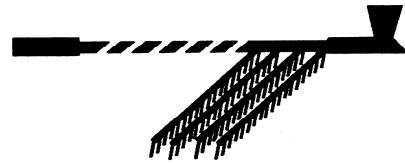


CALUMET

CONSERVATION
EDUCATION

PRESERVATION
EXPLORATION



Newsletter of the Indian Peaks Chapter of the Colorado Archaeological Society
December, 2005

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.

December 1	PAAC Lab at Lowry, See Page 2.
December 7	PAAC Class (session 6 of 7)
December 9,10	PAAC Lab at Lowry, See Page 2.
December 12,13	PAAC Lab at Lowry, See Page 2.
December 14	PAAC Class (session 7 of 7)
December 16,17	PAAC Lab at Lowry, See Page 2.
January 5	Executive Board Meeting, 7:30PM at The Atrium.
January 10,11	PAAC Lab at Lowry, See Page 2.
January 12	Presentation Meeting – Dr. Bob Brunswig. Topic is “Roman Archaeology in Roman Gaul”.
January 13,14	PAAC Lab at Lowry, See Page 2.
January 18,19	PAAC Lab at Lowry, See Page 2.
January 25,26	PAAC Lab at Lowry, See Page 2.
February 2	Executive Board Meeting, 7:30PM at The Atrium.
February 9	Presentation Meeting – Steve Holen. Topic is To Be Determined.
March 2	Executive Board Meeting, 7:30PM at The Atrium.
March 9	Presentation Meeting – Dr. Nicole Waguespack. Topic is “Recent Excavations at Barger Gulch”.

Inside This CALUMET	
Calendar of Events	1
Membership Renewals	1
Annual Christmas Party	2
Officers for 2006	2
Denver Lab Project	2
Getting The Point	3
Ancient Church Site	4
Costa Rica Excavations	5
Chaco Canyon Analysis	6
Fort Raleigh NHS	7
Executive Board Minutes	9
Officers/Board Members	10
Membership Application	10

Membership Renewals

Expired in July: Russell D. Smith

Expired in August: James Egarton

Expired in October: Wayne Gilbert Jr., Jeannie Hamilton, William Jones, Richard Owens, Laura Viola

Renewed in August: Joanne Morgan

New in September: Robin Hardin and Sara Michl

Renewed in October: Tom Cree, Cheryl Damon, Piper Prillaman Herron, Ken Larson, and John & Kathy Wilson

Glad you are with Indian Peaks!

Annual Christmas Party

The IPCAS Holiday Party will begin at 6:30 PM Thursday, December 8, at The Atrium, southeast corner of 30th and Iris. Parking is available along Iris to the north and in the merchant parking lot across 30th.

Our Christmas Party is a potluck dinner and fun get-together. The club provides the table service, utensils, and the beverages. Each person (or couple) attending brings one main dish and one salad/dessert to share. Plan on 25 people attending.

We also feature the White Mammoth Exchange. Each person brings a wrapped gift for exchange. Gifts should be something that you no longer need, no longer want, and are tired of looking at. Not-so-great gifts are the norm. The White Mammoth Exchange is very exciting and a fun end to our program year.

Newly Elected Officers and Board Members

At our regular meeting in November, the following people were elected as Officers and Board Members:
Co-Presidents - Cheryl Damon and Kris Holien, Secretary - Christine O'toole, Treasurer - Rick Pitre (until January, 2006), Professional Advisor - Dr. Robert Brunswig, Calumet Editor - Tom Cree, Internet Manager - Piper Herron, PAAC Coordinator - Jim Morrell, CAS Representative - Reggie Hofmaier, Archivist/Librarian - Kris Holien, Board Members - Pete Gleichman, Jeff Ferguson, and Joanne Turner.

We will need a replacement for Rick Pitre in January. It would be nice to have another couple Board Members.

Denver Lab Project

The Office of Archaeology and Historic Preservation (OAHP) has archaeological collections that have yet to be completely processed for permanent curation. PAAC volunteers may receive credit toward certification at either the Laboratory Trainee or Laboratory Technician level by helping the State Training Coordinator in the cataloguing and analysis of these materials.

The lab work is held at the Colorado Historical Society's Museum Support Center in east Denver (MSCD), typically on intermittent days in December and January. Dates and times are 8:30AM to 4:30PM on:

December 1, 9, 10, 12, 13, 16, and 17, 2005;

January 10, 11, 13, 14, 18, 19, 25, and 26, 2006.

All supervised hours spent with specific materials in the collections apply toward the 40 hours of lab time required for certification. While the collection includes a variety of prehistoric and historical materials, a large majority is lithic (flaked stone and ground stone artifacts).

Prerequisite Courses:

No prior experience is required in most instances. However, lab space and equipment for volunteers is limited, so if too many PAAC participants wish to volunteer on a scheduled lab day, preference will be given to those volunteers who have already earned the Lab Trainee certificate and are working toward the Lab Technician certificate, and others who have completed one or more of the following courses:

a. [Introduction to Archaeology, CAS & PAAC](#)

b. [Introduction to Laboratory Techniques](#)

c. [Prehistoric Lithics Description and Analysis](#)

Requirements:

Prospective volunteers must complete the [PAAC Candidate Application Form](#) (PDF), and should be prepared to participate on a minimum of two days. Contact the State PAAC Coordinator at 303-866-4671 or

kevin.black@chs.state.co.us .

Getting the Point Hammer Stone



The sides of the *Hammer Stone* have been pecked smooth to make it easier to handle.



The pictures above are of a *Hammer Stone* made of granite. The *Hammer Stone* (sometimes called a cone pestle) is from the state of Washington and shows the damage from a lot of use. It is a two-pound, hand tool that was probably used to crush berries or crack nuts. And pound other things... like below.



Archaeologists unveil ancient church site in Israel **Ramit Plushnick-Masti, The Associated Press**

Megiddo Prison, Israel - Israeli prisoner Ramil Razilo was removing rubble from the planned site of a new prison ward when his shovel uncovered the edge of an elaborate mosaic, unveiling what Israeli archaeologists said Sunday may be the Holy Land's oldest church.

The discovery of the church in the northern Israeli town of Megiddo, near the biblical Armageddon, was hailed by experts as an important discovery that could reveal details about the development of the early church in the region. Archaeologists said the church dated from the third century, decades before Constantine legalized Christianity across the Byzantine Empire. "What's clear today is that it's the oldest archaeological remains of a church in Israel, maybe even in the entire region. Whether in the entire world, it's still too early to say", said Yotam Tepper, the excavation's head archaeologist.

Israeli officials were giddy about the discovery, with Prime Minister Ariel Sharon calling the church, "an amazing story". Vatican officials also hailed the find. "A discovery of this kind will make Israel more interesting to all Christians, for the church all over the world", said Archbishop Pietro Sambi, the Vatican envoy to Jerusalem. "If it's true that the church and the beautiful mosaics are from the third century, it would be one of the most ancient churches in the Middle East.

Razilo, who is serving a two-year sentence for traffic violations, was one of about 50 prisoners brought into the high-security Megiddo Prison to help excavate the area before the construction of new wards for 1,200 Palestinian prisoners.

Arenal Region, Costa Rica

From www.ghcc.msfc.nasa.gov/archeology/arenal.html

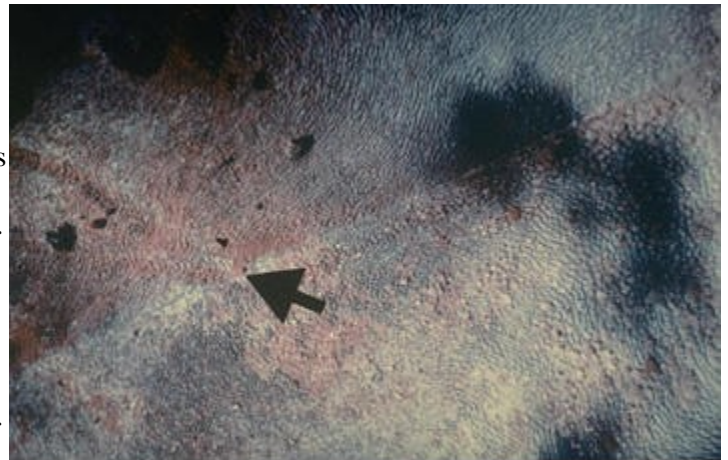
Payson Sheets (IPCAS member), an archeologist from the University of Colorado had a National Science Foundation grant to excavate prehistoric villages in Costa Rica. Devastated by ten volcanic eruptions over the past 4000 years, these villages were preserved to some extent under layers of ash.

As a result of the First Remote Sensing Conference in Archeology in 1984, Tom Sever of NASA joined Sheets's research team to investigate the utility of remote sensing technology in a tropical environment. NASA initiated two series of overflights using a specially equipped Learjet that flew about 1000 ft. high. With the completion of the second series, in the Spring '85, the remote sensing database included:

- color and false-color infrared photographs,
- thermal data from TIMS ,
- two bands of synthetic aperture radar data,
- light-detection and ranging (lidar) data, and
- seven spectral bands from Landsat's Thematic Mapper.

This was one of the most extensive remote sensing databases created for archeology to that time.

Linear features were detected in the color infrared photographs. First thought to be roadways, they seemed to be several feet wide at the surface, upon excavation, they turned out to be footpaths, the oldest known footpaths. Using excavation and dating techniques, it was determined that there were two time periods for the footpaths. The earliest dated to 500 BC (2500 years ago). The faint lines indicating footpaths on the infrared photographs could only be seen in open pasture lands. Later, TIMS was used to discern the footpaths beneath the thick forest canopy. The footpaths can be seen as a window into the culture's religious, economic, political and social organization. As people travel along paths, for a variety of objectives including transportation, communication, and ritual, they leave behind them the record of their presence. This is an aspect of behavioral archeology, the study of prehistoric features to understand networks of human activity and their underlying reasons for those activities.



Color Infrared Photograph showing suspected road.



Excavation of a remotely sensed footpath.



Tom Sever & Payson Sheets on a prehistoric footpath.



Jungle canopy under which the prehistoric footpaths are located.

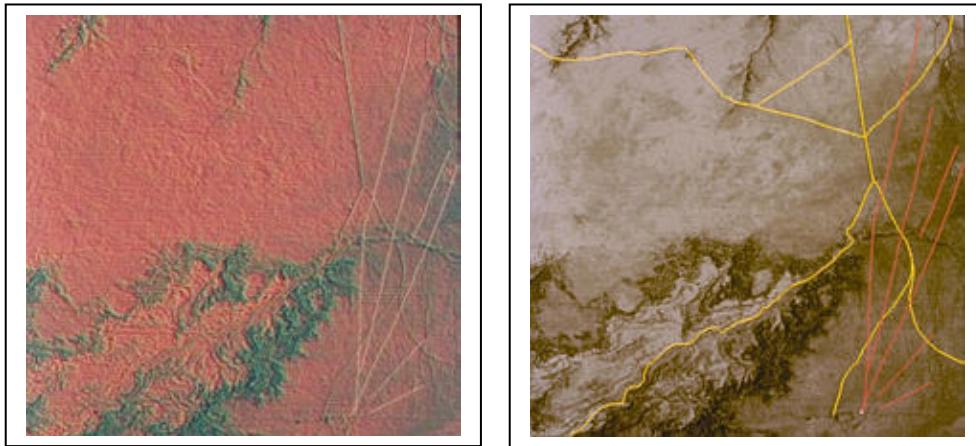
A wandering people lived around Arenal as early as 10,000 BC, finally settling permanently on the nearby lakeshore around 2000 BC. The people raised corn and beans and got the rest of their diet from wild crops. The population never grew large enough to require extensive agriculture. This allowed them to survive the eruptions of the Arenal volcano. After an eruption, the people would move 15 or so miles away, and return once crops began to grow again. This resiliency was probably a direct result of the Arenal people's simplicity; a small society in balance with the tropical ecology could bounce back more easily than could a civilization as complex as the Maya. In the end it was likely an epidemic, not an eruption, that doomed the people of Arenal at about the time of the conquistadors.

Chaco Canyon, New Mexico

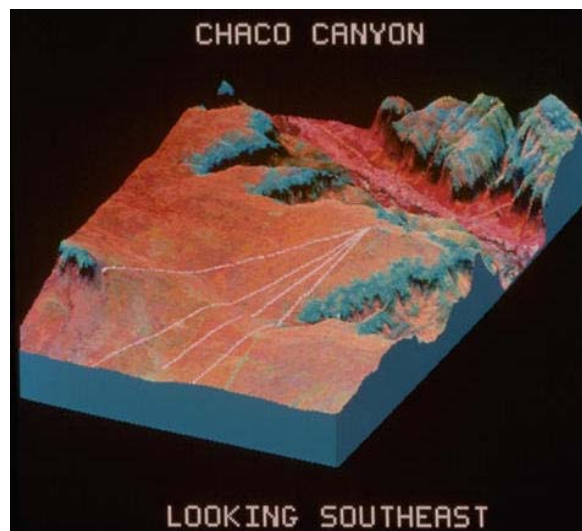
From www.ghcc.msfc.nasa.gov/archeology/chaco.html

The Chaco Canyon Research Center had done aerial photography and a ground survey. This was the beginning of an archeological database, to which, we proposed to add thermal infrared multispectral data. If our sensors could locate prehistoric features, this would prove that using remote sensing technology could work for archeology.

The Thermal Infrared Multispectral Scanner (TIMS) was flown by NASA over Chaco Canyon for the first time in spring of 1982. TIMS measures temperature differences near the ground, it has five meter resolution. Prehistoric roads from 900 or 1000 AD were detected. The roads could not be discerned by the naked eye from ground level. They also could not be seen in either aerial photography or color infrared photographs. Three more flights over Chaco detected over 200 miles of a prehistoric roadway system, as well as prehistoric walls, buildings, and agricultural fields. It may be that Chaco Canyon was a social and religious center. People were coming exchanging ideas, practicing ritualistic activities, such as breaking pottery, and then returning to whence they came. Why were the Chaco roads designed with exacting linearity, which surmounted any topographic obstruction, built to a width of 20 feet or more, and constructed by people who did not even employ beast of burden in their lives? The Chacoan roadway system was an impressive accomplishment that facilitated widespread movement and participation in religious activities. They connected the people along the periphery of the San Juan Basin and beyond to sacred places upon the landscape, to outlier sites, and ultimately to Chaco Canyon itself.



The images above, shows two false color composites of TIMS data. The Chacoan roads are the linear features fanning out from the lower right hand corner. The yellow lines are current day roadways. The current roads follow topography, and the path of least resistance in construction. Conversely, the prehistoric roads are strikingly linear. The image below combines TIMS data with topographic features.



Archaeological Investigations Renewed at Fort Raleigh National Historic Site

All Fort Raleigh Information found at <http://www.nps.gov/fora/> and in Newspaper Articles

MANTEO, NC - A team of archeologists for the National Park Service's (NPS) Southeast Archeological Center is taking a close look at park grounds on the north end of Roanoke Island. The archeological survey is the first part of a multi-year archeological survey designed to investigate a portion of the 202 acres of land acquired in the mid-1990s as a result of Public Law 101-603. The project is not intended to specifically look for evidence of the early English settlement for which the park was founded. Rather it will focus on several other historic resources thought to be present in the park's newly acquired lands-including remains associated with the Civil War period, the Freedmen's Colony, and a Works Project Administration (WPA) work camp. The survey is intended to locate, identify, and evaluate these and any other sites encountered, including any prehistoric occupations.

Working closely with the Outer Banks NPS Group resource management staff, Archeologists Lou Groh, David Brewer, Robert Abbott, and Bill Andrus will be systematically investigating the area by shovel testing, metal detection and other remote-sensing techniques, including ground-penetrating radar, all referenced by a global positioning system unit.

The archeological survey is part of the NPS Southeast Regionwide Archeological Survey Program, a component of the Service's Systemwide Archeological Inventory Program. This is the type of project that can be funded in the future by the Fee Demonstration Program in which the Outer Bands NPS Group has just recently been included

Archaeologists Return to Fort Raleigh with Ground Penetrating RADAR

MANTEO, NC-Archeologists from the National Park Service's Southeast Archeology Center (SEAC) have arrived at Fort Raleigh National Historic Site to renew investigations meant to reveal below ground cultural resources. This effort, a follow-up to last April's archeological investigation of newly acquired park lands on the north end of Roanoke Island, is the second part of a multi-year archeological survey designed to investigate a portion of the 202 acres of land acquired in the mid-1990s pursuant to Public Law 101-603.

Ground penetrating radar will be used for the first time at the historic park to search the soil in an area extending from the Elizabethan Gardens to the Waterside Theater and from the earthen fort to the Albemarle/Roanoke Sound. Recordings from the radar will provide archeologists with underground anomalies that could indicate the presence of artifacts or identify patterns of soil disturbance associated with formally inhabited sites. The radar can penetrate to a depth of at least 25 feet. Original ground levels in areas associated with the 1587 "lost colony" have been covered with accumulations of 10 - 15 feet of sand in several park locations. Identified anomalies may provide archeologists prime locations for future exploratory excavation.

The SEAC Team is composed of Archeologists Lou Groh, Robert Hellmann, Tyler Cremeens, and Bill Andrus. They will be systematically using the radar on a grid pattern and will investigate other portions of the park by systematic shovel testing. The archeological survey is part of the NPS Southeast Region-wide Archeological Survey Program, a component of the Service's System-wide Archeological Inventory Program. This is the type of project that can be funded in the future by the Fee Demonstration Program in which the Outer Bands NPS Group has just recently been included.

The Civil War Comes To Roanoke Island

The Outer Banks of North Carolina were the setting for important conflicts during the Civil War. Union victories at Hatteras Inlet and Roanoke Island early in the war placed the area under Federal control and extended their blockade of the southern coast.

The federal campaign began on August 27, 1861 with an amphibious assault by Commodore Silas Stringham and General Benjamin Butler on two small and lightly defended forts at Cape Hatteras. The Confederate government had placed a higher priority on the conflicts in Virginia, and thus had made little effort to outfit and maintain these forts.

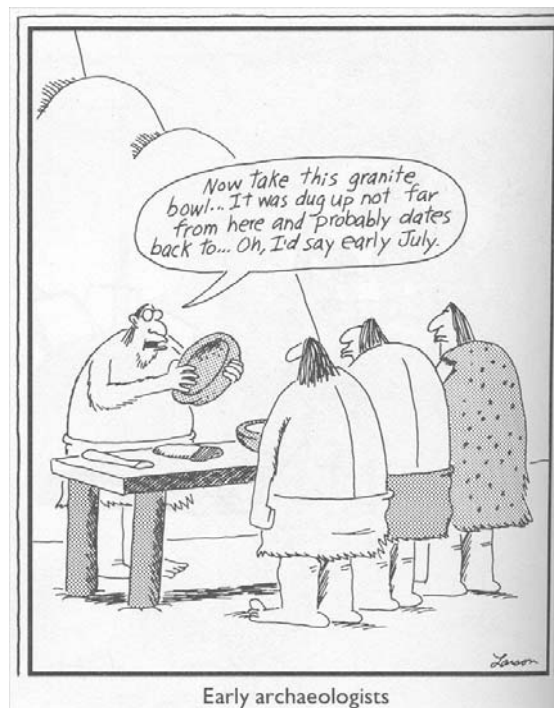
The poorly-trained and poorly-equipped Confederate militia and recruits manning them were also plagued by thirst and mosquitoes. The Federals took both forts in less than 48 hours, and not one Union soldier was killed. The entire Pamlico Sound north to Roanoke Island was now open to Union activity, and for the Confederates the great highway linking coastal shipping to the rivers of interior North Carolina was beginning to close.

A few months later, the Union assembled another fleet, this time for an attack on Roanoke Island. Since the fall of the Hatteras forts, the Richmond government had done little to strengthen the defense of Roanoke Island. There were three small earthen forts on the island, with a fourth position west of the island across Croatan Sound (north of the current Manns Harbor Bridge). Because the Confederate general staff was expecting a Union attack from the north, most of their artillery pieces were pointed in that direction and could not be turned to face an attack from the south, up Pamlico Sound. Due to the Confederate government's commitment to the defense of Richmond, only 1400 soldiers were made available to hold the strategically important island.

After struggling south from Annapolis, MD through a series of winter storms, Union General Ambrose Burnside led a fleet of 67 ships and 13,000 men through Hatteras Inlet and dropped anchor off the western shore of Roanoke Island on February 5th, 1862. He landed 4000 soldiers at Ashby Harbor and after sloggng through the swamps assaulted the Confederates' makeshift position near today's intersection of U.S. 64 and N.C. 345. On Croatan Sound, the South's five-vessel "Mosquito Fleet" harried the Union ships as best it could, but it was badly battered and quickly driven north out of range.

The island's inexperienced defenders fought tenaciously behind their earthen fortifications but were eventually outflanked and overwhelmed by Burnside's veterans. Few on either side were killed, and the Union forces eventually captured the entire Southern defense contingent.

The "Mosquito Fleet" temporarily escaped to the north, but was destroyed a few days later in a battle near Elizabeth City. The Union now controlled North Carolina's sounds and access to the state's interior shipping routes. It was a devastating loss. The Federal campaigns on the Outer Banks helped accomplish President Lincoln's goal of a blockade of the Confederacy's coastline, and helped foster cooperation and coordination between the Union's Army and Navy. Today, only one of the Confederate defensive sites is accessible to visitors. Remnants of the ramparts near the U.S. 64-N.C. 345 intersection can be seen and parking is available about 100 yards south of the intersection. The three island forts, either worn down over the years or washed away into Croatan Sound, are commemorated by historic plaques and street names throughout Roanoke Island.



Executive Board Meeting

November 3, 2005

Meeting called to order at 7:30 PM at the Atrium in Boulder.

Attendees: Kris Holien, Tom Cree, Joanne Turner, Christine O'Toole, Rick Pitre, Reggie Hofmaier

Secretary's report read by Christine O'Toole. Accepted with amendments.

Treasurer's Report (Pitre):

Received money from garage sale

We will receive \$170 to \$180 from the PACC class

Paid honarium to November speaker

No other expenses before end of year except Christmas Party

President's report (Holien) :

Kris spoke to Bill Butler. He enjoyed speaking to our group. Kris wanted to know if the group would like her to ask Bill if we could become involved as site stewards for archaeological sites in RMNP. Lava cliffs, Trail Ridge game drives, aspen art may be possibilities. The Board agreed that this was a great idea and Kris will pursue it.

We need to locate the white board for the elections at the monthly meeting next week.

We need someone to provide refreshments for monthly meeting. Tom Cree volunteered.

Kris suggested that we not meet as a Board in December and instead do planning for Christmas party via email. Members thought that could work.

Old business:

Our speaker scorecard is covered for January and February

New business:

Rick will email the CU museum and reserve space for all of 2006 and pay for the first 5 months

Kris will reserve Atrium space for 2006

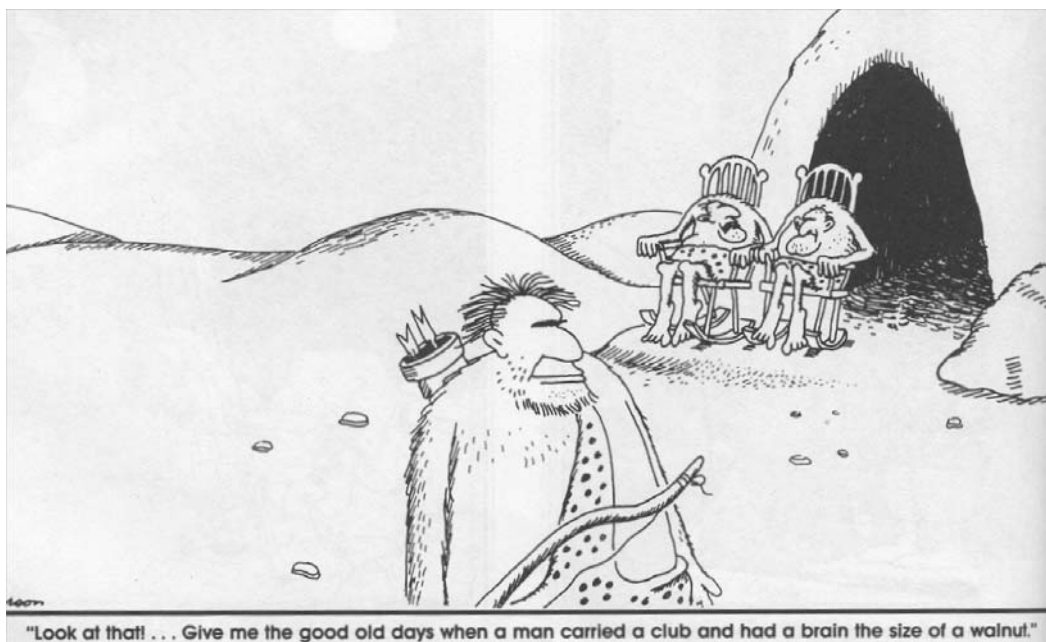
Next monthly meeting we need to do elections. Everyone on the board agreed to run again except

Rick, who can only do the first 3 months of 2006. Then we will need to find a new treasurer. It works best if it is someone that lives in Boulder due to location of PO Box and bank account.

We need to poll the membership to determine what PACC class to do in the spring and also bring a sheet to the current PACC class.

Open floor: none

Meeting adjourned at 9:00 PM - Christine O'Toole, Secretary -



2005 IPCAS Officers, Board Members, and major functions

Co-President	Cheryl Damon	(303) 678-8076	cherdam@cs.com
Co-President	Kris Holien	(970) 586-8982	kjholien@aol.com
Secretary	Christine O'toole	(303) 776-3458	mountainzznsky@yahoo.com
Treasurer	Rick Pitre	(303) 673-0272	rpitre@kryos.colorado.edu
Professional Advisor	Dr. Robert Brunswig	(970) 351-2138	robert.brunswig@unco.edu
Calumet Editor	Tom Cree	(303) 776-7004	tomcree@earthlink.net
Internet Manager	Piper Herron	(303) 988-0814	codirtnerd@comcast.net
PAAC Coordinator	Jim Morrell	(303) 678-7642	j.s.morrell@att.net
CAS Representative	Reggie Hofmaier	(720) 684-1181	reginald.hofmaier@seagate.com
Archivist/Librarian	Kris Holien	(970) 586-8982	kjholien@aol.com
Board Member	Pete Gleichman	(303) 459-0856	pjgleichman@yahoo.com
Board Member	Jeff Ferguson	(720) 890-2708	fergusonjeff@hotmail.com
Board Member	Joanne Turner	(303) 494-7638	joanne.turner@colorado.edu

Please check the chapter web-site at: <http://www.indianpeaksarchaeology.org>

MEMBERSHIP APPLICATION - INDIAN PEAKS CHAPTER			
<input type="checkbox"/>	Individual	\$28.50 / Year	<input type="checkbox"/> New _____ Date
<input type="checkbox"/>	Family	\$33 / Year	<input type="checkbox"/> Renewal
<input type="checkbox"/>	Student	\$14.25 / Year, with Calumet delivery by e-mail	
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.			

CALUMET

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