



Colorado Scientific Society

*The objective of the Society is to promote
the knowledge and understanding of Earth science,
and its application to human needs*

Thursday, April 17th:

*THE MID-WISCONSIN HUMAN COLONIZATION OF NORTH AMERICA: A CALL
FOR ARCHAEOLOGICAL INVESTIGATIONS IN OLDER GEOLOGICAL DEPOSITS*

*Speakers: Steven R. Holen and Kathleen Holen,
Center for American Paleolithic Research
Fort Collins, CO*



*Location—Shepherd of the Hills Church,
11500 W. 20th. Ave. (at Simms St.),
Lakewood, Colorado
Social time— 6:30 p.m. Lecture—7:00 p.m.*



Everyone is Welcome!



Abstract

The hypothesis that humans entered North America during the mid-Wisconsin via Beringia was proposed by Muller-Beck in the 1960s. The Mammoth Steppe Hypothesis presented here suggests that humans entered North America from Siberia during the relatively warm mid- Wisconsin, 40,000 to 22,000 rcybp. A mammoth steppe biome extended from Europe across Siberia to Alaska, and in modified form, into the Great Plains of North America. The authors offer evidence of a mid-Wisconsin human presence in the North American mid-continent, including Colorado. The hypothesis that Upper Paleolithic populations successfully adapted to the mammoth steppe biome and entered mid-continent North America before the Last Glacial Maximum ice sheet covered Canada is supported with enough evidence to justify further research. We suggest that it is important for archaeologists to investigate older geological deposits in their search for archaeological components and to educate and collaborate with paleontologists who do work in these deposits.



Biographies

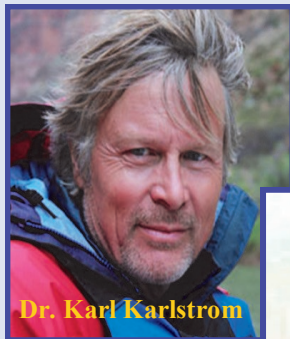
Steven Holen has more than 40 years of archaeological experience in the Great Plains and has worked on all types of archaeological sites dating from historic to pre-Clovis. Recently, Steve has concentrated his efforts on determining when humans first arrived in North America. He has excavated several mammoth sites with impact-fractured and flaked bone that suggest humans were present on the Great Plains during the Last Glacial Maximum when Canada was covered with glaciers from coast to coast. This evidence indicates that humans must have arrived before the route from Siberia to the Great Plains was closed about 22,000 years ago. Steve also researches Clovis lithic procurement and mobility on the Central Plains. Steve recently retired as Curator of Archaeology at the Denver Museum of Nature & Science. He then joined his wife Kathleen in a new nonprofit organization, the Center for American Paleolithic Research, with the goal of searching for evidence of early humans in the Americas.

Kathleen retired as a Geriatric Nurse Practitioner after more than 26 years in practice and more than 10 years of avocational archaeology. In 2009 she received her MA in archaeology from the University of Exeter, Devon, United Kingdom. She is interested in early human dispersals into the Americas from the perspective of human cognition and behavior. She has participated in Steven Holen's research by studying prey animal bones and methods for differentiating human made bone modifications from other causes. She is co- director of the Center for American Paleolithic Research.

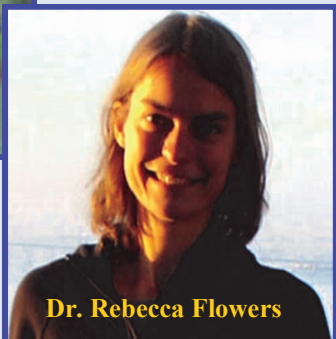
“The Age of Grand Canyon: A Century of Debate”

Friday, April 11, 2014, 7:00 p.m.

Speakers: Dr. Karl Karlstrom and Dr. Rebecca Flowers



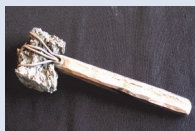
The question of the Grand Canyon's age may not be the most crucial concern on your mind. However, that issue has focused the professional attentions of Dr. Rebecca M. Flowers of the University of Colorado at Boulder and Dr. Karl Karlstrom at the University of New Mexico. They represent two competing views, old canyon (Flowers) vs young canyon (Karlstrom), and the controversy brings to light new technology and raises fascinating questions about what was happening and when in the Grand Canyon's long-ago past.



In their presentation, “The Age of Grand Canyon: A Century of Debate,” each doctor will deliver facts to support their position. They will then engage in a debate on the pros and cons of the issue. They have sparred before on this issue and promise to give an energetic, enlightened debate on the Grand Canyon's youth or old age, highlighted by good humored disagreements about what facts and figures mean that are provided by the latest technology.

**Held at the National Mining Hall of Fame & Museum
(ballroom), 120 West 10th Street, Leadville, CO.**





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CSS President's Message by Scott Lundstrom

Within a few hours of the Vernal Equinox (by mere coincidence), our March 20 meeting was a real pleasure to have such a large and engaged audience receive a very interesting and well-done presentation on **Front Range Floods** by Professor John Pitlick of CU, Boulder. John emphasized several key points toward an improved perspective on flood hazards and events such as those of last September, including: the contrast between flood peaks from snowmelt (larger basins producing typical annual flood peaks of moderate to large but limited magnitude), and flood peaks from big rainfall events (much greater peak discharges for much lower probability of recurrence); as well as new ways to consider flood magnitude-frequency relations for a given location on a given stream. We also had excellent hors d'oeuvres and beverage available, thanks to Jane Dianich and Celia Greenman.

For our April 17 meeting, we are very fortunate to have Steve and Katherine Holen (Center for American Paleolithic Research) scheduled to present their work on evidence for mid-Wisconsin human colonization in North America. Their presentation will reflect years of careful work and an important sector of the paleo-anthropological community that questions the prior longer-standing paradigm of Clovis-first in North America. As usual for our talks, I am really looking forward to this opportunity to learn!

In March we also had a CSS Council meeting in which 4 Councilors (of 6), and 4 officers (of 5) took hours from their normal evening time to discuss pressing agenda items for CSS. My message here will be longer than previous in order to touch on selected key items from this meeting:

1). Pete Modreski offered to fill the 2014 Councilor position vacated by Paul Morgan when Paul became President-Elect this year, and Pete was unanimously approved. I wrote earlier that we should recognize individual members exemplary work for CSS, so this is a good time to add additional thanks for Pete's work for CSS. After Pete served as CSS President in 2012, he has continued to do very much for CSS, and we are fortunate to have such an active and dedicated member. Each meeting at our Shepard of the Hills venue has worked well because Pete has made the key arrangements, then made sure that the speaker's slides worked on the available IT equipment which has involved backup equipment more than once. Pete, as an experienced USGS field geologist and a pegmatitic minerals specialist, as well as an educational outreach leader, has arranged and led several field trips for CSS, and has offered ideas on doing a couple more this summer!

2). The annual dues rates for CSS are a very good deal because pretty much all tasks done for CSS are done through volunteered time and efforts; we try to find the best deals on operating costs such as the rent for meeting venues, insurance, website, and on; and several of those doing voluntary work for CSS also donate costs to help CSS activities. Thus, it is all the more important that annual dues income is received to cover CSS expenses in a somewhat regular and expected way.

3). Last year in May, we had a Past-Presidents dinner (open to all CSS members) and a separate regular CSS meeting presentation. We are considering the possibility of combining these for this May – and we will let you know the plan and program in the May newsletter. There are other topics to mention, but they will have to wait for a later newsletter due to limitations of time and space!



GSA GEOSCIENCE TRIVIA

1. The first 2010 Eyjafjallajökull eruption occurred on what date?
2. What is "geest"?
3. The 50th anniversary of the largest recorded earthquake in North America is 27 March. Where did this earthquake occur?

Answers on page 6.





Colorado Scientific Society Spring Field Trip 2014

Colorado Headwaters Basin –

Five mountain passes, cool rocks, and (maybe) moose!

Leaders: Jim Cole and Marieke Dechesne, USGS

Date: Saturday-Sunday, May 31-June 1, 2014

Departing from Federal Center Park and Ride (and Boulder too)

The cost for transportation and drinks provided will most likely be between \$20-30.

This trip is limited to 30 attendees, so please go ahead and reserve your spot by contacting Cal Ruleman - cruleman@usgs.gov or call: (303) 236-7804

DESCRIPTION

This two-day trip will showcase new insights into the Cenozoic geologic history of the western flank of the Front Range in Grand and Jackson Counties, north-central Colorado. We'll show evidence for widespread major uplift that occurred about 67-61 million years ago, in contrast to contemporaneous subsidence in the Denver Basin and South Park areas. Once the Colorado Headwaters Basin began to downwarp (approximately 61 Ma), subsidence was rapid and deep, and spectacular cannonball gravels were deposited in places. Distinctive volcanic porphyry cobbles are traced to source rocks in south-central Colorado, with intriguing implications for paleodrainage. We'll show evidence for faulting before and during basin filling, and show that many of the big folds and reverse faults in the area are mostly younger than the Paleogene sediments.

The middle Tertiary Period here is marked by diverse volcanic/intrusive rocks in the Rabbit Ears and Never Summer Ranges, and by high-energy stream deposits of boulder gravel and coarse sand eroded from volcanoes and mountain uplifts. The most recent 5 million years history shows evidence of renewed mountain uplift, drainage adjustments and integration, and landscape incision.

Saturday night lodging will be in Hot Sulphur Springs with an optional visit to the hot springs spa. Attendees must call and make their own reservations for Saturday night's lodging. Plan on providing your own breakfast and lunch for Saturday and Sunday.

Lodging options:

The Canyon Motel – (970) 725-3395

Hot Sulphur Springs Resort – (970) 725-3306

Ute Trail Motel – (970) 725-0123



Calendar of Events- April

Colorado Scientific Society's regular meetings are held the 3rd Thursday of the month at the Shepherd of the Hills Presbyterian Church, 11500 West 20th Ave., Lakewood, CO.
Unless otherwise advertised- Social time begins at 6:30 p.m. and talks start at 7:00 p.m.
For more information, contact Scott Lundstrom, 303-917-2849, pslundstrom@msn.com.

Upcoming CSS Meeting Presentations:

Thurs., April 17th., 6:30 p.m. Social half-hour; 7:00 p.m. Lecture- "The Mid-Wisconsin Human Colonization of North America: A Call for Archaeological Investigations in Older Geological Deposits." Speakers—Steven R. Holen and Kathleen Holen, Directors of Research Center for American Paleolithic Research Ft. Collins, CO. Location—Shepherd of the Hills Church, 11500 W. 20th Ave. (corner of 20th and Simms), Lakewood. Free admission. Public welcome!

ALSO: Save the date! The Annual CSS Past Presidents' Dinner, to which ALL members and guests are invited to come. Dinner plus a special short program. White Fence Farm, Jewell Ave., Lakewood, CO, Friday, May 16., details to follow in the May newsletter.

OTHER EVENTS:

Tues., Apr. 1, 10:30-11:30 a.m., USGS Rocky Mountain Seminar, **Origin of Grand Canyon, and implications for geomorphology**, by Brian Wernicke, Caltech. Building 25 auditorium, Denver Federal Center, Lakewood. Write to Pete Modreski, pmodreski@usgs.gov, for a complete schedule of spring 2014 USGS seminars.

Tues., Apr. 1, 6:30 p.m., in the **FrackingSENSE 2.0** series, Hale #270, CU campus, Boulder. Lecture--**"Hydraulic Fracturing: Where Does the Research Lead Us?"** Speaker-- Norman Warpinski. See: <http://centerwest.org/> for information on the series through the last presentation on April 15.

Wed., Apr. 2, 4:00 p.m., CU-Boulder Geological Science Colloquium, Benson Earth Science Building, Room 180. Lecture-- **"The Coming Changes in the Mexican Petroleum Industry and their Consequences for North America's Energy Supply."** Speaker-- Alfredo E. Guzmán, Consulting Geologist. Refreshments will be served at 3:30 pm upstairs outside Benson Room 380; all are invited. See: <http://www.colorado.edu/geolsci/colloquium.htm> for a list of all the spring term colloquia.

Thurs., Apr. 3, Western Museum of Mining and Industry Exhibit opening 6:00 p.m. and Heritage Lecture 7:00 p.m. Lecture--**"Social Life in Western Mining Camps."** Speakers--Mark and Karen Vendl, and Duane Smith. Free admission, but lecture room capacity is limited so advance RSVP is required. Please write to: rsvp@wmmi.org for reservations.

Mon., Apr. 7, 7:00 p.m., Denver Region Exploration Geologists' Society monthly meeting, Colorado School of Mines, Golden, Berthoud Hall Room 241. Lecture--**"Colorado Potash Project."** Speaker--Jon P. Thorson, Consulting Geologist. All are welcome.

Thurs., Apr. 10, 4:00-5:00 p.m., Van Tuyl Lecture Series, Colorado School of Mines, Berthoud Hall Room 241. Lecture-- **"Life at the Top of the Greenhouse Eocene World--The Eocene Vertebrate Fauna from Canada's High Arctic."** Speaker-- Jaelyn Eberle, CU- Boulder. All are welcome. Refreshments served. See: http://geology.mines.edu/GE_Lecture-Series.

Fri., Apr. 11, 7:00 p.m., National Mining Hall of Fame & Museum, ballroom, 120 West 10th Street, Leadville, CO. Lecture--**"The Age of the Grand Canyon: A Century of Debate."** Speakers-- Dr. Karl Karlstrom and Dr. Rebecca Flowers.

Fri., Apr. 11, 6:45 p.m., North Jeffco Gem & Mineral Club Silent Auction, APEX Community Recreation Center, 6842 Wadsworth Blvd., Arvada, CO. Free parking, free admission.

Sat., Apr. 12, 10 a.m. – 2 p.m., the first **Dinosaur Discovery Day** of the year at Dinosaur Ridge, Morrison, CO, featuring, **"Bicycles and Dinosaurs."** Join us for our first "Bicycle and Dinosaur" day. Ride your bike along the ridge and learn about the geology and paleontology from Dinosaur Ridge volunteers!" For more info see: <http://www.dinoridge.org/>.

Tues., Apr. 15, 10:30-11:30 a.m., USGS Rocky Mountain Seminar Series, Building 25 auditorium, Denver Federal Center, Lakewood. Lecture--**"Mantle to Surface Dynamics During the Transition from Collision to Escape Tectonics."** Speaker-- Donna Whitney, University of Minnesota.

Apr. 18-20, Colorado Mineral & Fossil Show, Ramada Plaza-Denver Central, 10 a.m. - 6 p.m. Fri. & Sat. 10 a.m., 5 p.m. Sun. Free admission.

Apr. 18-20, Colorado School of Mines Geology Museum, Book & Garage Sale (rocks, books, etc.), 9 a.m. - 4 p.m. Fri., 1 p.m. - 4 p.m. Sat. & Sun.,

Other Events Continued...



April 21, 5:00-7:30 p.m., a short (the-day-before) Earth Day Hike for the public, led by USGS geologist Pete Modreski. A walk on trails in the Ravines Open Space, Lakewood, to see exposures of the Denver Formation containing petrified logs. Meet at the intersection of W. Jewell Ave. and S. Wright St., Lakewood; suggested parking is along Wright St., south of Jewell.
If planning to come contact: pmodreski@usgs.gov, or call 303-202-4766.

Wed., Apr. 23, 4:00 p.m., CU-Boulder Geological Science Colloquium, Benson Earth Science Building, Room 180. Lecture--“**Why is Grand Canyon young and steep?**” Speaker-- Joel Pederson, Utah State University. All invited. See: <http://www.colorado.edu/geolsci/colloquium.htm> for more information.

Tues., Apr. 29, 10:30 a.m. - 11:30 a.m., USGS Rocky Mountain Seminar, Building 25 auditorium, Denver Federal Center, Lakewood. Lecture-- “**Groundwater Age and Mixing in Rocky Mountain Energy Basin: Implications for Monitoring.**” Speaker-- Peter McMahon, USGS.

Wed., Apr. 30, 4:00 p.m., CU-Boulder Geological Science Colloquium, Benson Earth Science Building, Room 180. Lecture-- “**Groundwater Pressure Changes in Central Japan Induced by the 2011 off the Pacific Coast of Tohoku Earthquake, and their Relationship with Faults.**” Speaker-- Masakazu Niwa, Japan Atomic Energy Agency. All are invited.

May 3, 11 a.m. - 3 p.m., Colorado Mineral Society Silent Auction, Holy Shepherd Lutheran Church, 920 Kipling St., Lakewood CO.

May 10, 10 a.m. - 2 p.m., Dinosaur Discovery Day at Dinosaur Ridge, Morrison, CO. Featuring: Boy Scout Day.
See: <http://www.dinoridge.org/> or more information.

May 10, 12 p.m. - 4 p.m. Friends of Mineralogy Colorado Chapter, Silent Auction, Clements Community Center, 1580 Yarrow St., Lakewood CO.

May 31-June 1, CSS Spring Field Trip, Colorado Headwaters Basin

June 6-8, Pikes Peak Gem and Mineral Show, Western Museum of Mining & Industry, Colorado Springs, sponsored by the Colorado Springs Mineralogical Society

June 11-15, Mining History Association, Annual Conference, Trinidad, Colorado. This conference, hosted at Trinidad State Junior College, will touch on many aspects of mining history: geology, mining technology, social history, etc.; Raton Basin coal is the central theme. Full details about the technical program, field trips, and social functions are posted on the MHA website: www.mininghistoryassociation.org/TrinidadConference.htm.

July 12, CSS Family Field Trip, Devils Head and Topaz Point

Aug. 7-10, Contin-Tail Rock Show, Buena Vista Rodeo Grounds, Buena Vista, CO

Aug. 14-17, Woodland Park Rock, Gem & Jewelry Show, Woodland Park, CO

Aug. 15-17, Lake George Gem and Mineral Show, Lake George, CO, sponsored by the Lake George Gem & Mineral Club



Answers to GSA Geoscience Trivia

- March 20th.
- A type of slightly raised landscape made up of moraines and sandurs.
- Alaska



Looking further ahead in the coming months:

Apr. 17, Colorado Scientific Society monthly meeting, “The Mid-Wisconsin Human Colonization of North America: A Call for Archaeological Investigations in Older Geological Deposits.” Speakers—Steven R. Holen and Kathleen Holen MS, MA., Directors of Research, Center for American Paleolithic Research, Ft. Collins, CO. Location—Shepherd of the Hills Church, 11500 W. 20th. Ave. (at Simms St.), Lakewood, Colorado. Social time— 6:30 p.m. Lecture—7:00 p.m. All are welcome!

Apr. 18-20, Colorado Mineral & Fossil Show (Ramada Plaza-Denver Central), 10 a.m. - 6 p.m. Fri. & Sat., 10-5 Sun.

Apr. 18-20, Colorado School of Mines Geology Museum, Book & Garage Sale (rocks, etc.), 9 a.m. - 4 p.m. each day.

May 3, Colorado Mineral Society Silent Auction, Holy Shepherd Lutheran Church, 920 Kipling St., Lakewood CO, 11 a.m. - 3 p.m.

May 10, Dinosaur Discovery Day at Dinosaur Ridge, Morrison, CO; featuring Boy Scout Day.

For more info see —<http://www.dinoridge.org/>

May 10, FM Colorado Chapter, Silent Auction, Clements Community Center, 1580 Yarrow St., Lakewood CO, 12 noon - 4 p.m.

May 15, Colorado Scientific Society monthly meeting, topic TBA.

May 31-June 1, Colorado Scientific Society Field Trip, to the North Park and Middle Park region of Colorado is being organized for this weekend by CSS Field Trip Chair Cal Ruleman.

June 6-8, Pikes Peak Gem and Mineral Show, Western Museum of Mining & Industry, Colorado Springs, sponsored by the Colorado Springs Mineralogical Society

Aug. 7-10, Contin-Tail Rock Show, Buena Vista Rodeo Grounds, Buena Vista, CO

Aug. 14-17, Woodland Park Rock, Gem & Jewelry Show, Woodland Park, CO

Aug. 15-17, Lake George Gem and Mineral Show, Lake George, CO, sponsored by the Lake George Gem & Mineral Club

Sep. 5-7, San Juan Mountains Mineral Symposium, Ouray CO; lectures and field trips; for more information see —

<http://friendsofmineralogycolorado.org/>

Sep. 6-14, Denver Coliseum Mineral, Fossil, & Gem Show

Sep. 7-14, Colorado Mineral & Fossil Show, Ramada Plaza Hotel (formerly Holiday Inn), Denver

Sep. 10, Colorado School of Mines Geology Museum, Reception & Open House, 6-9 p.m.



Where is this Rock? By Pete Modreski



March – Where is this Rock?

Eroded pinnacles of White River Group (Brule Formation), Oligocene, along the trail leading to the Pawnee Buttes, Weld County, CO. In the background is part of the “Escarpment” formed by resistant sandstone and conglomerate of the Ogallala Group, Miocene, which also forms the upper portion of the Pawnee Buttes. I didn’t post a picture of the Buttes themselves—that would have been too easy!



April – Where is this Rock?

Here is April’s picture, to see who can identify the *What* and the *Where* of this one.

Write to: Linda Barton, lbarton1611@gmail.com, or Pete Modreski, pmodreski@usgs.gov.



And a note received about our [February photo](#), from CSS member [Bud Wobus \(Williams College\)](#): “Pete, last month’s pic was too easy for me so I held back. The background is my PhD thesis area (for Stanford, 1966) and is part of the mapping I joined with Chuck Hawley’s for USGS Prof Paper 608- B (1977)...the “Southern Tarryall Region” at a scale of 1:24,000. The summits in the photo are Pulver Mtn on the right and Stoll Mtn on the left (in middle of the Stoll Mtn batholith of 1.7 GA gneissic granodiorite/tonalite). Bud.”



Science News:

Astronomers confirm that debris from Comet 209P/LINEAR should create a sky show on May 24, 2014.

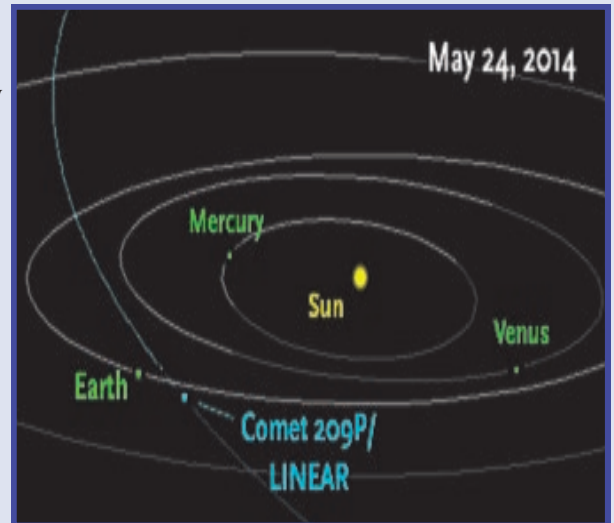
According to predictions, a little-known comet will pass perihelion in early May of 2014 and, two weeks later, sandblast Earth with dust particles spread along its orbit.

NASA / JPL / Horizons

Most meteor showers, like this week's Leonids, occur when Earth plows into the debris trail left behind by a comet. The comet throws this debris off as it's heated by the Sun, but while all comets heat up as they enter the inner solar system, many do not have orbits that intersect with Earth's. That's why the number of major meteor showers per year has remained relatively constant, even though we're regularly discovering new comets.

The tried-and-true list of showers might change soon, though. As we noted in 2012, the comet 209P/LINEAR, which passed by the Sun in 2009, may produce a big meteor shower on May 24, 2014. New calculations by Quanzhi Ye and Paul A. Wiegert (both University of Western Ontario) refine that prediction — and make it a little less optimistic.

Comet 209P/LINEAR was discovered in 2004 by an automated observing campaign. With a period of just over 5 years, the comet stays relatively close to the Sun and inner solar system. Detailed calculations of its orbit indicated that in May 2014 the comet's debris trails would pass extremely close to Earth (about 0.0002 Earth-Sun distances, or within spitting distance of our planet's outermost atmosphere). These thousands of particles could burn up in Earth's atmosphere as meteors when our planet plows through the debris field.



Ye and Wiegert used images from the comet's last visit in late 2008 and 2009 to model the comet's trajectory and predict what kind of shower its crumbs might create. The shower's strength depends on the size of debris particles left behind. Although astronomers can't go out with a net and collect the particles for measurement, they can find this information encoded in the curve of the comet's grand dust tail. The curve's shape depends on the interplay between the radiation pressure and gravity of the Sun, and different sized particles will produce tails with different amounts of curvature.

As Ye and Wiegert report in an upcoming *Monthly Notices of the Royal Astronomical Society*, the team's calculations suggest that the comet has been producing relatively large particles (on the order of 1 mm), meaning that the upcoming meteor shower may be chock-full of bright meteors. But their work also places limits on the overall rate of meteors, suggesting a rate of 200 per hour under ideal conditions.

That's in the same ballpark as previous, independent work by Jérémie Vaubaillon (IMCEE, France) and Mikhail Maslov: Maslov, for example, estimated between 100 and 400 meteors per hour. But Ye and Wiegert warn that, "given the current relatively weak dust production of the comet, rates could be much lower." With the low dust production, as well as the team's lower estimate of how many debris streams from the comet's previous passes are hanging around in this region of space, it's highly unlikely that we're in for a "meteor storm" (1,000 per hour) — although the team couldn't quite rule it out.

Whatever the outcome, it'll be worth going out to look in May. The meteor shower is set to peak around 7h Universal Time on May 24, 2014, with the radiant point (where the meteors appear to come from) in the constellation Camelopardalis. That'll be a fist-width or two above the horizon for those around latitude 40° N; the shower should be easily visible from much of the Northern Hemisphere.

As Comet 209P/LINEAR enters the inner solar system again, it will brighten but still be relatively faint with an apparent magnitude of 11 around the time of the shower. Nonetheless, skywatchers will have their telescopes trained on this comet, as new data on its position and brightness will be crucial for updating models of its behavior. I know I will be looking up as well, searching for meteors in the early spring sky.

Reference: Quanzhi Ye and Paul A. Wiegert. "[Will Comet 209P/LINEAR Generate the Next Meteor Storm?](#)" *MNRAS*, in press.



Pleas and Thank Yous

It's Time to Pay Dues for 2014...

Membership dues for the coming year (2014) are now being accepted. You will find a dues payment form in this newsletter or on the CSS Web site: www.coloscisoc.org/membership/dues.html

Dues payments are \$20 for regular members; \$10 for corresponding members (outside the Colorado Front Range area), and \$5 for students. You may pay your dues by mailing a check to the CSS, or pay with a credit card using PayPal on the CSS website.

CSS Treasurer Don Sweetkind will send out an email to all members with information on their dues paid status. If you are uncertain if you owe dues or of your member status, or if you have not received a receipt for a past contribution, contact CSS Treasurer Don Sweetkind by phone at 303-236-1828 or by e-mail at dsweetkind@usgs.gov.



Dear GSA Member,

Remember to cast your vote in the GSA annual election. You can make a difference in the future of your Society. Please mark your ballot for the GSA officers and councilors that you prefer to represent you. (Note: officer terms are July 2014-June 2015 and councilor terms are July 2014-June 2018). [The voting deadline is 6 April 2014 at midnight Mountain Daylight Time.](#)

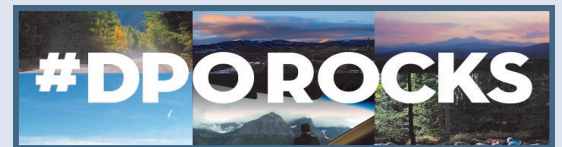
Follow the instructions to vote electronically or print a paper ballot. You will be asked for your 7-digit member ID number above as a password access for online voting. Please contact GSA Sales and Service at gsaservice@geosociety.org or at 1-800-472-1988, option 3, between 8:00 a.m. and 5:00 p.m. MDT if you need further assistance.

If you have already voted or have contacted us to request that a ballot be mailed to you, please disregard this message.

Suzanne Mahlborg Kay
GSA President



Be Part of the Music! Denver Philharmonic Orchestra



*On April 4, Jeffrey Nych's geology-inspired piece, **Formations**, will take you on a journey through the history of the Rockies. But we need you — yes, you! — to help transport us there visually.*

Send us your favorite pics (taken by you) of our beautiful Colorado Rocky Mountains to be included in a cascade of projected images during our New Formations & Mysterious Mountains concert on April 4.

Email us your photos with your name and where it was taken, or tweet at us @DenverPhilOrch and hashtag #DPORocks. We look forward to sharing your favorite mountain vistas with our community!

By submitting, you agree to allow us to display your name and photographs during our April 4 concert, New Formations & Mysterious Mountains. Don't worry — you'll still own the copyright to your images. You also agree that you are the photographer of the submitted work or you have expressed written permission from the photographer to submit on their behalf.



The Colorado School of Mines (CSM) Geology Museum is having a combined ***Used Book Sale/ Garage Sale April 18-20. The hours are 9-4 on Friday and Saturday; 1-4 on Sunday in the Museum Building.*** Most prices will decrease throughout the event.

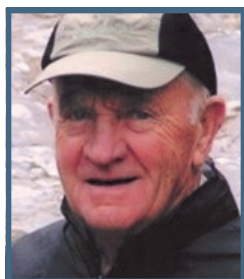
We have sorted through two warehouses for dozens of boxes of books, rocks, maps, and U.S.G.S. folios. In short, there's a wide range of specimens and publications for rock hobbyists at many levels.

The Museum address is 1310 Maple Street in Golden and our phone number is 303-273-3815. We accept cash, checks, and credit cards. Members of the "Friends of the CSM Geology Museum" receive a 20% discount on all their purchases.

Remember that there is a small fee for parking in campus lots and on campus streets on weekdays. Please make sure to pay for a parking permit from one of the parking kiosks and place the permit on your dashboard, to avoid being ticketed.



A Memorial.....



Gerrett (Jerry)'H. Bryant, 85, passed away March 13, 2014 at home surrounded by family.

Jerry was born October 2, 1928 in Taylor's Falls, MN. In 1941, the family moved to Tacoma, WA. He served in the US Army in Korea 1946-48. Jerry graduated from the Colorado School of Mines in 1953 where he was President of Tau Beta Pi, the engineering honor society, and where he developed his lifelong interest in mining and minerals. He worked in exploration and development of mines, mills and production facilities. As President and owner of Resource Exploration and Mining, Inc. he employed nearly 250 people in exploration, drilling, mining, and many real estate interests.

He always had time for his family, many friends, employees and hobbies. His greatest joys were spending time with family, tennis, skiing, golf, hiking, travel, boating, avid fisherman, and rock hound.

Jerry is survived by his wife Beverly of 56 years and his son Bruce (Stephanie), daughter Lisa Bryant, grandchildren Chantel, Kellen (Shanna), Kyle (Marybeth) and Daniel, five great grandchildren, brother Morgan (Patricia), sister Bonnie Taylor (John), and many cousins, nephews and nieces. He is preceded in death by parents Howard and Alice Bryant, brother Charles, sisters Dorothy and Lois.

Jerry was a man of integrity, foresight and inspiration. He will be truly missed by his family, friends and colleagues. Please contact the family about the private memorial celebration. In lieu of flowers, donations may be sent to the Colorado School of Mines in his name.

- See more at: <http://www.horancares.com/obituary/Gerrett-Jerry-H.-Bryant/Centennial-CO/1362454#sthash.euaGtQCW.dpuf>



2014 CSS Elected Positions

President:.....Scott Lundstrom, 303-917-2849, pslundstrom@msn.com
President Elect:.....Paul Morgan, 303-866-2611, paul.morgan@state.co.us
Treasurer:.....Don Sweetkind , 303-236-1828, dsweetkind@usgs.gov,
Secretary:.....Lisa Fisher, 303-215-0480, lisa.fisher@escalantemines.com
Past President.....Matt Sares, 303-866-3581 x8290, matt.sares@state.co.us

We are still seeking volunteers or nominations to fill several vacant posts. They are:

- ◆ Outreach Chair
- ◆ Publicity Chair
- ◆ Hospitality Chair
- ◆ Program Chair



We will also gladly accept volunteers to serve on any and all of our standing committees. If you have any questions regarding the duties of these positions, please call your favorite officer, councilor, or chair.

Please consider volunteering—many hands make lighter work and we would love to have a larger pool of ideas and contacts!

COUNCILORS

2013–2015: Marieke Dechesne, mdechesne@usgs.gov
2013–2015: Liz Pesce, pesce.e@gmail.com
2014–2016: Celia Greenman, celia.greenman@earthlink.net
2014–2016: Peter Barkmann, barkmann@mines.edu
2012–2014: Rebecca Flowers, rebecca.flowers@colorado.edu
2012–2014: Pete Modreski, pmodreski@aol.com

COMMITTEE CHAIRPERSONS

Best Paper Award: Matt Sares, 303-866-3581 x8290, matt.sares@state.co.us
Database Manager: Paul Morgan, 303-866-2611, paul.morgan@state.co.us
Field Trips: Cal Ruleman, 303-236-7804, cruleman@usgs.gov
History: Beth Simmons, cloverknoll@comcast.net
Hospitality: Open
Membership/Mentor: Liz Pesce, epesce@mines.edu
Memorial Funds: Matt Sares, 303-866-3581 x8290, matt.sares@state.co.us
Newsletter Editor: Linda Barton Cronoble, 720-338-1237, lbarton1611@gmail.com
Outreach: Open
Program: Open
Publicity: Open
State Science Fair: Chuck Weisenberg, 303-238-8806, cweisnrg@msn.com
Webmaster: Barb Warden, 303-278-2701, bwarden@tablemtn.com

Colorado Scientific Society
P.O. Box 150495
Lakewood, CO 80215-0495
<http://www.coloscisoc.org>



Colorado Scientific Society

Application and Membership Update Dues and Funds Contributions

Date _____

New Member _____

Renewing Member _____

(email address)

(Telephone)

(Last Name)

(First Name)

(Initial)

(Address)

The success of most Society activities depends on volunteer help. Please circle any activities for which you can provide assistance. We will pass your name on to the appropriate Committee Chairperson.

Field Trips

History

Outreach

Fund Raising

Newsletter

Program/Talks

Annual Dues (January – December)

Regular Members \$20

Corresponding Members \$10

Student Members \$5

Memorial Funds: These funds support research grants to graduate students in the Earth Sciences throughout the nation. *Please note if contribution is made in the memory of an individual.*

Ogden Tweto Memorial Fund

Steven Oriel Memorial Fund

Edwin Eckel Memorial Fund

Bill Pierce-Heart Mountain Fund

George Snyder Memorial Fund

Chuck Pillmore Memorial Fund

Endowment Fund:

This fund is used to support the Society's monthly meetings and newsletter, field trips, family night, annual Emmons Lecture, invited speaker honorarium, and special activities.

TOTAL CONTRIBUTIONS (DUES AND FUNDS): _____

Please make your checks payable to the:

Colorado Scientific Society

Send this form & your check to:
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P.O. Box 150495
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