THE FOLSOM POINT

NORTHERN COLORADO CHAPTER OF THE
COLORADO ARCHAEOLOGICAL SOCIETY

Volume XVIII Number 9 **September 2003**

CALENDAR OF EVENTS

Sept 17 **Business Meeting - 7:00 pm**
CSU Veterinary Hospital, 300 W Drake Road
Program: Rick Mattingly, ELCO Water District
"GPS – New Technology For Archaeology"

Oct 7 **PAAC Class starts – "Principles of Archaeological Excavation"**

Oct 15 **Business Meeting - 7:00 pm**
CSU Veterinary Hospital, 300 W Drake Road
Program: O.D. Hand, Colorado DOT

Oct 17-19 **CAS Annual Meeting – Colorado Springs**

Nov 19 **Business Meeting - 7:00 pm**
CSU Veterinary Hospital, 300 W Drake Road
Program: TBA

Dec **Annual Holiday Party – date to be decided**

Welcome Back

Officers for 2003

President
Bev Goering
Phone: 484-3101
E-mail: bgoering@comcast.net

Vice-President
Open

Treasurer
Betty Herrmann
Phone: 416-9380
E-mail: betherm5@wmconnect.com

Secretary
Marian Wemple
Phone: 226-0298
E-mail: mariancweisser@juno.com

Rick Lippincott
Phone: (970) 346-0042

Librarian
Maryel Lewis
Phone: 225-9009

Education Coordinator
Mary Jo Zeidler
Phone: 224-3609
E-mail: jmjzeidler@msn.com

PAAC Coordinator
Open

Field Trip & Field Work Coordinator
Open

Newsletter Editor
Bev Goering (temporarily)

Web Site
Joel Hurmence
E-mail: jhurmence@hotmail.com

Program Coordinator
Dick French
E-mail: dickyf99@worldnet.att.net

Advisory Committee:

LesLee Ann Heusinkveld
Phone: 669-6135
E-mail: heus@aol.com

Jeff Eighmy
Phone: 491-5784
E-mail: jeff.eighmy@colostate.edu

Mary Van Buren
Phone: 491-3781
E-mail: mvanbure@lamar.colostate.edu

Donn DeCoursey
Phone: 223-5274
E-mail: donndec@aol.com

Web Site: **http://www.coloradoarchaeology.org/fcollins.htm**

Dues Due Notice

Jeff Eighmy - January - individual $26
Robert King - February - individual $26
Ed Day - March - individual $26
Donn & Shirley DeCoursey - June - family $32.50
Mary Lee Birmingham - March - individual $26
Brian & Heidi Short - March $32.50
Ron & Marian Wemple - March $32.50
Ray Jenkins – April - $26
Kevin Boulter - April - individual $26
Sharon Hull - June - individual $26
Susan Ayala - September - individual $26
Michael Burns - July - family $32.50
LesLee Heusinkveld - August - individual $26
Sid Sather - July - individual $26
Maryel Lewis - September - individual $26
Ulli Limpitlaw - September - individual $26
Steve Main - June - family - $32.50
Gary Myers - August - individual $26
Carmelita Thorndike - August - individual $26

September Meeting

The program for the **September 17th** meeting will be presented by Rick Mattingly. His presentation will cover the basics of GPS - Global Positioning System - and how this technology can be used in archaeology. Please mark your calendar and plan to attend this Wednesday. If you would like to join us for dinner before the meeting, we will be meeting at the Country Buffet in Fort Collins, near Barnes & Noble, at 5:30 pm.

Update on the Kaplan-Hoover Project

The following e-mail was received from Tom Hoff , CAS President, on 2 July 2003:

To Mary Jo:

Just a note to let you and the Northern Colorado Chapter know how impressed Terri and I were with your exhibition "Awakening Stories." It is not only esthetically pleasing from the viewers perspective, I think the message it relays is very important. Your recognition of the dual importance of Kaplan-Hoover from both an archaeological and cultural framework is important if trust and cooperation are to be restored between the Archaeological and Native American community.

I am looking forward to showcasing your exhibit at the CAS Annual Meeting in Colorado Springs, and in working with you in the future to insure that "Awakening Stories" has the opportunity to spread its messsage statewide through the exhibit's lending program.

Sincerely,

Tom Hoff, President, CAS

The following message was distributed via e-mail 30 July 2003:

Greetings NCC members:

I hope summer time is treating you well. I am happy to relay good news. Thanks to the support of Tom Hoff, our interpretive program on the Kaplan-Hoover site, 'Awakening Stories', was presented to the Colorado Inter Agency Task Force to seek their support. They decided to make a generous contribution of $777 as matching funds to the original SHF grant received to help complete production of this exhibit. NCC should be very proud to receive this endorsement and support from such a prestigious organization. 'Awakening Stories' will be displayed at the upcoming annual CAS meeting this coming Oct 17-19 hosted by the Pikes Peak Chapter in Colorado Springs, so I hope you are planning on attending this meeting as a way of showing your support!

Mary Jo Zeidler, Education Coordinator

PAAC Class

Our next PAAC class is scheduled to start on October 7 - this will be a 7 session class. It is "Principles of Archaeological Excavation." So far, we have 3 people interested. We need 10 to make it a go. The PAAC classes are taught by Kevin Black, the Colorado Assistant Archaeology. The class will meet at the CSU Veterinary Hospital, 300 W Drake Road, Room B222, 6:30-9:30 pm. The cost of the class is $12. Please make your check out to Colorado Historical Society and send it to NC/CAS, PO Box 9554, Ft. Collins, CO 80525 or pay at the meeting on Wednesday.

CAS Annual Meeting

The Pikes Peak Chapter will host the CAS 2003 Annual Meeting, October 17-19 in Colorado Springs. Events will be held Saturday, October 18, at the conference center at CU Colorado Springs. The banquet will be Saturday night. Details on registration and available lodging will be provided soon.

Update on the New Rock Art Chapter

CAS is moving closer to the formation of a state-wide Rock Art Chapter. The May meeting of Rock Art enthusiasts in Pueblo expressed a strong support for joining CAS. They elected a steering group that is actively working toward petitioning for Chapter membership status as early as the Annual Meeting in October.

What in the World is GPS?

Our program for this month will be presented by Rick Mattingly and be geared toward an aspect of technology known as the Global Positioning System (GPS). Some of you may be well aware of GPS and even use it in your work or for recreational activities. And others may be asking, "What in the world is GPS and what does it have to do with archaeology?" So, following is some background information that will provide you with insight into the subject matter Rick will be discussing. This is an exciting technology and is gradually changing our lives. [http://aero.org/publications/GPSPRIMER/Intro.html]

GPS is the only system today able to show you your exact position on the Earth anytime, in any weather, anywhere. GPS satellites, 24 in all, orbit at 11,000 nautical miles above the Earth. They are continuously monitored by ground stations located worldwide. The satellites transmit signals that can be detected by anyone with a "GPS receiver." Using the receiver, you can determine your location with great precision.

GPS is one of history's most exciting and revolutionary developments, and new uses for it are constantly being discovered. An important element of GPS is understanding Navigation. Since prehistoric times, people have been trying to figure out a reliable way to tell where they are, to help guide them to where they are going, and to get them back home again. Cavemen probably used stones and twigs to mark a trail when they set out hunting for food. The earliest mariners followed the coast closely to keep from getting lost. When navigators first sailed into the open ocean, they discovered they could chart their course by following the stars. The ancient Phoenicians used the North Star to journey from Egypt and Crete. According to Homer, the goddess Athena told Odysseus to "keep the Great Bear on his left" during his travels from Calypso's Island. Unfortunately for Odysseus and all the other mariners, the stars are only visible at night – and only on clear nights.

The next major developments in the quest for the perfect method of navigation were the magnetic compass and the sextant. The needle of a compass always points to north, so it is always possible to know in what direction you are going. The sextant uses adjustable mirrors to measure the exact angle of the stars, moon, and sun above the horizon. However, in the early days of its use, it was only possible to determine latitude. Sailors were still unable to determine their longitude. This was such a serious problem that in the 17th century, the British formed a special Board of Longitude consisting of well-known scientists. This group offered 20,000 pounds, equal to about a million of today's dollars, to anybody who could find a way to determine a ship's longitude within 30 nautical miles.

The generous offer paid off. In 1761, a cabinetmaker named John Harrison developed a shipboard timepiece called a chronometer, which lost or gained only about one second a day – incredibly accurate for the time. For the next two centuries, sextants and chronometers were used in combination to provide latitude and longitude information.

In the early 20th century several radio-based navigation systems were developed, which were used widely during World War II. To overcome the drawbacks of radio-based systems, scientists decided the only way to provide coverage of the entire world was to place high-frequency radio transmitters in space. A transmitter high above the Earth sending a high-frequency radio wave with a special coded signal can cover a large area and still overcome much of the 'noise' encountered on the way to the ground. This is on of the main principles behind the GPS system.

In a simplistic fashion, this is how it works. We know that the GPS system consists of satellites whose paths are monitored by ground stations. Each satellite generates radio signals that allow a receiver to estimate the satellite location and distance between the satellite and the receiver. The receiver uses the measurements to calculate where on or above the Earth the user is located. Keep this in mind to imagine how the system might work for you.

Imagine being an archaeologist on an expedition to the Yucatan Peninsula in Mexico. After preparing for your trip for months, you are certain that somewhere close by are the ruins of villages once populated by the Mayans. The forest in dense, the sun is hot, and the air is humid. The only way you can record where you have been, or find your way back to civilization, is by using the almost magic power of your GPS receiver.

Or let's suppose you are an oceanographer for the International Ice Patrol. You may be responsible for finding icebergs that form in the cold waters of the north Atlantic Ocean. Some of these icebergs are to miles long. They are a major threat to the ships that travel those waters, and more than 300 of them form every winter. Using a GPS receiver, you are able to help ships avoid disaster by zeroing in on the position of the icebergs and notifying ship captains of their locations, perhaps averting disaster.

During the construction of the tunnel under the English Channel, British and French crews started digging from opposite ends: one from Dover, England, one from Calais, France. They relied on GPS receivers outside the tunnel to check their positions along the way and to make sure they met exactly in the middle. Otherwise, the tunnel might have been crooked.

There will probably be a time soon when every car on the road can be equipped with a GPS receiver, including a video screen installed in the dashboard. The in-dash monitor will be a full-color display showing your location and a map of the roads around you. It will probably monitor your car's performance and your car phone as well. Systems as amazing as this one are already being tested on highways.

Vehicle tracking is one of the fastest-growing GPS applications. GPS-equipped fleet vehicles, public transportation systems, delivery trucks, and courier services use receivers to monitor their locations at all times.

GPS is also helping to save lives. Many police, fire, and emergency medical service units are using GPS receivers to determine the police car, fire truck, or ambulance nearest to an emergency, enabling the quickest possible response in life-or-death situations.

Automobile manufacturers are offering moving-map displays guided by GPS receivers as an option on new vehicles. The displays can be removed and taken into a home to plan a trip. Several Florida rental car companies are demonstrating GPS-equipped vehicles that give directions to drivers on display screens and through synthesized voice instructions. No more getting lost on the way to Disney World!

In the field of wildlife management, threatened species such as the Mojave Desert tortoise are being fitted with GPS receivers and tiny transmitters to help determine population distribution patterns and possible sources of disease. GPS-equipped balloons are monitoring holes in the ozone layer over the polar regions, and air quality is being monitored using GPS receivers. Buoys tracking major oil spills transmit data using GPS.

Archaeologists and explorers are using the system. Anyone equipped with a GPS receiver can us it as a reference point to find another location. With a basic knowledge of math and science, plus a hand-held device, the possibilities are endless.

Bring your questions and plan on an informative program with Rick Mattingly.

Colorado Archaeological Society
Code of Ethics

Members will uphold State and Federal antiquities laws and regulations.

Excavation of archaeological sites will be conducted only according to professionally accepted procedures developed in consultation with a professional archaeologist and with the written permission of the landowner. The investigator has the responsibility for publication of the results of his/her investigation and for making the collection available for further scientific study.

Members are encouraged to report archaeological sites to the Office on the State Site Report forms. Materials collected from the surface sites shall be catalogued and described in the site survey report. Collected materials should either be deposited with the State Archaeologist's office or made available for scientific study.

Members will not support illegal or unscientifically conducted activities by participating in or condoning the sale, exchange or purchase of artifacts obtained from such sites.

Members who exhibit artifacts will do so in an educational context. Items from burials and objects considered sacred will not be exhibited.

Members will cooperate with the State Archaeologist and other agencies concerned with archaeology and related fields.

Members will respect the dignity of groups whose cultural histories are the subject of archaeological investigation.

Members will not participate in conduct involving dishonesty, deceit, or misrepresentation about archaeological matters.

Northern Colorado Chapter
Colorado Archaeological Society
P.O. Box 9554
Fort Collins, CO 80525