

THE MOKI MESSENGER

NEWSLETTER OF THE SAN JUAN BASIN ARCHAEOLOGICAL SOCIETY

Chapter of Colorado Archaeological Society



NOVEMBER 2008

The next meeting of the San Juan Basin Archaeological Society (SJBAS), our local chapter of the Colorado Archaeological Society, will be on Thursday, November 13th, commencing at 7:00 PM; as usual, this will be held at Fort Lewis College's Center of Southwest Studies, in the Lyceum. There will be a program by archaeologist Brad Bartel concerning "Paleolithic Cave Art"; the talk will be a follow-up to his 2007 lecture that concerned "The Venus Figurine Controversy", and will relate to the famous cave paintings of southern France and northern Spain. This meeting will be held in conjunction with that of the Professional Associates of Fort Lewis College, as a part of the popular Life Long Learning series. As noted in the current Life Long Learning brochure, "Within the last decade our understanding of the function of cave art during the European Upper Paleolithic has changed dramatically. Dr Bartel, President of Fort Lewis College, will review the history of discovery and interpretation while including examples from modern hunter-gatherer societies to derive the most appropriate interpretation for these fascinating sites". This lecture should be of much interest to all of us, and most especially to the rock art connoisseurs of our chapter.

An embarrassing admission: once again, there is a date conflict problem: we have an overlap with that of this meeting and that of the forthcoming Verde Valley excursion that is discussed in the following paragraph. Of course it will be impossible to take advantage of Dr Bartel's talk and also enjoy what should be a delightful and informative outing. And there will be a second unfortunate result of our scheduling mix-up - our annual election of chapter officers for the next year is traditionally held at our November meeting. Perhaps the twenty or more SJBAS members who have signed up for the Verde Valley trip can be provided with absentee ballots?

Verde Valley Field Trip

The San Juan Basin Archaeological Society will visit the Verde Valley and Anderson Mesa in AZ enroute during Nov 12, 13, 14, and 15 of 2008. Both camping and hotel accommodations will be available. We will visit many interesting sites ranging from easy to moderately hard. Those unable to hike the more difficult areas will have other options available. Our primary locations to visit will be Chevlon, Chavez Pass, W. Clear Creek, Sacred Mountain, and Tuzigoot N.M. ruins. We will also visit Fort Verde.

Participants should come prepared for their chosen sleeping accommodations. Most hikes will require sturdy shoes (boots), walking sticks, hat, sun screen, and water. Wear clothes appropriate for cactus country, and means for appropriate needle removal.

Verde Valley Field Trip

Tentative Schedule:

Wednesday the 12: Leave Santa Rita Park at 8:00

Arrive in Winslow at 2:30 and check in or prepare camp.

3:00 PM go to Cheylon Ruin, return to camp.

Thursday: Leave by 8:30

Arrive at Chavez Pass at 10:00 and have a sack lunch plan on leaving at 1:00 PM

Arrive in Clarkdale at 4:00 PM

Friday: leave at 8:30 and arrive at W. Clear Creek at 9:30

11:30 have lunch at Fort Verde and visit until 1:00

Arrive at Scared Mountain at 1:30 and stay until 3:30

Saturday: Pack up and leave by 8:00 with breakfast at restaurant, be at Tuzigoot N.M. at 9:00 AM

Leave for home at 10:30.

Cheylon ruin: has no trail and a 25 foot elevation gain, rated easy

Chavez Pass: has 3 ruins with no trail and up to a 20 ft elevation gain, with many volcanic rocks- moderate difficulty

W. Clear Creek*** ruin: has two sites, the first has a trail with 150 elevation gain rated easy to mod easy, the second hill top has no trail, fallen volcanic rock walls, a steep 30 elevation gain, and cactus rated mod to hard. This is the hardest scheduled hike.

Scared Mountain: a hill top ruin with a 100 ft elevation gain with cactus lining the trail.

Tuzigoot N.M.: Rated easy

Fort Verde: rated easy

Call Richard Robinson 970-259-1943 or email Robinson@Frontier.net for more details.

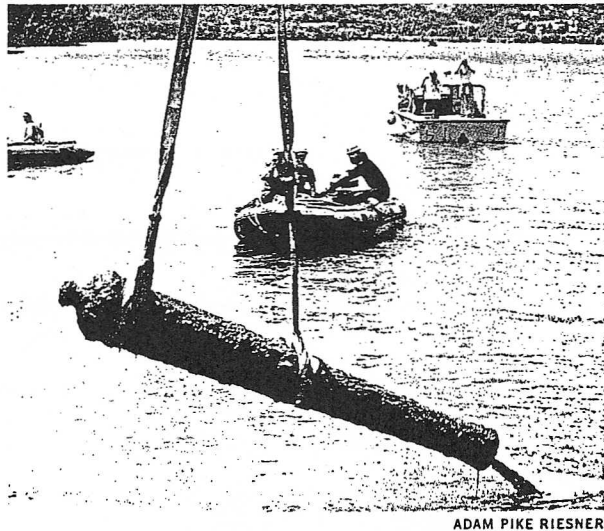
Lake Yields Redcoats' Guns, Shot, and Rum

THE DISCOVERIES are mementos of a turning point in the American Revolution.

British troops, buoyed by their success in seizing a rebel fort at Mount Independence in Vermont and Fort Ticonderoga in New York, confronted the Americans near Saratoga, New York, in September 1777. Routed, the British retreated north and crossed Lake Champlain on a 1,800-foot-long floating bridge built by the rebels, dumping weaponry and provisions into the lake. They

burned the bridge before high-tailing it to Canada.

Divers from Vermont's Lake Champlain Maritime Museum have recovered more than a thousand items discarded in that retreat. Chief among them: this



ADAM PIKE RIESNER

cannon, cast in 1676 for the English Navy and probably sent to the Colonies for use during the French and Indian War.

The divers also located 21 of 22 caissons the Americans had built for a permanent bridge span. The British capture of the two forts had cut short that plan.

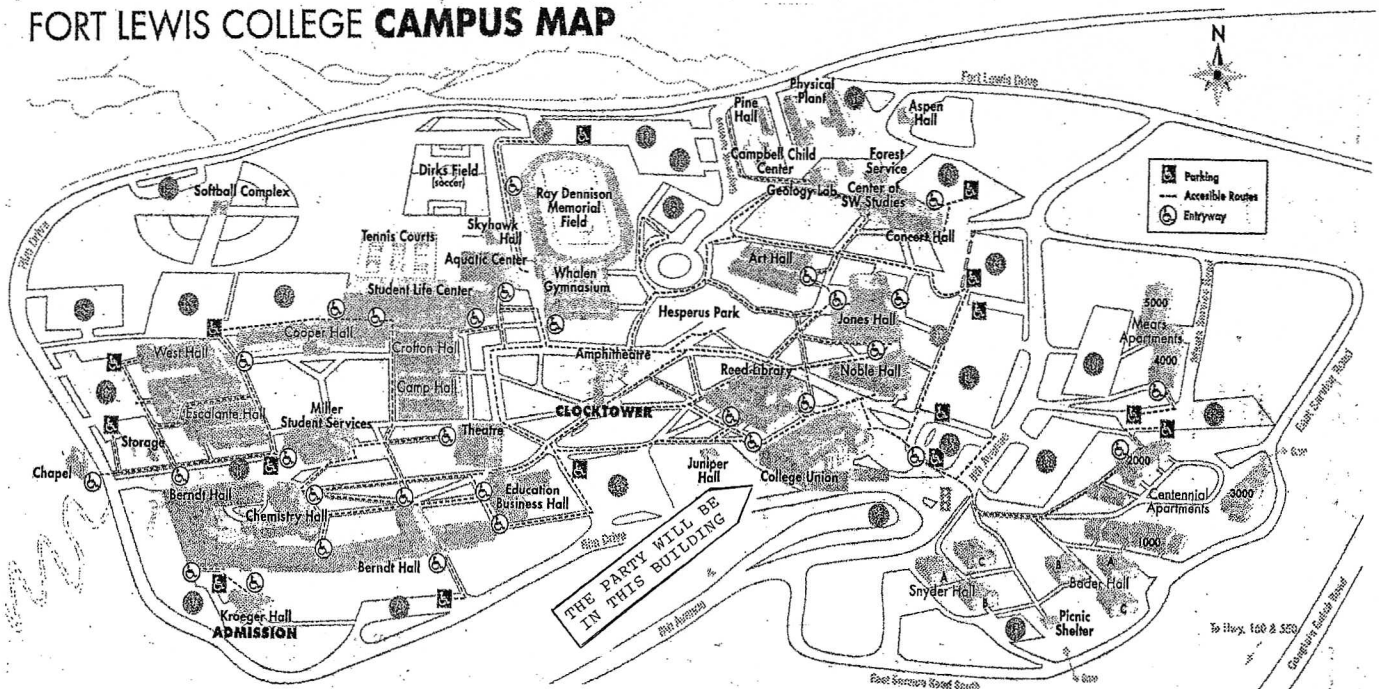
"We found remnants of the bridge in the early 1980s, but only recently have we been able to bring up items," says Art Cohn, the museum's director. The cannon, ammunition, shovels, and wine and rum bottles are now displayed in a new visitors center in Orwell, Vermont.

—BORIS WEINTRAUB

NATIONAL GEOGRAPHIC

IT'S PARTY TIME!

FORT LEWIS COLLEGE **CAMPUS** MAP



As you readers know, our chapter's monthly meetings are held (with rare unfortunate exceptions) on the second Thursday of each month. Our December gathering will be different – our group will gather on the first Thursday of the coming month, December 4th, and instead of the customary business meeting and lecture we'll celebrate the onset of the holiday season with our ANNUAL SJBAS CHRISTMAS PARTY! This will take place in Fort Lewis College's Student Memorial Lounge, in the Student Union Building, and will commence at 6:00 PM. You most certainly will wish to join your fellow chapter members for an evening of fun and frolic; you also may wish to bring guests, friends who may have an interest in archaeology and who would enjoy meeting our members and learning about our chapter's various projects and activities. The party will feature a Mexican buffet dinner at a cost of \$24 per person (this price covers coffee, dessert, tax and gratuities); send your payment check, made out to SJBAS, to our Treasurer Mark Gebhardt, 107 St. Andrews Circle, Durango, CO 81301, no later than November 24th so that our caterer will have an accurate head count. As always, this party will be highlighted by music and other entertainment, a description of the field trips and other activities that we plan for the coming year, and a Powerpoint presentation showing scenes from our various 2008 excursions and other activities.

The talented Lyle Hancock is now preparing the above-mentioned Powerpoint show, and we understand that he needs photos for his presentation. Call him at 970-764-4531, or lylehancock@bresn, if you have some photos that you would like to share with the group.

As an adjunct to our Christmas celebration, we'll also have our annual election of chapter officers on December 4th. If you'd like to serve as one of our leaders, or wish to nominate someone to fill a position as an SJBAS officer, please notify outgoing SJBAS President John Viner (970-382-2594) before the party date.

And a further note: as mentioned above, our party will be held in the Fort Lewis College's Student Memorial Lounge, in the Student Union Building, and will not be held at the Southwest Studies Center; see the above map if you are unfamiliar with the layout of the FLC campus. The Student Memorial Lounge is on the north side of the Student Union Building.

Six enthusiastic SJBAS members journeyed to Montrose on the last weekend of September to attend and represent our chapter at the 2008 Annual Meeting of the Colorado Archaeological Society. The San Juan Mountains scenery was fantastic as the group traversed the high country passes, with the aspen, oak and sumac at the peak of the Fall color change, and the conference program was superb. The series of talks given at the Saturday lecture session largely related to "American Indian Architecture", the conference theme, with a dozen speakers making a significant contribution to our group's archeological education. The most noteworthy lecture was that



"Neanderthals have moved in next door!"

THE NEW YORKER

given by geophysicist Allen West, the keynote speaker at the traditional Saturday evening banquet, who discussed "Diamonds, Mammoths, and Comets". This amply illustrated program concerned the work of 26 scientists from 18 institutions who followed multiple trails to uncover evidence of a great catastrophe that affected large portions of the Northern Hemisphere 12,900 years ago; this was when an enormous space object, most probably a comet, exploded a short distance above our earth with a force more than equivalent to that of the world's entire nuclear arsenal. This horrendous event pushed mammoths, mastadons, sabre-tooth tigers and other large mammals into extinction, caused a decline in hominid populations, and apparently resulted in a major reorganization of human culture, as shown by the sudden disappearance of Clovis points and the emergence of those of the Folsom and later styles.

As always, this yearly gathering of the various CAS chapters was followed by a series of field trips to local archaeological sites. Our chapter's sextet chose to go on an especially delightful and informative tour, a visit to the famous Shavano Valley Rock Art Preserve. This site, the focus of Colorado rock art research for more than a century, includes some notable examples of petroglyphs of Ute origin, and is listed in the National Register of Historic Places. The principal panel depicts three bears (but no Goldilocks!) climbing trees, along with a number of bear tracks and other features that may represent the Ute Bear Dance Story. After visiting this site our people were given a special tour of the recently renovated and enlarged Ute Museum complex, and were able to examine the 800-year-old Telluride Blanket, a unique example of Anasazi weaving that was found stored in a pot in a cave in southeastern Utah. We wish to thank our friends in the Montrose chapter for organizing and hosting this annual CAS meeting, the field trips, and the various other activities!

NEW ZEALAND: Humans are Pied Pipers by nature; we seem to bring rats along wherever we go. A new study of rat bones and rat-gnawed seeds has provided firm radiocarbon dates for the colonization of New Zealand and the

rest of Polynesia. People and the Pacific rats who love them reached New Zealand around A.D. 1280, or 1,000 years later than some previous estimates and a time that coincides with the islands' earliest clear archaeological evidence.

ARCHAEOLOGY

Whaling Older than Previously Thought

Evidence discovered by an American-Russian research team on Russia's Chukotka Peninsula, in the Bering Strait near Alaska, indicates that people were hunting whales there at least 3,000 years ago, 1,000 years earlier than was previously thought. The researchers found carved images on a walrus ivory along with hunting and butchering tools and whale and walrus remains. Radiocarbon dating of wood samples associated with the ivory indicates it is about 3,000 years old.

Ivory carving has been an important folk art for people of the Arctic since prehistoric times. Many elements of whaling are depicted by the images etched in the ivory the researchers recovered. There's a scene of warfare, of whale hunting, of men dragging something large to shore, and of men shooting arrows at a bear. "Along this coastline, hunting and fishing are the only possible ways to sustain life," said Daniel Odess, curator of archaeology at the University of Alaska Museum of the North. "Yet, as important as whaling is, we have known little about how, where, and when it began."

The site, known as Un'en'en, was discovered in 2005 and appears to be related to the Old Whaling culture complex. The only other known Old Whaling site is on Cape Krusenstern, in northwestern Alaska. Odess spent three weeks at Un'en'en last summer along with colleagues from Richard Stockton



This drawing depicts the walrus ivory carving recovered beneath the roof of the semi-subterranean house at Un'en'en. Samples of wood in direct contact with the ivory have been dated to 3,000 years ago.

College, the University of Alaska Southeast, the Kunstkamera Museum in St. Petersburg, and the Institute for Heritage in Moscow.

Describing a typical whale hunt, Odess said that when the villagers spotted a whale, they would launch a boat with five or six hunters. Because it is hazardous to deal with a full-grown whale, most likely they would try to take juvenile Bowhead or Grey whales, which are relatively docile. "They would close in," Odess said, "then time it so that as the whale came to the surface to breathe, they could paddle right up to it, almost on top. Then the tricky part begins. The harpooner in the bow strikes the whale, while those who paddle have to move the boat backwards. A

whale might well react violently, and a flip of the tail could crush the boat."

"This kind of hunt takes coordination and leadership," Odess explained. "It can't work with consensus. Someone must be in charge, and that's significant. The same sort of hierarchical decisions needed for whaling are also needed to be effective in war."

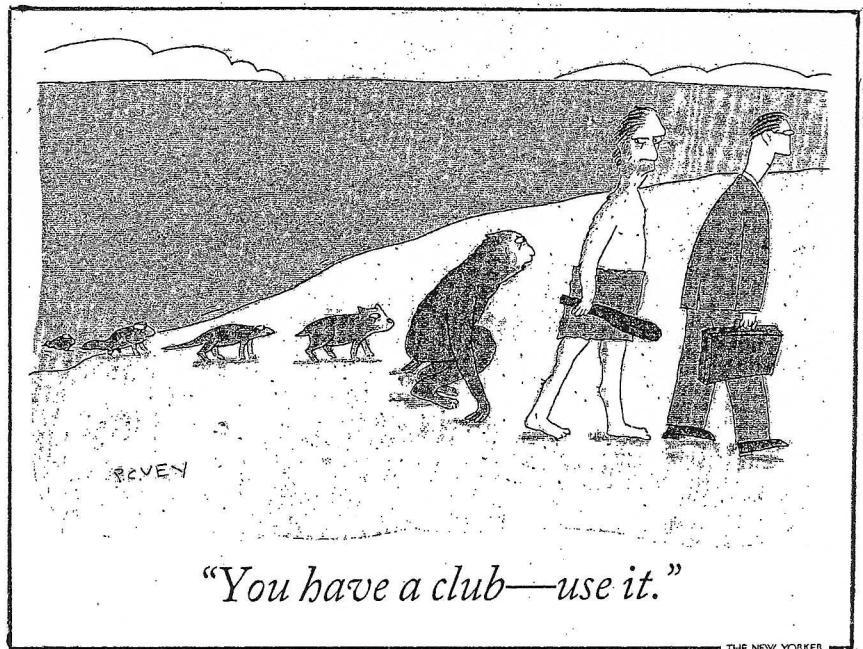
The 2007 fieldwork was the first joint Russian-American archaeological project in Chukotka. Odess regards the collaboration as significant. "If you think of the prehistory of the Bering Strait as a book," he said, "then half of the pages are in Alaska and half in Russia. To understand the whole, you have to read both halves of the book."

—Steven McFadden
american archaeology

There was an excellent turnout for our chapter's Montezuma Canyon expedition of last September 26/28th, when 14 adventurous SJBAS members enjoyed the Indian Summer weather and splendid scenery of this especially interesting sector of southeastern Utah. Montezuma Creek is a relatively major stream in this otherwise arid portion of the Great Sage Plain, with it and its tributaries draining much of the area between the Abajo Mountains and the Colorado-Utah line. Taking advantage of this permanent and abundant water supply and its associated natural resources, the ancient Anasazi settled in the valley bottom and along the adjacent canyon rims during the Pueblo II-III period. Our group investigated a number of their habitation, farming, and rock art sites, most notably the large Coalbed Canyon, Three Kiva, Bradford Canyon, and Nancy Patterson Pueblos. An ample campsite was found near the creek and, under the capable leadership of Joe Griffith and Diane Donovan, our people found much to see and do and appreciate. This Montezuma Canyon complex is well worth revisiting in view of its many archaeological features — perhaps next year?

Sixteen SJBAS members went on our mid-October visit to the Santa Fe-Galisteo area, and had a delightful time learning about the Pueblo IV (1300-1650 AD) occupation of the region. The gang visited the sprawling ruins of Puye, Tsankowi, Arroyo Hondo, and other ancient settlements — structures quite different from the Pueblo II and Pueblo III sites of the Four Corners area because of their much larger extent, plaza layouts, and (as regards Puye and Tsankowi) the use of cavate dwellings as supplementary habitations. Our people were also given a comprehensive tour of Santa Fe's School of American Research and the associated Indian Arts Research

Center, where they viewed an impressive collection of Pueblo IV and Pueblo V pottery, basketry, and other artifacts, plus the unique Hispanic architecture of the establishments. On the whole, our crew was blessed with good Indian Summer weather, although they did miss out on a small part of the planned itinerary because of a bit of rain and excessively muddy road conditions — but of course there will always be a next time, and on the one day that the group was unable to go far afield they were able to enjoy visits to Santa Fe's many museums and other abundant indoor attractions. The Robinsons, who organized this fine outing, did an excellent job of finding comfortable motel accommodations for our people, and recruited some extremely competent and hospitable tour guides, both Anglo and Indian. Many thanks, Rich and Linda!



Neandertal noisemaker

Neandertals, whose evolutionary relationship to modern humans inspires much scientific sound and fury, apparently made some noise of their own—perhaps even music. Amid stone implements typical of European Neandertals excavated last year in a Slovenian cave, researchers found a piece of a juvenile bear's thighbone that contains four artificial holes and resembles a flute.

Similar bone flutes have been recovered at several *Homo sapiens* sites in Europe and Asia dating from 22,000 to 35,000 years ago. A preliminary age estimate for the new find, however, places it at between 43,000 and 82,000 years old.

"This bone could have been used to make noise or, possibly, music," contends geologist Bonnie Blackwell of the City University of New York's Queens College in Flushing, N.Y. "It would not surprise me if this was a Neandertal musical instrument."

Blackwell and her colleagues, including excavation director Ivan Turk of the Slovenian Academy of Sciences in Ljubljana, are slated to publish an analysis of the flutelike bone and other discoveries at the Divje Babe I cave in an upcoming *GEOARCHAEOLOGY*.

The ends of the hollow bone artifact are broken off, and the holes, which penetrate only one side of the shaft, run in a straight line. Neandertals probably produced the holes, possibly by using a carnivore tooth as a punch, according to Blackwell. Cave bears or other carnivores could have gnawed off the ends of the bones, she holds.

Five cave bear teeth from three sediment layers at the site were dated by a technique known as electron spin resonance. Researchers calculated a maximum and minimum age for the teeth based on measurements of minute amounts of radioactivity that the teeth had absorbed while buried and on estimates of periodic fluctuations in natural radioactivity levels in the cave soil.

Excavations at Divje Babe I began in 1980. Fossil remains unearthed so far consist primarily of more than 65,000 cave bear teeth. Other animals whose bones lie in the sediment include lions, leopards, ibexes (a type of wild goat), bats, and a number of rodent species.

Remnants of several hearths have been found as well, along with sharpened stone implements and debris from tool making. The flutelike bone turned up near stones and charcoal associated with a small hearth.

The Slovenian bone closely resembles several hole-bearing bones that were likely to have been used as musical instruments by humans at later European sites, according to archaeologist Randall K. White of New York University. White hopes to construct a model of the Divje Babe I bone artifact in order to explore the range of sounds that could have been produced by blowing into it.

"Neandertals were apparently quite similar to *Homo sapiens* in their behavior and cognitive capacities," Blackwell asserts. "In both groups, musical traditions probably extend back very far into prehistory."

LOOKING AHEAD: every two or three years we have an SJBAS trip scheduled to visit archaeological sites, museums and other features in foreign countries, or in parts of the United States far from our Four Corners home base; such trips have included journeys to Guatemala, Peru, Mexico and Greece. The purpose of these adventures is to broaden our understanding of the past by relating what we see in nearby regions with the prehistory of more distant parts of the world, places with differing cultures and cultural backgrounds. John Viner, as shown in the following notice and as will be discussed at future SJBAS meetings and newsletter issues, is now organizing a tour of sites and communities in northern Mexico, a trip that he hopes to make next spring. Trips such as these involve a great deal of advanced planning because of scheduling complications and other matters so, if you would like to travel with John next April, do contact him as soon as possible so that he will know how many wish to join him and so that he can make suitable arrangements for guides, accommodations, and transport by vans or whatever.

ARCHAEOLOGICAL SOCIETY TOUR OF STATE OF CHIHUAHUA, MEXICO, APRIL 15-24, 2009

We are now taking sign ups for this 10 day tour being set up for SJBAS members which will start and end in Deming, New Mexico. The approximate cost of the trip will be \$1,200 per person. Everyone will need a passport. Walks on this tour will be moderate and taken at an easy pace for taking photos and enjoying the scenery. The longest walk will take about an hour one-way with a 900-foot elevation gain.

For the first four days of the trip our guide will be Ben Brown, Ph.D., the archaeologist who was in charge of the Casas Grandes site from 1988 for some years.

Day 1: After leaving our cars at Deming, we will go to Nuevo Casas Grandes, visiting Janos en route.

Day 2: Visit Paquimé Casas Grandes and the old Casas Grandes pueblo.

Day 3: Visit Mormon settlements at Colonia Juárez, local pottery workshops and exhibitions in Mata Ortiz, then drive to Madera where we'll stay in comfortable cabins in the woods, with fireplaces but no electricity.

Day 4: Visit Casas Grandes, Cueva del Águila, Conjunto Mogollon, Cueva de la Serpiente, and Cueva Grande. At the end of the day, there will be hot springs to soak in.

Day 5: Visit Casas Grandes type sites in Namiquipa with a local guide. Visit Apache sites in Namiquipa. Arrive at Basaseachi waterfall. Our hotel will be Cabañas Rincón de Basaseachi, in the Copper Canyon area.

Day 6: Area sightseeing. Drive to Arepo. Walking tour of Copper Canyon surroundings, where our guide will be Gustavo Lozano, a specialist in the geology and flora of the area. There will be a free afternoon to visit crafts sellers or walk by the rim of the Canyon to different viewpoints.

Day 7: Walking tour to Apache and Tarahumara sites in the Sierra with local guide.

Day 8: Leave for Guachochi, stopping at Arareco Lake and Valley of the Monks. Visit Cusárare, an early missionary town settled in a heavily Indian-populated area. See museum and colonial church. Visit Samachike, where we'll see an American-created hospital that provides services to Rarámuri people.

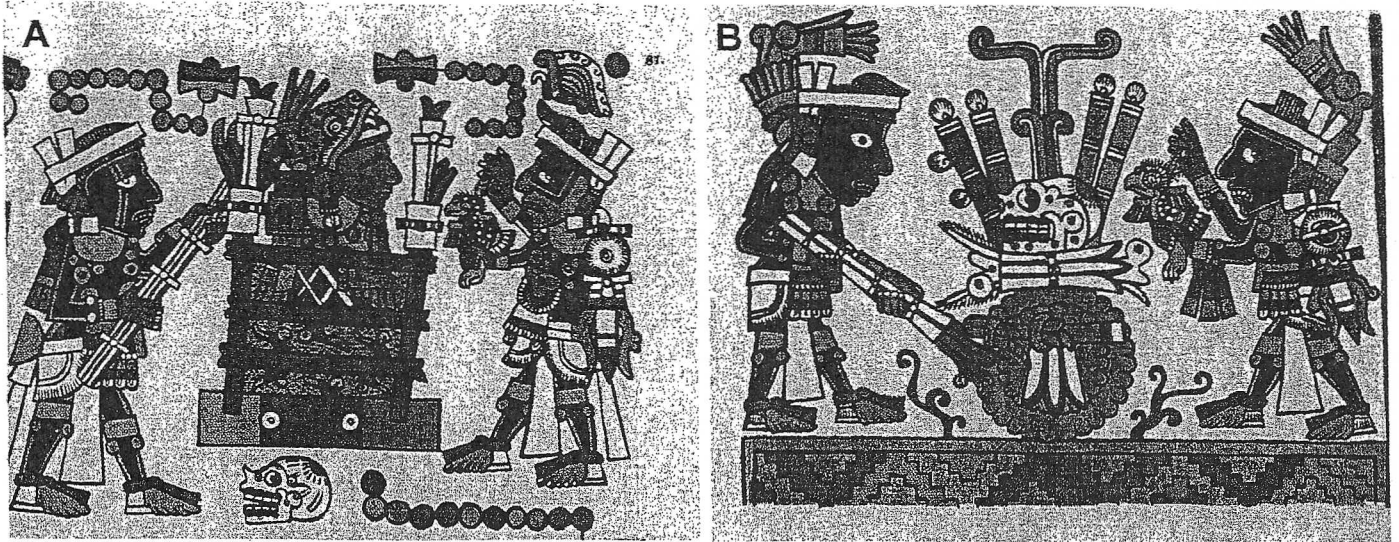
Day 9: Visit Sinforosa Canyon rim. Continue to Parral. Take walking tour. Enjoy trip's Farewell Dinner.

Day 10: Return to Deming. End of tour.

A more detailed itinerary is posted on our website www.sibas.org. To register for this tour send an e-mail to John Viner j_e_viner@frontier.net and include your phone number. Trip updates will be sent to everyone on the sign up list by e-mail. If e-mail contact is not convenient, please call John at 382-2594.

As noted above, trip participants will need to have passports; the good old days when one could cross the US-Mexico border with only a birth certificate and photo ID are long gone. We wish to point this out, as many of our people may not possess currently valid passports and may not be aware that there is usually a fairly long delay between the time one submits a passport application and the time that a passport is actually received — this has caused more than a few problems in the past. We also suggest that, if you wish to go on this excursion and are unfamiliar with the Spanish language, you might bring along an English-Spanish dictionary or phrasebook; it's always helpful to know a bit about the language of the country being visited, although of course the tour guides that John is recruiting for this trip will speak fluent English.

Earliest Mesoamerican Cremations Discovered



These two images from the Codex Nuttall, a Mixtec text, show cremation of elite members of society.

Archaeologists working at a Mixtec site in southern Mexico have discovered the earliest known cremations in Mesoamerica. The site, located in the ancient village of Tayata in the state of Oaxaca along Mexico's southern Pacific coast, yielded evidence of elite funerary practices that took place over 3,000 years ago. The cremation of elites later became more widespread throughout Mesoamerica, according to native and Spanish accounts.

The Mixtec were one of the major pre-Columbian civilizations of Mesoamerica, and Tayata was among the largest villages of the early Preclassic period, which dated from approximately 1200 to 900 B.C. "The Mixtec area is one place where civilization emerged," said William Duncan, an archaeologist at St. John Fisher College in Rochester, New York, who co-directed the excavation. "These burials sites represent important evidence of that emergence."

Despite being cremated, portions

of the remains of two individuals were found by the archaeologist in 2004 and subsequently underwent analysis that was recently completed. One set of remains is thought to have been a female between 18 and 25 years old. The sex of the other individual, who they believe was between 15 and 25 years old, could not be identified because so little of the remains were preserved. The archaeologists found the corpses at Tayata were placed into the graves and then burned.

Evidence from the site suggests that a class of leaders emerged among the Mixtecs as early as 1100 B.C. "A number of things from Tayata show ranked society," Duncan said, "including cranial modification, jade ear spools, access to deer meat, and seated or kneeling in burial." The burials were associated with a house and middens containing deer, dog, and fish remains, pottery and shell ornament production, and obsidian. The archaeologists also found a

large number of dog bones, which suggests ritual feasting. It's believed that the leaders ate dog, he said, but not the commoners.

The Tayata cremations reflect the ancient Mixtec's worldview concerning death, according to Andrew Balkansky of Southern Illinois University, the project's other co-director. He said ancestor rituals were very important for the Mixtec, as well as for later Mesoamerican societies.

Balkansky said the Tayata discoveries reveal a period when rank, or hereditary inequality, was manifested in early Mesoamerican villages. "High-ranked ancestors were considered to be closer to the spirit world than other people," Balkansky said. "This was true in pre-Hispanic Mesoamerica and for many other societies around the world. This is an important ideological change necessary for the development of later, more complex societies."

—Steven McFadden

american archaeology

On last October 19th the Moki Messenger staff met at the home of Beverly and Paul Dittmer to discuss ways and means by which our chapter's newsletter might be improved. Do any of you readers have any ideas or suggestions regarding this matter? If so, please pass such on to Beverly, Jill Ward, or Janice Sheftel. And remember — the Moki Messenger is your news sheet, and the editors will welcome any help or input that you can give them. They might also welcome any complaints or criticism, too — although probably not.

Ancient Remnants Of a Complex Civilization

Shards of pottery point to an Amazon cradle of culture

By Boyce Rensberger
Washington Post Staff Writer

Generations of archaeologists searching for the prehistoric roots of civilization in the Western Hemisphere have taken one look at the tropical forests of the Amazon valley and dismissed the steamy, bug-infested jungles as an unlikely site to nurture any major cultural advancement.

In the conventional view, complex culture in the Americas germinated along the coasts of northwest South America and flowered with the Incas in the Andes, and the Maya and Aztec in Central America.

After all, these places had more equable climates and better soils, and they were where European explorers found advanced civilizations when they reached the New World. If complex culture spread from these centers into the rain forest, the experts assumed, it died out there because the forest lacked the natural resources to sustain much more than scattered bands of hunters and gatherers.

Now, after a decade of research and advocacy by archaeologist Anna C. Roosevelt, the Amazon is coming to be seen as one of the world's great fertile river valleys—perhaps even one of the cradles of the earliest complex human cultures.

There is also evidence that the forests, far from being primeval wilderness, are the result of prehistoric human management that encouraged the spread of economically useful species.

In her most far-reaching claim to date, Roosevelt, the great-granddaughter of President Theodore Roosevelt and curator of archaeology at Chicago's Field Museum of Natural History, reports in *Science* that she has found the oldest known pottery in the Western Hemisphere.

Reddish-brown pieces of bowls, some painted with designs, turned up in the remains of a village that flourished on the bank of the Amazon River between 7,000 and 8,000 years ago—assuming the dates are reliable, which is something not all archaeologists are prepared to do.

If Roosevelt is right, the Amazon ceramics would be between 1,000 and 2,000 years older than the previous record-holder in the Americas, which was found on the Caribbean coast of Colombia. (The world's earliest known pottery comes from the Japan of about 12,000 years ago.)

Pottery has traditionally been considered one of the earliest marks of a culture that has advanced beyond that of hunters and gatherers. This is because the technology itself requires sophistication—from selecting the clays to firing the objects at the right temperatures in special furnaces—and because it is a sign of a culture that has developed a sustainable food source and established large settlements that require a degree of political management. The find, if confirmed, would show that ancient Amazonians were making ceramics 3,000 years before anybody in the Andes or in Central America took up the practice.

In other words, Roosevelt asserts, the Amazon, far from

being a cultural backwater taking hand-me-down innovations from peoples elsewhere, was a leader.

Roosevelt's report also strikes another blow at what once was a tenet of anthropology—that pottery comes with agriculture. The old idea was that because pots are heavy, they would be of no use to hunter-gatherers always on the move. Only after farming made it possible to feed a large, settled population would it make sense to make pots for storing and cooking food.

Roosevelt says the people who lived in the ancient riverside settlement, a site called Taperinha, appear to have had no domesticated plants; but they did enjoy an abundant and stable food source in the river's fish and shellfish. The pottery—nearly 400 shards—was found in a midden, or refuse dump, 20 feet high and 15 acres in area.

She says the huge midden, and others like it in the region, indicate that well-established towns were thriving along the river for thousands of years.

"The accepted theory for many years was that this habitat was simply too poor, too low in resources, to support large, dense populations," Roosevelt says. "But one of the first things we found was that the Amazon basin is filled with the same kinds of soil as the flood plains of the Nile, the Ganges and other great river basins of the world where we know there were large populations and complex societies."

Roosevelt's earlier work in the region has suggested that the quality of life in the past was comparatively good. Skeletons of ancient Amazonians from burial mounds, for example, show they averaged nearly five inches taller than Indians of the region today.

"What this discovery shows is that the Amazon is a lot more interesting place in terms of the development of complex culture than we've been led to believe," says James A. Brown, a Northwestern University specialist in ancient pottery.

"We know that large river valleys tend to be very rich and abundant places to live. They become incredible breadbaskets. This new work makes the Amazon basin fit in quite well," he says.

Roosevelt and other researchers have found that although the Amazon valley nurtured human culture, humans modified the valley, creating plant communities that modern ecologists have mistakenly thought pristine.

In many parts of the region today, for example, the forest contains unusually rich concentrations of trees that bear edible fruit or nuts, and plants that produce medically useful compounds.

"We think these areas were created by people long ago who either deliberately planted species they wanted around their villages or, at the very least, discarded seeds of plants they were using in the villages," Roosevelt says.

"Either way, they created tropical forest communities that provided a rich source of economically useful products."

Along with the forest's bounty, the ancient Amazonians ate mussels from the river. Countless millions of discarded shells make up large parts of the middens, in which Roosevelt also found stone tools including hammerstones, flake cutting tools, scrapers, grinding and cooking stones and a bone awl.

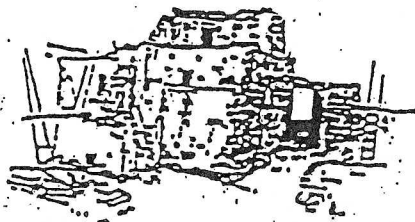
By about 1,000 years ago, all experts agree, Amazonian peoples were making elaborate pottery vessels and statuary and sculpting beautiful jade ornaments. By 500 years ago, according to European explorers sailing up the Amazon, there were gleaming white cities holding tens of thousands of people. By 300 years ago European diseases had wiped out much of the New World's native population and the Amazon riverbanks were largely devoid of human habitation. By this century, the explorers' accounts were dismissed as exaggeration.

SAN JUAN BASIN ARCHAEOLOGICAL SOCIETY

A Chapter of the Colorado Archaeological Society

If you're not a member of our group and would like to receive our newsletter, attend our monthly meetings, join us on our outings, and participate in our many other activities and those of the Colorado Archaeological Society (CAS), call our President John Viner (970-382-2594) and ask for information about our organization. Annual dues, including those for membership in the Colorado Archaeological Society, are listed below and are payable by checks made out to SJBAS and mailed to our Treasurer Mark Gebhardt, 107 St. Andrews Circle, Durango, CO 81301. Dues cover membership for the calendar year. Please note our new dues structure (no more regular vs. senior). With SWL means that the membership includes a subscription to CAS's quarterly journal "Southwestern Lore" (SWL). No SWL means that the journal is not included with your membership, hence the difference in the dues.

Individual (includes "Southwestern Lore")	SJBAS \$15.00+CAS \$16.00 = \$31.00
Individual (no SWL)	SJBAS \$15.00+CAS \$ 8.00 = \$23.00
Family (with SWL)	SJBAS \$20.00+CAS \$20.00 = \$40.00
Family (no SWL)	SJBAS \$20.00+CAS \$10.00 = \$30.00



www.sjbas.org

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385 HIGHLAND HILL DRIVE
DURANGO, COLORADO 81301

FIRST CLASS