral Kansas and laboratory work on the 1988-1989 Kansas Archaeological Field School Investigation of the Zacharias site and the 1991 Kansas Archaeological Field School Investigation of the Quarry Creek site.

Continued archaeological survey and test excavations at Lovewell Reservoir in Jewell County, Kansas occurred during June with support from the Bureau of Reclamation, Grand Island, Nebraska. I was assisted during this work by Rose Estep, M.A. graduate student in anthropology and Robert Rothman, undergraduate in anthropology and classics. Surveys in south-central Kansas focused on the Sand Prairies region between Great Bend and Pratt. I was assisted by Robert Rothman during fieldwork in July and August. Our work there is an interdisciplinary attempt to explain the paucity of archaeological sites in this region of grass-covered sand dunes and to provide the project sponsor, the Historic Preservation Department, Kansas State Historical Society, with a predictive model for the discovery and interpretation of the regions prehistoric culture and environmental history. We are being aided in this effort by Professor William C. Johnson, Department of Geography, and his doctoral student, Alan Arbogast. Johnson and Arbogast are exploring the sediments below the sand sheet through backhoe trenches and probes.

Continued analysis of the Quarry Creek site, a Kansas City Hopewell occupation on the Fort Leavenworth military reservation, is being supported by a grant from the Department of Defense, Legacy Resource Fund. Students involved in this laboratory work are Judy Banks, Ken Lawrence, Chris Raymond, John Romine, and Robert Rothman. We hope to complete sorting of more than 320 flotation samples (representing 160+ bushels of fill) from the site and cataloging of the site assemblage this fall and winter. I will present a paper about the Quarry Creek investigation at the upcoming Plains Anthropological Conference in Lincoln, Nebraska. John Weymouth, Professor Emeritus of Physics at the University of Nebraska, Lincoln and I will also present another paper about the magnetometer survey of the site by the KAFS. Completion of a site report is slated for next spring.

I am also continuing analysis of data, primarily ceramics, from the Zacharias site, a Plains Village occupation north of Leavenworth, with support from a University General Research Fund grant. The results of this work will be included in a paper to be presented at the SAA Meeting in St. Louis next April. This paper is to be included in a symposium entitled "New Views on Plains Villager Adaptations" that I and Dr. Donald Blakeslee, Wichita State University have organized for that meeting.

Barbara Tsatsoulis: Hurrah! The summer is finally over, my kids are back in school, the house is painted, the garden cleaned out, and, looking back, I even got some work done. I fought with the VAX and its watchdog program, drove through California, Arizona, and New Mexico for three weeks, and read a lot on backlash and other women's issues (my husband had enough survival instinct to stay out of town and out of reach for some backlassing
of my own) - and my Lego houses are unsurpassed works of art!

Ted Hamann: Last summer was like last spring, last winter, etc. I continued to coordinate and teach in the bilingual parent literacy program targeting Latin American immigrants in K.C., Ks. I did get to take a break to visit friends in Spain and Austria.


My research interests include applied anthropology and the anthropology of education. I tentatively plan to do an ethnographic study on decision making in an urban school district for my thesis.

Risa Ueda: I did nothing exciting this summer except work on my M.A. thesis in Cultural Anthropology. I am interested in looking at cultural adjustment through different scopes, especially, since I am so poor and starving, I have been pursuing this through dietary patterns. I strongly desire to complete my thesis by May, 1993. Besides that, I am teaching Japanese this Fall '92.

Teresa Hedges: She spent the summer doing field work in South Dakota (Black Hills and High Plains) for the South Dakota State Archaeological Research Center. Teresa is working on her M.A. in Archaeology with special interests in the High Plains, the Southwest, and Rock Art. Born and raised in southern Kansas, Teresa has a B.S. in Education from Southwestern Oklahoma State University. She taught in Kansas, Oklahoma, and New Mexico, and worked for the Archaeology Department of the Kansas State Historical Society for two years. Teresa enjoys camping, sports, and making willow furniture.

Kari North: I am a MA student in biological anthropology working with Dr. Crawford. I am from the Washington, D.C. area, and come from a large family of seven. I received my BA from the University of South Florida in May, 1992. I had a summer IRTA fellowship at the National Institutes of Health (NIH) where I was studying communication in nonhuman primates. My area of research interest is population genetics.

Linda Greatorex: She is working on her M.A. in archaeology. This summer, she participated in the University of Maryland's Field School in Historic Annapolis, MD. Linda, who was born in Washington, D.C. and raised in Rockville, MD, has a B.A. in Art History from East Carolina University, Greenville, N.C. For the last 12 years, she worked at the National Gallery of Art in the Department of Design and Installation.

Chris Nicolay: is a graduate student in physical anthropology. His summer was spent analyzing human skeletal material for the US Army Corps of Engineers for possible repatriation.
**William (Will) Banks:** Will is working on his MA in archaeology. While at the University of Wyoming, from which he received his BA, Will worked on an Avonlea site in SE Wyoming. He presented the results of this dig at last year's Plains Conference. Over the summer, Will served as the Assistant Crew Chief for the High Plains Project in Pine Bluffs, Wyoming and also got married. His interests include Paleoindians and Early Late Prehistoric lithic economics and technologies. Will is currently working with Jack Hofman on materials from Farra Canyon, Oklahoma.

**Teresa Hedges:** She spent the summer doing field work in South Dakota (Black Hills and High Plains) for the South Dakota State Archaeological Research Center. Teresa is working on her M.A. in Archaeology with special interests in the High Plains, the Southwest, and Rock Art. Born and raised in southern Kansas, Teresa has a B.S. in Education from Southwestern Oklahoma State University. She taught in Kansas, Oklahoma, and New Mexico, and worked for the Archaeology Department of the Kansas State Historical Society for two years. Teresa enjoys camping, sports, and making willow furniture.

**Mary Conrad:** While I’m tracked for studies in cultural anthropology, I also am interested in archaeology. For a number of years, I have volunteered at the June digs of the Kansas Anthropological Association (KAA). The KAA digs are designed and supervised by archaeologists from the Kansas State Historical Society. As the number of volunteers has increased steadily for a number of years, some of the regular KAAers have been trained to assist with supervision. At the last KAA dig, in which the Great Bend aspect at the Sharps Creek site in McPherson County was investigated, I assisted with the supervision of the lab. Of the 295 volunteers at the dig, 99 spent one-half day or more in the lab. So far I’ve twice presented a slide show titled “There’s More to Archaeology than Digging: The Archaeology Lab”.

**Nancy Palmer:** Nancy is a Ph.D. student in cultural anthropology. She returned a year ago after conducting fieldwork in Cameroon, and her research interests include medical anthropology and cross-cultural adaptation.

Her summer was spent working on her dissertation, backpacking in Colorado, and working on her 50-year-old house (including her first solo wallpapering job) while she “tried to get her life in balance.”

**Lisa Walawender:** Hi, everyone. I hope you all had a wonderful summer. I did. I spent the month of July as an intern at Analytical Genetic Testing Center in Denver. There, I learned how to extract DNA, restrict (cut) DNA, and detect it with a non-radioactive probe. I know that might be boring for you, but I had a blast. Unfortunately, I was spoilt by the temperate Denver climate and I can’t handle the heat of Kansas summers.

Besides Denver, I have had my hands full because I have begun the arduous task of writing my thesis—wish me luck. I also am trying to plan my wedding so my semester should be quite hectic.
DEERSONG

Subtract a thousand years
No, make it two thousand
I will already be older
than I am today

Each day will be filled
with deer
piercing a heart with stone
at the end of a spear's throw
cutting the flesh
fleshing the hide
filling the pots by the fire
with meat
listening to them simmer slowly
for hours

with the bones
I criss-cross designs on
what I leave behind

In winter I will wrap
my children in the fur
surrounding them with deer

There must have been songs for deer then
songs that ran through the forest jumping
over streams
songs that caught on the breath of
the wind
There must have been songs
but I cannot hear them now

Time in a tantrum
has crushed the cooking pots
swallowed the hides
hidden the houses and erased
the memories

Now there are only the deer left
Ancient songs in their ears
Hearts waiting to be pierced

Celia A. Daniels
excavation north of the bonebed in what might represent a camp or processing area. Our testing in this area documented small flakes removed during sharpening scraping or butchering tools. Additionally, study of the local geology and the geologic setting of the Lipscomb site was continued by William Hendy, a retired geologist from of Irving, Texas, who was also in charge of the 1939 field work at the Lipscomb site. Support for our work at the Lipscomb site was provided by Jerry and Hollene Peery who have made the continued work possible. While in Texas the crew visited the Horace Rivers site, a late Paleoindian camp, in nearby Hemphill County with the tour guided by Horace Rivers.

The last portion of the field work was at the Waugh site in northwestern Oklahoma near Buffalo. In this second season of work at Waugh our efforts were directed toward exploration of the site’s limits, geology, and testing of Locality 3. In addition to the students, Leland Waugh, Lanen Waugh, Mick Sullivan, and Alvie Laverty assisted the excavations. Leland also operated the backhoe in excavating stratigraphic trenches. Stratigraphic study of the soils at Waugh is being conducted by Brian Carter of Oklahoma State University. Results this season included testing in a possible camp and processing location, recording of stratigraphic sections, and expanding the original bonebed excavation (Locality 1). The most exciting discovery was in Locality 3 where a hearth containing ash and charcoal was found. About a half meter away and on the same level, a distinctive Paleoindian scraper made from Alibates flint was found. The exact age and relationship of the hearth and occupation surface in Locality 3 to the original bonebed remains to be determined. The hearth was discovered while excavating an area around articulated vertebrae exposed in the canyon sidewall. This hearth discovery and work in Locality 1 at Waugh are very encouraging. Much remains to be learned about Folsom behavior and site structure from this site.

The field work in western Kansas, Texas, and Oklahoma included many days when the work did not end until sundown or after dark. There was some good food, some great, and some bad; camping in a variety of quasi-rustic settings; working with many interesting and interested people; thinking about dirt and prehistoric bison hunting; and, getting stuck in Wallace County mud. Between the blisters and the BS we learned some things we had not known about each of the sites studied, and we improved our vantage for asking better and more informed questions about the past behaviors and processes which led to the formation of these sites.

The work, however, is not over. There is little or nothing about the archaeological record of west Kansas or elsewhere which is “self-evident.” In order to accurately interpret the bones, stones, charcoal and other materials from these sites we must develop our analytical skills and tools. When working with prehistoric bison bones, it is critical that we do more than simply identify the bones as to species and element. The bones can inform us about the size of herds, the sex and age composition, the season of a death or kill event, the processes which have influenced preservation and modification of the bones, and about bison evolution and ecology. The way bison carcasses are utilized, the portions butchered or removed, the time of year, the intensity of processing, all provide information about the way human groups were organized, their economic status, and their mobility or movement patterns. Bison have variable economic potential by sex and during different seasons, so controlling for these factors can help us understand why carcasses were utilized in particular ways. In conjunction with information on tool functions, lithic material sources, and stratigraphy it is sometimes possible to learn much about what happened in particular places in prehistory. Perhaps more importantly, however, we can gain insights into how these particular places fit into regional frameworks of prehistoric adaptations and evolutionary change of human systems and environments. To use information
from bison bonebeds effectively, it is critical that we have a wide range of controlled information on bison weathering and natural dispersal agents. We must not only distinguish natural modification of bones from cultural modification, but also determine the degree of weathering, the type of modification, and the number and sequence of agents involved.

These concerns form the basis for what is planned to be a continuing taphonomic research effort in the Konza Prairie Natural Research Area near Manhattan. This work is supported by the assistance of our KSU colleagues including Dave Hartnett, Ted Barkley, Diane Post, Jack Oviatt, and others. In this setting it will be possible to monitor the natural weathering and dispersal of bison skeletons over a period of years. This sometimes odorous task will provide a library of information which, when used in conjunction with controlled experiments and archaeological samples, will help us refine our approaches to interpreting the archaeological record. This will help us develop better explanations for what happened in prehistory. Taphonomic work at Konza Prairie has been spearheaded by Dixie West with the help and support of other students including Matt Hill, Dean Sather, and Will Banks. This effort is beginning to provide information which will be of long-term significance to archaeological and paleontological research in the Plains and other regions.

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recovered from page 9

fragments. Other interesting items were a billiard ball, poker chip, ceramic doll fragments, and several coins.

Following the field school, the artifacts collected over the summer were returned to the Museum of Anthropology where analysis has begun. The analysis is being performed by KU anthropology students under the supervision of Dr. Adair and Dean Sather. One of the objectives of the analysis is to establish a time range for the separate stratigraphic layers in hopes of identifying the time scale of the site. Datable items such as embossed bottles or ceramics with maker's marks may provide information regarding the chronology of the site's use, abandonment, and subsequent burial. The nature of the deposits may also provide information which will help determine the history of the area and the activities of the people living in this region during the mid-19th century.

The Town of Kansas project provided a unique opportunity for field school students to become acquainted with the basic methods of archaeological research in the field, laboratory, and library. The documentary records of the early history of the site area have helped identify its utilization through time. It is hoped that through the analysis of the artifacts more can be said about the role the Town of Kansas played in the settlement of the midwest and particularly about the people that participated in that process.

Gender Issues in Anthropology:
Seminars on Topics Relevant to both Males and Females

Times of Meetings will be Announced
Continued from page 9

ters for Chiquita Banana, these facilities are now administrated by a foundation at the UCR dedicated to the promotion of research and economic development in the region. The University of Costa Rica is focusing its efforts on promoting ecological tourism in Golfito, taking advantage of the fact that the facilities are located within walking distance of mature rain forest and a refuge for tropical fauna. KU's archaeological research there will provide information on the ecological history of the area as well as additional attractions for tourism (in the future, we hope to establish a museum to display archaeological materials from the area).

Facilities utilized by the project included three apartments with bunkbeds and screened porches, a field laboratory in the old banana company administration building, and a large mess hall—complete with ceiling fans and a vintage 1970's jukebox. We rented a fire-engine red Toyota Land Cruiser as our field vehicle, and the UCR made available a 10 ft launch with a 25 hp Suzuki outboard motor so that we could get to sites on Golfito Bay that were inaccessible by land.

All of the sites that we investigated were situated near Golfito Bay. The first, and earliest, is located on top of a 300 ft high ridge overlooking the bay from the south. Access was via a 10 minute boat ride and then a very steep climb up cow paths to the ridgetop. The second site was located on an island across from the town of Golfito. It is situated at sea level, on the edge of a mangrove swamp. Additional research included the mapping and exploration of Isla Pelicano, a small island in Golfito Bay, where we identified prehistoric fish weirs made of piled-up stones. These were investigated both above the water line and below through snorkeling and scuba diving.

The Research: Research focused on the recovery of information on prehistoric patterns of hunting, fishing, and agriculture. We are especially interested in discovering how indigenous populations made use of natural resources from nearby rainforest and estuarine ecosystems, and how complex interrelationships between human populations and their environment changed through time. We tackled these problems by conducting excavations at two sites, both of which have excellent preservation of organic remains in prehistoric trash dumps. One of these sites dates to between AD 200-600 and the other to between AD 700-1570. By excavating vertical columns into these trash dumps, we were able to obtain samples of shell, animal bone, and carbonized plant remains as well as pottery and stone artifacts. Looking at species variety and relative frequencies of different kinds of food remains, we will be able to develop theories to explain prehistoric dietary patterns and the effects of native populations on rainforest and estuarine ecosystems prior to the arrival of Europeans.

While the analysis of our data is just beginning, we can recognize some general patterns in the subsistence systems of the ancient populations of Golfito. The diet of these people took advantage of the great biodiversity that is characteristic of the region. Over two dozen different species of shellfish have been identified, including several varieties of snails, clams, mussels, and oysters. The fish bones represent both freshwater and saltwater species, and species that live in mangrove swamps as well as the open sea. Among the most common were red snapper and snook, with shark being taken as well.
Less common species include eels and rays. Shrimp and crabs were also eaten, although the remains of these were more difficult to find. The most common mammals eaten were deer, peccaries (wild pigs), and agoutis (tropical forest rodents about the size of small dogs), although armadillos, porcupines, raccoons, coatis, and tapirs were probably also hunted.

So far, information on prehistoric agriculture has been the most elusive. It had been suggested that the cultures we were investigating were based on maize farming. However, although we used the most intensive methods known for recovering carbonized plant remains, we have not yet identified a single burned maize kernel. Our pottery analysis revealed that flat plates, such as those used by traditional cultures of northern South America for toasting cakes of manioc (a starchy root), were common at the sites. It is likely that previous investigators have overemphasized the importance of maize, and that the principal sources of carbohydrates came from root crops that were harder and more versatile in the humid tropics.

Preliminary data on shellfish from our excavations suggest that there were marked changes in the use of various species over a period of several hundred years. For example, oysters appear to have been the preferred shellfish in the very earliest levels at the site. These were replaced by scallops as the most important species over time, perhaps because oysters diminished in availability as the population of the village increased. In the uppermost levels of the site, just prior to its abandonment, we found massive quantities of small snails and clams—species that had not been collected in significant quantities in earlier times. The appearance of high proportions of these small shells, the kind that would have required a lot of energy to collect, may indicate a population under stress. If the size of the village grew to the point where populations of larger shellfish were over-collected, people may have been forced to turn to smaller, less desirable species.

Of course, there are other explanations for changes in dietary patterns. Shellfish are highly sensitive to changes in their natural habitat, such as the increased sedimentation that results from forest clearing associated with agriculture. Scallops, which were the most important species harvested in Golfito in prehistoric times, are unknown in the region today. Whether they disappeared because of overexploitation or modern destruction of their habitat through sedimentation and pollution is unclear. Understanding the reasons for their disappearance can be an important step towards resuscitating the natural wealth of the region through the formulation of policies for the conservation and restoration of severely altered ecosystems.

Among the results of our research is evidence that human effects on rain forest and estuarine ecosystems—while accelerating in the modern age—have a long history that stretches back into Pre Columbian times. This is something that biologists who have conducted a great deal of research on “virgin” rain forests in the tropics are just beginning to appreciate. Even small human populations can have significant and sometimes lasting effects on the ecology of the region they occupy. Considering humans as an important factor in the evolution of “natural” ecosystems in the distant past can help us to understand the long-term effects of modern human populations today. Understanding how ancient populations used natural resources can also help us to develop models for the continuing use of these resources in the future.
UNDERGRADUATE ANTHROPOLOGY CLUB

With the new fall semester, 1992, the Anthropology Club continued the annual pilgrimage to Cahokia Mounds, St. Louis. A group of 12 students went to visit the archaeological site and learn about the prehistory of the Mississippi Valley. We have been sponsoring this trip, in conjunction with the Fall and Spring Equinoxes, for the past two years. Once again, it was an exciting experience for all participating students. (We actually saw the sun rise.)

We have had and will continue having guest lecturers from different departments in the University such as Dr. Sandra Gray, Anthropology, and Dr. Paul Mirecki, Religious Studies. In addition, a trip is being organized by the Club to attend the Aztec Art Exhibit in Denver, Colorado the weekend before Thanksgiving. All are welcome to participate.

-- Chris Raymond and Bellina Kweskin

ANOTHER MYTH: THE DJANGGAWUL

This journey begins
surrounded by water.

Already there are small things
to distinguish us by:
the etched lines of a fingerprint
the lumpy structure of a spine
and the water-streaked symbols
that will be our birthmarks
when we finally land.

Afloat, the waters below us churn
with unseen forces.
The gills and fins of animals
that have lived before
and the wind
taking its first breath
create a storm beneath the surface.
Wet and splattered
we reach our destination.

This is a sign.
Surrounded by family
a new land cradles us
whispering our names.

Celia A. Daniels

NEW!!

We welcome to the
Anthropology Department
the following people:

Graduate Secretary: Judy Ross

Faculty: Jane Gibson-Carpenter
Sandra Gray

Students: Bill Angelbeck
Will Banks
Margaret Beck
Bradley Borchardt
Kenneth Erickson
Linda Gertoirex
Edmund Hamann
Teresa Hedges
Michael Hickman
Karen Komp
Christina Lohn
Joe McComb
Kari North
Cheryl Pahmahmie
Yvette Robeson
Charles Walther
Bruce Zimmerman

November 1992
POMP AND CIRCUMSTANCE

CONGRATULATIONS!!

Steven L. Butts  M.A., Sp., 1992
Iona: Mass Tourism on a Scottish Island

Penelope Daubach  M.A., Sp., 1992
The Politicization of Folklore in the Soviet Union

Kathleen Fuller  M.A., F. 1992
An Analysis of the Probability of Multiple Taxa in a Combined Sample of Swartkrans and Kromdraai Dental Material

Riley Cord Roughened Ceramic Variability as Exhibited by the Assemblages from Ten Smoky Hill Sites in North-Central Kansas

Richard C. King  M.A., Su., 1992
Erogenous Zones: Sexual Politics, Differential Constructs and the Exotic/Erotic Image of Tahiti

Jerry A. Schultz  Ph.D., Sp., 1992
The Kickapoo Nation School: Local-Level Politics, Collaboration, and Indian Education Policy Implementation

Patsy Whitney  M.A., Sp., 1992
Faunal Analysis of Grubgraben AL1: The 1989 Excavation
False dream of technological fix

Polygraph tests are more hurtful than helpful in age of ascension, disillusionment.

By P. ALLAN HANKIN

What do Charles E. Cutri, Anna Zuck and Wendy Neve have in common? They are professional users of polygraphs. All of them say that they are disillusioned with their use.

"I have always been a believer in the polygraph," Cutri, a director of the National Institute of Justice in Washington, said recently. "I was one of the first to use it." But, he added, "I became disillusioned with it after I saw how it was used in the 1970s."

"I believe in the polygraph," Zuck, a polygraph examiner for the District of Columbia, said recently. "I have used it for years." But, she added, "I became disillusioned with it after I saw how it was used in the 1970s."

"I believe in the polygraph," Neve, a polygraph examiner for the State of New York, said recently. "I have used it for years." But, she added, "I became disillusioned with it after I saw how it was used in the 1970s."

The use of the polygraph in the 1970s was widespread. The government was using it to investigate the Watergate scandal. Private companies were using it to investigate employee theft. The police were using it to investigate crimes.

But, as the use of the polygraph in the 1970s became more widespread, the errors became more common. The polygraph was being used to find evidence of guilt, not to prove it. The polygraph was being used to determine the truth, not to prove it.

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