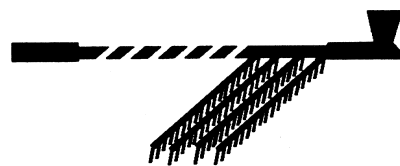


CALUMET



CONSERVATION PRESERVATION
EDUCATION EXPLORATION

Newsletter of the Indian Peaks Chapter of the Colorado Archaeological Society
JANUARY, 1999

CALENDAR OF EVENTS

**General (lecture) meetings are held in the University of Colorado Museum, Dinosaur Room
Second Thursday of each Month, at 7:00 PM. The public is always welcome.**

Jan 7 Executive Board, Boulder Police Community Room, 7:30PM
Jan 14 IPCAS General Meeting, 7 PM. Bob Powell. Topic: Copán.
 Jan 16-17 The Quarterly Meeting of the Colorado Archaeology Society will be held in Denver on January 16th and 17th. Members will have the opportunity to complete the PAAC class "Introduction to Archaeology, CAS, and PAAC" on Sunday, January 17th, 1999. For more information contact Kevin Black at (303) 866-4671.

Feb 4 Executive Board, Boulder Police Community Room, 7:30PM
Feb 11 IPCAS General Meeting, 7 PM. Julie Francis
 Topic: Rock Art.

Mar 4 Executive Board, Boulder Police Community Room, 7:30PM
Mar 11 IPCAS General Meeting, 7 PM. Rich Wilshusen
 Topic: Southwestern Archaeology or Archaeology and The Computer Data Base.

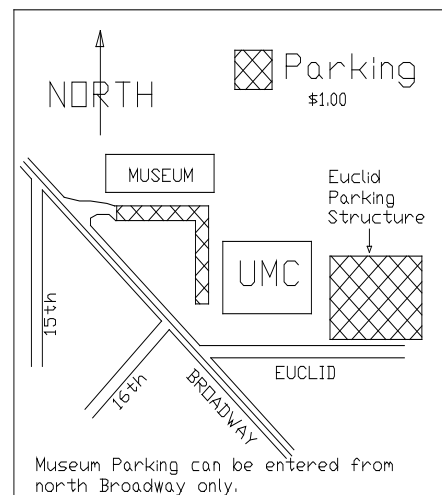
Apr 1 Executive Board, Boulder Police Community Room, 7:30PM
Apr 8 IPCAS General Meeting, 7 PM. Larry Todd
 Topic: Archaic Bison Hunters of Northern Colorado.

May 5 Executive Board, Boulder Police Community Room, 7:30PM
May 13 IPCAS General Meeting, 7 PM. Kevin Black
 Topic: Human Burials.

May 8-16 Colorado Archaeology and Historic Preservation Week
 Archaeology and Historic Preservation Week is a celebration of our state's heritage. The week highlights special preservation projects, archaeological talks and prehistoric or historical sites cherished by local residents and visitors. This year's poster will focus on Apishipa structures of southeastern Colorado. Local organizations, museums, and agencies are invited to participate in the week's celebration for 1999 that will be held May 8 through 16. Our office will again be providing event grants of up to \$200.00 that organizations can use for helping to hold an event. For example, funds can be used for renting space, purchasing an advertisement, or to obtain materials. Interested organizations should complete a grant application form that is available from the Office of Archaeology and Historic Preservation or can be found on our web site at:

<http://www.aclin.org/other/historic/chs/index.html>.

Applications must be received by the Colorado Historical Society on or before February 19, 1999. For further information call Todd McMahon, Staff Archaeologist, Colorado Historical Society at (303) 866-4607.



Map of Parking at CU Museum

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January Topic - Copán

Bob Powell

I was first introduced to archaeology by a former president of IPCAS, Ann Hayes, who arranged a trip to Grand Gulch in November, 1986. That was the beginning of the Wetherill-Grand Gulch Project to document the excavation sites of the early explorers: McLoyd, Graham, Richard Wetherill, and their companions. Since then, I have visited, studied, and photographed the main sites in Java, Bali, Sulawesi, and most of the well-known, large sites in Mesoamerica. I have also visited many of the lesser, hardly known, archaeological ruins in México and Belize. I spent two weeks in the Copán valley studying Spanish and visiting the central ceremonial area and residential suburbs of ancient Copán, Honduras. My talk will describe the history and societal development of the valley. Stone buildings and monuments will be illustrated with slides. The Mayan time count will be discussed.

Copán lies in a very fertile, long valley of western Honduras, a short distance from the Guatemalan border. It is the farthest southeast, major site of the Maya world. As with most other Mesoamerican sites, the Preclassic or Formative Period (2000 BC to 250 AD) is deficient in large building structures. Therefore archaeologists have had to rely mainly on test pits, human burials, and ceramic fragments to study the early societies. The oldest house in the Copán has been dated at about 1400 BC. Even with that early date, there are indications of strong interactions with distant communities. Classic period Copán has long been considered "the Athens of the New World". For that reason, it was the first site explored by several important early archaeologists: Maudslay, Stephens and Catherwood, and Morley. Copán has more inscriptions and well-preserved te-tun (stone monuments) than other site in the New World.

Because of the large number of datable carvings, the history of the rulers of Copán is now very well known. Although he was not the first king of Copán, the founding ancestor of the longest dynasty was K'inich Yax K'uk Mo'. His exact birth and death days are not known, but he was ruler at the "millennium" date, 9.0.0.0.0 (11 December, 435 AD). During the dynasty's 400 year rule, many ceremonial buildings, monuments, and residences were built. The 16th and last king of the dynasty was Yax Pac. Although he was powerful and innovative, he was unable to prevent the decline of Copán. He died on 9.19.10.0.0 (6 May, 820 AD). A pretender to the throne, U Cit Tok' ruled weakly for a few years, but was unable to construct any ceremonial buildings or even complete his own te-tun. The extremely slow but almost inevitable decline of the Copán community had many different causes, the most important probably being environmental destruction. The site now has an excellent museum.

Where, Oh Where, Has Our Little Trunk Gone?

The IPCAS Rock Creek trunk is missing. It was picked up at Ann Hayes' house several months ago and never returned. If you know the whereabouts of the Rock Creek Trunk, please give Ann a call. The trunk is extremely important to our club as an educational tool. A huge thanks to anyone with information about the trunk.

Ann Hayes (303) 494-3773 annhayes@boulder.net

Cedar Mesa Project

The Cedar Mesa Project is a grassroots endeavor aimed at minimizing human impacts in the greater Cedar Mesa area through education about the environment, cultural history, and natural history. CMP hopes to rekindle a new respect for the landscape, the Native American archaeological artifacts and ruins, and the historical signatures and artifacts left by members of the early expeditions of the area. The CMP group offers information about low impact and "leave no trace" practices for hiking and camping in desert environments, as well as an "Etiquette for the Cedar Mesa Area" about viewing and visiting archaeological sites of the Anasazi, or Hisatsinom - the Ancestral Puebloan people, without destroying them.

As our population increases in number, our ability to alter the landscape is compounding. Our collective and individual decisions about how to conduct ourselves when visiting the Colorado Plateau is becoming more and more significant to the future of this area. The land is bold and rugged, full of discoveries and adventures. One needs to be prepared and respectful of the weather and the land itself, recognize the intense sense of personal responsibility for one's own personal safety, and yes, survival. However, the Cedar Mesa area offers many extraordinary opportunities.

URL (Internet Location) for the Cedar Mesa Project is: http://www.sni.net/cedar_mesa/index.htm

Kennewick Man -- More Background and Opinion

Only a couple of years ago, archaeologists knew, or thought they knew, when and how human beings ended up in the American continent. The story went like this. About 15,000 years ago, the Wisconsinan glacier was at its maximum, effectively blocking all entrance to the continents south of the Bering Strait. Somewhere between 13,000 and 12,000 years ago, an "ice free corridor" opened up in what is now interior Canada between the two main ice sheets. That part remains undisputed.

Along the ice free corridor, or so we thought, people from Northeast Asia began to enter the North American continent, following megafauna such as woolly mammoth and mastodon. We called those people Clovis, after the discovery of one of their camps near Clovis, New Mexico. Archaeologists have found their distinctive artifacts all over North America.

Eventually, according to the theory, Clovis descendants pushed southward, populating the southern 1/3 of North America and all of South America, but in the meantime adapting their hunting lifeways for a more generalized hunting-and-collecting strategy. The southerners are known generally as Amerinds.

Around 10,500 years BP, a second big migration came across from Asia, and became the Na-Dene peoples settling the central portion of the North American continent. Finally, around 10,000 years ago, a third migration came across and settled in the northern reaches of the North American continent and Greenland and were the Eskimo and Aleut peoples.

Evidence supporting this scenario included the fact that none of the archaeological sites in the North American continent predated 11,200 BP. Well, some of them actually did, like Meadowcroft Rockshelter in Pennsylvania, but there was always something wrong with the dates from these sites, either context or contamination was suggested. Linguistic data was called upon and three broad categories of language were identified, roughly paralleling the Amerind/Na-Dene/Eskimo-Aleut tripart division. Archaeological sites were identified in the "ice free corridor." Most of the early sites were clearly Clovis or at least megafauna-adapted lifestyles.

And then, in early 1997, one of the occupation levels at Monte Verde, Chile--far southern Chile--was unequivocally dated 12,500 years BP. More than a thousand years older than Clovis; 10,000 miles south of the Bering Strait. The site contained evidence of a broad-based subsistence, including mastodon, but also extinct llama, shellfish, and a variety of vegetables and nuts. Huts arranged in a group provided shelter for 20-30 people. In short, these "pre-Clovis" people were living a lifestyle far different than Clovis, a lifestyle closer to what we would consider Late Paleoindian or Archaic patterns.

Recent archaeological evidence at Charlie Lake Cave and other sites in the so-called "Ice Free Corridor" in British Columbia indicates that, contrary to our earlier assumptions, peopling of the interior of Canada did not take place until after the Clovis occupations. No dated megafauna fossils are known in the Canadian interior from about 20,000 BP until about 11,500 BP in southern Alberta and 10,500 BP in northern Alberta and northeastern British Columbia. In other words, settlement of the Ice Free Corridor occurred from the south, not the north.

The resulting theory begins to look like this: Migration into the Americas had to have taken place either during the glacial maximum--or what is more likely, before. That means at least 15,000 years BP, and likely around 20,000 years ago or more. One strong candidate for primary route of entrance is by boat or on foot along the Pacific coast; boats of one sort or another have been in use at least 30,000 years.

Evidence for the coastal route is slim at present, but the coast as the new Americans would have seen it is now covered by water and the sites may be difficult to find. The people who traveled into the continents were not primarily dependent on megafauna, as Clovis peoples were, but rather generalized hunter-gatherers, with a broad base of subsistence.

Most astonishingly, the human skeletal remains recovered dating to these times, such as the Kennewick Man, are providing genetic and morphological proof that the earliest peoples on the continent were not typically Asian, as was expected.

Ken Larson

Nearly Extinct Siberian Language Linked to Native American Tongues

Brahm Rosensweig

There are very few Ket left, not more than 1,100. Of these only 500 still speak their language, and most of these are over 40 years of age. They're all that's left of a much larger language group that once covered a broad expanse of western Siberia. But new observations by a Stanford University linguist may breathe new life into the story of the Ket language. Merrit Ruhlen believes it spawned a thriving family of Native American languages.

Today the remaining Ket live within this limited area -- a long way from the Bering Strait. By comparing key words in both languages, Ruhlen concluded that both groups were once part of the same large population in Eurasia. He found that many words of great importance for nomadic people had similar sounds, and published an article in the latest issue of the Proceedings of the National Academy of Sciences outlining 36 of these words. They included terms like birchbark, children and rabbit.

Anatomy of an extinction - It has been a long decline for the Kets. From the early 17th century onward they were pushed back by the expanding Russian empire, their bows futile against the Cossacks. In the early 18th century the Kets were deported to break their resistance.

The Russians' main interest was furs and gold prospecting, and they demanded a yearly tribute in fur. Epidemics of smallpox, influenza, and typhoid, diseases imported from Europe, decimated the Kets. Russian traders controlled the prices of commodities in an arbitrary fashion, and famine killed off yet more Kets. By the end of the 19th century the Kets were unable to survive without food support from the Imperial State. The Soviets introduced collectivization and the semi nomadic Kets were forced to settle down. By the 1950's most Kets lived in Russian-type houses, ate Russian-type food and wore Russian-type clothes. The school system successfully ousted Ket language from the home.

In 1934, a Ket primer was written which contained an alphabet, and in 1986, a new Ket alphabet in Cyrillic characters was conceived. There is a greater interest in the language today, but it remains to be seen whether it will survive into the twenty-first century.

Word Comparisons - The word for birchbark is "ch'ee" in the Yeniseian family of languages, which includes Ket and several other extinct branches such as Pumpokol and Yug. It is pronounced similarly in several existing Na-Dene languages, which today include Navaho and Apache, as well as Tlingit and Eyak which are spoken in Western Canada and Alaska. The Ket word for breast, "tuhguh", is similar to "t'uga" in Koyukon, a Na-Dene language from the Yukon and Alaska.

Geronimo was the most famous Apache. Could he talk Siberian? Finding similarities in words is perhaps the most obvious way of uncovering links between languages. The English word "brother" is similar to the Sanskrit word "bhraataa" and the Russian word "brat", because all three languages are part of the Indo-European family. The practice of finding parallel words to link faraway languages has, however, been a bone of contention when applied to Native American languages. In 1963 Stanford University linguist Joseph Greenberg set the linguistic world on its ear when he reclassified 1,500 separate African languages into a mere 4 macrofamilies.

Twenty years later he caused a similar uproar by claiming that Native American tongues, which had been numbered at 150 language families, could be reclassified as three macrofamilies of languages, each representing a distinct migration across the Bering Strait. The first of these, about twelve thousand years ago, was the Amerind family which eventually spread right to the tip of South America. The second and third were the Na-Dene and the Eskimo Aleut, neither of which descended much below the United States. The objection against the theory tends to rest on the relatively small sample of words that are shared between the languages. Some of the languages, for instance, are linked on the basis of only 5 or 6 words. "The evidence isn't just those 5 or 6 words," Greenberg defended his position in an interview. "It's all the other languages you know because they tell you what's significant about those 5 or 6 words."

Genetic data seems to agree with the idea of three or four prototypic Native groups, and dental analysis of molar tooth roots also points toward this conclusion. But the real goal of men like Greenberg and Ruhlen, a Stanford colleague and follower of Greenberg, is not to reduce languages to a few score of proto-languages, but rather "monogenesis" - the uncovering of the one original language shared by the ancestors of all humankind. They believe that all languages sprang from one tongue spoken by early humans, and that with enough sifting and comparing, we'll one day be able to reconstruct this mother of all languages.

The Resurgence Of The Atlatl And Dart - How It All Began

By Leni Clubb

In the summer of 1983, while volunteering on a Paleo "Dig" near Douglas, Wyoming, I was told of a "World Open" atlatl contest to be held in August. Roderick (Rod) Laird, a teacher in the Saratoga, Wyoming Middle School, organized the contest. Rod was teaching Ancient History and thought it would be a valuable learning experience to have the students make and learn to throw darts with the atlatl in order to understand primitive man in his quest for food. In 1980, Mr. Laird started the atlatl making activity in his classroom and organized a "Kids' World Open Atlatl Contest and Primitive Technology Fair" with pottery making, making fire with sticks, throwing with the atlatl, etc. This activity generated so much interest with children from all over Southern Wyoming coming to participate that it grew into a major event. During the year the sixth graders did research, wrote papers, and refined their skills. Each year until 1994, Laird continued to hold the "Kids' World Open Atlatl Contest".

In July 1981, "The World Open Atlatl Contest" was born. Mrs. Ada B. Jackson of the Saratoga Historical and Cultural Society, who had organized the annual community Fireside Folk Festival, invited professional archaeologists to participate in the contest. The contest was divided into three divisions - Youth, Adult, and Professional. She also organized an evening Early-Man Symposium with well-known archaeologists as speakers. Among them were Bruce Bradley, renowned flint-knapper and archaeologist; Dennis Stanford of the Smithsonian Institute; George Frison, University of Wyoming; Marie Wormington, famous woman archaeologist; Waldo Wedel, Archaeologist Emeritus of the Smithsonian Institute, and others. The atlatl contest was divided into Divisions - youth, adults, and professionals. Mrs. Jackson, in connection with her "Summer Fireside Folk Festival" and Rod Laird in the classroom, organized the popular community event. In 1982, a Grand Champion award for the best "shooter" with competition among the best of the three divisions was added. Eleven-year-old Brian Benson beat Bruce Bradley for the first Grand Championship! By 1983, many flint-knappers and hobbyist had been added which drew many well-known persons to the Folk Festival and the atlatl contest in Saratoga.

Mrs. Jackson, Rod Laird and others formed The Atlatl Press and published a book written by Laird titled "How to make and use THE ATLATL, The Ancient Weapon of the Ice Age Hunters". It contained both the history of the atlatl and also many illustrations on how to make and throw with the atlatl. It was published as Saratoga Museum Papers, No. 1, in October 1984. One thousand copies were printed and sold out within a short period. Mr. Laird is presently working on another atlatl book.

As a member of the Colorado Archaeological Society, I received a brochure in 1983 announcing the contest, The Third World Open Atlatl Contest. Having studied archaeology for a number of years in New Mexico and Colorado, I knew what an atlatl was, but it was just another interesting artifact until I heard of this contest and found that a woman had never entered the competition. Immediately, I knew I HAD TO DO THAT! I called a friend, O. D. Hand, the Assistant State Archaeologist of Colorado, who sent me his atlatl that he had replicated from one displayed in the Denver Museum of Natural History. My friend and companion, Hallie Cash (a woodcarver without peer) carved a copy complete with atlatl weight. I made a dart out of bamboo and off I went to Saratoga, with no idea of how to stand, how to hold the atlatl and dart, much less how to throw the dart with my new spear-thrower.

At the Saratoga Museum contest area, I was slightly intimidated, as I didn't want to make a spectacle of myself, but several of the men and the young boys encouraged me and instructed me in the fine art of throwing. No one minded how many throws it took me to get to any of the targets and by the time the contest was over, I was thoroughly HOOKED on the atlatl and remain so today.

Returning home from Saratoga, I enthusiastically told a group of my Chapter members of the Colorado Archaeological Society about the contest and suggested a workshop to make spear-throwers and darts and learn how to throw. Ten people signed up for that first workshop in October 1984 at my home in the country. We met evenings and on Saturdays until we all had equipment. We secured hay bales, set up targets according to the number and distances of the throwing course in Saratoga, and started to practice in our big field almost every Saturday and Sunday for months. We found that darts fly fast in 6-degree weather, but are hard to find in the snow - some we didn't find until spring. We were fortunate that we had space to work inside and plenty of shop equipment as well as our porch deck for warmer weather. Our first organized practice was on February 16, 1985 and we practiced and practiced. Others of our CAS Chapter came to join in the fun and soon participants from the Denver Chapter of CAS, including Bill Tate, then President of the Colorado Archaeological Society, came to learn this wonderful skill.

In our enthusiasm to have everyone learn to throw, we started to take our equipment to all Quarterly and Annual Meetings of the Colorado Archaeological Society and to any function where we were invited to attend and "demonstrate". Soon we had "hooked" many other throwers throughout Colorado. In July 1985, eighteen members of our CAS Chapter traveled to Saratoga and ten of us entered the contest, which was held across from the Saratoga Inn. Seven of us won all the awards!

During the Fall of 1985, after a practice "at the farm", several of us stayed over - the CAS President Bill Tate, the State Archaeologist Leslie Wildeson, Marcia Tate, Robin Farrington, Hallie Cash and myself. We discussed the possibility of having our own contest in Colorado and have it as a "fun time", for CAS members once a year. After approaching the CAS membership at an Annual Meeting and having the idea approved, THE COLORADO ARCHAEOLOGICAL SOCIETY ENCAMPMENT was born and the first contest was held at Twin Lakes, Colorado on July 4, 1986. It was a huge success with all ages competing - including the 4-year-old son of Bruce Bradley, well known archaeologist and flint-knapper. The 1986 Encampment became an annual event held on or about July 4th each year in various areas of Colorado and it continued for eleven years.

Many of us continued to go to Wyoming - the "password" at meetings was, "See you at Saratoga". A number of us participated in the World Open for several years after the contest was moved to Fort Casper, Casper, Wyoming, some of us winning at each event. With all the practice we had, we were really good!

In 1987, it was suggested that perhaps we should form an association and on September 17, 1987, The World Atlatl Association was chartered in the State of Colorado as a Non-profit Corporation with seven Directors. In 1988, at the Third CAS Encampment near Woodland Park, CO, the first meeting of WAA was held with ten members. Bill Tate was elected President; Leni Clubb, Vice President; Charlie Lilly, Secretary/Treasurer. Dues were set at \$10.00 and a periodic newsletter was discussed and approved with Bill Tate as Editor. The newsletter was named THE ATLATL. Charter membership was offered and by 1989, 75 Charter members had enrolled. The membership at October 1, 1998 is 440 (including Family memberships) with members in several provinces in Canada, Australia, and in Europe - England, Belgium, France, Italy, Switzerland, Finland, Germany and Scotland.

News of The World Atlatl Association traveled far and wide and in April 1991, after an invitation from the Valley of Fire State Park, Overton, Nevada, the First Annual Atlatl Contest was conducted by WAA officers Tim Boucher and Leni Clubb. In June 1993, the First Annual Atlatl Contest conducted by WAA was held in Fremont Indian State Park, Sevier, Utah, after being invited to "talk about it" by the Director of the Park. In 1996, we were invited to conduct a contest on Bois Blanc Island, Michigan by the Michigan Atlatl Association. Eight of our officers attended.

A FELLOWSHIP AWARD was established in 1992 with Leni Clubb the first recipient. Bill Tate and Tim Boucher have also been awarded this Fellowship award which is given "In recognition of outstanding dedication and the encouragement of membership and the education of the general public in the use of the ancient hunting weapon and modern sporting device known as the Atlatl and Dart". In 1998, Pascal Chauvaux, Belgium, was the presented with the award. The Fellowship entitles the recipients to a Life Membership in the WAA.

In 1995 Honorary Board Member, Lloyd Pine of Baton Rouge, Louisiana, developed the International Standard Accuracy Contest (ISAC). This extremely popular contest enables throwers from all over the world to compete equally due to the specific set of contest rules, safety rules, the special target set in ranges of 15 and 20 meters and an official score sheet. Five throws are required at each of the ranges. Pascal Chauvaux, Belgium, won the first TOP award, in 1996. Ray Strischek, Ohio, won the second TOP award, in 1997. Awards are given annually to the TOP TEN throwers with the best scores.

Pascal Chauvaux, Belgium, who translated it into English and made it available to U. S. contestants, developed a European-style spear-thrower contest. U. S. organizers quickly adopted this contest as it gives throwers more opportunities to throw in a contest at targets of various sizes set at varying distances. Each contestant has three throws at each of ten targets with a complex method of calculating the scores.

President Troy Helmick established a President's Award in 1997 with Lloyd Pine, Louisiana, the recipient. In 1998, President Charlie Brown presented the award to Ray Madden, Missouri. This award is given in recognition for their exemplary and ongoing service to WAA and its members.

Were Egyptians the First Scribes?

The earliest writing ever seen may have been discovered in southern Egypt. The hieroglyphics record linen and oil deliveries made over 5,000 years ago. The find challenges the widely-held belief that the first people to write were the Sumerians of Mesopotamia (modern-day Iraq) sometime before 3000 BC.

The exact date of Sumerian writing remains in doubt but the new Egyptian discoveries have been confidently dated to between 3300 BC and 3200 BC using carbon isotopes. Ancient Egyptians developed writing to develop trade. "It was thought that Sumerians were earlier in writing than Egypt", said Gunter Dreyer, director of the German Archaeological Institute in Egypt. "With our findings, we now see it's on the same level and this is an open question: was writing invented here or there"?

It was possible that Sumerians who traded with Egypt copied their inscriptions, Dr. Dreyer said. "But we have to wait for further evidence", he warned, saying publication of his results would appear in early 1999.

Momentous Find - Archaeological experts hailed the find as momentous. "This would be one of the greatest discoveries in the history of writing and ancient Egyptian culture", said Kent Weeks, Professor of Egyptology at the American University in Cairo. Describing Mr. Dreyer as, "a very meticulous scholar", Professor Weeks said the German archaeologist would not have disclosed his findings without being "absolutely certain".

The writings are line drawings of animals, plants and mountains and came mainly from the tomb of a king called Scorpion in a cemetery at Abydos, about 400 km (250 miles) south of Cairo. Since 1985, Mr. Dreyer and his team have unearthed about 300 pieces of written material on clay tablets barely bigger than postage stamps. Clay jars and vases also display the documentary records of linen and oil delivered to King Scorpion I as taxes. Two-thirds of the hieroglyphics have been deciphered, including short notes, numbers, lists of kings' names and names of institutions. The newly discovered Egyptian writings also show that the society then was far more developed than previously thought, Dreyer said.

He said man's first writings were not a creative outpouring but the result of economics: when chieftains expanded their areas of control they needed to keep a record of taxes. Although the Egyptian writings are made up of symbols, they can be called true writing because each symbol stands for a consonant and makes up syllables.

Ancient Mariners Found In Peru

Two campsites--Quebrada Jaguay (Jaguay Canyon) and Quebrada Tacahuay (Tacahuay Canyon)--on the south coast of Peru have yielded evidence of early maritime subsistence. At Quebrada Jaguay, a team led by Daniel H. Sandweiss of the University of Maine, Orono, recovered bits of knotted cordage, possibly the remains of fishing nets, abundant bones of fish, primarily drum, and shells of mollusks and crustaceans. At Quebrada Tacahuay, researchers led by David K. Keefer of the U.S. Geological Survey found a hearth, tools and obsidian flakes, as well as the bones of numerous fish--mostly anchovy, whose small size implies the use of nets rather than hook and line--and seabirds, including cormorants, booby, and pelican.

Two dates from the earliest level at Quebrada Jaguay are around 11,100 radiocarbon years before present (about 12,984 calendar years B.P.). Both have large margins of error, one as great as 260 years. The earliest dates from Quebrada Tacahuay are later, about 10,770 radiocarbon years B.P. (ca. 12,730 calendar years B.P.), but have lower error margins.

While the discoverers of these sites believe that they bolster the theory that the earliest Americans migrated southwards by sea rather than land, an idea put forth by archaeologist Knut Fladmark of Simon Fraser University some 40 years ago, Tom D. Dillehay of the University of Kentucky notes that these early people need not have had only one subsistence strategy. "We have good evidence of early coastal migration from sites such as an 11,000-year-old-camp discovered in 1989 at Huentelafguen, Chile," says Dillehay, "as well as evidence of inland subsistence, not only at the 12,500-year-old site of Monte Verde, Chile, but from a suite of well-dated sites in eastern Brazil and Colombia. There are simply too many different modes of adaptation to suggest that South America's first peoples selected any one strategy for survival."

Quebrada Jaguay and Quebrada Tacahuay are important because most sites of this period were inundated by the rise sea level, as much as 450 feet in the wake of the last Ice Age some 18,000 years ago. The new sites are located in headland areas where the continental shelf is narrow and drops off quickly. Such areas were not substantially impacted by rising sea level.

Evidence of Ancient Civilization - Mexican Pyramid Yields Secrets

Little is known about Teotihuacan, a thriving city that predated the Aztecs by several centuries. Artifacts of obsidian and jade were found in a sacrificial tomb during excavations inside the Pyramid of the Moon at Teotihuacan, about 30 miles north of Mexico City. Archaeologists digging inside the Pyramid of the Moon in ancient Mexico's biggest ceremonial center have uncovered what could be a pre-Columbian civilization even older than the mysterious Teotihuacanos.

The archaeological team said Tuesday that the pyramid was built on top of the remains of at least three buildings, one of which contained a human skeleton surrounded by funeral offerings and other artifacts. "It could be very important, once we find out more", said Saburu Sugiyama, a Japanese-born archaeologist from Arizona State University. He said the bones were in good condition, buried in a sitting position. The tomb was discovered by accident 11 days ago, Sugiyama said. Teotihuacan, in the valley of the same name 30 miles north of Mexico City, used to be a thriving city and ceremonial center that predated the Aztecs by several centuries.

Few Clues of Civilization - But very little is known about it. Investigators have studied the pyramids and buildings close by, artifacts and a few pictographs, but no hieroglyphs or other writings of any kind. No one knows what their language was. Teotihuacan began declining sharply around 650 AD, and was almost completely abandoned around 750 AD. No one knows why.

The skeleton is still half-buried, and its gender and age have not been determined. Sugiyama said a rough guess would place the skeleton between 100 and 150 AD. Around 150 artifacts have been found in the tomb, including figurines, ceramics, statuettes, jade carvings and obsidian pieces.

Important, But How and Why? - "It must have belonged to somebody important, because of the amount and quality of funeral offerings surrounding it", Sugiyama said. Although mummies and other human remains have been uncovered in pyramids in Egypt and elsewhere, human remains deep inside a Mexican pyramid have been almost unheard of. The step-pyramids were built mainly to give height to stone temples where they made sacrifices and worshiped the gods.

Ancient Clam Bake

Geologists at the University of Delaware have successfully used ground penetrating radar (GPR) to measure a midden site on an upland surrounded by a saltwater marsh at Cape Henlopen in Delaware. Previously, the technique had not been used in coastal marsh areas because GPR signals do not effectively penetrate salt water. Because of its proximity to the marsh, it was thought that the ground water at the site was salty. GPR allows archaeologists to identify underground features non-invasively. The process involves sending an electromagnetic pulse from an antenna into the ground which reflects back to a receiver. Different layers in the ground are identified by the changes in the electrical properties of the signal, and the time it takes for the signal to return is used to determine depth. A profile is generated as the antenna is moved along the surface.

The Cape Henlopen site has been profiled down to depths of roughly 25 feet. The shell midden is six feet deep, 90 feet long, and 60 feet wide, and it is underlain by Holocene sand. The GPR reading will be confirmed by archeological excavations at a future date.

The site, which dates to between A.D. 1000 and 1600, was discovered by the Delaware Department of Natural Resources and Environmental Control in 1976 and is listed on the National Register of Historic Places. Items found on the surface of the shell mound include pieces of pottery, stone tools, and fire-cracked rock. It is thought that Native Americans waded into the water and collected seafood, then heated rocks to drop into pots, cooking the meat. There were many such coastal shell middens when European settlers first arrived, but nineteenth-century farmers, after a suggestion by geologists, used them to fertilize their fields.

William J. Chadwick, a graduate student at the University of Delaware, is using the GPR information in his study of the deposition of shell middens and the evidence of sea-level changes during the evolution of Cape Henlopen over the past 2000 years.

Excavation Opportunity

I am looking for three experienced amateur archaeologists to participate in an Upper Paleolithic excavation in Southern Spain next June/July. The program is two weeks long and involves digging and recording Magdalenian Cultural materials. You pay tuition and travel expenses. Detailed information is available on my webpage at:

www.geocities.com/rainforest/vines/7010/spain99

If interested please contact: Dr. Bruce Bradley
P.O. Box 534
Cortez, Colorado 81321
(970) 565-7618

Membership Renewals

The following members have renewals due in February:

Tracey and Bruce Derheim, Carolyn C. Hansen, and Elaine Hill.

The following members have renewals due in March:

Jim Chase, Paula M. Edwards, Jeannie Hamilton, Frank Hauke, Kris Holien, Hal Ravesloot, Dock Teegarden

The Calumet - 15 Years Ago

The January, 1984 regular meeting featured Mr. Ivol Hagar who gave his postponed November, 1983 presentation on "Front Range Archaeology". The November meeting was canceled because of a snowstorm and the December meeting was canceled because so many members were traveling. The January, 1984 meeting featured the approval of a slate of officers and other issues that had been delayed because of the meeting cancellations. Steve Cassells was planned as the February, 1984 speaker.

The Calumet - 10 Years Ago

The January, 1989 regular meeting was held at the Erie UMC Fellowship Hall and the speaker was Dr. Susan Collins. Dr. Collins spoke on "Architectural Geometry of Mesa Verde Great Pueblo Structures". Leni Clubb contributed an article describing three elaborately carved spear throwers from France, (15,000 to 10,000 BP). Memberships were \$15 for individuals and \$22 for families. The new officers were:

| | | | |
|----------------|--|------------------|--|
| President | William Maxson | Librarian | Larry Riggs |
| Vice-President | William Boyle | Prof. Advisor | Sue Struthers |
| Secretary | Ann Phillips | Field Directors: | Bob Mutaw, Larry Riggs, Sue Struthers, William Maxson |
| Treasurer | Jeannie Hamilton | PAAC Coord. | Ann Pipkins |
| Directors: | Leni Clubb, Lee Lacey, Richard and Sue Lippincott | Calumet Editor | Richard Lippincott |
| CAS Rep. | Sue Struthers | | |

The Calumet - 5 Years Ago

The January, 1994 regular meeting featured Kenny Frost, who presented the topic, "Sacred Sites, Ancestral Graves and the Archaeology of an 8,000 year old skeleton found in the Colorado Mountains. The meeting was held at NIST Auditorium. Ann Hayes, 1993 IPCAS President, wrote a long article about the past year's projects and identified the numerous members that had provided assistance to her and the chapter. Chapter officers for 1994 were:

| | |
|----------------|---|
| President | Steve Montgomery |
| Vice-President | Ken Larson |
| Secretary | Maureen Arthur |
| Treasurer | Jeannie Hamilton |
| Directors: | Pam Baker, Leni Clubb, Ann Hayes, Sue Lippincott, Hilary Reynolds, Dock Teegarden |
| CAS Rep. | Bob Powell |
| Prof. Advisor | Bob Mutaw |
| Project Info. | Laura Viola |
| PAAC Coord. | Janet & Morey Stinson |
| Calumet Editor | Ed Grefrath |

1999 Officers and Board Members

| | | | |
|----------------------|------------------------|----------------|---------------------------------|
| President | Unfilled | | |
| Vice-President | Jim Morrell | (303) 652-2874 | jmorrell@gateway.net |
| Treasurer | Dick Owens | (303) 650-4784 | yankee_clipper@email.msn.com |
| Secretary | Cheryl Damon | (303) 678-8076 | cherdam@compuserve.com |
| CAS Representative | Cindy Miller | (303) 415-9564 | cindy@sni.net |
| Professional Advisor | Dr. Robert Brunswig | (970) 351-2138 | rhbruns@bentley.univnorthco.edu |
| Project Information | Piper Prillaman | (303) 988-0814 | dyggum@aol.com |
| PAAC Coordinator | Morey/Janet Stinson | (303) 530-7727 | mstinson@cris.com |
| Internet Manager | Doak Heyser | (303) 678-5728 | doak@indra.com |
| Calumet Editor | Tom Cree | (303) 776-7004 | tlc@lanminds.net |
| Membership Director | Mac Avery | (303) 499-3455 | averycompany@sprintmail.com |
| Board Member | Michael Braitberg | (303) 443-7190 | mbrait@ix.netcom.com |
| Board Member | Leni Clubb | (760) 358-7835 | leniwaa@inreach.com |
| Board Member | Kristine Holien | (970) 586-8982 | kris_holien@nps.gov |
| Board Member | Ken Larson | (303) 469-2228 | kglarson@ix.netcom.com |
| Board Member | Hilary Reynolds-Burton | (303) 530-1229 | hilary@landbridge.com |
| Board Member | Donna Shay | (303) 443-3273 | |
| Board Member | Russell Smith | (303) 776-5503 | rdsmith@lanminds.net |

Please check the club web-site at: <http://www.coloradoarchaeology.org>

| MEMBERSHIP APPLICATION - INDIAN PEAKS CHAPTER | | |
|---|-------------------------------|-------------------|
| ___ Individual \$25 / Year | ___ New | _____ Date |
| ___ Family \$28 / Year | ___ Renewal | |
| NAME _____ | TELEPHONE (____) _____ | |
| ADDRESS _____ | E-MAIL _____ | |
| CITY _____ | STATE _____ | ZIP _____ |
| Please make check payable to: | Indian Peaks Chapter, CAS | |
| Mail to: | PO Box 18301 | |
| | Boulder, CO 80308-1301 | |
| When you join or renew you will receive the <i>Calumet</i> , our monthly newsletter, and <i>Southwestern Lore</i> , the quarterly publication of the Colorado Archaeological Society. | | |
| And you will have opened the door to Colorado Archaeology. | | |

CALUMET

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of the Colorado Archaeological Society
P.O. Box 18301
Boulder, CO 80308-1301

