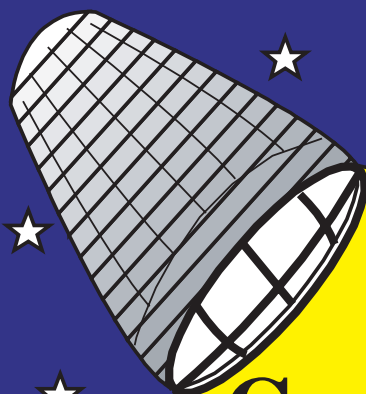




Colorado Scientific Society

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



Geology Goes Hollywood and Other Public Perceptions of Geoscience

presented by

Sarah Andrews

Sonoma State University
Sonoma, California

Thursday, April 18, 2002

CSM Geology Museum, Berthoud Hall

16th & Maple St. Entrance

Colorado School of Mines Campus

Social time from 5:30

Dinner at 6:30

Movie and talk from 8:00

Reservations required. Contact Eric Nelson, 303 237-3811 or enelson@mines.edu



ANNUAL FAMILY NIGHT

GEOLOGY AND THE MEDIA

by

Sarah Andrews

Sonoma State University, Sonoma, California

If the way geology is portrayed in such cultural vehicles as *Dante’s Peak* (remember that SUV sashaying across hot lava?) and *Star Trek* (how did the cave floors of all those unexplored planets get so flat?) is any indication, America is either scientifically ignorant or has a rich vein of wry humor. While I hope it’s the latter, some of the reviews my books get suggest that it’s the former. It’s enough to make me want to found a geology anti-defamation league.

The media appear to be here to stay, so I suggest instead that we bend it to our will. Geologists are natural storytellers, and telling stories is the media’s stock in trade. The human species is just as easily entertained, and are better informed, by reality-based stories as by fantasy. Certainly the public’s interest in the geology snaps to attention each time the earth shakes, spews molten rock, or disappears under water. And many people evidence an authentic longing to know more about the oblate spheroid they live on. How many of us have heard phrases like, “I’ve always had a secret desire to [be a geologist] [know more about geology] [study dinosaurs], but [I knew I couldn’t do the math] [my parents wanted me to study dentistry instead] [I was born female in the wrong generation], so...”

Visual, auditory, and literary storytelling is as powerful a tool for influencing public opinion as it ever was. The media consciously and unconsciously sell not only reality and fantasy, but also cultural values and valuation. The stories people hear strongly influence their political, ethical, religious, and scientific beliefs. It is important therefore that we understand and fully utilize this tool, and emerge not only as sympathetic protagonists rather than flat, passionless, often ominous antagonists in someone else’s story, but also as authors of an advancing culture.

Sarah Andrews is the author of seven forensic geology mystery novels and is a lecturer in Geology at Sonoma State University. She holds a B.A. from Colorado College and an M.S. from Colorado State University and is the recipient of the 1999 AAPG Journalism Award and the 1997 RMAG Journalism Award.

The hilarious and thought-provoking video “**Geology Goes Hollywood**,” produced by Dr. Dorothy Stout and edited by Deborah Steller, will be shown for the second part of this media-oriented family-night program.

CSS 2002 Family Night (Thursday, April 18th) reservation form

Make checks payable to **Colorado Scientific Society** and send by April 15th.

Number of adults @ \$20 _____ plus children @ \$15 _____ each for a total of \$_____

Name(s): _____

Phone Number: _____

Email address: _____

Please send to:
Eric P. Nelson, CSS President
GE Department
Colorado School of Mines
Golden, CO 80401

Announcement of Upcoming Field Trips

Emmett Evanoff, CSS Field Trip Coordinator

Three field trips for the Colorado Scientific Society are planned for 2002: two local trips this spring and a long-distance trip this fall. The local trips include a one-day trip to the rock quarries at Lyons, Colorado, and a one-day trip to see sites related to the Denver Basin in and around Denver. The longer, four-day trip in the fall will be to see the geology of Jackson Hole, Wyoming.

The first Colorado Scientific Society field trip this year will be on Saturday, May 11th. The trip will examine the depositional features of the Lyons Sandstone at the Sterling Quarry, and the features associated with a Paleocene sill at the Andesite Quarry. The Sterling Quarry is famous in the history of aeolian sedimentology, for it is the site where Ted Walker and J. C. Harms in 1972 recognized the modern sedimentologic criteria of ancient eolian dune deposits. Dr. Ted Walker, professor emeritus at the University of Colorado, Boulder, will be our guide to the quarry. The Andesite Quarry contains a spectacular sill that was emplaced during active Laramide tectonism. Dr. Ed Larson, professor emeritus at the University of Colorado, Boulder, has studied the petrology, remnant paleomagnetism, and diagenetic effects of the sill and its surrounding sediments, and Ed will be the guide to this quarry. The cost for this trip will be \$30 per participant, and this fee will include transportation, lunch, and handouts for the trip. Those interested in attending the trip will meet in Boulder at 8:45 AM at the RTD park and ride just east of the intersection of Pearl Street and the Foothills Parkway. Fill out the form below and send it with your check no later than **May 3**. Attendance will be limited to 30 participants, so please make your reservation early.

The other one-day field trip in 2002 will be a minimal-cost trip in early June to examine the features associated with the development of the Denver Basin. Dr. Bob Reynolds, research associate with the Denver Museum of Nature and Science, will lead a trip to see the interesting sites associated with the Denver Basin Project, a detailed stratigraphic and sedimentologic study that Bob has been involved with over the last 6 years. The May CSS newsletter will have more information concerning this trip.

The long fall field trip to the Jackson Hole area of Wyoming is planned for the weekend of September 20-23. Drs. Ken Pierce and Jack Reed of the USGS have recently revised geologic interpretations of the valley and the Teton Range, and I am negotiating with them to be coleaders on the trip. Not only will the geology be spectacular, but so should the fall colors in Jackson Hole at that time of the year. We will not be able to go to Yellowstone this year, primarily because reservations for lodging in the Park must be made more than one year in advance. My plans for potential future fall trips include a trip to the San Juans with Peter Lipman in 2003, and a trip to Yellowstone National Park with Ken Pierce in 2004. I will provide additional information on the fall field trip in the May CSS newsletter.

Those people interested in attending the May 11 field trip to the quarries at Lyons, Colorado, please fill out the following form and send it and a \$30 check (per participant) to the address given below. Make your check out to **Colorado Scientific Society**. If you need additional information, please contact me at:

Emmett Evanoff
Department of Geological Sciences, 399 UCB
University of Colorado, Boulder, CO 80309-0399
Phone: 303-444-2644, FAX 303-444-2684, emmettevanoff@earthlink.net



Lyons Quarries Field Trip Reservation Form

Name: _____ Address: _____

Phone: _____

E-Mail : _____

Number of Participants: _____ X \$30/participant = \$ _____

Any Food Preferences or Restrictions (vegetarian, allergies, diabetes, etc.):

Please send reservation to Evanoff, Geology Dept., CU, 80309-0399 no later than May 3rd

Geologist of the Month

The State of Colorado's Geological Survey: Interview with Vicki Cowart, State Geologist of Colorado by Maeve Boland.

Vicki Cowart has been State Geologist and Director of the Colorado Geological Survey (CGS) since June 1993. Before joining CGS she worked in the oil and gas industry for 16 years with Mobil Oil, ARCO Oil & Gas, and Schlumberger Well Services. Vicki earned her BS degree in physics from Worcester Polytechnic Institute and an MS in geophysics from Colorado School of Mines. She and her geologist-turned-natural-resources-lawyer husband hike, bike, and ski avidly and thoroughly enjoy living in Colorado.

The Colorado Geological Survey was created in 1967 by the Colorado General Assembly "to coordinate and encourage by use of appropriate means the full development of the state's natural resources, as the same are related to the geological processes that affect realistic development of human and mineral utilization and conservation practices and needs in the state of Colorado, all of which are designed to result in an ultimate benefit to the citizens of the state." (C.R.S. 34-1-101 <http://geosurvey.state.co.us/statutes.htm>). Vicki describes the current CGS as a group of 37 state employees, plus a helpful group of contractors, consultants and interns, who work together to ensure that reliable and relevant geological information is available to the public.

As a scientific and information agency within the Colorado Department of Natural Resources, the CGS concentrates on engineering geology, environmental geology, mineral and mineral fuels, geologic mapping and earthquakes, and the Avalanche Information Center. "But our work is only partially done when our studies are final. The real completion of a project comes with the public dissemination of our information," says Cowart. It may surprise many of us to learn that CGS is not funded directly by our taxes. "CGS receives no General Fund monies from taxes paid by citizens. We receive our funding for specific projects from federal agencies, a local government, or another state agency (including the Severance Tax Operational Fund, which comes from taxes on gas, oil and coal operations). Consequently, we have no designated funds to use for outreach, but we make sure that each project concludes with something that goes back to the people of Colorado ... We're not doing our job unless we share what we learn with the citizens."



Vicki highlights three areas where geoscience is important to the future of Colorado: sustainable growth, resource development, and geologic mapping.

Sustainable growth requires sound housing and infrastructure, which is more and more dependent on understanding the geologic conditions upon which we are building, she says. “Colorado has a fairly forward-thinking set of land use laws, including a statute that requires a review of subdivisions and school sites by the CGS. Our land-use review activity has reached record-setting levels in the last few years. Whether it’s landslide, debris flow, heaving bedrock or collapsing soils, there are real challenges to building safely and economically in Colorado. At CGS, we are actively working with citizens, the building and consulting communities, and local governments to increase the understanding of the geologic conditions in which we invest our communities’ trust and infrastructure dollars.”

Resource development is important to Colorado’s economy. CGS statistics show that Colorado’s coal industry produced a record 33,411,127 short tons during 2001. More than half the gas produced in Colorado is from coalbed methane and operators are actively looking for more in virtually every coalfield in the state. Major oil companies are pursuing new methods to develop an old fuel source – oil shale. Cowart points out that throughout the state, urban and suburban housing development has moved into areas previously left to mineral or mineral fuel development. “Local governments need sound geologic information to fold into their planning process, as they determine if areas will be used for resource development or housing development, or both. Land-use conflicts and concerns about the environment are an inevitable result of these competing uses that have a geologic underpinning.”

Geologic mapping is another critical focus for the CGS. “We are consistently told that new geologic maps are one of the most important and useful products we provide, because of the information they give planners, developers, consultants, resource companies, and state and local government policy makers.” Only about 20% of Colorado has been geologically mapped at the 1:24,000 (1 inch on the map equals 2,000 feet on the ground) scale which is the common starting point for most projects. “CGS is mapping about seven or eight quadrangles each year under the auspices of a federal-state cooperative program called the National Cooperative Geological Mapping Program that is operated by the U.S. Geological Survey. We are working on a priority list, trying to get the areas mapped that are in the most immediate need due to growth pressures or resource conflicts. We hire about 10 contractors to help us map each year, and we help train about 5 students from local colleges.”

When asked about broader issues affecting Colorado’s geologists, Cowart mentions licensure. “Colorado is now in the minority of states that do not require licensure for geologists. I’m not sure why we are bucking this trend, but most of the states around us require licensure for geologists. There have been two recent efforts to have Colorado become a state that licenses geologists, and emotions run strong on both sides of the issue. But I think the nation is moving to licensure as the norm, and the Colorado geoscience community will have to wrestle with this topic again.”

Vicki Cowart considers Colorado’s geoscientists to be one of the state’s most important geologic resources. “I think this strong collection of well-trained, highly professional earth scientists is a benefit to our state. I encourage geologists to bring their skills to their local governments and state government processes, to make sure there are valid geologic inputs to the governing process,” says Cowart. She herself is an excellent example of how a geoscientist can actively engage the policy process and benefit the state through her work and the work of all the CGS staff.

Women Sweep San Luis Valley Regional Science Fair

CSS congratulations to the winners of awards for the best geoscience projects at the recent San Luis Valley Regional Science Fair. The Elementary division award was won by **Ashley Warsh** of Haskins Elementary School in Center for her project on “Force Field” (earth’s magnetic field). The Middle Division winner was **Kaitly Barker** of Sange de Cristo Middle School in Mosca for a study of “Leaping Limestone.” **Rachel Doyle** of Monte Vists High School took the Senior division by explaining “The Effect of Acidic Precipitation on Rock Weathering and How It Affects Architecture”

Notes from the Editors

CSS President Eric Nelson is geologizing in Peru as we go to press, so there will be no “Presidential Notes” this month. In lieu of that we offer a few miscellaneous tidbits.

The March meeting presentation on the effects of geology on the wines of Washington and the following wine tasting were a sold-out success.

The **menu for CSS Family Night** is an oriental buffet featuring: Baked brie and beverages for the cocktail hour, fresh fruit salad, Mongolian Beef, Luau Chicken, stir-fried vegetables, mini-egg rolls, steamed rice, and oriental peach cobbler for dessert.

The **May CSS program** will feature two very interesting talks. Sandra Perry of Perry Remote Sensing, LLC will speak about **Recent Advances and Innovations in Remote Sensing for the Geosciences**, and Robert Schuster of the USGS will describe his work on the **Usoi Landslide Dam and Lake Sarez, in Tajikistan**.

And now a brief message from your treasurer:

This time of year you may want to consider reducing your tax bill for 2002 by contributing shares of stocks or mutual funds to the Colorado Scientific Society Endowment Fund. Generally speaking, gifts to charities and non-profit organizations are not subject to gift taxes, and the donation is eligible for an income tax deduction. In addition, the property donated is removed from the donor’s estate thereby reducing the ultimate estate tax exposure. Charitable bequests may also be made upon death via a will or a specially designated trust, which will also result in estate tax savings. Call Don Sweetkind at 303-236-1828 for more information on donating securities to the Endowment Fund.

Current Colorado Geological Survey Research

Vince Mathews, Senior Science Advisor, Colorado Geological Survey

CGS continues 1:24,000 geologic quadrangle mapping in the state. Last field season CGS completed seven new 7.5 minute geologic quadrangles making a total of 35 since 1993. Three of the maps were located near Colorado Springs, two in Summit County, one near Fort Garland in the San Luis Valley, and one was north of Durango. This field season eight maps are planned: five near Colorado Springs, one in Summit County, one on the west flank of the Sangre de Cristo Range, and one north of Durango.



A View Through the Brown Cloud

by Lisa Ramirez Bader



Hooray! Colorado Ocean Journey has a reprieve! As the guest of Professor ‘Nuf Sed I was able to be a part of the COJ “last hurrah” turned celebration. Now, I’m not a fan of enormous debt, or of Chapter 11, but it’s the fishy equivalent of a Welly-boondoggle to Africa, and if that will save the aquarium then I’m all for it. Don’t we all wish we could have a choice when it came to frivolous spending and taxation? I voted NO-NO-NO to NO avail when we were slimed into voting on the “not Mile High” stadium, but if I had been told, “You’re going to be taxed, so suck it up *BUT* you get a choice! Your money can go straight into either: A. Madame Bowlen’s face-lift and waxing fund; B. Science, music, and art classes in the public schools; or C. Colorado Ocean Journey.” I think I wouldn’t feel so ripped-off. Let’s hope that COJ gets its act together so the children of Colorado will continue to have the chance to see flash floods, jungle life, and undersea wonders.





Earth Science Meetings and Talks



Newsletter items must be received by the 4th of each month. Items may include special events, open houses, etc...thanks!

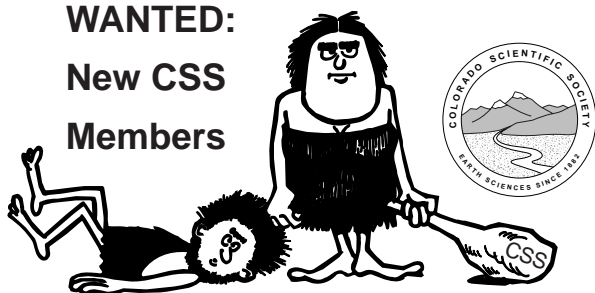
- Colorado Scientific Society's** regular meetings are held the 3rd Thursday of the month at the Colorado Mountaineering Center in Golden (unless otherwise advertised). Social time begins at 7:00 p.m. and talks start at 7:30 p.m. For info., contact Eric Nelson at 303-273-3811, enelson@mines.edu.
- USGS Geologic Division Colloquium** Thursdays, 1:30 p.m., Foord Rm., Building 20, entrance W3, Denver Federal Center. For information call Laura Strickland at 303-236-5302, or email: lstrickland@usgs.gov Call for cyber talk info. April 4, 2002: **“The Cellular River: A New Direction in River Measurement, Modeling, and Management,”** Mark Fonstad, Southwest Texas State University; April 18, 2002: **“Estimating the Rates of Contemporary U.S. Land Use and Land Cover,”** Tom Loveland, EROS Data Center.
- Denver Mining Club** meets every Thursday (except when noted) at China King 12037 West Alameda Pkwy., Lakewood, 11:30 a.m.-1:00 p.m. April 4.— **“The Nuclear Energy Industry,”** James Graham, President and CEO, ConvergDyn, and Chairman, Cotter Corp.. April 11.— **“Minerals Exploration in Kazakhstan”.** Harold Backer and Allan Juhas, Consulting Geologists. April 18.— **“The New Newmont: Acquisition of Normandy and Franco-Nevada, and the Future of Newmont”** Doug Hock, Director of Public Affairs, Newmont Mining Corporation.. April 25.— **“Mexico’s Mining and Environmental Challenges”**, Carlos Tamayo, Supervising Environmental Engineer, Parsons Engineering Science, Inc. . See past and future DMC talks at the web site: <http://www.china-resources.net>.
- Denver International Petroleum Society** meets the 2nd Friday of each month at the Wynkoop Brewing Co., 18th and Wynkoop Streets. Reception begins at 11:30 a.m., luncheon at 12 p.m., program at 12:30 p.m. Make reservations (required) by leaving message at (303) 623-5396. Reservations accepted after 8 a.m. on Friday until 10:30 a.m. on Wednesday prior to the meeting. Cancellations accepted until 11:00 am Wednesday prior to the meeting. Cost: \$15 for lunches; talk only is available for \$2 (make checks payable to “D.I.P.S.”). Contact John Web at (303) 673-0487 for information. April 12th, **“Global Offshore E&P trends,”** Pete Stark of IHS Energy Group.
- Denver Region Exploration Geologists’ Society (DREGS)** meets in the Mutual Consolidated Water Building, 12700 West 27th Avenue, Lakewood. Social hour 6:00-7:00 p.m. Technical presentation at 7:00 p.m. Meetings are normally scheduled for the first Monday of each month. For information contact Jim Piper, (303) 932-0134, or the website <http://www.dregs.org/>. April 8, 2002, **“The Terrazas Copper-Zinc Oxide Deposit, Chihuahua, Mexico: Geology, Mineralization and Economic Potential”**, Gary A. Parkison, Project Manager, and, Greg A. Hahn, President and CEO, Summo Minerals Corporation.
- Denver Well Logging Society (DWLS)** meets on the 3rd Tuesday of each month, Sept. through May. Lunch and a technical talk at the Wynkoop Brewery begins at 11:30 a.m., 18th and Wynkoop Sts. in Denver. Subject matter usually deals with the application of well logs to oil and gas exploration. Call Elice Wickham at 303-573-2781 for reservations. Web page: <http://dwls.spwla.org/>.
- Rocky Mountain Association of Geologists (RMAG)** Reception at 11:30 a.m., lunch at 12:00 p.m., talk at 12:30 p.m. Reservations are taken by recording at 303-623-5396 until 10:30 a.m., Wed. before the luncheon. Cancellations are taken until 11:00 a.m. on Wed. at 303-573-8621. Luncheon cost is \$20 payable to RMAG at the door. Reservations are not required for talk only—cost is \$3. Meeting location: Denver Petroleum Club, Anaconda Tower, 555-17th St, 37th floor April 5, 2002, **“Sequence Stratigraphy of the Dakota Sandstone, Eastern San Juan Basin, New Mexico, and Its Relationship to Reservoir Compartmentalization.”** Peter J. Varney. April 19, 2002, **“Overview of Geology and Operations, Grand Valley, Parachute, and Rulison Fields, Piceance Basin, Colorado.”** Steve Cumella.
- University of Colorado at Boulder, Geological Sciences Colloquium** Wednesdays, 4:00-5:30 p.m., Rm. 180. Refreshments at 3:30 p.m on the 3rd floor. For info., call 303-492-8141. Web page: <http://www.colorado.edu/GeolSci/>.
- Friends of Dinosaur Ridge;** 7:00 pm at Red Rocks Elementary School in Morrison, CO. **April 25, 2002,** Jake Jacobs will present a talk on **“Wintering over at the South Pole in 1958-59”.** May 29, 2002, Tim Conners of the National Park Service will speak on **“Digital Geologic Maps - Cutting Edge Technology to Show Geology”.** Join now. Web page: <http://www.dinoridge.org/>.
- Colorado School of Mines, Van Tuyl Lectures** Check this month’s locations on website. Web page: http://www.mines.edu/Academic/geology/van_tuyl/van_tuyl.shtml.

For a constantly updated, online geo-calendar, visit the Colorado Geological Survey at http://geosurvey.state.co.us/pubs/outreach_cal/GEOCALENDAR.htm.

Colorado Scientific Society
P.O. Box 150495
Lakewood, CO 80215-0495

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