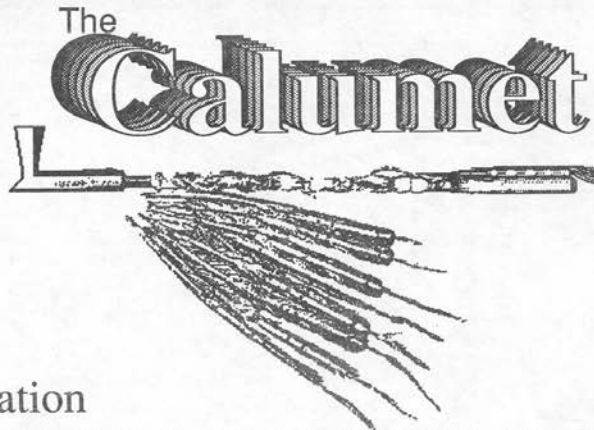




Indian Peaks Chapter
Colorado Archaeological Society

Conservation
Preservation
Education
Exploration



Calendar of Events

OCTOBER, 1990

- October 10 Principles of Excavation, 604 Holbrook, Erie
Call 828-3144 for directions.
- October 17 Principles of Excavation, Erie
- October 23 Indian Peaks Executive Board, 7:30 p.m., Jeannie
Hamilton's 1100 Deer Trail Rd. - 443-9221 for
directions
- October 24 Principles of Excavation, Erie, last class/test
- October 30 Indian Peaks Chapter Meeting, CU, Chemistry 142,
Dr. Frank Eddy, "Remote Sensing in the Galisteo
Basin," at 7:30 p.m.



**Coffee
Break**
with
**Ed &
Rick**

Ed Grefrath, our Co-Prez, is going back for some education, after retiring from IBM, and taking a new job. His class schedule includes Tuesday nights, so he will be absent from our meeting for a while.

Speaking of education, Ann Phillips, our Secretary, is also working on a masters in anthropology, and has begged to be excused this semester. Sue Myers has kindly, graciously, and with only the barest of arm twisting, agreed to be acting secretary. Thanks, Sue, and hurry back, Ed and Ann.

Which leads us into another matter! Larry Riggs has been overrun in the library department and needs to reclaim some space in his garage. We need to find a location for the library! Jeannie Hamilton is looking into the possibility of lodging the library at CU. Any other suggestions will be welcome.

The Rock Creek Project was exciting with the discovery of lithics, ground stone, bone, and several hearths! Only a small portion of the site has been excavated, and approximately 50 square meters of the site is still at risk from erosion. The search is on for some grant money to at least finish the at-risk portion of the site. Ideas, friends, contacts, call Rick Lippincott at 828-3906.

PAAC Coordinator Ann Pipkins has carried a burden almost too great to bear in the recent loss of both her father and mother. She wrote:

Many thanks to the members of the Indian Peaks Chapter for the plant and cards expressing their sympathy to me. Your thoughtfulness will never be forgotten.

Nor, might I add will her thoughtfulness and work in making this Chapter what it is!

On Tuesday, October 30, Dr. Frank Eddy will be our speaker at the Chapter meeting in Chemistry 142 on the CU campus at 7:30 p.m.

Just a reflection on the Rock Creek Project: Carol Gleichman, the P. I. (if you were taking the Principles of Excavation PAAC course, you would automatically know what that means), said some really great things about the Indian Peaks volunteers: that they were careful, competent, and good even with the paperwork! Chapter members put in 127 hours cutting through the clay plus 27 hours leading school children on tours of the working site. It's words like that that make being prez worthwhile.

Jeannie Hamilton asked me to note to the membership that:

October Dues is Due!!!



Sue Myers, Acting Secretary

Executive Board Minutes

The Indian Peaks Chapter Executive Board met at 7:30 p.m., Tuesday, September 18, at Sue and Rick Lippincott's in Erie. Present were Jeannie Hamilton, Bill Maxson, Ann Hayes, Sue Lippincott, and Rick Lippincott.

Treasurer's Report: Jeannie Hamilton reported a balance of \$1,436.51, which includes \$1,000 as the second installment of the Chapter's grant of \$2,000 from the Cultural and Scientific Facilities Commission. Jeannie also noted that October dues is due! If your address label on this issue says 10/89, a check to Jeannie will make it read 10/90.

Education: Bill Maxson will speak to a grade school class on archaeological preservation on October 4. Bill and Mary Sucke, along with Rick Lippincott conducted tours for nearly 400 school children at the Rock Creek Site during the testing phase in September.

PAAC: The new PAAC course, "Principles of Excavation" is now being presented for Indian Peaks Chapter. The class is meeting on Wednesdays at Erie United Methodist Church under the leadership of Kevin Black. This is the only PAAC class offered in our area for the rest of this year.

Library: Bill Lucius presented the library with several new reports which further expands this valuable resource.

Field Directors: No field directors were present at the meeting. Bill Maxson and Ann Hayes, agrees to look over the White Rocks project, aiming at recording some of the historic graffiti.

Annual Meeting: Prez Rick is planning to attend and welcomes any others at the Don K Ranch near Pueblo.

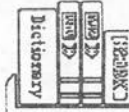
New Business: The Rock Creek Project was discussed. Prez Rick was directed to discuss with Boulder County Open Space the possibility of the Chapter continuing the Project as field training for the Chapter and as a part of the Chapter's educational emphasis. It was also recommended that discussions be held with Pete and Carol Gleichman as to the cost of continuing the Project to recover data this year, from those areas most likely to be damaged by natural forces over the winter.

The Chapter has nearly \$1,300 with which to purchase equipment. Suggestions on needed items should be directed to the Prezs.

Vice President Ann Hayes announced that Dr. Frank Eddy will speak to the Chapter October 30 at 7:30p.m. in Chemistry 142. Ann also announced that a possible meeting site has been located the National Bureau of Standards building. The Executive Board recommended she explore this possibility more fully.

October Executive Board: Will be at Jeannie Hamilton's, 1100 Deer Trail Rd. (443-9221 for directions). Because of weather considerations Jeannie's home is unavailable for meetings for most of the winter, so the October meeting will there.

rrl



For Your Information

Survey Station Shift Will Increase UTM Accuracy

Paul V. Heinrich
Louisiana State University

Editor's Note: This is the conclusion of Paul's informative report on the effects of changing the North American Datum.

The reference ellipsoid is a mathematical figure used in geodesy as a coordinate system for the calculation of position. This mathematical figure is an ellipsoid because the Earth is flattened slightly at the poles and bulges somewhat at the equator. A mathematical figure is used because either the topography or the geoid of the Earth are both too irregular and complex to be mathematically modeled (Morgan 1967; Stefanic 1987). Unfortunately, the mathematical and geodetic details of North American Datum (NAD) 83 are too complex to be presented in this article. The interested reader can find a detailed explanation of these matters in Morgan (1987) and Bossler (1976).

PROCESS OF CHANGE

The change from NAD 27 to NAD 83 involves two distinct elements. First, various governmental agencies readjusted the network of 250,000 survey stations (monuments) across the U.S., and hundreds of thousands more within Canada, Greenland, Mexico, Central America, and the Caribbean Islands. This readjustment removed unpredictable distortions that had accumulated since NAD 27 was established. These distortions result from (1) the addition of 99,000 new stations to the network of control points, (2) a significant deficiency in the length control of the 1927 adjustment, (3) numerous inaccurate azimuths in the 1927 network, (4) NAD 27 not including the Atlantic Seaboard, (5) order of magnitude increases in the measurement accuracy of angles and lengths, (6) loss of original survey stations, and (7) horizontal tectonic movements. The second change involved the redefinition of the reference ellipsoid used to define both the vertical and horizontal grids. This redefinition included the selection of a new reference ellipsoid that best described the shape of the Earth and the placement of its center at the mass center of the Earth. The old reference point was the survey station Meade Ranch in Kansas, whose datum was coincident with the hypothetical surface of the Clarke 1866 ellipsoid used for NAD 27 (McKay 1988; Morgan 1987; Dr. Elizabeth B. Wade, National Geodetic Survey, personal communication, 1988).

SUMMARY

The important thing archaeologists need to know is that the horizontal datum used to determine horizontal distances, has been revised. The revised horizontal datum has shifted both the UTM and longitude and latitude grid systems used to locate the position of archaeological sites, rights of way, and other boundaries and points used in cultural resource management work. At this time, archaeological sites are still tied to the old NAD 27, Continued, Page 5

CAS Meet Sets Archaeological Preservation Week by Bill Maxson

Next year the Colorado Archaeological Preservation Week will be April 7th to 13th. As part of this week, the Museum of Natural History will hold a fair. The Indian Peaks Chapter may be asked to participate in this fair.

For calendar year 1992, the Colorado Archaeological Preservation Week will be April 26th to May 2nd. Our Sue Struthers will chair this week.

The State Archaeologist's Office has developed new site forms. I have been told that these new site forms are five pages long and that we will have to take the basic site survey course again just to understand the forms.

The Anasazi Cultural Heritage Center in Dolores has a traveling trunk we can use for show and tell purpose.

Based on a ruling from the State Attorney General's Office, the state Archaeologist must accept non-CAS members for PAAC courses.

Kay Adams, President of the Denver Chapter, received the only PAAC Certification Certificate issued by the State Archaeologist's Office in 1990. Kevin Black said that a number of members were close to receiving a certificate. He asked that you call him, 866-3395, if you want to know your status.

Site Locations Clouded Continued from Page 4

which will result in confusion when U.S.G.S. topographic maps are eventually based on NAD 83. Confusion would also result if site locations based on NAD 27 are plotted against rights of way boundaries and other projects which are using the current NAD 83.

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1976 *The New Adjustment of the North American Horizontal Datum*. National Geodetic Survey, Silver Springs, MD

McKay, E. J.

1988 *Changes - NAD 27 to NAD 83*. Paper presented at the U.S. Army Corps of Engineers Surveying Conference (Feb. 8-12) Savannah, GA

Morgan, J.G.

1987 The North American Datum of 1983. *Geophysics: the Leading Edge of Exploration*. 7(1):27-33

Stefanic, V.

1987 Missing the Mark; NAD 1983 Makes Many Maps Obsolete. *American Association of Petroleum Geologists Explorer*. 9(6):6-7.

U.S. Geological Survey

1988 Experimental Printing of the Ashaway RI-CT Quadrangle on North American Datum 1983 (NAD 83) and North American Datum 1927 (NAD 27). *U.S. Geological Survey Map 41071-D7-TF-024*.

Vincenty, T.

1976 *Determination of North American Datum 1983 Coordinates of Map Corners*. National Oceanic and Atmospheric Administration Technical Memorandum NOS NGS-6, 8pp.

PAAC News

from Ann Pipkins, PAAC Coordinator

Programs for People in
Avocational Archaeology



October

1	Grand Junction	Basic Site Survey & Ethics
3	Boulder	Principles of Excavation
5-7	Pueblo vicinity	PAAC Board Meeting
10/17	Boulder	Principles of Exvacation
19-22	Carbondale	Perishable Materials
24	Boulder	Principles of Excavation
26-29	Durango	Historic Archaeology

November

2-5	Montrose	Perishable Materials
8/13/15	Fort Collins	Lithic Description & Analysis
16-19	Colorado Springs	Ceramic Description & Analysis
20/27/29	Fort Collins	Lithic Description & Analysis

December

4	Fort Collins	Lithic Description & Analysis
7-10	Canon City	Principles of Excavation

Note that Indian Peaks Chapter will have one class between now and December. Call Ann to get the location of the class. Each chapter gets one class in each six month period.

Also note the fee for each class is \$10 payable to the "Colorado Historical Society- PAAC"

Members are able to take classes in other chapters to complete the course work needed for certification. Contact Ann Pipkins, 449-0851 for additional information.

Indian Peaks Chapter



Colorado
Archaeological
Society

October Meeting

Tuesday, October 30, 1990

CU Campus / Chem #142

7:30 pm

"Remote Sensing in the Galisteo Basin"

Speaker: Dr. Frank Eddy

Dr. Frank Eddy, Associate Professor at the University of Colorado, has spent 25 years researching the Anasazi, with special emphasis on sites at Chimney Rock and the Galisteo Basin.

Program is free and open to the public. Please join us.

This program is co-sponsored by
the CU Department of Anthropology

Heat, Snakes: Pinon Canyon Worth It

By Myriam Friggons

Braving searing summer winds and rattlesnakes, 14 rock art devotees from Indian Peaks Chapter joined Ann Hayes and Janet Lever in exploring the remote Pinon Canyon Maneuver Site northeast of Trinidad.

This vast 380 square-mile area reflects short grass prairie, pinon foothills, and deep sandstone canyons.

Because of Pinon Canyon's archaeological and historical significance, the U.S. Army has been cooperating with the National Park Service in preservation and documentation of the numerous rock arts sites. Ann and Janet, along with NPS archaeologist Steve Chomko, recorded rock art sites for the University of North Dakota, and served as guides.

Sorenson Village, an Apishapa site on a bluff overlooking the Purgatoire River, was the first stop. Here the rock walls, composed of vertically placed slabs are from 700 to 1100 years old. The walls, surrounding a habitation, appear to have served as a fortification. In places they were buttressed by horizontal rock slabs placed by sheepherders in the mid-1800s when this land was part of the Baca land grant.

The next stop was a prehistoric petroglyph pannel dubbed "The Zoo-keeper." A central figure with a staff, is surrounded by quadrupedal figures perhaps representing bighorn sheep and pronghorns. Many of the animal figures were connected by a wavy line like an umbilical cord, perhaps suggesting the interconnectedness of all living things.

A history buff's delight was the old Barlow-Sanderson stage station in Lockwood Canyon. Operating in the 1860s, the line ran from La Junta to Santa Fe. Crumbling walls of the small building, and a couple of foundation walls of the horse corral were still standing, but it was not hard to imagine the activity in this isolated outpost a century ago as the stage came in headed for Trinidad.

A boulder-strewn hogback was our next site. A climb to the top revealed many rock art pannels including several grouping of bison, and an exquisitely drawn buck, along with several mysterious symbols. Of particular interest at this site was the "vision quest seat", a small rock enclosure perhaps used by Indian groups inhabiting the area.

Our last stop plunged us into steep Van Bremner arroyo, where a boulder field bore some of the oldest rock art in Pinon Canyon, dating to some 4,000 years BP. The cation-ratio dating technique has enabled archaeologists to compare desert varnish patina on the rock art samples with varnish patina on untouched rocks in the area. This data, plus C14 dating has come up with some remarkably accurate rock art ages.

CAS members found the Army continues to do an excellent job managing and preserving the Pinon Canyon site so the art of ancient people will be available to see and to study into the future.

LYONS CHAPTER EXECUTIVE BOARD, 1990

OFFICERS:

Co-Presidents:

Ed Grefrath, 3875 Cloverleaf Dr. Boulder 80302 444-2091
 Rick Lippincott, Box 8, Erie 80516 828-3144

Vice President: Ann Hayes,
 2525 Briarwood Dr. Boulder 80303 494-6156

Secretary: Ann Phillips
 211 Hawthorne, Boulder 80304 449-5527

Treasurer: Jeannie Hamilton
 1100 Deer Trail Rd. Boulder 80302 443-9221

STANDING COMMITTEE CHAIRPERSONS

Directors:

Leni Clubb, Box 56, Ocotilla CA 92259 (691)358-7835

Lee Lacey, 2262 Juniper Ct. Boulder 80304 442-4400

Sue Lippincott, Box 8, Erie 80516 828-3144

Sue Struthers, 8439 N. 63rd, Longmont 80503 776-2350

Laura Viola, 2857 Shadow Creek Dr. Boulder 80303 442-2019

Dock Teegarden, 4590 Squires Cl., Boulder 80303 494-6496

CAS Representative:
 Bill Maxson, 827 Maxwell, Boulder 80303 447-1947

Librarian:
 Larry Riggs, 1690 Lombardy Dr., Boulder 80304 449-2852

Professional Advisor:
 Bill Lucius, 845 Hartford, Boulder 80303 449-7787

ADVISORY COMMITTEE TO STATE ARCHAEOLOGIST

Professional:

Sue Struthers, 8439 N. 63rd, Longmont 80503 776-2350

Avocational:

Larry Riggs, 1690 Lombardy Dr., Boulder 80304 449-2852

Field Directors:

Bob Mulaw, 3000 Colorado Ave. #117 Boulder 80303 449-6832

Laura Viola, 2857 Shadow Creek Dr. Boulder 80303 442-2019

Dock Teegarden, 4590 Squires Cl., Boulder 80303 494-6496

Sue Struthers, 8439 N. 63rd, Longmont 80503 776-2350

Jean Kindig, 714 Kalmia, Boulder 80304 442-2581

Ann Pipkins, 4500 19th #456, Boulder 80304 449-0851

Project Information Officer:

Ann Pipkins, 4500 19th #456, Boulder 80304 449-0851

PAAC Coordinator:

Ann Pipkins, 4500 19th #456, Boulder 80304 449-0851

Publicity:

Mary Sucke, 972 Martin Rd., Longmont 80501 772-9538

Ways & Means:

Suzanne Meyer, 5566 Sugarloaf Rd., Boulder 80302 447-2873

Youth Program:

Sue Struthers, 8439 N. 63rd, Longmont 80503 776-2350

The Calumet Editor:

Rick Lippincott, Box 8, Erie 80516 828-3144