ROBSON BONNICHSEN
1940–2004

Dr. Rob Bonnichsen passed away in his sleep on December 25. As you know, Rob was the founder and first Director of the Center. During his long career in archaeology, Rob was a pioneer and leader in the field of First Americans studies. His research and ability to synthesize diverse aspects of the field brought forth new ideas and ways of thinking about the past. Rob was also committed to sharing the story of the First Americans and the excitement associated with the quest for this knowledge with the public. Rob was also a dedicated teacher who loved to work with students. He felt that it was important to train new researchers who could make new discoveries about the earliest inhabitants of the Americas. Rob also fought for the rights of all archaeologists to pursue their research into the past. Rob was a guiding light in the study of the First Americans and his absence is a great loss to the field. We will miss our great friend and colleague.

Rob always said that life was about dreams. Rob’s dream led to the creation of the Center for the Study of the First Americans. Because of his dedication and hard work, the Center is strong and will continue its mission of research, outreach, and education.

—Michael Waters

The Center for the Study of the First Americans fosters research and public interest in the Peopling of the Americas. The Center, an integral part of the Department of Anthropology at Texas A&M University, promotes interdisciplinary scholarly dialogue among physical, geological, biological and social scientists. The Mammoth Trumpet, news magazine of the Center, seeks to involve you in the peopling of the Americas by reporting on developments in all pertinent areas of knowledge.
Rob Bonnichsen: The Making of a Scientist

Robson Bonnichsen was raised on a farm in Piler, near Twin Falls, Idaho. His family obviously created a stimulating home environment because his brother Bill became a geologist with the Idaho Geological Survey, and is well known for his contribution to understanding Idaho geological history. Rob became interested in the flaked stone artifacts which he found in nearby fields. He soon amassed a large collection of arrowheads, which he mounted on the walls of the Bonnichsen home.

I first met Rob in 1969 when I was surveying for caves in southern Idaho. I found him at the Brown Bench site, digging alone while the rest of the crew had gone to town for the weekend. I was impressed by his devotion to the work; and suggested that he contact Earl Swanson, the archaeologist at Idaho State College, and enroll in the undergraduate program there. In addition to his regular course work under Swanson and Bob Satter, Rob studied flintknapping under the tutelage of Don Crabtree, an accomplished flintknapper associated with the department. Although Rob did not become as good as Don at pressure flaking, he learned how to analyze flake patterns on stone tools, and come to a personal understanding of how they were made. Thus Rob became one of the first experimental archaeologists. He maintained that strong interest throughout his career.

Although not an honors student as far as grades were concerned at Idaho State, Rob concentrated on learning proper techniques of site excavation and analysis; and contributed to several field reports. He did so well as a field archaeologist that Swanson urged him to go on for a graduate degree after getting his B.A. in 1969. Impressed by Rob’s determination to become a professional archaeologist, I suggested that he apply to the University of Alberta, where Ruth Cruhan and I were starting an archaeology program in the new Department of Anthropology. So Rob came north to Canada.

Working with us at the University of Alberta, Rob became familiar with the controversial problem of the initial settlement of the Americas. His doctoral research, however, stemmed from his experience in the production of stone tools. While at the University of Alberta, Rob was the primary person to arrange for Don Crabtree to come to Edmonton for a lecture; and later suggested that François Bordes, the great French Paleolithic specialist, be invited to Edmonton for another lecture, in 1970. Dedicated from the beginning of his career to scientific method, Rob realized that in order to...
of force necessary to make standard blocks of various types of basaltine. The results of these experiments provided the basis for his dissertation.

Working with cognitive anthropologist David Young, Rob expanded his research into the application of the cognitive approach to stone tool technology. Then Rob turned his growing expertise in the production of stone tools to the analysis of bone technology. Before receiving his doctorate at the University of Alberta in 1974, he became a Visiting Scholar at the National Museum of Man in Ottawa, where he applied his talents to the analysis of bone specimens collected from late-Neolithic deposits in the Old Crow basin, Yukon Territory.

Degree in hand, Rob returned to the States. In 1974 he took a position in Anthropology and Archeological Studies at the University of Maine at Orono. His interest in the problem of the First Americans strengthened, and in 1981 he took the opportunity to obtain significant funding from the Bingham Trust to found a Center for the Study of Early Man. While at Orono he carried on fieldwork at early sites on Mount Desert Island in northern Maine, research which led to several publications. He also continued fieldwork at several important early sites in the Pryor Mountains area of Montana.

Rob continued his interest in developing experimental approaches to stone tool and bone tool technology. In 1980, with Daniel Steward, Dick Moran, and others, he used expertly fabricated bone tools to brush the carcass of Gingers, a 200,000-year-old elephant. The Gingers experiment was published in Science in 1981. The understanding of bone tool technology gained by this experiment was applied in the study of the Old Crow bone specimens and of fleshed bone recovered from several mammoth kill sites.

By 1981 Rob had amassed an impressive bibliography of published articles and monographs, many coauthored with colleagues and other specialists. He transferred his research center, now called the Center for the Study of the First Americans, to Oregon State University in Corvallis, where he later became a full professor. With an active pub-
discussed both sides of the argument as to whether or not scientific methods could determine whether ancient bones were broken naturally or by humans. The First World Summit Conference on the Peeling of the Americas, held in Oregon, Maine, in 1989, brought together archaeologists from several countries in South America, as well as Mexico, Russia, China, Korea, Japan, Canada, and the U.S. This conference made North American archaeologists more aware of the valuable archaeological research that was being carried out at significant early sites in Latin America. After the Kennewick discovery, an interdisciplinary conference was held in 1997 in Corvallis, entitled "Who Were the First Americans?" This meeting, focused on biological aspects of the question, brought together geneticists, physical anthropologists, and archaeologists who were dealing with the human skeletal and hair remains from early archaeological sites. Keeping current issues to the forefront, Rob also organized a public conference on the Coastal Entry Route model, held in Portland, Oregon, in 1998. The Clovis and Beyond Conference, held in Santa Fe in 1999, was certainly the most popular and best-attended conference on the First Americans ever held. Over 1,400 people, both avocational and professional archaeologists, packed the bactus hall and admired the collections of early artifacts assembled for the occasion.

Rob made a very strong contribution to public archaeology, both in articles published and presentations to lay audiences, all stressing the importance of preservation and scientific study of precious archaeological remains. Realizing that the public is increasingly interested in early archaeology, over the past decade he gave more than 50 public lectures to avocational and institutional societies, service clubs, and other organizations on the peopling of the Americas. I think back to his very first presentation, as a graduate student, at a professional meeting in Banff, Alberta, when he was very nervous that the audience would hear his knees knocking. It wasn’t long before he became a confident and polished public speaker, sure to draw an attentive audience.

The lifelong contribution Rob made to the study of the First Americans is incalculable, Rob himself never found a famous early site, but he with his research foundation provided essential intellectual support and encouragement for the many scholars in archaeology and other disciplines to pursue active research and publication in this vital sector of American prehistory. Rob especially gave his support to pre-Clovis research. Now with the recognition that the Clovis-first model is inadequate, the field of First Americans studies has opened up to new areas of research and the exploration of new approaches. We can only thank Rob for a large part of that scientific advance, and trust that the momentum he helped to generate will continue on.

—Alan Dyson
Remembering Rob

I met Rob at the summer of 1980. I was a graduate student looking for summer employment with someone doing research on Paleoindians. I had sent letters of inquiry to several prominent Paleolithic archaeologists, and Rob was the only one to respond with a job offer. He hired me to be a field assistant on a survey of Paleoindian sites in northern Maine. One of Rob's graduate students picked me up at the Orono airport and dropped me off at
his house. As I looked up his driveway, he was scratching out the back of his van and grumbling about his wife’s lack of understanding. It seems he had used the family van to pick up the battered carcasses of some animals along the side of the road in order to add the skeleton to his fossil collection. His wife didn’t appreciate his devotion to science; or maybe it was the blood stains and odor that she didn’t appreciate. While this incident doesn’t speak too well for Rob’s sensitivity, it does illustrate his devotion to archeology and his fierce commitment to furthering his understanding of the past, regardless of the personal consequences.

In recent years, Rob’s dedication as an archeologist the past became focused on the federal government’s attempt to give the remnant of the 9,000-year-old Kennewick Man to a group of modern Native American tribes for reburial. Rob believed that such a decision was an abuse of the laws governing ancient human remains, and he helped put together a scientific “dream team” of scholars who finally succeeded last year in overturning that decision. Rob faced a great deal of professional and personal harassment for his efforts to champion science, but thanks, in no small part, to Rob’s efforts, Kennewick Man will have the chance to tell his story to the world through the works of many dedicated scientists. I am deeply saddened that Rob will not get to play his intended part in that research or see the results of these studies, but it is a fitting tribute to him that this landmark court case forever will be known in legal shorthand as Bonnichsen versus the United States of America.

Bradley T. Lepper
Curator of Archaeology, Ohio Historical Society

My brother Rob was born in December 1940 at the county hospital in Twin Falls, Idaho, near the family farm at Filer where he grew up. He was the second of four children of his parents, Everett and Helen (Will-iam) Bonnichsen. His dad was 26 when Rob was born and his mother was 22. Rob came from ancestors that were explorers and pioneers, and this heritage rubbed off on Rob as he grew up. His great-grandfather, Cesar Bonnichsen, who was raised in Hamburg, Germany, emigrated to the U.S. after he had spent many years as a young man. He settled in eastern Iowa and raised eight children, including Rob’s grandfather, the first Russian

Bonnichsen, for whom my brother was named. When Rob’s grandfather was a young man, the family moved to western Missouri for a few years, where they became acquainted with the Whitby family. Granddad Bonnichsen eventually married Edith Whitby of this family. Just after the turn of the twentieth century, Edith and her aunts and brothers traveled from Missouri to southern Idaho to homestead land being offered in the new irrigation tract being formed by the construction of dams on the Snake River and of canals to distribute the water. Grandmother Edith homesteaded a 160-acre farm in the Deep Creek area, a few miles west of the town of Filer, then returned to Missouri. Soon she and grandfather returned to southern Idaho and proceeded to reclaim the farm land from the desert and began to farm it. It would have been a hard pioneering life in those times, without modern machinery such as tractors, but they persisted and eventually prospered. About the same time Rob's mother's parents, Charlie and Minerva (Patsy) Williams, had also moved to the same irrigation tract from Nebraska, where they took ownership of a farm near Filer, about a mile from where Rob grew up. They had four children: Rob’s mother, Helen, was the youngest of the family. Rob's parents met each other in the middle of the Great Depression. They were married in the fall of 1936, a little after his father had graduated from the University of California with an Electrical Engineering degree, and his mother had finished high school in Filer. A consequence of the Depression was the lack of available employment for many people, including those with outstanding credentials such as Rob’s dad, Everett, with his new EE degree. This dilemma was solved by the help of Rob’s Granddad Bonnichsen, who helped Rob’s parents obtain what became the family farm near Filer. With this, the future course of Rob’s early childhood was set—he would be raised on a farm in southern Idaho, which was an area surrounded by many thousands of square miles of uninhabited desert and in which farm America had lived for only a few decades. There was not much of local history amongst the people of that area in those times, as they were only the first and second generations of the history makers. The setting in which Rob was born was one in which everyone was in a pioneer of sorts and there was a huge surrounding desert and mountain region offering great opportunities for exploring the natural environment. Thus, he grew up on the edge of the Western frontier.

In Rob’s first few years, during the Second World War, things were quiet on the farm, since people not directly involved in the war effort stayed close to home due to the severe rationing of
gasoline. This was when his first memories were formed, such as the presence of German POWs on the farm in the fall of 1944 to help with the harvest of sugar beets and the huge V-J Day blowout celebration party by the entire community when the end of the war finally came in August, 1945. That party, among other things, involved Bob's parents tying an old tin pail, bathtub behind the family car and driving for miles with sparks flying on the country gravel roads, along with the neighbors in their cars doing similarly incongruous things and honking their horns all the way, to eventually end up at a party lasting well past dawn at one of the neighbors' places. Undoubtedly, this was the first time Bob ever saw adults behave in such an interesting fashion instead of just working on the farm all the time, it certainly planted a seed in his mind that there was more to life than just the farm work his parents and the other adults around him were involved in. Bob grew up in an extended family that included not only his brothers Bill and Joe and sister Janet, but also his cousins, Dick, Sam, Cecilia, and Mary Alice Williams. We were close and got together often, and the older boys had a tendency to be quite boisterous. We sometimes had great cloud fights—just for fun, mind you. It usually was the two oldest boys, Bill and Dick, against the younger Bob and Sam. This probably was where Bob learned to be competitive and persistent in the face of adversity—standing up to the onslaughts of the older boys. Looking back, I think he learned how to thrive on adversity in those years.

After the war it soon became possible for the Rundhousen family to travel more. One of the family activities during that time was to go exploring the desert areas out west from the farming region. Bob's Dad bought an army surplus jeep when these marvelous machines became available, and off we went on the outback desert roads to see what was out there, and there were lots of wonderful things. One of the first things Bob discovered that he really loved was fishing in the streams, and he always caught his limit of fine trout when we went on such expeditions. On one of these trips Bob spotted an arrowhead and picked it up. That was it—the hand of fate had intervened Bob knew then that there what he was mainly interested in, and it didn't take long until looking for arrowheads and other artifacts became the focus of his attention. Normal kids would have stuck with the fishing, but Bob had already mastered that.
eventually became very proficient. Many years later I and some of his nieces and nephews watched him make a fine arrowhead from a chunk of obsidian in less than 10 minutes. We were amazed. At one time in the 1970s he even obtained a contract with one of the Eastern U.S. Indian tribes to teach them how to make arrowheads. They had forgotten the skill and needed to find a way to make箭矢 to sell to others.

In the summer of 1957 while Rob was 16 the opportunity came up for him to join a four-week expedition of archaeologists, led by Professor Clarence Fichter of the University of Idaho, in order to excavate some prehistoric archeological sites located on the Missouri River near Mobridge, South Dakota.

That area was soon to be flooded by rising waters impounded behind the Oahe Dam, which was under construction. During this expedition Rob got his first real taste of systematic field archaeology and learned how to excavate for artifacts in a scientific fashion. He began to develop a new knowledge. In addition, he came home with a lot of new artifacts of his own and new friends in the world of archaeology. By that time the discipline was vast. His primary profession in the old high school annals read that he would become a famous archaeologist. When Rob finished high school he attended Idaho State College (now known as University of Pocatello) to study anthropology and archaeology. He believes he wrote his first published paper dealing with archeology while in school there. After this, it is history. Rob attended the University of Alberta in Edmonton for his M.A., did very interesting work on early man (20,000-30,000 years ago) in North America in northern Alaska and the Yukon, did post-doctoral work on artifacts from that region at the National Museum in Ottawa, Canada, and taught at the University of Maine in Oronon. While in Orono, in about 1980 and 1981, he founded the Center for the Study of the First Americans. He moved to Corvallis, Oregon, with the Center in the early 1990s, and moved again in 2002 to Texas A&M University with the Center. By the time he died, unexpectedly and tragically, at the end of 2004 he certainly had become a famous archaeologist, just as his high school prophecy predicted. In this brother’s opinion, he led a full life that was well lived, and he contributed mightily to the science of archeology while living it. But we’ll all miss him terribly and forever remember him fondly.

—Bill Gunther

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From the building at UNM

It was my pleasure and privilege to be Rob Kiefer's friend and his personal attorney for many matters. Over the years, we collaborated on many archeological, public policy and research projects. All of these were an education in one way or another. None of them, however, was more an education (both for Rob and myself) or better illustrates Rob's determination, integrity and commitment to science than the Beautrewick Man controversy like the other plaintiffs in the lawsuit, Rob was a reduction warrior. He did not resist the idea of litigation, and did everything he could to avoid it. It was the government, not Rob and the other plaintiffs, who refused to compromise and who turned a chance discovery into a front-page controversy.

Rob's commitment to the lawsuit, once it was filed, never wavered. As the first plaintiff named in the case, Rob came under enormous pressure from the institution he worked at, from members of the archeological community, and even from some of his close colleagues to withdraw from the lawsuit. The threats, work reg Prince and personal attacks he experienced only increased Rob's determination to stay the course he had undertaken. More than once, he commented to me that the more pressure that was brought to bear, the more convinced he became of the importance of standing up for science and for rational investigation of the question.

The Beautrewick Man lawsuit was not brought to extirpate or challenge Native American traditions and religious beliefs. Rob would not have countenanced or participated in, such an effect. He had great respect and sympathy for Native American cultures and beliefs. His professional career was spent in trying to learn more about how and when their ancestors first came to the Americas and how they adapted to new environments once they got here. The sole purpose of the lawsuit was to compel the government to follow the law as written by Congress. Native American religious beliefs became an issue in the case only because of the government's deliberative decisions to make treaties that claimed"treaties are traditional the priority, if not the basis, for giving them the skeleton.

Rob's role in the litigation was to help us draft the necessary legal instruments to establish points in dispute, to review and comment on drafts of documents, to find needed references, and to provide critical insights on ideas. He and I spent hundreds of hours discussing strategy and tactics. He was an exponent of moderation, patience and adherence to the highest standards of scientific practice. He never let untested or erroneous assumptions
go unchallenged, I shudder to think of what might have happened without the contributions that Rob made.

It is fortunate that Rob lived long enough to see his efforts vindicated by rewarding victories at the trial court and appellate levels. He had the satisfaction of knowing that he was not wrong in taking the stand that he did. Nonetheless, it seems more than a little unfair that he will not be here to participate in a study of the skeleton. No one gave more than he did, and he deserves the chance to see what he could have learned from Wenner-Gren's lab.

Rob was a special person, a great scientist... and we will miss him very much.

—Alan L. Schneider

H:\I'M NOT FEELING IMPORTANT

He was a man of many projects
He was experienced in time for his students
He made time for the everyday person that walked into the office.
He worked with other faculty in streamlining the workings of the Department.
We are still wailing at all the things he had started.

—Laurie Lind
CSFA Office Manager

I'VE HEARD an old Irish story about dying. The death believed that no one should be allowed to die until one had "sung his song." That "song" was what an individual was born to accomplish, whether it was to make the most beautiful carving in marble or perhaps to lead people to believe in a vision one knew to be true.

Rob Bonnichsen, from the time he became an archaeologist, worked relentlessly, in the words of the truth, "to sing his song." Rob was convinced that prehistoric archaeology in the Western Hemisphere couldn't progress until the established thinking that was blocking such research could be changed. North American archaeologists held to the theory that the earliest humans in the Americas migrated across frozen Beringia during the last ice age and spread throughout the Western Hemisphere. Textbooks stated that the people who crafted the spectacular stone tools called "Clovis" were the "first Americans" and set foot in the Western Hemisphere no earlier than 13,000 years ago. For more than 40 years, the "Clovis first" archaelogists refused to believe that humans were in the Western Hemisphere any earlier. Research funds were seldom available to anyone who thought differently.

Rob, a young academic at the University of Maine, dared to disagree. He began to speak out about "the big picture," trying to encourage discussion in North America about some of the discoveries of very old sites in South America. He thought about possible migration routes and methods deemed to be "unacceptably early" by most North American archaeologists. His position on the peopling of the Americas caught the attention of the Binghams Trust Board in New York City, who also were interested in this growing archaeological debate. In 1981, they chose Rob as the recipient of a $500,000 grant to establish an archaeological center to encourage Paleoamerican research that would involve not only interdisciplinary academic but also would establish a parallel program to reach out to the general public as well.

With characteristic zeal, Rob led the new Center into a multitude of new projects. The Mammoth Trust was started to get current information about the earliest American research out to the general public as well as to academics. Current Research in the Paleoamerican, an academic journal, was launched. In addition to teaching and leading research projects, Rob published a number of scholarly books about what he now called "The Paleoamericans."

Spurning a web of fascinating evidence, he recruited those of us who became advisory board members from all walks of life to enthusiastically join him in this epic journey into our American past. Rob also traveled to sites in North and South America, to China, Japan, and Russia, meeting with archeologists who had evidence of earlier dates. During the summer, he launched archeology dig sites using students and other volunteers (including most Board members) in Maine and Montana. Battling heads with some of the more traditionally minded archeologists, he also met with amateur archeologists and hobbyists, some who were dedicated stone tool and artifact collectors.

Under Rob's direction, the unprecedented World Summit Conference focusing on the peopling of the Americas...
was held in Maine in 1983. Most of the prominent American paleoanthropologists attended, as well as those from South America, Europe, China, Korea, Japan, and Russia. Dozens of private citizens were encouraged to bring their some soil and artifact collections to be displayed and to discuss them with the archaeologists who were present.

Ten years later, in Santa Fe, New Mexico in 1979, after years of working seven days a week from early morning to late at night, Bob's "cure" finally became a chorus. It was here that his Center for the Study of the First Americans sponsored a conference called "Chavez and Beyond." The conference was attended by 12,500 people, including the media, and displayed, among other exhibits, pottery and other clay objects. The roosters of accepting nothing other than Chavez's evidence were displayed and admired, but the roadblock of accepting nothing other than Chavez's report was an obstacle that had been demolished.

Successful in generating debates about the timetables of the peopling of the Americas, Bob's report was a lightning rod in the midst of the American archaeology establishment and others who disagreed with him. He was stubborn, he was not cowed. He was fearless about voicing his opinions and was often quoted in the New York Times and other national and international media. He was especially prominent in his lead position among the eight scientists who successfully battled the U.S. government in the courts for years over the right of scientists to study the bones of the now famous Kennewick Man found in the state of Washington and carbon dated to be approximately 9000 years old. The ancient Kennewick Man, a skeleton with a distinctive bone structure distinctive to modern Native Americans, was to be buried over by several Northwest Native American tribes for immediate burial without any examination by scientists. The courts finally ruled in favor of the scientists' right to study the skeleton in 2004.

It was a huge victory for Bob, his colleagues, and science.

After some tumultuous times for his professional life and the life of the Center, two years ago Rob and the Center found a new and hospitable home at Texas A&M University in a thriving environment with an anthropology department supporting the mandate of the Center.

Rob's legacy will live on. Yes, he accomplished what he set out to do. As the angels would say, "Go in peace, Rob Bonnichsen. You have sung your song."

—Ann Stanaway
CSUA Advisory Board Chair (1991-1999)
much more eloquently and knowingly of Rob's extraordinary ability to envision and articulate new directions in a field sometimes stuck in the past (in more ways than one). He repeatedly devised means of bringing together factions among the internationally known archaeological elite, and at the same time, he never lost sight of the scientist's obligation to reach out and excite and inform and motivate the general public. His enthusiasm for the search for the origins of American prehistory never flagged. His energy was contagious, attracting to him some of the most unlikely of people to help in the search. If you remember, for example, a very bright management consultant he met on a plane and sweet-talked into dedicating untold free hours in the Center's cause, and the guy wasn't even interested in archaeology...! Rob was a unique character with a singular style, a wonderful sense of humor, punctuated by a huge, roving laugh. I grieve in the silence. —John Harris

Former Chair, CSFA Advisory Board

Rob Bonnichsen was a beautiful and compassionate man of vision and insight, a constant flow of truth, kindness and understanding: a strong but quiet proof of extraordinary integrity, a lover of world art, the human experience, through all the ages. An instructor and mentor that respected with a profound affection, tolerance, balance and knowledge. He was inquisitively "twisting" the known for the unknown in a science that is very conservatively defining itself and redefining its role within its own definition. This subjective science serves for objectivity it will not allow for the arbitrary.

Rob was an incredible and relentless pioneer. He could open your eyes, your ears, your mind, to the possibilities held within the turning in the mind of a single stone.

The father of anthropology, Fowler Boring, first studied the language of my tribe, the Wintu/Casheret. Uhooky on the north bank of the Columbia River Gorge, approximately 186 years ago. Anthropology has had some apologies to make over some. Rob's work made many of those apologies. His work spanned almost half the life of this new science.

He was pure flowing wove, a great friend. —Scott Watkins

Former graduate student, OSU

In many ways Rob was born in the wrong century. Although that could probably be said for many archaeologists, it was particularly true for Rob, who from his high school years all the way to the present, did not really fit the mold of a scholar of this generation. In high school, he learned the ways of early Native Americans, explored their habitats, and practiced their trades, including the removal of facial hair with tweezers, because "Indians did not have beards." Fortunately, he got over that one.

As he moved through his professional career, his view of the "big picture" did not always gel with those who were in position of political clout, as many of us know from personal experience. But he always took the high road and moved in the direction that he knew was right, regardless of the consequences. He was not one to subscribe to political pressures that did not conform to his discipline's higher goals and objectives.

I remember in the early years, his favorite thing was to go into the Idaho desert with a shovel and a screen and dig for artifacts.

I am not glib that I had the opportunity to do that with him, since he generated the interest that I have always had in history and archeology.

Rob knew how to be a true friend. How many people maintain close relationships with friends from each stage of their lives? Most of us tend to move on in life. If you were ever one of Rob's friends, you were always his friend and you could come on him to honor that friendship forever.

Rob will be greatly missed. He will be missed by family, by his many friends, by his professional colleagues, and by the entire academic community of his chosen discipline, which has looked to him as one of its recognized leaders. He was a giver and a contributor to all, and we are all very fortunate to have had him with us for the time that we did.

—Bob Eagle

Secretary, CSFA Advisory Board
It was 1989 the day we made Rob's acquaintance, when his generic pickup pulled into the driveway of our humble bome- stead after a 40-mile drive from Beeville. He had introduced himself on the phone after seeing my ad in a journal targeted at Maine writers and publishers (it was the only niche we ever got into the ad). PC and laser printers were rare in those days, and CMYK illustrations was the only entry in the local phone book under "typesetting" and "desktop publishing." Over coffee we talked and took the measure of each other. Rob was dissatisfied with the performance of the UMO campus press. Did we think we could do better? We said, Yes, we did. A few days later he gave us the contract for the press work on Climate: Origins and Adaptations.

Somehow after we had put the book to bed—details about the passage of time are portent today—we got a call from Karen Tamburello, editor of Mammoth Trumpet. Would we be interested in doing the typesetting and paste-up for their quarterly newspaper? (At the time Trumpet was an eight-page tabloid.) Yes, we said. Would. Until then cameramen and layout masters had been assembled by a campus office worker in her spare time; letters were printed by a local weekly newspaper. The newspaper's production manager greeted us with a gown and said he was hoping we knew how to keep columns straight.

Well, we kept Trumpet columns pretty straight until Rob declared himself fume de combat on the political squabbles of the University of Maine system and moved his little shop to Oregon State University. The last time we ever met Rob face to face was the day in 1991 we drove to Oswego to bid him farewell. It turned out to be good-bye, not farewell, because publication of Trumpet never stopped a bit. Rob immediately got his working across the country with his new editor as Cumberland, Maine. Don is our candidate for acclamation. No one but a saint could have made it work long distance in three days before e-mail and CDs. It did work, though.

Somewhere down the road Trumpet became a 20-page newsletter and Wordsmiths cranked out an occasional CMYK book. Then along came the Kennebec Man lawsuit and the toxic effects on Rob's career and his peace of mind that Alvin Schueler, the lead attorney for Rob and his co-plaintiffs, describes in his tribute in this issue. Once more Rob moved his Center, this time to the congenial atmosphere of College Station. We continued to pop out Trumpets irregularly four times a year, except now we invariably contained articles about the latest developments in the wrangling between the U.S. government and the tribal coalition on one side, Rob and his co-plaintiffs on the other, and other scientists on either side of the fence—straddling it.

Saints get tired, too, just like the rest of us. When Don decided after nine years he had had just enough of pyramidal publication deadlines, I (Jim) asked Rob if he would consider me for the post. Rob gave me the job and about as much freedom as any editor could ask for. After—good grief—four years in this job, I can only describe Rob's management style as laissez-faire. He would feed me leads for stories and score as a Jana- ree review board for articles submitted by a writer. Only oc- casionally would he nudge his nose at a bit of suspect science and send me or a staff writer to an alcohol with heroes who support me far more faithfully than I deserve) returning back to the principal for clarification. Otherwise, silence, Rob, always up to his ears in projects and living with the Kennebec Man turmoil constantly graving at his initials, didn't find time to help finally, I can't fault him, though, because neither did he ever chide us about the zealotries that inevitably find their way onto the printed pages of Trumpet—we always have to be on guard for grammatical clutters, misspellings, etc. Type. If you worked for Rob, you learned to run on word and simply do your best not to embarrass him and his Center. I'll bet I can count on the fingers of both hands the number of phone conversations we had with Rob after he left Oswego. The last one was early last December. He was estranged (for Rob) and couldn't wait to tell us about the plans he and the CSFA Advisory Board had for the future. He had prevailed in the Kennebec Man case after a grueling seven-year legal battle. He had just turned 62, he said, and didn't plan to retire as far ahead as he could see. After 25 years, he felt his Center was just starting to enjoy the success he always hoped for.

There was time when you wish rewards for hard work were distributed just a bit more fairly in this madly imperfect world.

—Bus and Jim Chantler, CSC Wordsmiths
Jim Chantler, editor, Mammoth Trumpet

P.S.

Greetings to the memory of Rob Bomchill, legendary archeolo- gist and native root of Pillar.

Sadly, Bomchill passed away this Christmas at age 64, after a long and often-times controversial career in archeology and...
MAMMOTH TRUMPET

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POLITICS, BUT FOR A BOY WHO GREW UP STUDYING THE EARTH'S GEOLOGICAL WONDERS IN THE SOUTHERN IDAHO DESERT, HE LEFT A SIGNIFICANT IMPRESSION ON THE SCIENCE.

Rommel's biggest impact came when he tried to explain the U.S. government to extend study of the so-called "Kunnuck-Man," whose remains were discovered in Washington and were believed to go back 2,300 years. That wasn't a popular stand among the politically correct ranks of academia. But Rommel's interest in debate and scientific research on the ground—not in an ivory tower, his unconventional style were refreshing and enlightening, and he will be hard to replace.

"At least I like the idea of the buffalo and the wooly mammoth," Rommel said. "I think the buffalo is the most interesting animal in the world."


"IT WAS A GREAT OPPORTUNITY TO LEARN ABOUT THE SCIENCE," ROB SAID. "I LEARNED A LOT FROM DR. DON THOMAS, ONE OF THE PIONEERS IN THE FIELD OF EARTH HISTORY."
give talks and show slides, but to bring their artifacts for display in secure cases. Then he allotted time in the schedule for visits to be at the displays and talk with participants. There was a great response, and even when artifacts couldn't be taken out of their country, scientists tried to bring replicas to show. Many of our scientists learned that their counterparts from other traditions (countries) didn't look at the peopling of the Americas in quite the same way as they did. Seeing differences opened minds to new interpretations. Science is indeed a voyage of discovery. Bob realized that and planned conferences that gave opportunities for people to listen and discuss openly, which helped advance knowledge and understanding. That is one of the reasons I will always remember about him.

In addition to the publicity outreach of the Center, Bob had his own research projects to do. At Mammoth Medicine, Montana, an area picked for its location directly south of the ice-free corridor, his love of archaeology led him to pursue the project. This Earthwatch and was one of its best. Some Earthwatchers showed their enjoyment by returning year after year. His enthusiasm about archaeology and early man in the Americas came out in the lectures he gave and the field trips. He was receptive to new ways to do research. Many Beatty and I developed a quick and easy way to test an area for a site by using the power pole digger that rancher George Cremer, who befriended the project in many ways, had loaned to the dig. The "digger" made it possible to do a quick, deep survey report in a neighborhood valley for AIM. That report saved the site from being torn up and built over by a logging road.

Rob made use of the digger in other venues, too. We had an unexpected snowstorm and freeze that threatened to prevent our Earthwatch crew from getting out in time to make their flight home. The usual road was impassable. But there was another way — over the steep hill to the next valley, across a creek and down the valley. After scouting, it was the general consensus that this route had the best chance for making it. But there was luggage to get out as well. Rob loaded up the digger with the entire luggage and started across back to see if the digger could make it. When it did, he hiked back, loaded people in the van, and took them across. All the Earthwatchers we had in camp followed in case they were needed. People who didn't have bikes or make it at camp until the snow stopped, walked, and the roads dried up the next afternoon. Some of those people even came back the next year.

These are just a few of my memories of Rob. Throughout them all, I remember Rob's curiosity, his love of palaeoanthropology, especially the peopling of the Americas, his ability to solve problems, and his wit. I also remember his never-ending willingness to spread knowledge to the public through the work of the Center. When the Center moved to Texas A&M, both Mert and I had that it had found a very wonderful place to appreciate home. While Rob will very much be missed, we know that the Center for the Study of the First Americans that he nurtured will continue to develop and grow.

—Janice Taylor
Former Secretary, CSFA Advisory Board
The Craftsman, Climb WITH DELIBERATE CARE. MADE HIS way up the ever-steepening side of the peculiar mountain. Earlier, seen from the little hill, it had looked strange, with many long ridges like fingers that ran from all its sides. Thoughtfully rubbing his chin with his hand, he had resolved to climb it. Why he thought it important he could not have said, but it seemed to him to be so. Now the climb was costing him much effort, every step trying to steal his breath. Drawing air in ragged gasps, he determinedly worked his way upward until he reached what was more or less the top. Strewed all about were boulders, large rocks, and many, many smaller pebbles and cobbles. All of them h ad a certain grayish gr rainy air, and the craftsman smiled, for this was what he had hoped he would find.

From his elle-shin pouch he took out a smooth river-worn stone, his hammerstone. Seating into a comfortable sitting position, he began to study a cobbles the site of his head. He turned it this way and that, seeking to probe the mysteries of its surface and to imagine the even deeper mysteries of what lay beneath that surface. Finally he found a particular speck on the near-top and struck it a determined yon delicate blow with the hammerstone. He could almost feel the force of his blow flowing through the rock, lifting and replacing the very heart of it. All this happened in an instant, for with his blow still ringing in his ears he saw a long slanted flake fall away, a flake steeply有关black, black—so shiny and slick that it reflected light like a dark pool and cast the man’s eye back at him in a way he had not dreamed to hope for. This was it, the black tool he had sought, the magic tool that made the flake and sharpened points and tools.

He studied the inner surface of the cobbles revealed by the removal of the flake. With a rising sense of awe, every bit as evident as that of the hunter-dweller in his cave, he quickly worked the cobbles a succession of careful blows that released flake after perfect flake. He thanked his gods for giving him the presence of mind to listen to his intonation and follow him to this place, this wondrous magical place. At last the hunter was sitting in the shade of a small grove of aspen, staring at the object in his lap. Hearing a sound, he looked up and acknowledged with a brief word the return of his companion. The craftsman removed the hastily constructed pack from his back, and carefully set it down beside him. He was smiling. "You were right,” said the craftsman. “This is a good place.”

"Yes,” replied the craftsman, still smiling. "I did.”

Opening the pack, he showed the hunter the black shining flakes he had struck from the cobbles and from others like it. He had kept only those that he felt in his bones were right, were perfect, that would make the finest tools and weapons. He carefully spread these out on the hide in which he had carried them down from the sacred mountain where he had spent many hours this day. He told the hunter, "Choose."
The hunter hardly dared before his eyes. There before him were the stak' black rocks, the stones from which were made weapons like the one he had lost in his bent and that now lay in pieces in his lap. Hope burned fiercely in his eyes like a lantern. Slowly, deliberately, he studied the shapes and patterns of the flakes spread before him. Finally, without hesitation, he picked up a flake. "This one," he handed it to the craftsman. "It spoke to me.

The craftsman saw within the dimming black light of stone the speck point that the hunter desired. He nodded, and said. "I shall try."

Both men saw the need for favorable in- vention of the gods in this endeavor. The craftsman moved off from their company to the place that seemed best to him for communing with the spirits that dwelt in the

The conclusion of a story by Allan Kirkland

His companion moved his hand so that the craftsman could see what was in his lap. There lay the point, the perfect unfailing spear-point, in three broken shards. His mouth worked, his features struggled, every sense aiming to find a way of expressing the deep sense of despair that was in his heart. "It is broken," he croaked finally, "It is gone, and with it my magic, my ability to hunt..." His voice choked off on a sob.

"Now I understand why there was no meat brimming, no fire made," said the craftsman, "I am no hunter such as you. I else I would have brought meat for us to eat.”

The hunter scowled at him, "You dare to mock me, I, who could hunt better than you since we were boys! Can you not see the gods are angry with me, else my spear would not have broken?"

The craftsman smiled. "Maybe there is something that can be done."

"True! You think so?"
place that had made the wonderful stone to be. He chose a spot with shade and running water, a place near the creek where they had first entered this wonderful place. He bathed in the water. When the sun had dried him, he spread his hide on the ground near the water and sat himself upon it.

On the hide he placed the flake, his hammerstone, and a selection of elk antlers that he had collected on his way back from the sacred mountain of the black men. After applying each stone piece, he chose three that seemed good to him. With measured blows he struck each of his base, making from the main stem of the antler. Then he scraped the broken edges of each base so that it was no longer jagged but not exactly smooth. There was no need for a smooth finish, since the work itself would eventually smooth them.

The hunter, meanwhile, was not idle. Since he knew that he could not help in the process and must stay away from the now sacred space where the craftsman was working, he basked himself learning the lay of the land and the ways of the numerous groups of elk that were his new place. Exploring for the sake of seeing new country was a now new thing to him. It was a task he enjoyed. Freed of the responsibility of feeding his fox-off family and their relations, he was able to do what he pleased when he pleased to do it. Knowing the craftsman would not need until he had completed the task at hand, the hunter had only to content himself with his own appetite. With each passing hour he discovered new and thrilling things about this wonderful place. He delighted in the sheer joy of seeing what he had never seen before, never stopping to wonder or care that he was the first. It was now to lose, and that was all that mattered. Since it would be three periods of light before the craftsman would be finished (or so he hoped), there was plenty of time to learn the new country.

Wandering into the encircling mountains, he found they were like a group of huddled flake, lying down in a magic circle to protect and guard the hole and verdant valley below them. He marveled for many hours at the sight, and in his mind he called the place the Great Valley. When he looked at the humped shapes of the mountains wrapped around it, shrouded as they were in their cloaks of mist in the early morning, he thought of them as the Elk Mountains Shrouded-in-Mist. He saw the little domed hill in the valley, all alone, which seemed to him an old man who watched over the plain, and so he called it Old One-Who-Watches. So he passed the time amusing things, as he waited for his companion to accomplish his mysterious task.

The crowding in the craftsman’s belly was forgotten as he worked to shape the flake according to the vision of the spear-point in his mind. He had seen it, had felt the way it should be, after his companion had chosen it. Truly, he did not for a moment doubt that he had spoken to him, for it was exactly exactly as he wished it to be, step by step he carefully stuck flake from the piece of black stone. With each falling flake the piece became more like the vision he had seen of it, the form that he visualized it to take. Having fashioned it into a long, nearly the ribbon of stone, he now began the arduous task of forming the point and edges. Using the arder tools to exert pressure on the stone, he removed flake after delicate flake of material, gradually fashioning it into the outline of a slim and deadly blade. The end was a wicked point, tapering and deadly, and the opposite end was squared off for joining it to the shaft of the spear.

Two days later, with delicate pressure and sure hand, the craftsman removed the final thin piece from the edge, now sharp as anything imaginable. There remained but one task, to remove the channeled flake so that the point would mate with the shaft and become a single relentless weapon. Carefully he peeled the piece in hand. Fixing his eye on the precise spot, he struck a perfectly delivered sharp blow. The flake ribboned off the middle of the piece and snapped off about a third of the way down its length. He repeated the process on the other side, hardly daring to breathe lest he make a mistake. He did not. The other side became almost the mirror image of the first.

The point was done. All that remained was to mount it to a shaft he would select, and then he would present the finished weapon to the hunter.

The sun was slanting to the west, casting a peculiar pattern of patchwork light on the sides of the mountains, when the craftsman returned to the campfire. He tossed a bit, almost staggering, for only now did he realize that he had not eaten for three days. Yet his mind was clear, and his step, if a bit unsteady, was springy, alert.

The hunter looked up from fish that were boiling in the coals and said, “I know you would come today. See, there is fresh fish for us to eat.”

“Soon you will make meat,” said the craft- man, and he handed him the new spear.

The hunter’s eyes shone as he took the spear from the craftsman. Each by each he examined it, bounding for the slightest flaw, the tiniest warp in the shaft that could make it miss his man when hurled, that he could find none. Tears sprang to his eyes, and he said to his companion, “Never before have I seen the like of it. It is beautiful. You made this for me, Why?”

“Because I wanted to,” replied the craftsman. “Even as you hunt and bring to the fire such meat, I make the weapons so that you can.”
I shall return, said the hunter.
It shall be here, said the crafstemen, seeing this delightful fish.

"Not," said the hunter, "do not eat the fish. I shall bring you far better meat than this to eat this period of darkness by this fire. With this space, there is no elk that can withstand my skill, and if the gods are kind enough to reserve my power to me, then we shall see full and long this darkness.

The bison, his eyes lowered in deference to his companion possessed of waggil powers, replied. "All this, and more. It is truly a weapon that ours to the great ancestors would have been proud to own. But surely it is deadly enough to have brought down the great Longhorn on the steady Long-Faiver Car. I see in your deer.

"You are pleased," said the crafstemen. "That is good.

The meat steamed and smelled upon the bow of the fires. Finally the meat was removed to the thick steaks and prepared their hunger with the rich flavor.

"With such a powers," the crafstemen remarked, "a man might never be hungry again.

I pledge that you and yours shall never know hunger again," cried the hunter.

"And I pledge you shall never lack for space points again," said the crafstemen replied.

Thus was born in this new place of wonder and beauty a relationship the became a deep and lasting friendship between the two men. Indeed between all its followers, for many years to come.

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About the photographer: D. Reiko McDemott, landscape architect and environmental planner, has been deeply immersed in the field of landscape architecture for the past five years. The residential landscape design company he founded encouraged clients to pursue natural and ecological design principles and showed them ways to retain the original cultural and historic landscape of a city and achieve a sustainable natural balance.

As a professional landscape architect at the Valley Caldera National Preserve in New Mexico, he works in managing visual ecology, conceptual house planning, and interpretive thematic house planning.

After earning a bachelor’s degree in Landscape Architecture from Utah State University in 2003, he became engaged in landscape photography. With no prior experience or training, over the next four years he developed a love, style, and passion for showing extraordinary landscapes. "Any space, any moment, I get," says McDemott. "I either have a camera to my hand showing a landscape or am on the road making that next amazing place to see the preservation and passion to. Through my training and background as a landscape architect and the moments of still contemplation while photographing inspiring landscapes, the sensibilities of the past and present begin to appear and the spirit of the place starts to reveal itself. It’s those like these when I am writing and to recognize the abusive relationships between architecture and landscape architecture."
Besides studying Clovis expedient tools, doctoral candidate Char Penny's assigned areas of investigation are analyzingdebitage to determine spatial patterns—identifying areas that may have been knapping locations, for example, or possible hearths. What's more, she is analyzingdebitage from all cultural layers at Gault, from Clovis through the Archaic period. Her work is pivotal to the success of the project, it's probably also the most demanding.

When you sort through 8,000 flakes, as Penny is doing, you find many objects that may be expedient tools, flake tools, or edge-modified tools mixed withdebitage. Understanding expedient tools—pieces of chert made to serve as throwaway utensils—is essential to understanding the lifestyle of Clovis occupants at Gault. "There are the plastic knives and forks of the prehistoric world," she emphasizes. She has collected about 300 potential edge-modified tools from the Clovis layers, and more than 100 from the late-Paleoindian and Archaic contexts. For her study, she excludes all candidate objects more than twelve as long as wide.

Scott Mitchakal deals with true blades and biface tools. Penny looks at everything else. "Some are small," she explains. "Some are quite large." How does she know which pieces of chert are tools? "Right now it's a stage in my education," she admits. "I'll be honest with you. I don't know.

The problem, of course, is determining whether a piece of modified chert is an artifact, altered by a human hand, or a product, chipped or broken by an animal or a natural event. "That's why," she says, "we've been deviating a series of experiments to try to replicate post-depositional processes. Figuring that a colluvial layer at the site, sloughwash from the banks of Buttermilk Creek, must have done a lot of damage to artifacts, Penny asked her husband (a naval archaeologist who specializes in ship reconstruction) to build her a big rock tumbler so that she could simulate the action of pieces rolling down a slope onto the Clovis layer. She tried variations, first tumbling flakers, dirt, sand, and a few pebbles; then she added water and tumbled again for an equal length of time. Adding water, she found, increased the damage to flakers. Re-sourcefulness is a quality that appears again and again in these team members.

Every conceivable agent of change gets attention. For instance, when doctoral candidate Bill Dickens was making bifaces and blades for use in experiments by the team (Penny calls him "a fantastic knapper"), they found that damage resulted from the knapping process itself, when a piece knocked off onto a pile of debris. Penny emphasizes the importance of documenting the location of objects before and after experiments. Using the sophisticated camera is the TAMU lab, which takes pictures as though viewed through a 10-power scope, they photograph every piece of material used in experiments. Edges of objects are especially important—Penny's flakes, Mitchakal's blades. Smallwood's bifaces.

Before entering the documentary program at TAMU, Penny worked for six years in CRM for a professional archeology company in New Orleans. She serves as a teaching assistant at the Gault lab on campus, each semester walking five to ten students through the fundamentals of biblical analysis, how to identify different types ofdebitage and different kinds of flakes, how to determine whether material is burnt or unburnt, learning how to weigh, count, and sort. Her students get credit, she gets help with aggregate analysis of Gaultdebitage. "There's a lot of data to run," she says in a superb example of understatement. It's a necessary step, though, before she can undertake a study of spatial patterning in collaboration with Waters.

The research for the Gault Clovis Site: Excavations at the Lindsey Pit is overshadowed by the commitment made by TAMU to return all artifacts to the Lindsey brothers.

Until recently, we would have lost the loss of all the artifacts for further scientific study. Lucky for the gault team, however, C. Wayne Smith, director of the Archaeological Preservation Research Laboratory at TAMU, has made his humorous 3-D imaging and replication system available for recording the precise shape and dimensions of artifacts (MT 11-22, "Freezing Moments in Time: C. Wayne Smith and the Art of Archaeological Conservation"). Penny is understandably excited about Dr. Smith's "very sexy" machine. Set an artifact on the turntable, and the imaging system rotates it 360 degrees while scanning it continuously. Digital inform-

Char Penny excavates Clovis layers at the Gault site, 2000.
Char Penny says of this artifact, "It is one of the few flake tools I have that is so obviously a flake tool! On this piece, edge modification is easy to see with the naked eye and its wear is clearly visible under the microscope (in the form of polish, rounding and linear indicators). Use is concentrated near the edge, there's no damage anywhere else on this tool that may confuse the issue, and I have no doubt that the damage you can see on this tool was the result of cultural processes and not post-depositional or lithosomatic processes."

Ralph, safely seated, can later be retrieved and manipulated — view the object from any angle, double-check any measurements, even rest broken pieces on the computer monitor. What's more, it's even possible to make as exact plaster casts of the object. For Penny, the system adds to the excitement of her work. "If you find something you like to do and it's fun," she says, "then you definitely have the perfect job."

**Humble endscrappers hold surprises**

We next visit Jim Widener, who's been using the UCLA computer to analyze the possibility of how early Neanderthals might have used these tools. At the time (March 2000) he was compiling his work on his master's at TAMU and working part-time as a microscope in the lab. Since then he has been granted the degree (the still works in the lab). His contribution to the **Gault Cliffs Site** is adapted from his thesis.

His research on endscrapers found in the Gault Cliffs layers took an unexpected turn when he discovered that they weren't used on hide, at least not exclusively. "I can't say they weren't used on hide," he explains, "but the last use they had, the use we trace, was not hide care. It was something harder." Many hours spent working hides with experimental scrapers have taught him to recognize polish characteristics of hide use wear. On Gault scrapers he found traces of the same kind of polish, but most of it was caused by rough damage to the edges, unlike wear you'd expect from hide. He concludes that the scrapers may have been used to work hides early in their life. Periodically they would have been removed from the hide and resharpened; after repeated resharpenings they developed twin spaces that are characteristic of Palaeoamerican endscrapers. He believes they received their last use wear after being unhanded for the last time before being discarded. It's noteworthy that every endscraper he examined in the Gault collection was worn out because those "ancient little horns" would have made the form endscraper useful as a scraping tool. Sure enough, when he examined the spurs under his scope he found abrasion and polish on the tips. Cliffs bison makers, it turns out, were also savvy innovators.

**Gault site gets attention, too**

If you're on a prearcheological career track, as Heidi Luchinger is, then you'll want to get your first taste of the Palaeoamerican Site in Central Texas, because of the research objectives of her thesis. It's also a fine example of TAMU Anthropology Department's policy of making students' research available to the scientific community.

Luchinger, a doctoral student, pursued microstratigraphic research at Gault to answer specific questions posed by Collins, Winters, and Stafford. Directed research is the best way to proceed with micromorphology, she says, because if you don't have really pointed directives or specific research questions you can get overwhelmed because there's so much you can see under the microscope. Four questions spurred her investigations.

1. What was the effect of groundwater on the Gault site? Buttermilk Creek was a blessing for early Americans who camped beside it, but the fluctuating water table that results from it complicates the archaeologist's job. Iron staining in the soil indicates that some soil alterations occurred; the important question is, How much was the site altered by water from the creek and all sources?

Very little organic matter has been found in the Gault layers, probably because of repeated episodes of wetting and drying. That could account for the absence of pollen and phytoliths. Because of the similar petrology of chert, the Gault layers have resisted attempts to date them. Winters, who works closely with Luchinger, recalls that "we did find a few
Bill Dickens with replicated blades he and Jim Wiederhold used in bison butchering experiment. Using chert tools like these, they skinned and butcheted these bison.

Broadly speaking, Dickens describes Edwards' chert from Gault as falling into two groups. One form is very high quality with excellent flaking characteristics that made fine tools. The other, perhaps because silica has eroded out, is grainy and doesn't flake well and therefore wasn't used by early toolmakers. Unfortunately, today there is no good chert left at Gault, since hunters over the years have taken it all. What's left is small fragments of debris, few pieces large enough to make tools. After scouring the countryside, inspecting quarries and getting permission from landowners to make exploratory digs, he has found a few deposits of what he considers good-quality chert, though not very much.

In his studies of Clovis bifaces and blades from Gault, Dickens describes Clovis knapping strategies in exquisite detail—enough to satisfy any purist.

Refitted cortical overshot ▼ flakes (partial type), showing initial chert tab width.

Dickens departs from the gospel preached by authorities like Tom Crabtree, "He was a wonderful flintknapper whose ideas have been refined and copied." Dickens readily admits, what makes him uncomfortable is the particular reduction strategy that Crabtree describes, which Dickens finds too rigid. He gives Clovis knappers credit for inventiveness and flexibility in their technology. He contends that there wasn't a fixed sequence, a "cookbook" that prescribed a specific procedure. Instead, he believes knappers worked individual pieces according to the material, their skill, and the mistakes they made.

One reason Dickens takes issue with Crabtree's description of Clovis knapping procedure is because Crabtree worked principly with obsidian, which flakes much more easily than chert. Consequently Crabtree worked extensively with indirect percussion using a punch, which calls for vastly different techniques than direct percussion of chert using a hard or soft hammer. Dickens finds little evidence of indirect percussion on Gault tools except for fluting.

"Clovis knappers had a bag of tricks," says Dickens, "and they pulled out what they wanted when they needed it." Readers of The Gault Clovis Site Interest in Clovis, housing will be fascinated with Dickens' encyclopedic discussion of variations of overshot flakes, including a technique he calls "overface flaking," and other strategies he has identified in the Gault collection of more than 560 blades, 55 bifaces, 4 finished Clovis points, 185 overshot flakes, and more.

A landmark publication No publication date has been set yet for The Gault Clovis Site: Excavations of the Lindsey Pit, which promises to be an all-encompassing description of the Clovis culture as no book yet published. Waters promises that "you'll be able to pick up this book and glean a very comprehensive overview of the site."

And yet, there remains a mystery about these people we call Clovis. They were gatherers as much as they were hunters," says Waters. They were undeniably capable hunters, though not of mammoth alone. Collins has found evidence of large association in Clovis horizons in TAMU excavations. However, there appears, along with bison, deer, elk, and miscellaneous small animals, the truth that is emerging is that, like all primitive peoples who lack farming or herding skills, Clovis people depended on their hunting bounty and probably ate anything that didn't eat them first. And they also made those marvelous fluted points.

Suggested Readings

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