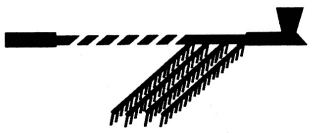
CALUMET



Newsletter of the Indian Peaks Chapter of the Colorado Archaeological Society
March, 2010

CALENDAR OF EVENTS

Presentation (lecture) meetings are held in the University of Colorado Museum, Dinosaur Room on the Second Thursday of most Months, at 7:00 PM. **The public is always welcome**.
Web Site: WWW.INDIANPEAKSARCHAEOLOGY.ORG

March 4	IPCAS Executive Board Meeting, 7:30
March 10	CU Lecture Series, CU Museum, 7:00, Beth Dusinberre, Topic: "The Achaemenid Empire"
March 11	**IPCAS Presentation Meeting,** Bob Brunswig and Fred Sellet, Topic: A Potpourri of Archaeological Research at UNC and Beyond, See Page 2
March 26-28	CCPA Annual Meeting, Montrose
March 27	CAS Quarterly Meeting, Montrose
March 27	Loveland Archaeological Society Fair, Poudre Valley REA Building, Windsor
April 1	IPCAS Executive Board Meeting, 7:30
April 15	**IPCAS Presentation Meeting,** Dr. Arthur Joyce, Topic: Rio Viejo Site, Oaxaca, Mexico
>>>>>>	**NOTE UNUSUAL MEETING DATE!**
May 6	IPCAS Executive Board Meeting, 7:30
May 13	**IPCAS Presentation Meeting**, TBA
May 14-16	CRAA Rock Art Symposium and Annual Meeting, Trinidad
June 22-28	CAS Trip to Easter Island
June 29-July 11	CAS Trip to Northern Peru and the Sacred Valley
July 24	CAS Quarterly Meeting, Cortez
September 2	IPCAS Executive Board Meeting, 7:30
September 9	**IPCAS Presentation Meeting**, TBA
October 7	IPCAS Executive Board Meeting, 7:30
October 14	IPCAS Presentation Meeting**,** Alice Tratebas, Newcastle, Wyoming BLM Topic: Whoop-up Canyon - dating, fire damage, and finished photogrammetry.
November 4	IPCAS Executive Board Meeting, 7:30
November 11	**IPCAS Presentation Meeting**, TBA
December 2	IPCAS Executive Board Meeting, 7:30
December 9	**IPCAS Christmas Party**, TBA

Inside This CALUMET

March Topic

A Potpourri of Archaeological Research at UNC and Beyond

The University of Northern Colorado has been a leader in Colorado Archaeology for more than two decades. Its on-going research programs include a major cultural landscapes project in North Park Valley, Sacred Landscapes field and Geographic Information Systems (GIS) modeling studies in Rocky Mountain National Park, and a new Northwest Colorado Paleoindian Research Project headed by Dr. Fred Sellet, in Moffat and Rio Blanco counties and beginning in spring 2010. A new appointment of Dr. Sellet to the University of Kansas opens new opportunities for UNC and KU to collaboratively expand and enhance archaeological research agendas in the state. At the same time, an emerging research project involving Dr. Brunswig in the Carpathian Mountains of Poland and Slovakia will widen the breath of UNC archaeology with an international dimension. This talk will briefly explore current results and expanding dimensions of UNC's potpourri of research.
[And probably present volunteer opportunities at their projects. –Tom]

Bio-Bob Brunswig

Dr. Bob Brunswig is Professor of Anthropology and Director of UNC Center for Engaged Research & Civic Action (CERCA). His research and publication record ranges from southern and eastern Europe, the Arabian Peninsula, Pakistan, and the western United States, focusing on reconstruction of ancient landscapes and cultural adaptation associated with paleoclimatic and ecological change. He has authored more than 100 professional publications, including his most recent co-edited book on Colorado Paleoindian Archaeology (2007). Bob's awards for funded research and scholarship include UNC's University Distinguished Scholar Award and its Distinguished Achievements in Sponsored Programs Award.

Bio-Fred Sellet

Dr. Fred Sellet is Assistant Professor of Anthropology and specializes in lithic technology and Paleoindian Archaeology. He has published more than a dozen peer-reviewed articles (American Antiquity, Current Research in the Pleistocene…) and co-edited a book on hunter-gatherer ethnoarchaeology and mobility (University of Florida Press). He is a former Smithsonian Institution Senior Fellow and recently received the UNC College of Humanities and Social Sciences College Scholar Award.

February Presentation Meeting

Trying to get the computer to talk to the projector. "How many Archaeologists does it take to …"

Bob Rushforth presentation on Crash-Site Archaeology

Changes Are Planned for the IPCAS By-Laws

The Officers and Board of Directors have been working on some modifications to the IPCAS By-Laws. The changes occur in two areas because: IPCAS will follow the recommendation of the Colorado Archaeological Society (CAS) that all memberships begin on January 1 of any year and continue to December 31. This means that memberships for the each calendar year will be due on January 1. A prorated schedule for current members is being planned and a prorated schedule for new members joining during future years will be established also. Changes in the By-Laws will be required for this modification. An email or letter will be sent to inform you of your dues for 2010.

A change will also be made to require a yearly audit of the IPCAS financial transactions, also suggested by CAS.

A copy of the current IPCAS BYLAWS follows.

BYLAWS
(Revised April 2007)

ARTICLE I. NAME
The name of this organization shall be Indian Peaks Chapter, Colorado Archaeological Society.

ARTICLE II. PURPOSE
The Indian Peaks Chapter, Colorado Archaeological Society (the Chapter) is a non-profit organization existing for the purpose of maintaining and promoting the goals of amateur and professional archaeology in the State of Colorado. These goals shall include, but not be limited to:

A. Establishing and promoting high standards of archaeological research, documentation, reporting and resource management.

B. Establishing and promoting mechanisms to represent archaeological interests in political and public forums, including increased state and federal recognition.

C. Promoting education and interest in the fields of archaeology and resource management for both the chapter membership and the public.

D. Adhering to the Constitution of the Colorado Archaeological Society (C.A.S.) of which this organization is a recognized member chapter.

ARTICLE III. MEMBERSHIP
A. Any person, interested in the field of archaeology and agreeing with the purposes of this chapter and those of the C.A.S., is eligible to become a member .

B. Membership period is for twelve months, beginning on the date dues is first paid and ending an the anniversary date thereof, concurrent with membership in the Colorado Archaeological Society.

C. Voting rights: All individual members and all family members over the age of 14 shall have one vote each.

D. Chapter dues shall be established by the Executive Board in accordance with class of membership, subject to annual review, payable by the anniversary data of a member's joining of each year, and shall include C.A.S. membership dues.

ARTICLE IV. OFFICERS
A. The officers of this chapter shall be

1) President,
2) Vice President,
3) Treasurer,
4) Secretary, all to be elected by the membership.

B. The officers and committee chairmen, including the directors, shall comprise the Executive Board and have the power to vote on all issues which come before the Executive Board.

C. The President and the Executive Board shall have the power to appoint committee chairmen and committeemen, or additional positions as they see fit. The committee chairmen include but are not limited to: Historian/Librarian, Publicity, Membership Secretary, Newsletter Editor, Field Director/s, C.A.S. Representative, Archaeological Advisory Committee Representative, Professional Advisor, Project Information Officer, PAAC Coordinator. and at least four Directors.

D. The elected officers shall perform the following duties:

1. President
    a. Presides over all regular chapter and Executive Board meetings.
    b. With the Executive Board, appoints various positions in the Chapter, including Executive Board vacancies.
    c. Insures the satisfactory performance of fellow officers and appointees.
    d. Serves as a member of the Board of Directors of C.A.S.
2. Vice President
    a. Performs the President's duties in that officer's absence.
    b. Arranges and presents each monthly chapter program.
    c. Arranges special events and appoints assistants as necessary.
    d. Arranges for PAAC classes with the PAAC Training Coordinator.
    e. Collects, deposits, dispences and reports all moneys connected with special events and makes final written report to the Treasurer and Executive Board.
3. Treasurer
    a. Collects and records all funds, deposits and disburses funds and presents an itemized statement of chapter finances at each Executive Board meeting.
    b. Responsible for forms and reports of finances of the chapter to be made to the State C.A.S.
4. Secretary

a. Records and files minutes of each chapter meeting and executive board meeting.
b. Maintains a file of all chapter correspondence.
c. Prepares a summary of minutes of meetings to be included in the chapter newsletter.
d. Carries out official correspondence of the chapter in conjunction with the President.

E. Terms of the elected officers shall be for one year, January 1 to December 31. Elected officers may serve up to three consecutive years. Longer terms may be recommended by the Executive Board and approved by the membership.
F. Any individual member in good standing shall be eligible to hold office, but shall hold no more than one office at a time, except is approved by the Executive Board. Resignations must be submitted in writing to the chapter Secretary.

ARTICLE V. ELECTION PROCEDURES

A. At the Executive Board meeting in August of each year, a Nominating Committee shall be appointed by the president. It shall submit its report at the regular September meeting, at which time a complete roster shall be presented to the membership. Nominations may be made from the floor at this time. Nominations are to be published in the October newsletter prior to the October meeting. Candidates for office shell be introduced to the membership at this time to acquaint the membership with the candidates prior to the election-
B. The election shall be held in November at the regular meeting.
C. The new officers shall be installed at the December meeting to take office officially January 1st of the following year.

ARTICLE VI. MEETINGS

A. The regular meeting of the Chapter shall be held on the second Thursday of each month from September through May, unless otherwise authorized by the Executive Board.
B. Fifteen percent (15%) of the membership shall constitute a quorum.
C. Parliamentary authority shall be Robert's Rules of Order.

ARTICLE VII. AMENDMENTS

A. These bylaws may be amended by a majority vote of the members present at any regular chapter meeting, proposed changes having been submitted in writing at the previous meeting or published prior to the meeting in the Chapter newsletter to the membership.

ARTICLE VIII. CHAPTER PROPERTY

A. If the Chapter becomes inactive for any reason, its Charter, all records, funds, library, equipment, supplies, and other property become the absolute property of the Colorado Archaeological Society and shall be sent to the Executive Secretary or arrangements be made for these materials to be picked up by the Executive Secretary or his/her representative.
B. If any member of the Chapter becomes inactive for any reason, all Chapter property or materials shall be delivered to a Chapter Officer. The Executive Board is empowered to request return of Chapter property from any member who becomes inactive as they see fit.

ARTICLE IX. COMPLIANCE

A. No part of the net earnings of the Indian Peaks Chapter Colorado Archaeological Society, shall inure to the benefit of, or be distributable to its member, except that the Chapter shall be authorized and empowered to pay reasonable compensation for services rendered and to make payments and distributions in furtherance of the purposes set forth in Article II, (PURPOSE).
No substantial part of the activities of the Chapter shall be the carrying on of propaganda, or otherwise attempting to influence legislation and, the Chapter shall not participate in, or intervene in (including the publishing or distribution of statements) any political campaign on behalf of any candidate for public office.
Notwithstanding any other provision of these Articles, the Chapter shall not carry on any activities not permitted to be carried an (a) by a corporation exempt from federal income tax under Section 501 ©(3) of the Internal Revenue Code of 1954 (or the corresponding provision of any future United States internal Revenue Law) or (b) by a corporation contributions to which are deductible under Section 170 ©(2) of the Internal Revenue Code of 1954 (Or the corresponding provision of any future United States Internal Revenue Law).

ARTICLE X. CODE OF ETHICS

A. All members are bound by the code of ethics stated in Article III of the Constitution of the Colorado Archaeological Society and any and all amendments thereto.

Competition, Not Climate Change, Led To Neanderthal Extinction

ScienceDaily (Dec. 30, 2008) — In a recently conducted study, a multidisciplinary French-American research team with expertise in archaeology, past climates, and ecology reported that Neanderthal extinction was principally a result of competition with Cro-Magnon populations, rather than the consequences of climate change.

The study, reported in the online, open-access journal PLoS ONE on December 24, figures in the ongoing debate on the reasons behind the eventual disappearance of Neanderthal populations, which occupied Europe prior to the arrival of human populations like us around 40,000 years ago. Led by Dr William E. Banks, the authors, who belong to the French Centre National de la Recherche Scientifique, l'Ecole Pratique d'Hautes Etudes, and the University of Kansas, reached their conclusion by reconstructing climatic conditions during this period and analyzing the distribution of archaeological sites associated with the last Neanderthals and the first modern human populations with an approach typically used to study the impact of climate change on biodiversity.

This method uses geographic locations of archaeological sites dated by radiocarbon, in conjunction with high-resolution simulations of past climates for specific periods, and employs an algorithm to analyze relationships between the two datasets to reconstruct potential areas occupied by each human population and to determine if and how climatic conditions played a role in shaping these areas. In other words, by integrating archaeological and paleoenvironmental datasets, this predictive method can reconstruct the regions that a past population could potentially have occupied. By repeating the modeling process hundreds of times and evaluating where the errors occur, this machine-learning algorithm is able to provide robust predictions of regions that could have been occupied by specific human cultures.

This modeling approach also allows the projection of the ecological footprint of one culture onto the environmental conditions of a later climatic phase—by comparing this projected prediction to the known archaeological sites dated to this later period, it is possible to determine if the ecological niche exploited by this human population remained the same, or if it contracted or expanded during that period of time.

Comparing these reconstructed areas for Neanderthals and anatomically modern humans during each of the climatic phases concerned, and by projecting each niche onto the subsequent climatic phases, Banks and colleagues determined that Neanderthals had the possibility to maintain their range across Europe during a period of less severe climatic conditions called Greenland Interstadial 8 (GI8).

However, the archaeological record shows that this did not occur, and Neanderthal disappearance occurs at a point when we see the geographic expansion of the ecological niche occupied by modern humans during GI8. The researchers' models predict the southern limit of the modern human territory to be near the Ebro River Valley in northern Spain during the preceding cold period called Heinrich Event 4 (H4), and that this southern boundary moved to the south during the more temperate phase GI8.

The researchers conclude that the Neanderthal populations that occupied what is now southern Spain were the last to survive because they were able to avoid direct competition with modern humans since the two populations exploited distinct territories during the cold climatic conditions of H4. They also point out that during this population event contact between Neanderthals and modern humans may have permitted cultural and genetic exchanges.

Inconsistencies With Neanderthal Genomic DNA Sequences

ScienceDaily (Oct. 14, 2007) — Were Neanderthals direct ancestors of contemporary humans or an evolutionary side branch that eventually died out?

This is one of the enduring questions in human evolution as scientists explore the relationship of fossil groups, such as Neanderthals, with people alive today. Two recent papers describing the sequencing of Neanderthal nuclear DNA from fossil bone held promise for finally answering this question.

However, the two studies came to very different conclusions regarding the ancestral role of Neanderthals. Jeffrey D. Wall and Sung K. Kim from University of California San Francisco now reveal in PLoS Genetics what they found when they reanalyzed the data from the two original studies.

Wall and Kim's reanalysis reveals inconsistencies between them and they believe that possible contamination with modern human DNA and/or a high rate of sequencing errors compromised the findings of one of the original Neanderthal DNA studies.

The authors therefore recommend that we carefully evaluate published and future data before arriving at any firm conclusions about human evolution.

References

1. Noonan JP, Coop G, Kudaravalli S, Smith D, Krause J, et al. (2006) Sequencing and analysis of Neanderthal genomic DNA. Science 314: 1113-1118.
2. Green RE, Krause J, Ptak SE, Briggs AW, Ronan MT, et al. (2006) Analysis of one million base pairs of Neanderthal DNA. Nature 16: 330-336.
Citation: Wall JD, Kim SK (2007) Inconsistencies in Neanderthal genomic DNA sequences. PLoS Genet 3(10): e175. doi:10.1371/journal.pgen.0030175

Last Neanderthals in Europe Died out 37,000 Years Ago

ScienceDaily (Jan. 27, 2010) — The paper, by Professor João Zilhão and colleagues, builds on his earlier research which proposed that, south of the Cantabro-Pyrenean mountain chain, Neanderthals survived for several millennia after being replaced or assimilated by anatomically modern humans everywhere else in Europe.

Although the reality of this 'Ebro Frontier' pattern has gained wide acceptance since it was first proposed by Professor Zilhão some twenty years ago, two important aspects of the model have remained the object of unresolved controversy: the exact duration of the frontier; and the causes underlying the eventual disappearance of those refugial Neanderthal populations (ecology and climate, or competition with modern human immigrants).

Professor Zilhão and colleagues now report new dating evidence for the Late Aurignacian of Portugal, an archaeological culture unquestionably associated with modern humans, that firmly constrains the age of the last Neanderthals of southern and western Iberia to no younger than some 37,000 years ago.

This new evidence therefore puts at five millennia the duration of the Iberian Neanderthal refugium, and counters speculations that Neanderthal populations could have remained in the Gibraltar area until 28,000 years ago.

These findings have important implications for the understanding of the archaic features found in the anatomy of a 30,000 year old child unearthed at Lagar Velho, Portugal. With the last of the Iberian Neanderthals dating to many millennia before the child was born, 'freak' crossbreeding between immediate ancestors drawn from distinct 'modern' and 'Neanderthal' gene pools cannot be a viable explanation. The skeleton's archaic features must therefore represent evolutionarily significant admixture at the time of contact, as suggested by the team who excavated and studied the fossil.

Professor Zilhão said: "I believe the 'Ebro frontier' pattern was generated by both climatic and demographic factors, as it coincides with a period of globally milder climate during which oak and pine woodlands expanded significantly along the west façade of Iberia.

"Population decrease and a break-up of interaction networks probably occurred as a result of the expansion of such tree-covered landscapes, favouring the creation and persistence of population refugia.

"Then, as environments opened up again for large herbivore herds and their hunters as a result of the return to colder conditions, interaction and movement across the previous boundary must have ensued, and the last of the Neanderthals underwent the same processes of assimilation or replacement that underpin their demise elsewhere in Europe five millennia earlier."

The dating was undertaken by experts at the University of Vienna (VERA laboratory) led by Professor Eva Maria Wild, and at the University of Oxford's Radiocarbon Accelerator Unit.
Professor Wild, head of the 14C program at VERA (Vienna Environmental Research Accelerator) said: "Accurate 14C dating was crucial for this study. For layer 2 of the cave sediment we achieved this by selecting teeth for 14C dating and by comparing the 14C results of the same sample after different, elaborate sample pre-treatments. Agreement between the results obtained with different methods provides a proof for accurate dating."

Neanderthal Man Was An Innovator

ScienceDaily (June 20, 2007) — Neanderthal man was not as stupid as has been made out says a new study published by a University of Leicester archaeologist.

In fact Neanderthals were far removed from their stereotypical image and were innovators, says Dr Terry Hopkinson of the School of Archaeology and Ancient History in a paper published in Antiquity.

Neanderthals were the sister species of Homo sapiens, our own species, and inhabited Europe in the Middle Palaeolithic period which began some 300,000 years ago. This period has widely been thought to have been unremarkable and undramatic in cultural or evolutionary terms.

Now Dr Hopkinson has challenged this notion and shown that it does not fit the archaeological evidence. He says early Neanderthals were devising new stone tool technologies and also coming to terms with ecological challenges that defeated their immediate ancestors, Homo heidelbergensis.

Conventional theories focus on tool innovation much later on leading up to the period when modern humans replaced Neanderthals some 40,000 years ago.

Dr Hopkinson said: "There has been a consensus that the modern human mind turned on like a light switch about 50,000 years ago, only in Africa. But many ‘modern’ traits like the use of grind stones or big game hunting began to accumulate in Africa 300,000 years ago.

"It was the same in Europe with Neanderthals, there was a gradual accumulation of technology."
Not only did the Neanderthals combine old stone tool technologies in innovative ways to create new ways of working stone, says Dr Hopkinson. They also spread from Western Europe into areas of central and Eastern Europe their forbears had been unable to settle.

"The eastern expansion shows that the Neanderthals became capable of managing their lives and their landscapes in strongly seasonal environments,” said Dr Hopkinson.

Dr Hopkinson concludes:” Neanderthals have typically been thought of as incapable of innovation, as it was assumed to be something unique to Homo sapiens. With this evidence of innovation it becomes difficult to exclude Neanderthals from the concept of humanity."

New Evidence On The Role Of Climate In Neanderthal Extinction

ScienceDaily (Sep. 13, 2007) — The mystery of what killed the Neanderthals has moved a step closer to resolution after an international study led by the University of Leeds has ruled out one of the competing theories -- catastrophic climate change -- as the most likely cause.

The bones of more than 400 Neanderthals have been found since the first discoveries were made in the early 19th century. The finds suggest the Neanderthals, named after the Neander Valley near Düsseldorf, where they were first recognized as an extinct kind of archaic humans, inhabited Europe and parts of western Asia for more than 100,000 years.

The causes of their extinction have puzzled scientists for years -- with some believing it was due to competition with modern humans, while others blamed deteriorating climatic conditions. But a new study recently published

in Nature has shown that the Neanderthal extinction did not coincide with any of the extreme climate events that punctuated the last glacial period.

The research was led by Professor Chronis Tzedakis, a palaeoecologist at the University of Leeds, who explained: "Until now, there have been three limitations to understanding the role of climate in the Neanderthal extinction: uncertainty over the exact timing of their disappearance; uncertainties in converting radiocarbon dates to actual calendar years; and the chronological imprecision of the ancient climate record."

The team's novel method -- mapping radiocarbon dates of interest directly onto a well-dated palaeoclimate archive -- circumvented the last two problems, providing a much more detailed picture of the climate at the possible times of the Neanderthal disappearance. The researchers applied the new method to three alternative sets of dates for the timing of the Neanderthal extinction from Gorham's Cave, Gibraltar, site that is thought to have been occupied by some of the latest surviving Neanderthals:

- a set of generally accepted but older dates (around 30-32,000 radiocarbon years ago)
- newly-suggested younger dates (around 28,000 radiocarbon years ago)
- more contentious dates (around 24,000 radiocarbon years ago).

The team showed that during the first two sets of dates, Europe was experiencing conditions similar to the general climatic instability of the last glacial period -- conditions the Neanderthals had already proved able to survive.

The much more controversial date of around 24,000 radiocarbon years ago placed the last Neanderthals just before a large expansion of ice sheets and the onset of cold conditions in northern Europe. "But at that time, Gibraltar's climate remained relatively unaffected, perhaps as a result of warm water from the subtropical Atlantic entering the western Mediterranean," explained palaeoceanographer Isabel Cacho of the University of Barcelona. "Our findings suggest that there was no single climatic event that caused the extinction of the Neanderthals," concludes palaeonthropologist Katerina Harvati of the Max Planck Institute for Evolutionary Anthropology. "Only the controversial date of 24,000 radiocarbon years for their disappearance, if proven correct, coincides with a major environmental shift. Even in this case, however, the role of climate would have been indirect, by promoting competition with other human groups."

The work also has wider implications for other studies, as paleoclimatologist Konrad Hughen of the Woods Hole Oceanographic Institution explained: "Our approach offers the huge potential to unravel the role of climate in critical events of the recent fossil record as it can be applied to any radiocarbon date from any deposit."

The article Placing late Neanderthals in a climatic context (Tzedakis, P.C., Hughen, K.A., Cacho, I. & Harvati, K) is published in Nature on September 13. The study was conducted by Chronis Tzedakis (University of Leeds); Konrad Hughen (Woods Hole Oceanographic Institution); Isabel Cacho (University of Barcelona); Katerina Harvati (Max Planck Institute for Evolutionary Anthropology).

Synchrotron Reveals How Neanderthal Teeth Grew

ScienceDaily (Nov. 27, 2006) — Scientists from the United Kingdom, France and Italy have studied teeth from Neanderthals with X-rays from the European Synchrotron Radiation Facility (ESRF). They found that the dental development of Neanderthals is very similar to modern humans. Their results are published in Nature this week.

Neanderthals first appeared in Europe approximately 200,000 years ago and became extinct about 25,000 years ago. These predecessors of modern humans have always been considered genetically closer to us than any other members of the genus Homo. It has even been suggested that Neanderthals achieved adulthood faster than modern humans do today.

A research team from the United Kingdom, France and Italy has recently shed new light on this theory by studying this species' teeth. Teeth express genetic differences found between individuals and different populations more efficiently than any other tissues preserved in the fossil record. Studies with teeth can identify a timescale on the entire period of dental development that occurs from before birth until adulthood.

Scientists used the ESRF X-rays to study the enamel dentine junction of a deciduous and a permanent Neanderthal molar tooth (approximately 130,000 years old) that was found on a site in France. The technique used to image the teeth is high-resolution tomography at ID17. The researchers noticed that the samples showed more complex folding of the enamel dentine junction than their modern human counterparts. Some of the unique surface morphologies of Neanderthal molars clearly showed a deep embryological origin and are likely to have been functionally significant.

Thin ground sections of the same Neanderthal molars revealed that the crowns and roots did not grow faster than those of modern humans. The permanent molar tooth studied had completed its root growth at about 8.7 years of age, which is typical of many modern human children today. Almost all deciduous teeth contained an accentuated birth line, or neonatal line that results from the changing physiology and stress of birth. The Neanderthal deciduous also showed a neonatal line with evidence of the usual perinatal physiological stress but with no signs of additional postnatal stress.

Among anthropoid primates there is a close relationship between brain growth and tooth eruption. Scientists predicted that the first permanent molar eruption in this Neanderthal (6.8 years) fits a dental development schedule similar to those found in modern humans.

The next step in the research is to find out whether Neanderthal teeth from sites dated to more recent times will reveal evidence of the demographic pressures that overcame the Neanderthals as they approached extinction.

Reference: Macchiarelli et al., How Neanderthal molar teeth grew, Nature online, 22 November 2006.

Three Neanderthal Sub-Groups Confirmed

ScienceDaily (Apr. 15, 2009) — The Neanderthals inhabited a vast geographical area extending from Europe to western Asia and the Middle East 30,000 to 100,000 years ago. Now, a group of researchers are questioning whether or not the Neanderthals constituted a homogenous group or separate sub-groups (between which slight differences could be observed).

Paleoanthropological studies based on morphological skeletal evidence have offered some support for the existence of three different sub-groups: one in Western Europe, one in southern Europe and another in the Levant.

Researchers Virginie Fabre, Silvana Condemi and Anna Degioanni from the CNRS Laboratory of Anthropology (UMR 6578) at the University of Marseille, France, have given further consideration to the question of diversity of Neanderthals by studying the genetic structure of the mitochondrial DNA (mtDNA) and by analyzing the genetic variability, modeling different scenarios. The study was possible thanks to the publication, since 1997, of 15 mitochondrial DNA (mtDNA) sequences (the mtDNa is maternally transmitted) that originated from 12 Neanderthals.

The new study confirms the presence of three separate sub-groups and suggests the existence of a fourth group in western Asia. According to the authors, the size of the Neanderthal population was not constant over time and a certain amount of migration occurred among the sub-groups. The variability among the Neanderthal population is interpreted to be an indirect consequence of the particular climatic conditions on their territorial extension during the entire middle Pleistocene time period.

Degioanni and colleagues obtained this result by using a new methodology derived from different biocomputational models based on data from genetics, demography and paleoanthropology. The adequacy of each model was measured by comparing the simulated results obtained using BayesianSSC software with those predicted based on nucleotide sequences.

The researchers hope that one day this methodology might be applied to questions concerning Neanderthal cultural diversity (for example the lithic industry) and to the availability of natural resources in the territory. This could provide new insights into the history and extinction of the Neanderthals.

Minutes – IPCAS Executive Board Meeting; February 4, 2010; 7:45PM–9:35PM

Location: Longmont (Tom Cree residence)

Executive Board Member Attendees: Carolyn Camell-Coppin, Tom Cree, Cheryl Damon, Joanne Turner, Dave Hawley, and Anne Robinson.

Secretary's Report (Hawley): Draft minutes of the last Board meeting on January 7, 2010 were published in the February 2010 *Calumet* Newsletter. The final minutes were approved by acclamation.

Treasurer's Report (Camell-Coppin):

End of Month Date	Beginning Balance	Ending Balance	Number of Renewals
January, 2010	$2,561.91	$2,547.41	3

- Purchased four honorariums.
- Completed the audit required for transitioning the Treasurer duties from Katherine McComb to Carolyn Camell-Coppin. Dave Phillips and Anne Robinson were the independent auditors. No negative findings. A suggested improvement was to better document the check registry.
- Bank accounts and mailbox keys were transferred to Anne and Carolyn.
- Carolyn had prepared a preliminary budget. Line item discussions took place, and Carolyn will further refine the draft budget in preparation for additional discussion during the March Board meeting.
- Carolyn shared that we have 78 members, of which 45 are individual members, 15 family members, and 3 student members.

President's Report (Robinson):

- Anne, Carolyn, Kris, Kathleen, and Joanne attended the CAS Quarterly meeting held in CO Springs on January 23, 2010. At that meeting several of our members received PAAC Class Certificates: Carolyn for PAAC Scholar and Lab Trainee, Katherine for PAAC Scholar and Provisional Surveyor, and Cheryl for Provisional Surveyor. Congratulations for the hard work!

Old Business:

- IPCAS Website – Tom is still working technical issues.
- Speaker Scorecard:
  - March, 2010 Meeting: Bob Brunswig, and possibly Fred Sellet, will present, and include an update on the Walden dig and plans for this summer.
  - April, 2010 Meeting: Dr. Arthur Joyce and grad students will present on the Rio Viejo Site, Oaxaca, Mexico.
  - May, 2010 Meeting: Celebration of Colorado Archeology & Historic Preservation month. Candidates for presenting were discussed, and assignments to contact individuals fixed.
- PAAC Classes – We should know in April if the class for this fall will take place. This class being offered or not depends on the status of the physical move of the Colorado Historical Society (CHS) offices in Denver.

New Business:

- Dues: In furtherance of our desire to move to a calendar year based dues period, Carolyn will draft amendments to our Bylaws to reflect both this change and the new State requirement for an annual internal audit so that these amendments may be included in the March *Calumet* and members may vote on these amendments during the March meeting. Agreement was reached that we should pro-rate new member dues based on the four quarters of the calendar year. Assuming that the applicable Bylaws amendment is approved in January, individual emails will be sent to current members beginning in April to enable them to bring their dues payments current through December 31, 2010. Members who have already paid beyond calendar year 2010 will have their fees adjusted for 2011. Annual dues for calendar year 2011 will be due in January 2011. The pro-rated numbers for future members, by membership category, will be included in the membership form included in the *Calumet*. A footnote will also be added to this form asking potential members to contact the Treasurer if they have multiple CAS memberships to enable them to avoid receiving more than one subscription of *Southwestern Lore*.
- Membership Chair: Anne will talk with a member volunteer about assuming the duties of Membership Chair, with a focus on recruiting new members. Carolyn has agreed to take on the membership administrative duties of keeping the membership list updated and tracking expiration dates.
- Historical Documentation: Tom will compile a historical speakers list and also compile a membership master list that will be useful to have in our archives.
- Files Disposition: Discussion took place on what to do with files more than 7 years old. No decisions were reached – the topic will continue to be addressed during Board meetings.
- Strategic Planning: Anne will lead this effort, using the ideas generated during our Nov09 meeting of the membership as grist.

The next Board meeting on March 4, 2010 will be held at Dave's home in SE Boulder. Members are welcome to attend but are requested to pre-coordinate with Dave.

2009 IPCAS Officers, Board Members, and major functions

President	Anne Robinson	(720) 890-3944	annerco@yahoo.com
Vice-President	Karen Kinnear	(303) 516-9260	kinnearkaren@hotmail.com
Treasurer	Carolyn Camell-Copin	(303) 775-9206	cacc.co@live.com
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PAAC Coordinator	Dave Hawley	(303) 443-2332	dave_hawley@comcast.net
CAS Representative	Kris Holien	(970) 586-8982	kjholien@aol.com
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Board Member	Cheryl Damon	(303) 678-8076	cheryl_damon@msn.com
Board Member	Kris Holien	(970) 586-8982	kjholien@aol.com
Board Member	Joanne Turner	(303) 494-7638	joanne.turner@colorado.edu

MEMBERSHIP APPLICATION - INDIAN PEAKS CHAPTER

____ **Individual** $28.50 / Year ____ **Family** $33 / Year ____ **Student** $14.25 / Year
____ **New** ____ **Renewal**
Tax-Exempt Donation __ $10, __ $25, __ $50, Other _____

NAME _____ **TELEPHONE** (____)_____

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Please make check payable to: Indian Peaks Chapter, CAS
Mail to: PO Box 18301, Boulder, CO 80308-1301

I(We) give CAS permission to :
Yes ____ No ____ disclose phone numbers to other CAS members
Yes ____ No ____ publish name/contact information in chapter directory
Yes ____ No ____ publish name in newsletter (which may be sent to other chapters, published on the internet, etc.)

CODE OF ETHICS

As a member of the Colorado Archaeological Society, I pledge:
To uphold state and federal antiquities laws. To support policies and educational programs designed to protect our cultural heritage and our state's antiquities. To encourage protection and discourage exploitation of archaeological resources. To encourage the study and recording of Colorado's archaeology and cultural history. To take an active part by participating in field and laboratory work for the purpose of developing new and significant information about the past. To respect the property rights of landowners. To assist whenever possible in locating, mapping and recording archaeological sites within Colorado, using State Site Survey forms. To respect the dignity of peoples whose cultural histories and spiritual practices are the subject of any investigation. To support only scientifically conducted activities and never participate in conduct involving dishonesty, deceit or misrepresentation about archaeological matters. To report vandalism. To remember that cultural resources are non-renewable and do not belong to you or me, but are ours to respect, to study and to enjoy.
Signature: _____ Signature: _____

CALUMET

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