



THE MOKI MESSENGER

NEWSLETTER OF THE SAN JUAN BASIN ARCHAEOLOGICAL SOCIETY

Chapter of Colorado Archaeological Society

August, 2013

SJBAS August Meeting

August 8, 2013, the SJBAS Meeting will be held at 7:00 p.m., Fort Lewis College Center for SW Studies Lyceum. Mary L. Gillam, Ph.D. and Lillian D. Wakeley, D.Ed., will speak on *Are Utah's Sand Island "Mammoths" Late Pleistocene? A Geologic View*. Two petroglyphs on a 20-m cliff cut into Navajo Sandstone by the San Juan River near Bluff have been interpreted as images of mammoths, thus late Pleistocene.

Evidence for erosion of the cliff is inconsistent with this interpretation. Partial erosion of younger petroglyphs shows that very old petroglyphs are unlikely to be preserved on such weak stone. The River first undercut the cliff, causing rock fall. After enough talus accumulated at the cliff base to protect it from the River, cliff erosion continued by fracturing, scaling and grain removal. Slow erosion by surface runoff and moisture seeping through the rock erodes the rock surface even though the "mammoth" are beneath a slight overhang. Geologic dating suggests that the cliff face beneath the "mammoth" stabilized during middle-early Holocene time, long after mammoths and mastodons became, extinct around 13,000-12,500 years ago. While some elements of these petroglyphs resemble mammoth anatomy, their interpretation must be based on all available evidence, including the geologic setting.



There will be a celebration of the life of **John W. Sanders** on Saturday, September 21, 4:30 p.m., at the Center for Southwest Studies

Further work on the petroglyphs and their geo-environment may resolve scientific questions but could take years or be inconclusive, because of cost and other limitations. The "mammoth" interpretation remains a hypothesis.

Mary Gillam is a consulting geologist

(Continued on page 2)

Officers for 2013

President	Andy Gulliford
Vice President	Florence (Foxye) Mason, Peggy Morris
Vice President in charge of field trips:	Jim Robinson
Secretary	Diane Skinner
Treasurer	Mark Gebhardt
CAS Representative	Bob Powell
PAAC Co-ordinator	Lori Norton
MOKI Editors	Jill Ward, Jan Sheffel, & Beverly Stacy Dittmer

What's Inside

SJBAS Upcoming Field Trips	2
PAAC Classes & Voting	3
Hisatsinom Meetings	3
Conferences	4
Museum Exhibits	4
Other Activities	7
The Editor's Corner	7
Archeology Near & Far SW	10

(Continued from page 1)

with specialties in geomorphology, young sediments, and surface soils. She has worked for 25 years on research and applied studies in most western states, including projects concerning archaeology and river geomorphology in the Four Corners. Her degrees include a Ph.D. from CU and an M.S. and B.S. from Stanford U. She has taught introductory geology at San Juan College and is a "friend of the geosciences" at Fort Lewis College.

Lillian Wakeley is a consulting geologist with world-wide research experience in near-surface soil properties, desert and river geomorphology, specialty geo-materials, interpreting paleo-environments, and science for the public. She holds an M.S. from UT State U, where she is an adjunct faculty member, and a D.Ed. from Penn State. She spent 27 years as an engineering and environmental geologist for the Army Corps of Engineers, where she led a geologic study of the "Kennewick Man" site.

SJBAS Upcoming Field Trips

Key: (DT=Day Trip; TL=Trip Leaders; TPL=Trip Limit)

Aug. 14. Ames Power Plant near Telluride.

(TLs: Bev and Bob Danielson, 970-385-1058). DT. No TPL. The site where a technological advance made a tremendous improvement to both the health of miners and mining profit.

8/21 to 8/25. Range Creek ("R. Ck."), Nine Mile Canyon ("NMC"), UT, near Price.

(TLs: Marlo and Gail Schulz, 970-946-5234, or mschulz@frontier.net) Drive to Price on **8/21**; **8/22**, view the NMC rock art; **8/23**, tour the Anthropology and Paleontology Museums at the College of Eastern UT. Drive to the R. Ck. to set up camp -- one-two nights; R. Ck. tour all day **8/24**, with Jeanie and Butch Jensen from Tavaputs Ranch, on the Tavaputs Plateau above R. Ck. Leave **8/25** for home. Tour is in Tavaputs Ranch vehicles, driven by guides, with many stops to view rock art and ruins, sometimes with spotting scopes provided by the guides. Lunch included. **Several tour slots available because of cancellations.** For reservations, contact Gail Schulz, (970) 259-3249, 114 Schulz Rd., Hesperus, CO 81326. 4-wheel drive vehicle is needed to reach the Range Creek Trailhead.

9/5-8. History, Culture & Archaeology in Albuquerque.

Four-day motel trip to visit the Telephone Pioneer, Turquoise, Harvey House Museums, Museum of Arch. and Material Culture, Isleta Pueblo and church. Hopefully hear lecture on Albuquerque archaeology. TPL=20. TL: Pam & Lynn Butler, 505-899-2688, lynbut@msn.com.

9/19. Archaeological Conservancy Four Corners Sites.

Day trip to visit Albert Porter, Gillota-Johnson and newly acquired Carhart pueblos. TPL=20. TL: TBD. (Contact Mary Ann Hiller: 970-259-5170; johnhilldurco@durango.net.

9/29 - 10/2. Capitol Reef and Horseshoe Canyon.

Four-day, car-camping trip to visit some of best Barrier Canyon style rock art. Hike into Horseshoe Canyon: steep, 7 miles roundtrip. TPL=20. TL: Janice & Brooks Taylor; 970-382-0165; durango-folk@frontier.net.

10/16-18. Cedar Mesa.

Three-day, car-camping trip to take moderately difficult hikes into variety of Ancestral Puebloan sites. Some off-trail hiking. Hikes up to five miles long. HC/4WD vehicles necessary. Carpooling to be arranged. TPL=12. TL: Barb & Lyle Hancock; 970-764-4531; lylehancock@bresnan.net.

10/26. The History of Trail Canyon.

Day trip to cover 10,000 years of history in six miles. TPL=12. Preference for members not there before. TL: Bud Poe (contact Mary Ann Hiller; 970-259-5170; johnhilldurco@durango.net.

11/2. Crow Canyon.

Day trip, with BLM archaeologist Jim Copeland, to visit spectacular Crow Canyon petroglyphs, other sites. HC/4WC vehicles required. TPL=20. TL: Rhonda Raffo & Jim Mueller. 504-258-9564; rhon-

(Continued on page 3)

(Continued from page 2)

daandjim@msn.com.

12/24-25. Taos Pueblo.

Two-day motel trip to see Procession of the Virgin Mary, other Rio Grande Pueblos to see dances. TL: Marion & Andy Simon; 970-749-2927; msimon183@aol.com.

PAAC Classes

PAAC Classes: <http://www.historycolorado.org/oahp/program-avocational-archaeological-certification-paac>. SJBAS needs volunteer PAAC Coordinator, short term. Contact Andy Gulliford.

Vote on Your Favorite PAAC Classes.

Kevin Black, Asst. State Archaeologist, will be offering another PAAC class in our area in the fall. Please let Janice Sheftel know what your top 3 choices would be. Kevin will try to schedule the one we want, unless it has been recently offered here or nearby. Most would be scheduled on a **Friday** eve, all day **Sat.**, all day **Sun.** and **Mon.** evening. Please email or call: jshftel@mbsslip.com, 970-247-1755, in order of interest of top 3 choices.

- (1) **CO Archeology** (20 hrs);
- (2) **Prehistoric Lithic Description & Analysis** (20 hrs);
- (3) **Prehistoric Ceramic Description & Analysis** (20 hrs);
- (4) **Perishable Materials** (20 hrs);
- (5) **Arch. Dating Methods** (15 hrs);
- (6) **Field and Lab Photography** (15 hrs);
- (7) **Principles of Arch. Excavation** (20 hrs). A classroom experience, this course does not involve actual field training;
- (8) **Archeology Lab Techniques** (15 hrs).

other BMIII site in Tract 4. Also found was a site which appears to be an archaic camp site with lots of chert flakes, bifaces, cores, etc., but no diagnostic tools, and only five sherds (pot drop?)." Interesting finds included a Dolores corner notched, expanding stem, AD 600-1000 isolated find; a spiral-incised sherd, Early Whiteware isolated find; San Jose Archaic dart point, 4500-1500 BC; Uinta projectile point, side notched, straight base, AD 850-1200, CCAC Type 1, AD 900-1300, chert; and a Dolores corner-notched, straight-stemmed projectile point, AD 600-1000, non-local chert.

High School Archaeological Survey. (Hisatsinom Newsletter, July 2013)

The proposed archaeological excavation project at the new Cortez High School site, located behind Walmart, was cancelled due to lack of funds. The grant for the construction of the new high school does not include site work. The one significant site with architecture in the NE corner of the property will be avoided during construction, so it will not require mitigation. The Hisatsinom Chapter was to be involved by providing volunteers to assist Woods Canyon Archaeological Consultants with excavation efforts. The nonprofit SW CO Canyons Alliance, dedicated to supporting the AHC and CANM, provides opportunities for cataloguing artifacts and other opportunities to members of the alliance. Annual 500-acre surveys are mandated on the Monument, but budget cuts have had an impact on their completion.

Coming Hisatsinom Chapter Meetings

Meetings will be held at the First United Methodist Church, 515 N. Park St., Cortez, 7:00 p.m.

Aug. 6 - Jason Chuipka - *Whiskey is for Drinking, Water is for Fighting: Water Projects and Archaeology in the Desert West, 1950-Present.*

Sept. 11 - Steve Lekson - *Chaco Canyon, Capital of the Northern SW.* At the Anasazi Heritage Center as part of Four Corners Lecture Series.

Hisatsinom McAfee Survey Report - Four Days of Research.

(Hisatsinom Newsletter, June & July, 2013) The Survey Team was out once or twice a week in May/June. Eight more sites were discovered and recorded, among them: three Basketmaker III sites, two Pueblo II sites, a possible archaic site, and an 8-stone arc. The site found May 19 was an *Isolated Feature*, a single course of eight stones aligned in an arc with an approximate radius of two meters. No artifacts were found in association with this feature. From the May 17 report, "Dale (Diede) found a perfect point . . . a corner notched Trujillo phase point from the Dolores cluster (Justice 2002) dating AD 400-600. Pottery on this site indicated an-

Upcoming Lectures

Four Corners Lecture Series

Aug. 9, 7 pm, Far View Lodge: Tara Travis: *Navajo Farming in Canyon de Chelly*.

Aug. 18, 1 pm, Anasazi Heritage Center, Laurie Webster: *Ancient Textiles, Baskets, Hides and Wood from SE Utah*.

Aug. 21, 7 pm, Crow Canyon Arch. Cntr.: Mark Varien & Paul Ermigiotti, *Pueblo Farming Project*.

Aug. 25, 1 pm, Anasazi Heritage Center: Bud Poe: *Trail Canyon: Six Miles Long, 10,000 Years Deep*.

SW Seminars: *Voices from the Past 2013*, Mon. nights, 6 p.m., Hotel Santa Fe, Santa Fe, NM, \$12 at the door.

Aug. 5: Jimmy Arteberry (Comanche), Tribal Historic Preservation Officer, Comanche Nation. *A Glimpse Into Comanche History: the Archaeological Record*.

Conferences

2013 Pecos Conference. Aug. 8-11, 2013, Flagstaff.

Each August, archaeologists gather in the SW US or NW Mexico to spend three+ days discussing recent research and the problems of the field and challenges of the profession. First inspired and organized by A.V. Kidder in 1927, the Pecos Conference has no formal organization or permanent leadership. It is run much like the mountain man rendezvous of old. Archaeologists sit around the campfire, review their work and swap stories. Recently, Native Americans, avocational archaeologists, the general public and media organizations have come to speak with the archaeologists. Web Site: www.swanet.org/2013_pecos_conference/.

Rocky Mountain Anthropological Conf., Sept. 26-29, Taos, NM, www.rockymtnanthro.org.

Plains Anthropological Conf & CAS Annual Meeting, Oct. 3-5, Loveland, CO.

Utah Rock Art Research Assoc.'s 33rd Annual Symposium, Oct. 11-14,

Abstracts requested relating to the Moab area and SE UT and the Barrier Canyon Style. Send to Nina Bowen by July 1, 2013. nina_bowen@comcast.net, or (801) 499-0585.

Paleoamerican Odyssey Conference, Oct. 17-19, 2013, Santa Fe.

Museum Exhibits

Maxwell Museum, Albuquerque, Features Exhibit of Curanderos (Mexican Healers).

Museum of the West has New Look with 2013 Opening in Downtown Grand Junction. The museum at 462 Ute Ave., opens 9 a.m. to 5 p.m., Tues.-Sat.

Edge of Cedars Museum, Blanding, UT. *Upper Sand Island Rock Art Recording Project*. Thru Dec. 30, 2013.

Windsor Museum, Windsor, CO. *Bittersweet Harvest*. Wed & Sun, 12-4pm, 116 N. 5th Street. Exploration of 1942-1964 Bracero guest worker program. Free.

NM Historical Museum/Palace of Governors. **Aug. 4, 2 p.m.**, *Pride in the Saddle in NM: The Story of Gay Rodeo Cowboys*, by Out West producer Gregory Hinton and photographer Blake Little. **Aug. 5, 10 a.m. - noon**. "Member Monday" Learn about letterpress printing techniques at the Palace Press, hear plans for renovating the Palace of the Governors, tour Photo Archives.

(Continued on page 5)

Museum/Exhibits—Cont.

(Continued from page 4)

Aug 9, 6 p.m. *Cowboy Music*. Music historians Mark Gardner and Rex Rideout perform and discuss cowboy ballads Free.

Aug. 10 & 11, 10 a.m. - 4 p.m. *Wild West Weekend*. Celebrate heritage of cowboys: singing cowboys, hatmaking, rawhide-braiding, silver work, trick ropers, poets, dutch-oven cooking demonstrations, more. Learn to tie cowboy knots, measure your height in hands, and figure out your cowboy hat size.

Mon. - Sat., Aug., 10 am - 12:15 pm, Historical Downtown Walking Tours. Learn about the history of Santa Fe with tours led by museum guides. Gather at the Palace Courtyard Blue Gate on Lincoln Ave. \$10; 16 and under free with adult. No tours on Saturdays during large community events and markets. (505) 476-5100; nmhistorymuseum.org.

Museum of Indian Arts & Cul./Lab of Anthropology. Santa Fe, NM. *Buchsbaum Gallery of SW Pottery*, Long term.

Aug 9, 13, 16, 23, 8:30-10 a.m. - *Breakfast w/Curators*. \$30, includes museum admission. Learn about Native Amer. artists and arts through talks, exhibit tours, or behind the scenes with MIAC curators, scholars and artists. (505) 476-1269, See IndianArtsandCulture.org. for entire schedule.

Museum of International Folk Art, New World Cuisine: The Histories of Chocolate, Mate y Más. Aug., days vary, 10 am-2 pm. *Arts Alive!* Free, hands-on, drop-in workshops for all ages; children must be with adult. Workshops begin on the hour. July 30 & Aug. 1 - Panamanian mola designs; Aug. 6 & 8 - Ghanaian Fante pride flags.

Denver Museum of Nature & Science. *Mammoths and Mastodons: Titans of the Ice Age*". On loan from Field Museum.

Colorado University Museum of Natural History (Summary, *SW Arch Today*)

Ancient SW: Peoples, Pottery and Place, new exhibit curated by Steve Lekson, features more than 100 rarely viewed ancient SW pots from one of the museum's collections and photographs of ancient SW ruins by aerial photographer Adriel Heisey. <http://bit.ly/Yoxupt>.

Ancient SW: Peoples, Pottery, and Place, features rarely exhibited ceramics from the museum's SW collection and takes visitors through more than 1,000 years of SW history, from AD 500-1600. Photographs of ancient SW ruins provide a visual and dramatic frame of reference for the exhibit, which is divided in seven areas representing the primary cultural groups that defined the ancient SW: Hohokam, Early Pueblo, Chaco, Mesa Verde, Mimbres, Casas Grandes, and Pueblo. Thru Feb. 14, 2014.

Pawnee Indian Museum, Republic, KS. Thru Sept. 30. *Edward S. Curtis Photographs: A Sacred Legacy*. Exhibit displayed in 4-month installments: First, Plains Indians; second, SW tribes; third, NW tribes; fourth native Alaskans. (785) 361-2255, www.kshs.org/pawnee_indian.

Phoenix Sky Harbor Interntl Airport, Phoenix Deer Valley Airport. *From Above: Photographs by Adriel Heisey*. <http://bit.ly/WPV81W>.

Museum of Western CO's Dinosaur Journey Summer Exhibit Thru Sept. 8, with Two of Largest Crocodylians to ever Live -- Sarcosuchus from Africa and S. Amer., and Deinonychus from NW CO. (*Daily Sentinel*, May 22 & 24, 2013) The carnivores are on display in the exhibit "Super Crocs: Terrors of the Cretaceous Swamp," featuring fossils and information on other crocodylians, including their modern counterparts.

(Continued on page 6)

Museum/Exhibits—Cont.

70 Million Years after Body Settled into Muddy Bottom of Western Interior Seaway (Mancos Shale), Jaws of 15-foot Xiphactinus on Display at Dinosaur Journey in Fruita. (Daily Sentinel, July 1, 2013)

Xiphactinus was a fearsome predator that roamed the shallow inland seas of the Cretaceous Period. Its fossilized remains are well-known in KS. The toothy jaw of "Jed the fish," as he was dubbed by the family of his discoverer, Jed Smith, more than a decade ago, now sits in a display case with scales, pieces of rib, rays from a pectoral fin and other bits and pieces. A tiny bit of shark tooth was unearthed when the museum last year was called in to complete the excavation. Visitors who view the xiphactinus jaw will see spiky teeth stick out from jawbone, but what's not immediately plain is that both sides of the jaw were crushed and petrified together. The weight of settling sands appears to have forced the two sides of the jaw together, but the bone was strong enough to hold its shape. "Jed the fish" is the first xiphactinus to be found in the Grand Valley, but another specimen was discovered near Snowmass in the 1960s. The jaw is on display from 9 a.m. to 5 p.m., seven days a week.

Fred Harman Art Museum Celebrated Fred's 86th Birthday on May 25. (Pagosa Sun, May 23, 2013)

Residents of Archuleta County were admitted free of charge and received a gift of four Harman cards with envelopes. The Gomez Store was open to the public, a rare treat thanks to Lily Padilla and Ray. The San Juan Shootists put on a display of fast draw shooting. Doug Chapin, a Red Ryder impersonator, was at the site to stop any robberies.

Public Invited on Behind-the-scenes Tours at Anasazi Heritage Center ("AHC"). (Durango Herald, May 24, 2013)

The AHC houses collections representing 12,000 years of human history in the Four Corners, with most stored in the museum basement. There is more out of sight than on display. Every Thursday, at 2:00 p.m., through October, the public can take a behind-the-scenes tour of the artifacts included in the museum's curated collection. The AHC is one of only three federal repositories for archeological materials managed by the BLM. Collections include artifacts from ancestral Puebloan sites that were excavated before construction of McPhee Reservoir and other indigenous cultural material from the Four Corners. In addition to seeing portions of collections not on display, the public will learn about the research projects supported by the collections, understand how they reflect the cultural landscape of Canyons of the Ancients Nat'l Mon. and learn about care and preservation. Participants should reserve in advance by calling 882-5600. The tours are included with the \$3 cost of AHC admission. Federal recreation pass holders and people under age 18 enjoy free admission. For safety and security reasons, tours are limited to adults and upper-age children. The AHC is open from 9 a.m. to 5 p.m. seven days/week through October. For more information, see: www.co.blm.gov/ahc.

Georgia O'Keeffe Museum, 217 John St., Santa Fe, NM. **Sept. 11, 2013.**

Architecture, Katsinam, and the Land. O'Keeffe's introduction to Hispanic and Indigenous art and architecture, inspired a significant creative shift in her painting. In addition to her iconic landscapes, it includes newly discovered paintings, and the work of Hopi artists Ramona Sakiestewa and Dan Namingha.

Museum of New Mexico Foundation. **Aug. 13.**

Cocktails with the Collector. Visit a private residence on the Nat'l Register of Historic Places and see a collection of works by Taos artists, followed by an outdoor garden reception. For Governor's Circle members and above.

Other Activities

CAS Excavation Opportunities in SW. Second excavation season at **Champagne Spring (Greenlee) Ruins**, Dove Creek. **8/16-19**. One of few community centers in the Northern San Juan drainage during AD 900-1100. See: <http://coloradoarchaeology.org/Hisatsinom/Reports/Greenlee;> www.fourcornersresearch.com/index. **Open only to CAS members.** Additional field school at **Mitchell Spring Ruin Group**, originally noted by Lewis Henry Morgan in 1870. Each field sessions lasts four days. Maximum of 15 participants: \$50/person/session (Student members \$25) charge to cover expenses related to camping, specimen collection, processing and analysis, due two weeks before scheduled dig. Free on-site camping. Contact Tom Hoff at tthoff@hotmail.com or 970-882-2191.

Free Entrance Days in National Parks.

Aug. 25, NPS Birthday;

Sept. 28, Nat'l Public Lands Day; and

Nov. 9-11, Veterans' Day Weekend.

Dendrochronology at Timberline: Windy Ridge Culturally Modified Tree Study.

Aug. 9-13. Paleo Cultural Research Group ("PCRG") will continue study of culturally modified trees ("CMTs") in the CO high country, investigating a unique bristlecone pine grove at timberline in the Mosquito Range, north of Alma, CO. By extending the geographical range of the regional CMT database and documenting the use of a new tree species, this project will add significantly to an emerging understanding of why and when Native Americans harvested tree bark and bark substances. A cabin in Alma will be used as a project base camp. Participants should plan to arrive before supper on **Aug. 9**. Fieldwork will occur over a four day period, ending before supper on Aug. 13. The project area is located above 11,000' so field will be physically demanding. For info: Mark.Mitchell@Paleocultural.org, or (303) 439-4098. **CAS**

CAS: 2013 CAS. The CAS newsletter will be delivered electronically.

CAS Meetings: Oct. 4, Loveland, Annual Meeting, a joint conference with the Plains and Central US is scheduled. There will be a raffle of a Teec Nos Pos rug.

THE EDITORS' CORNER

• **Industrial Mercurialism: Agricola to the Danbury Shakes**", by Lloyd B. Tepper, *IA (Industrial Archaeology)*, (2010), pp. 47-63; Reported by Bob Rushforth. (CAS - Denver Newsletter, January 2013)

Mercury (Hg) (quicksilver) was used throughout history from alchemy to thermonuclear weapons. The IA article discusses these uses and the symptoms of mercury poisoning. Mercury is valuable in mining and mineral processing because it is a liquid at room temperature and dissolves most metals to form an amalgam. Important exceptions are iron, tantalum, tungsten, and platinum. Once a metal, such as gold, is dissolved, the amalgam is heated to drive off the mercury vapors, leaving the gold. When gold is contained in ore, the ore is first milled to make the gold accessible to mercury. The earliest record of the use of mercury to dissolve gold is from the Romans. Vitruvius reported that gold in the thread of old garments could be retrieved by burning the cloth and treating the ash with mercury.

The chemical usage of mercury is complicated by its multitude of names: Doorkeeper, May-



(Continued on page 8)

(Continued from page 7)

dew, Mother Egg, Green lion, Bird of Hermes, Ardent Wine, Theriac, Secret Furnace, Venomous Dragon, and Goose of Hermogenes. While mercury was used to separate gold from its ores by the 12th century, silver required an additional step, delaying the use of mercury amalgam in silver processing until the 16th century. Silver is chemically bound to other elements, such as sulfur, in silver ore. First, the silver must be chemically separated from its compounded elements before it can be amalgamated.



The ore of mercury is cinnabar. The earliest record of mercury mining was from Paracelsus (1527) and Agricola (1556). They described the mines at Almaden, Spain, which had been in operation for over 2,000 years. It is estimated that 1/3 of all mercury that has ever been mined came from Almaden. The name of the mine derives from the Umayyad "Al-Maaden," "the mine." Another mine mentioned by Paracelsus and Agricola was Idrija in Slovenia, operating since 1490.

In the 16th century, silver mines opened at Taxco (1531) and Zacatecas (1540) in Mexico, and Potosi (1545) in Peru. Needing a closer source of mercury, a mine was opened at Huancavelica, Peru in the 1570s, worked by forced Indian labor, who suffered horribly. Underground heat and poor ventilation turned air poisonous. Perhaps 2/3 perished. In an effort to reduce the toll, service was limited to a two-month period. A mercury poisoned worker was termed an "azogado," derived from the Spanish word for quicksilver. Symptoms of mercury intoxication include: (1) Salivation - copious flow of saliva plus spongy, bleeding gums and loss of teeth; (2) Shakes - trembling of the hands, increasing with intended movements; and (3) Erythism - behavioral and personality changes, such as excessive shyness, irritability, inability to take direction, and extreme embarrassment. Other organs can become affected. Death can occur with high levels of mercury absorption. Effective treatment did not occur until the mid-20th century with the use of chelating agents.

In the 19th century, mercury mines were established in the US at New Almaden and New Idria in CA to supply requirements of the CA gold rush (1848) and the NV silver rush (1850). Mercury intoxication followed. One report claimed horses were salivated. The US Census of 1890 recorded >10% of the miners at New Almaden had mercury intoxication. Alternatives to amalgamation eventually diminished the mercury mining industry. The last US mercury mine closed in 1992. Unfortunately, the amalgamation process has reappeared in the recovery of gold in S. America and Africa.

Processing sites provide archaeological remains. The patio process for silver production was introduced in Peru in the 1570s as a replacement for smelting. First, silver ore was crushed in a drag stone or stamp mill. The fine slime was mixed with water, salt, copper sulfate, and mercury, and then poured into a "patio," a shallow, stone-floored, low-walled open enclosure, in a one foot thick layer ("torta"). The ingredients were stirred for weeks, using animals. The silver was separated from its compounds and amalgamated by the mercury. Silver was separated from the mercury by distillation. At higher altitudes, ore was heated in a stone trough because the cold process was ineffective. The patio process was replaced by the cyanidation process in 1890 in S. African mines.

Other uses of mercury were in gilding, treatment of syphilis, and the manufacture of felt hats. In fire gilding, the metal substrate, such as a suit of armor, was etched with acid. Then it was painted with a gold-mercury amalgam. Finally, the armor was heated to drive off the mercury into the air. Mercury boils at 357°C. Electroplating replaced amalgam in gilding.

Syphilis was treated by rubbing a mercury ointment into the skin. This led to the removal of skin indications of syphilis, but did nothing to cure the disease. Alternatively, the patient was sweated and exposed to mercury vapors in a tub with an oven for roasting cinnabar. The mercury vapors penetrated the skin. We are familiar with the nursery rhyme of "Rub-a-dub dub, 3 men in a tub," which had its origin in this treatment of syphilis.

(Continued on page 9)

(Continued from page 8)

Mercuric nitrate was used in the manufacture of felt hats. The procedure, called "carroting," because it turned the rabbit hair orange, caused the hair to become limp and roughened. The hair becomes more firmly matted. Carroting and the following steps of drying, piling, brushing, cutting, sorting, and blowing, suspended mercury containing vapors and dust in the air. Mercuric nitrate was banned in the US in 1941. This brings us to "The Mad Hatter" of Lewis Carroll's "Through the Looking Glass" (1865). Were the symptoms exhibited by the Mad Hatter attributable to mercury intoxication? The term "Mad as a Hatter" was a term in use at the time, but may be a cockney corruption of "mad as an adder." Carroting was only recently introduced into England and mercury intoxication reported in the literature (1863). Some folkloric medicines contain mercury. Mercury and its compounds have had cosmetic uses since ancient times. It also is used in some occult practices (voodoo, santeria and espiritismo).



The Turner Tradition, by Suzanne Turner Belt and Frederic B. Wildfang, self-published.

(Durango Herald, June 11, 2013)

The Turner family history is short and easy to read. J.C. Turner first arrived in CO Territory in 1858, 18 years before CO gained statehood. He followed gold strikes throughout the Four Corners, a quest that first brought him to SW CO at the start of the Civil War. During the next several years, he was a Union combatant in the Battle of Glorietta Pass in NM; a soldier at the Sand Creek Massacre and a Colfax County sheriff, battling outlaws such as William H. Bonney, "Billy the Kid." When he started a family and moved back to the Animas Valley by covered wagon in 1871, the D&S Narrow Gauge RR and Million Dollar Highway were still a decade away.

The Turners homesteaded a 160-acre ranch south of Bakers Bridge (J.C. had crossed paths with the ill-fated Charles Baker years earlier), raised eight children and established the Turner name as one of Durango's oldest. J.C.'s end was anticlimactic. In 1902, he fell from a pile of hay and died from his injuries. Ensuing generations helped form the financial and cultural infrastructure of the growing town. His son, John W. Turner, made and lost a fortune in land speculation and more traditional forms of gambling. He also was part of the group that started Durango's first radio station, KIUP-AM, in 1936. A generation later, Nick Turner was instrumental in the creation of Purgatory Ski Area in 1965. His father, Dick, had been the first to put a lift on Chipmunk Hill. The ski run, "The Bank," was named in honor of Nick, who arranged the financing that made possible the expansion of the resort in the 1970s. He was a player in saving Durango's RR in the 1960s, preserving the tracks to Silverton when the Denver & Rio Grande wanted to abandon the line.

Durango-Silverton Corp. preceded the multi-million dollar tourist draw. Suzanne Turner Belt provided Wildfang with historical family photographs. The short book contains almost as many photo pages as text. Of particular interest are reproductions of J.C. Turner's journals in his hand writing. *The Turner Tradition* is a fun, quick way to learn not only about one of Durango's most influential families, but also Durango.

Royal Cities of Maya, by Michael D. Coe, Emeritus Professor of Anthropology from Yale U. and Curator Emeritus in Yale's Peabody Museum: Book Review by Jack C. Warner.

(CAS - Denver Chapter Newsletter, May 2013)

The photos are by Barry Brukoff, who has collaborated on archaeology-related books in various parts of the world, including Stonehenge, Machu Picchu, and Angkor Wat. The first chapter, "Mayan Genesis", provides a concise overview of the time and geographical area the Maya grew to dominate. It is generally believed that the Maya built the most advanced pre-Columbian civilization in the Americas, their culture growing out of the Olmec civilization. They developed a writing system that has been deciphered. Translations of stone glyphs are ongoing.

(Continued on page 10)

(Continued from page 9)

The Mayan homeland encompasses a large part of Mesoamerica, including parts of Mexico, Guatemala, Belize, Honduras and El Salvador. Mayan power peaked from 200-925 AD, the Classic Period. The civilization had a major collapse in the 800-early 900s; but the Mayans are still with us. The Maya are the most numerous of all Native American peoples. In fact, about half the people of modern Guatemala are Mayan. The first chapter concludes with a discussion of El Mirador, the large, early (300 BC-150AD) city that was the first great center of the Mayan world.



The easy-to-understand text covers the city's history based on the latest archaeological findings. The text includes a history of key archaeological efforts and information uncovered by deciphering inscriptions, supplemented by large format, high quality photographs. It is organized around the main centers of Mayan political power, cities led by what we would think of as kings or princes (or in the case of Tikal, the occasional queen), "Royal Cities." The history and interrelationships for all Mayan royal cities are discussed and important ruins and art objects are illustrated by fine photos. Smaller nearby settlements of interest are discussed.

The second chapter, "Rival Giants of the Classic Period," discusses the rivalry between southern lowland powers, Tikal and Calakmul, in the period of peak Mayan power. The relatively recent results in decoding the Mayan language from carved stelae have provided many of the rulers' actual names, dates, and important events. The book reads more like a traditional history book than an archaeological one. The author relates the interrelationships of various factors, weaving them into a story. He describes how the economic importance of overland trading routes led to the rise and rivalry between these two cities; who fought whom over what, and what happened to the loser.

The next three chapters are devoted to royal Mayan cities of the Usumacinta River, e.g., Bonampak; cities of the West, e.g. Palenque, and cities of the East, e.g. Copan. The longest, second to last chapter, "Maya Renaissance in the Northern Lowlands," describes the flowering of the Mayan civilization in the Yucatan, as the great cities of the southern area declined. The Mayan world becomes more of a melting pot of Mayan culture with other cultures from central Mexico. The Maya came to be ruled by other peoples. The text and pictures describe the architecture and the belief systems reflected in the stone art.

The final chapter, "Twilight of the Ancient Maya," tells of the conquering of the Maya and the late capital cities at Chichen Itza and Mayapan. Tulum is the last of the "Royal Cities" discussed, a sea trading center perched on a cliff overlooking the Caribbean. It was still occupied by the Maya when it was viewed from the sea in 1518 by a Spanish exploratory expedition.

The book was useful in understanding the "big picture" story of the Maya. It explained all the major Mayan centers of power and how they fit into the whole; the economy of the cities; trade items and routes; and how things shifted over time; the rivalry, alliances, war, and who conquered whom among the ruling elites; the shift of the civilization from its Classic Period center in the southern lowlands into the north in the Yucatan.

Archeology Near and Far: Southwest

La Plata County.

Construction Workers in March Uncover Four Human Bodies Buried on School Grounds in Ignacio, Building New Elementary School. Three Months Later, District Uncovers 26 More. (Durango Herald, July 7, 2013)

While authorities suspected the bodies were of Spanish origin and buried about 50-75 years ago, it now appears the cemetery is multi-ethnic, dating 100 years ago. Some of the bodies are Native American. Though the bodies have been taken to FLC for further study, little is known about them. Everyone from pro-

(Continued on page 11)

Archeology Near and Far: SW.—Cont.

(Continued from page 10)

fessors at FLC to Ignacio School District ("ISD") officials has been publicly keeping mum about the origin of the bodies. Since construction workers uncovered the first human remains while laying a sewage line in March, ISD has had to persevere with the \$14.9 million construction project, to be ready for kids in August. On the other hand, it has to comply with CO law pertaining to newly rediscovered cemeteries -- requiring exhumation -- while honoring Southern Ute Indian beliefs about death and reburial, which hold that death is not the end of a human being. Tribal elders do not want to comment on their views of death.

Testifying in Santa Fe last year before a national committee Southern Ute Indian Tribal Council member Pathimi GoodTracks said, "We have hundreds of relatives waiting, waiting for reburial, and it is distressing to Native people when our ancestors are left in limbo." The school district has included the Tribe in the excavation from the earliest stages. After a construction worker discovered human remains in March, work stopped, and Ignacio police were called. Since then, ISD has tried to manage competing imperatives -- build the schools, take care of the bodies -- and nothing about ISD's continuing construction project has been legally, financially or culturally simple. Numerous agencies have been involved: ISD, Ignacio Police Dept., La Plata County Coroner's Office, Office of the State Archaeologist, Southern Ute Indian Tribe, Durango-based construction consultant ERO Resources, two professors in FLC's anthropology department, the firms KPMC and Okland Construction, the CO Dept. of Education and the Building Excellent Schools Today grant program, which awarded the district \$5.8 million for its construction project. In the case of the BEST Program, involvement has meant tapping into reserve funds, as the ISD, which has been forced to use magnometers to ferret out potential corpses, must pay the bill for the ever-expanding exhumation. The ISD, in addition to receiving tribal funding for many ISD programs, receives federal money for every Native student enrolled because the Tribe does not pay property taxes.

Roybal Family History Set in Stone in Durango: "Book Case" at Durango Public Library Memorializes Past, Present Residents. (Durango Herald, June 2, 2013)

Carla Chirigos came to Durango often in her youth to visit her grandparents, Hipolito and Felciana Roybal, who raised 13 of 14 children in Durango. The two-bedroom Roybal family home still stands on East Second St. In partnership with the Durango Botanical Society, Chirigos paid tribute to the Roybal family by constructing a memorial in Oct. 2012 facing the Animas River behind the Library. Chirigos is the daughter of Genevieve Quintana, 89, who is honored in the memorial. Quintana lived in Durango until she was 22, then moved to Pojoaque, NM, and currently lives in Albuquerque. Chirigos helped with the design process of the Roybal section in the Book Case. The back wall of the garden is the Book Case, designed to represent the relationship that the society and library have with each other, as well as a symbol of community support.

The Book Case also serves as funding for maintenance. Anyone can purchase one of the 210 spaces available in the Book Case. Memorials are not the only engravings on the stones. The stones can have up to 25 letters and likely will host first and last names of families who are a part of the current Durango community and the surrounding area. Stones still are available and can be purchased for \$250. The stones that make up the structure are locally produced, hand cut and hand engraved.

The Roybal family had a rich history in Durango. J. Hipolito Roybal spent his time in Durango working at coal mines and as a shepherder to support the family, while his wife, Felciana, raised the children. Chirigos would come to Durango every year for a week to visit her grandmother, who made bread every Saturday. Communication was hard between grandmother and granddaughter, as Felciana Roybal spoke only Spanish and Chirigos only English. Chirigos remembers her grandmother as a beautiful woman with radiant blue eyes.

The Roybals' memorial consists of two foundation strip stones lying flat, with J. Hipolito and Felciana's names, and upright spines stacked on top denoting the birth order and names of the Roybal children, beginning with Olympia in 1908; ending with Victor in 1931. The Roybals leave behind their legacy to 53 great-grandchildren, 80 great-great-grandchildren and 30 great-great-great grandchildren. The memorial serves as a meeting ground for family members and a tribute to the Roybals. Six of the eight Roybal sons served in various branches of the armed forces during WW II. Not all of the Roybal children stayed in Durango, but those who did leave memories behind. One sibling, Olympia Sanchez, lived in the same home in Durango for 61 years, at 457 E. Fifth Ave. She worked at COD Laundry, then F.W. Woolworth Co. for 16 years until retirement. A single Roybal descendant continues to live in Durango: Bill Burrell, grandson of Olympia. The Roybal section of the Book Case is a means to contact cousins, who not only contributed money to help build the memorial but also supplied information and photos for completion of the family tree.

San Juan Basin Archaeological Society
107 St. Andrews Circle
Durango, Colorado 81301

FIRST CLASS

San Juan Basin Archaeological Society

A Chapter of the Colorado Archaeological Society

If you're not a member of our group and would like to receive our newsletter, attend our monthly meetings, join us on our outings, and participate in our many other activities and those of the Colorado Archaeological Society (CAS), call our President Andy Gulliford (970-375-9417) and ask for information about our organization. Annual dues, including those for membership in the Colorado Archaeological Society, are listed below and are payable by checks made out to SJBAS and mailed to our Treasurer Mark Gebhardt, 107 Saint Andrews Circle, Durango, CO 81301. Dues cover membership for the calendar year. With SWL means that the membership includes a subscription to CAS's quarterly journal "Southwestern Lore" (SWL). No SWL means that the journal is not included with your membership, hence the difference in the dues.

Individual (includes "Southwestern Lore")	SJBAS \$15.00 + CAS \$16.00 = \$31.00
Individual (no SWL)	SJBAS \$15.00 + CAS \$ 8.00 = \$23.00
Family (with SWL)	SJBAS \$20.00 + CAS \$20.00 = \$40.00
Family (no SWL)	SJBAS \$20.00 + CAS \$10.00 = \$30.00

Editors of this newsletter are in alphabetical order:

Beverly Stacy Dittmer - mokibev@frontier.net or (817-266-5046 or 970-375-9568)

Janis Sheftel - jsheftel@mbsllp.com

Jill Ward - jward@peterpattison.com

We welcome your comments, reports, pictures, and news to include in this newsletter.

www.sjbas.org