

Colorado Scientific Society

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

September talks:



Resource Constraints on Alternative Energy Development: An Update

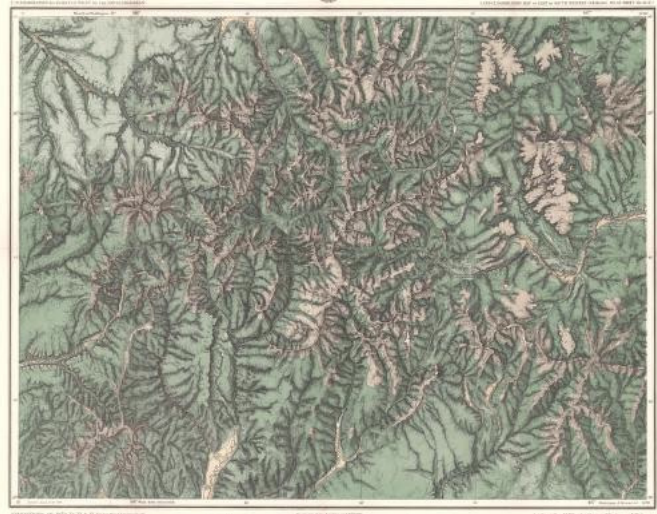
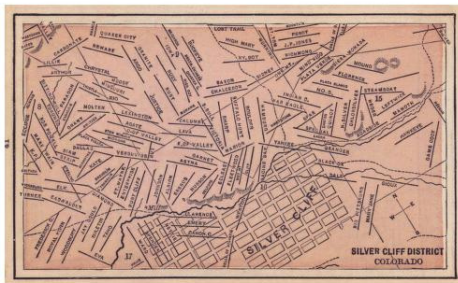
by

James Burnell, Colorado Geological Survey

Historic Mining Maps

by

Christopher J.J. Thiry



Another...
Location Change!!



Thursday, September 24, 2009

American Mountaineering Center

Conference rooms C & D (these rooms are DOWNSTAIRS, *not* in the auditorium)

710 10th Street (NE corner 10th and Washington) Golden, Colorado

Social half-hour – 6:30 p.m. Meeting time – 7:00 p.m.

SEPTEMBER MEETING ABSTRACTS

Back by popular demand! CSS councilor Jim Burnell has agreed to present an update of the talk he gave to us last year to accommodate a number of people who missed the presentation. Come hear what Jim has to say!

Resource Constraints on Alternative Energy Development: An Update

by

James Burnell, Colorado Geological Survey

Jim Burnell is a Minerals Geologist with the Colorado Geological Survey and a councilor of the Colorado Scientific Society.

Public support is growing for the development of energy generation from renewable sources. However, an aspect of renewables that is unknown by many is the “hardware needs” for these technologies. The infrastructure requires mined materials, including imported strategic and critical minerals. Silica, copper, gallium, indium, selenium, cadmium and tellurium are required for the dominant photovoltaic technologies. Silver and aluminum are necessary for “concentrating solar power” technology. Zinc, vanadium, platinum group metals, and rare earth elements are key components of power storage, hybrid vehicle, and fuel cell applications. All these materials must be mined. At present, the U.S. is woefully dependent upon import sources for most of these materials and demand is already squeezing the prices. The development of domestic sources is an important step toward increased utilization of alternative energy.



Historic Mining Maps

by

Christopher J.J. Thiry

Chris has worked for the past 14 years as the map librarian at the Colorado School of Mines Arthur Lakes Library. He oversees a 210,000+ map collection. In addition to day-to-day collection development and maintenance, reference services, and cataloging, Chris has library research interests that include topographic maps, and historic mining maps.

One of the driving motivations of the U.S. settlement of the Rocky Mountains was mining. The gold, silver and other minerals attracted fortune seekers from around the world. Beginning in the late 1850's, prospectors flocked to Colorado. As government organizations helped settle the lawlessness of the mining district, the need to accurately determine who had the rights to particular plots of land became necessary. At first, maps played an integral part of resolving who owned what. Later maps were used by people and companies to flaunt their claims and potential for resources and riches. Also, maps showed safety and workings features of mines. All along, maps inadvertently painted a picture of mining's booms and busts, noted prospectors' names, and showed the development of many of Colorado's famous mountain towns. Today, historians use mining map for all those things previously listed, but also as ways to reconstruct timelines and add background to biographies. On top of that, some of the original maps are works of art. This talk will illustrate Colorado's historical mining maps using the rich collection of the Arthur Lakes Library at the Colorado School of Mines.



POETRY CORNER

The Purist

I give you now Professor Twist,
A conscientious scientist.
Trustees exclaimed, “He never bungles.”
And sent him off to tropical jungles.
Camped on a tropic riverside,

One day he missed his loving bride.
She had, the guide informed him later,
Been eaten by an alligator.
Professor Twist could not but smile,
“You mean,” he said, “a crocodile.”

—Ogden Nash



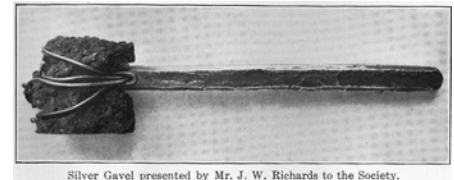


This month we ran into scheduling difficulties at the Colorado School of Mines. Campus-wide consolidated testing resulted in every lecture hall being used in the evenings in the last half of September. A similar situation occurs again in October. As a result, we are back at the American Mountaineering Center for those two months. The Geology Department at the Colorado School of Mines is very supportive of us and our use of the facilities, as long as our use of the lecture hall does not conflict with use by a CSM class or group.

The initial reaction of the CSS Council is just to live with this situation and try to be flexible. My feeling is that most folks enjoy the new lecture room in Berthoud Hall on the CSM campus. We have certainly seen an increased attendance at the talks although it is unclear if it is the speaker, subject matter, or the new venue that is the cause. We will look into the room scheduling issue at CSM, whether we can reserve earlier, or if there is another night, besides Thursdays, on which the room might be more dependably available. In the meantime, we will all have to be flexible and pay attention to the announced location for the CSS monthly program.

THE PRIZED SILVER GAVEL IS NOW AT CSM GEOLOGY MUSEUM *by Beth Simmons*

On Saturday, August 29, 2009, in order to assure that our prized silver gavel (now over 100 years old) doesn't get lost or damaged as it rolls around the presidents' offices, CSS Council members informally voted to place the gavel on permanent loan with the CSM Geology Museum, on the condition that we can "sign it out" when needed for special occasions. Museum director and CSS member Bruce Geller will publicly exhibit the gavel either in the Aspen silver ore display or with the silver in the vault, or perhaps in the "Colorado specials" case which was Ed Raines's idea. CSS Historian Beth Simmons delivered the gavel to the museum on Monday, August 31st.



The old box made for the gavel proved to be irreparable because of warping, but will be kept at the CSM Geology Museum with the gavel (but not on exhibit). If you didn't go on the tour on the 29th, stop by the CSM Geology Museum soon to see the CSS gavel!

CSS Embosser

Denver Bookbinding created a nice strong archivally correct box for the society's official embosser, so it can be stored properly without danger of paint chipping off or the embosser becoming misaligned when being stored "not upright."



CSS Fossil Display Coming Soon to CSM

CSS fossils will be exhibited in the cases outside our meeting room in Berthoud Hall as they gradually emerge from the CSM collection. To date, about 15 specimens have been located, including a collection of plant fossil specimens from the Florissant Fossil Beds that were displayed at the fossil beds' 40th anniversary event held on August 23rd. Some will be displayed in the "Old Fossils" case Beth Simmons will exhibit in the Denver Gem and Mineral Show on September 18–20 at the Denver Merchandise Mart.

CSS Family Day BBQ–Aug. 29

Beth Simmons writes: “The picnic was a delightful afternoon affair. Bob Weimer’s “shortest CSS field trip on record” taught us all about the treasures and geologic examples that exist right under our noses, in our backyard. We saw faults, dinosaur tracks, palm fronds, fossil logs, the Arapahoe conglomerate with its black chert clasts, the old clay mines, the outflow from the underground clay mines, and the relocated (hopefully not permanently) White Ash Coal Mine Disaster Monument. There was lots of food for the potluck - no one went away hungry!



Sharon Diehl writes: “The top floor of the geology museum is bright, airy, and inviting; the student volunteer leaders were knowledgeable and patient with questions. I especially enjoyed the displays of minerals and stock certificates from the Colorado mining districts—Creede, Aspen, and Leadville to name a few. The cases featuring mineral specimens from around the world are rotated periodically, and with several warehouses of specimens, there will never be a boring display. Displays of mineral clusters such as milky quartz, and Colorado’s own amazonite and smoky quartz showcase, were just as interesting and beautiful as the valuable gems and gold on exhibit.

I thought it was an absolutely great idea that geology

students had their own showcase on the lower floor in which to display the rocks and minerals that were the subjects of their theses. In addition to showing different types of minerals and rocks, hand samples displayed structures such as faults and veins. Also on the lower floor: Everyone on the tour spent a lot of time in front of a case depicting meteors



found in Colorado, and included examples of how to distinguish slag from meteors. The student volunteer said that every month someone brings in a hunk of slag for identification, thinking it is a meteorite!”





Even at a BBQ we must analyze *something*, so here goes...

Look at the back of the BBQ lid...

What causes the iridescence? Is it something to do with grease buildup?

What mineral would you compare the iridescence with? We had several suggestions, Lisa F. says it looks like turgite, but Don, Scott, and Jeremy had other suggestions...



Battle of the CSS chefs! (outta my way Scott! back off Jeremy! Yes Don, those are called 'tongs'.)

Goodies!!



A beautiful day!!!



OCTOBER PREVIEW:

AN EVENING AND FIELD TRIP TO HONOR GLENN SCOTT

Plans are currently in the works for an October program to honor Glenn Scott, CSS member and career USGS geologist. The program will include a Thursday evening of talks on October 22, followed by a Saturday field trip on October 24. In addition to the talks on Thursday, we will display a number of Glenn's geologic and historic trails maps. Cal Ruleman has been working with Pete Birkeland and Rich Madole to organize our one-day field trip and coordinate the talks. This will be a special set of events in October, so plan on returning early from the GSA meeting in Portland and join us!



Report from the Colorado Scientific Society Outreach Chair, Sue E. Hirschfeld

One of my passions has been to make science, especially geology, exciting and accessible to students, teachers, and the public. I became Colorado Scientific Society Outreach Chair in 2003, taking over from Paul Belanger. My initial focus, working with the CSS Outreach Committee, was to design interpretive geologic signs to be located at prominent Golden landmarks. Later, it was to develop materials to advertise CSS, and to produce web-based self-guided field trips.

When I took over, the Outreach Committee had already been in the process of funding and designing informational geologic signs for the new Triceratops Trail at Parfet Prehistoric Preserve and the Buffalo Bill Museum Overlook on Look-out Mountain in Golden. The signs outline the geologic history of the Front Range and the Golden area. Four signs were completed and erected in 2005. Many people (listed below) gave generously of their time and knowledge to create the signs. Funding came from a grant from SCFD and donations from RMAG, CGS, AAPG, CSM, and CSS.

To make more people aware of what CSS has to offer, we designed a large three-panel display board with information about CSS, photographs from CSS field trips, and membership applications. The display has been used at gem and mineral shows, WIPS, and CSS symposia. We also produced a new colored, CSS brochure that we hope will receive wide distribution.

I enjoy creating virtual self-guided field trips for the non-geologist. The Geological Society of America recently added EarthCaches to the popular geocaching phenomenon, an adventure game for GPS users to find hidden items following posted coordinates. An EarthCache site is a special place that people can visit to learn about geologic features. I designed three EarthCache field trips in Boulder along popular hiking trails. They are listed as virtual field trips on our CSS website. They are also on the City of Boulder Open Space website making them very accessible to the public. CSS members—if you have field guides of general interest in digital form, I would like to add more virtual tours/EarthCaches to our CSS website. For example, the guide from NCAR to the Flatirons was modified from an exercise created by Emmett Evanoff for his class at CU.

I want to acknowledge and thank members of the Outreach Committee since 2002: Paul Belanger, Bob Weimer, Bruce Bryant, Lisa Fisher, Thom Fisher, Claire Marshall, Vince Matthews, Emmett Evanoff, Eric Nelson, Jim Cappa, Joe Temple, Karen Houck, Michele Tuttle, Greg Holden, Kyle Murray, Bob Fleming, and Pete Modreski.

My apology if I left anyone out.



Sept. 18–20, Denver Gem and Mineral Show.

Take the kids and the grandkids to the “Kids Corner” display tables of hands-on activities and demonstrations about earthquakes, rocks, minerals, and fossils sponsored by the USGS. Support your local rock hounds!! Thank you!

Dinosaur Discovery Day at Dinosaur Ridge

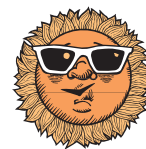
Girl Scout Day is on Saturday, October 10th from 10 a.m.–3 p.m. at the Ridge. We moved it to the second Saturday to coincide with Earth Science Week, which is sponsored by AGI. As always, your help will really be appreciated! The shifts will be from 10 a.m.–12:30 p.m. and 12:30–3:00. Please contact Clare Marshall if you'd like to help: dinodiscovery@dinoridge.org, 303.697.3466 ext. 15.





Earth Science Meetings and Talks

Newsletter items must be received by the 25th of each month.



Colorado Scientific Society's regular meetings are held the 3rd Thursday of the month at the Colorado School of Mines Geology Building in Golden (unless otherwise advertised). Social time begins at 6:30 p.m. and talks start at 7:00 p.m. For more information, contact Don Sweetkind, at 303-236-1828, dsweetkind@usgs.gov

Café Scientifique Wynkoop Brewery, evening science talks at 6:30. Free, except for beer. For upcoming schedule go to: <http://www.cafescicolorado.org/Upcoming.htm>

Colorado School of Mines, Van Tuyl Lectures Thursdays from 4–5 p.m. in Berthoud Hall room 241. <http://www.mines.edu/academic/geology>

CSM Executive Lecture Series Wed., September 23 *J. Michael Yeager, Group Executive and Chief Executive, Petroleum-BHP Billiton*, “Resourcing the Future: Keys to Opening New Doors in the Petroleum Industry”. Green Center, Metals Hall, 924 16th Street, Golden, 4–5 pm; Reception to follow. RSVP by September 18, 2009, Email patricia.bohner@is.mines.edu, Phone 303.273.3135

Colorado State University, Dept of Geosciences, Rm 320 Warner College of Natural Resources Bldg., Mondays, 4:00 p.m. 970-491-5661. <http://welcome.warnercnr.colostate.edu/geo-training/index.php>

Denver Mining Club, Ltd. Monday, Sept. 21.—*Harley J. Armstrong, Paleontologist, Colorado State Office, Bureau of Land Management*, “Colorado Fossils”; **Monday, Sept. 28**—*Ken Sweet, Sr., Geophysicist/President, Kenco Minerals*, “Nuclear Power.” Meetings held at: Country Buffet, 8100 West Crestline Ave, SE corner at Wadsworth, Littleton. Purchase of buffet lunch required. Every Monday, except when noted. 11:30 a.m. - 1:00 p.m. (+/-). VISITORS ALWAYS WELCOME! <http://www.denverminingclub.org>

Denver Museum of Nature and Science For a listing of lectures and upcoming events, go to: <http://www.dmns.org/main/en/General/Exhibitions/content/EventCalendar.htm>

Denver Region Exploration Geologists' Society (DREGS) meets in the Mutual Consolidated Water Building, 12700 West 27th Avenue, Lakewood. Social 6:30–7:00 p.m. Presentation at 7:00 p.m. Meetings are normally scheduled for the first Monday of each month. For information contact Jim Piper, (303) 932-0137, or the website <http://www.dregs.org>

Denver Well Logging Society (DWLS) meets on the third Tuesday of each month, Sept. through May. Lunch and a technical talk at the Wynkoop Brewery (Mercantile Rm.) begins at 11:20 a.m., 18th and Wynkoop Sts. in Denver. Call Noga Gardiner at 303-831-1515 by prior Thursday for reservations. <http://dwls.spwla.org>

DIPS (Denver Intl. Petroleum Society) Regular meetings held 2nd Friday of the month at Wynkoop Brewing Company, 1634 18th Street, Denver. Gather at 11:30 am; Lunch served at Noon; Presentation at 12:30. Lunch price: \$15 for members, \$18 for non-members, \$3 talk only. Please e-mail Bob Zilinski, at rezilin@aol.com or call him at 303-885-0615 to make reservations before Wednesday, noon.

Rocky Mountain Association of Geologists (RMAG) Nov. 2—2009 Rocky Mountain Expo (Prospect Fair & Technofest) The Rocky Mountain Expo (Prospect Fair & Technofest) will be held at the Colorado Convention Center Monday, November 2nd from 9:00am to 5:00pm. The Prospect Fair will display the best available opportunities for increasing your company's reserves. Properties and Prospects from all interior North American basins are being solicited. The Technofest will feature software developers, data vendors and service companies displaying the latest in geophysical, geological, drilling, completion, exploration and production technology and research. To register online, go to: <http://www.eventbrite.com/event/380041715>

Univ. of Colorado, Boulder, Geol. Sciences Colloquium Weds., 4:00 p.m., Rm. 380. Refreshments at 3:30 p.m. on the 3rd floor. **Sept. 23**—*Kate Huntington, Univ. of Washington*, “Constraints on Late Tertiary climate and elevation of the Colorado Plateau from clumped isotope thermometry”; **Sept. 30**—*Tom Marchitto, UC Boulder*, “ENSO-like response of the tropical Pacific Ocean to solar forcing during the Holocene.” <http://www.colorado.edu/GeolSci/>

Rocky Mountain SEPM 11:30 Reception, lunch at noon, speaker at 12:30. Reservations: luncheons@rmssepm.org, before noon of preceding Friday. \$20.00 lunch, \$3 talk only. Wynkoop Brewing Company, 1634 18th St., Denver. <http://www.rmssepm.org/luncheons.shtml>

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