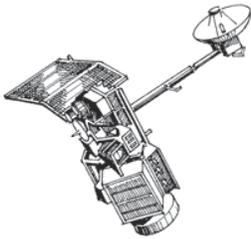


Colorado Scientific Society

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



Civilian Satellite Imaging Systems - How They Are Revolutionizing Worldwide Mineral Exploration



presented by

Sandra L. Perry

Perry Remote Sensing LLC.

The Usoi Landslide Dam and Lake Sarez, Southeastern Tajikistan

presented by

Robert L. Schuster

U.S.G.S. Hazards Team



Thursday, May 16, 2002

Colorado Mountaineering Center

710 10th Street (NE corner with Washington)

Golden, Colorado

Social half-hour – 7:00 pm

Meeting time – 7:30 pm



Overview of Civilian Satellite Imaging Systems - How They Are Revolutionizing Worldwide Mineral Exploration

by

Sandra L. Perry

Perry Remote Sensing LLC., Englewood, Colorado

Civilian imaging satellites have been in orbit since 1972 and have provided a valuable database for a variety of earth science applications. Digital image analysis of these satellite data systems has aided vegetation mapping and monitoring, mineral and hydrocarbon exploration, agricultural uses and planning, archeology, and global change observations. From a mineral exploration standpoint, image analysis has provided timely, ready-to-go information that offers both geologic and logistic information for worldwide operations. In the last three years, new satellite systems have revolutionized how mineral explorationists and field geologists conduct international exploration. These new systems offer higher spectral and spatial resolution detail which, coupled with global positioning systems (GPS) and geographic information systems (GIS), makes fieldwork more effective and efficient. With higher demand for metals worldwide, satellite imagery together with GPS and GIS have become necessary tools for the field geologist. This presentation will summarize applications of satellite imagery for international mineral exploration and field geology.

The Usoi Landslide Dam and Lake Sarez, Southeastern Tajikistan

by

Robert L. Schuster

U.S. Geological Survey, Geological Hazards Team, Golden Colorado

In 1911, a massive earthquake-triggered rock slide (volume: $\sim 2 \text{ km}^3$) dammed the Murgab River in the Pamir Range of southeastern Tajikistan. The still-existing blockage is 600 m high, by far the largest dam, natural or man-made, in the world. Lake Sarez, impounded by this natural dam, is about 60 km long and has a maximum depth of approximately 550 m and a volume of about 17 km^3 . The lake has never overtopped the dam; instead, it exits the downstream face as several large springs that regroup to form the Murgab River. There currently is about 50 m of freeboard between the lake surface and the lowest point of the dam crest, and the lake is rising at about 20 cm/yr.

If this natural dam were to fail, a worst-case scenario would endanger five million people in the Bartang, Panj, and Amu Darya valleys downstream. Dam failure potentially could be due to (1) seismic shaking, (2) catastrophic overtopping caused by a landslide entering the lake at high velocity from the valley wall, (3) surface erosion due to natural overtopping by the slowly rising lake, (4) internal erosion (piping), (5) instability caused by pressure of the lake against the dam, or (6) instability of the slopes that form the dam faces. Because of the high cost of installing physical remediation to the dam in this rugged mountain area (there are no roads to the dam), the main protective measures now being undertaken are hydrological monitoring at the dam and installation of a flood early-warning system downstream.

Recent studies of the Usoi landslide and natural dam and Lake Sarez, which have been funded mostly by the World Bank, the Swiss government, the Government of Tajikistan, and USAID, with cooperation from FOCUS Humanitarian Assistance, have been carried out mainly by Stucky Consulting Engineers of Lausanne, Switzerland. Field studies currently are on hold because of the situation in Afghanistan, but Stucky engineers and geologists are planning to return to the field in May 2002.

A Note from the President

Eric Nelson, President, Colorado Scientific Society

Wow. It is hard to believe, but summer (from an academic's point of view) is just around the corner. Here at Mines, graduation is May 3rd this year! That is the day I leave the country and start a summer of geological wanderlust around the globe. The good news is seeing more great geology; the bad news is that I will miss CSS activities in May.

May 16 Program- Catastrophism and Eye Candy

Following what I feel was a great program so far in 2002, we have two excellent speakers for the May 16th meeting. Robert Schuster of the USGS will describe his work on the Usoi Landslide Dam and Lake Sarez, in Tajikistan. I have seen some of Bob's talks on these landslide dams, and his speaking skills and topic will keep you on the edge of your seat! Sandra Perry of Perry Remote Sensing (and a Mines graduate!) will speak about recent advances and innovations in remote sensing for the geosciences. I have had the pleasure of visiting her office, and can say that the earth images she has available are pure eye candy for geoscientists and will keep your jaw ajar.

May 11 Field Trip - Lyons Sandstone Quarry

Don't miss the May 11 trip, on which Dr. John Harms and CU Boulder professors emeritus Ted Walker and Ed Larson will be guides to the depositional features of the Lyons Sandstone at the Sterling Quarry and to 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. Details and reservation form are on the CSS website.

March Meeting - Wine Night

The March meeting, or wine night, was a great success. Larry Meinert, from Washington State University, gave a stimulating and extremely interesting talk on the geology of wine and some of his cutting-edge research on the topic but did not stop there. He then forced us, not to drink the wine (we had no problem there), but to analyze the wine and how it blended with the fine food served at the 240 Union restaurant. Thanks go to Larry and to David Eberhard, of Eberhard Distributing, for supplying much of the wine. Larry actually hauled all those bottles on the plane with him so that we could enjoy some Washington state wines.

I might add that Larry kept up his wine enthusiasm by convening the 11th semi-regular meeting of the Hydrothermal Fluid Society at the recent Society of Economic Geologists Global Exploration meeting in Denver, where nearly 90 wines were tasted by a bunch of field geologists (see the list here: <http://users.pullman.com/meinert/HFS/SEGDenver/list.html>). You can only imagine.

April Meeting - Family Night

Family night this year, as with all those in my memory, was a great success. After a good long social hour and nice meal in the CSM Geology Museum, Sarah Andrews drew from her own experiences in the geoscience to keep us chuckling with her humorous and perceptive look at how geoscience is viewed and represented in the media. Thanks go to Susan Landon for organizing a raffle of Sarah's new novel (*Fault Line*) which netted \$132 for the memorial fund (and thank you Sarah for donating the copy)!

Speaking of memorial funds, eleven grants totaling \$8,750 were granted this year. Thanks go to Michele Tuttle and the entire committee for their hard work deciding from 26 submitted proposals. For details, see the article on following pages.

CSS Council Meets

The council met on 18 April and discussed a number of important society issues. The membership drive is still being discussed, and we may manage to get some press through a booth at the upcoming GSA meeting in Denver. I encourage you to be individually involved in this drive; just think of how many geo-friends and associates who are potential recruits! Just last week on a field trip through the SEG meeting to the State Line Kimberlite province, I recruited one of the field trip participants, Ulli Limpitlaw, a student at UNC. Welcome to the society Ulli!



At the council meeting, we also discussed a drive to encourage donations to the Endowment Fund (our primary operating fund). Our treasurer, Don Sweetkind, offers a column in this newsletter explaining the details of society funding. The council would like to remind members to break into that IRS refund, or your piggybank, and pay those CSS dues. Your dues are a valuable contribution to many CSS-sponsored activities. One of these activities is, of course, our outreach program to fund geological signs in Colorado. We have gone through the initial stages of approval for a grant from the Science and Cultural Facilities District and have generated significant matching funds from other local entities (e.g., RMAG, CGS, CSM, AAPG). Thanks go to Paul Belanger and the outreach committee for their hard work. In addition, graduate student Kyle Murray and a CSM undergraduate student team have produced a preliminary geology-draped DEM that will be incorporated in the sign on Lookout Mountain.

For the September program, our program chairperson, Donna Anderson, had suggested a very timely theme: “Water and Drought in Colorado.” Anyone with suggestions on excellent speakers who might fit in with this theme is encouraged to contact Donna (dsanders@mines.edu or 303-273-3883).

Lastly, I would like to thank all society volunteers for their help in making the society function, and I wish all society members a successful and enjoyable summer. Remember, there is geology everywhere you go!

CSS Memorial Fund for 2002

Michele Tuttle, Past President, Colorado Scientific Society

The CSS Memorial Fund Committee (Mark Hudson, Bruce Bryant, Richard Madole, Eric Erslev, and me) met April 17th to evaluate research proposals for the Tweto, Oriel, Eckel, Snyder and Pierce funds. We received 26 proposals from 18 Universities—16 from across the United States, one from Canada, and one from Greece. The total was an increase of five from the previous year.

Eleven grants totaling \$8,750 were awarded from the Tweto, Oriel, Eckel, and Snyder Funds. No proposals were received for research on the Heart Mountain fault. The \$3,850 in the Pierce fund will rollover to the 2003 Pierce Memorial Fund. A total of \$3,400 was awarded from the Tweto Fund for research in the Rocky Mountains, fully supporting three proposals and partially funding one proposal. The Oriel Fund for research in the central and northern Rocky Mountains awarded \$2,400 to three proposals. The Eckel Fund for research in engineering geology awarded \$1,650 to fully support two and partially support one proposal. The Snyder Fund for research on Precambrian geology of the Rocky Mountains awarded \$1,300 to two proposals. The committee is confident that these 11 funded research grants are of the highest quality and fulfill the intentions of the many donors to the CSS Memorial Funds.

Jessica Allen, \$1,000 – Tweto Fund, University of Georgia, MS, “*The sequence stratigraphy of the Harding Sandstone*”

Amanda Ault, \$880 – Tweto and Eckel Funds, Lehigh University, PhD, “*What is the nature of fluvial strath terraces?*”

Brian Coven, \$640 – Snyder Fund, Northern Arizona University, MS, “*Cogenesis of the Tertiary West Elk volcano and West Elk laccolithic cluster, Colorado: Implications of magma genesis during the Tertiary volcanism of the southern Rocky Mountains*”

Benjamin Grosser, \$660 – Snyder Fund, University of North Carolina at Wilmington, MS, “*Petrology and geochemistry of the Wildcat Gulch syenite: Comparison with the Tolvar Peak granite and the Powderhorn carbonatite complex*”

Caroline Harris, \$1,180 – Oriel fund, Northern Arizona University, MS, “*P-T paths and thermal modeling from the Albion Mountains, southern Idaho: Implications for hinterland deformation of the Sevier orogeny*”

Ben Kennedy, \$970 – Tweto Fund, McGill University, Ph.D., “*The roles of faults at Lake City Caldera, San Juan Mountains, Colorado and how they relate to the deeper structures and intrusions of Ossipee ring complex, New Hampshire*”

Elizabeth S. Langenburg, \$420, Oriel Fund, Utah State University, MS, “*Middle Cambrian parasequences in the Wheeler Formation: Faunal response to sea level oscillations and high-resolution chemostratigraphy of the House Range embayment*”

Isaac J. Larsen, \$600, Eckel Fund, Utah State University, MS, “*Mass-movement sediment delivery to the Green River: Linking bedrock geology, precipitation, and hillslope processes in Dinosaur National Monument*”

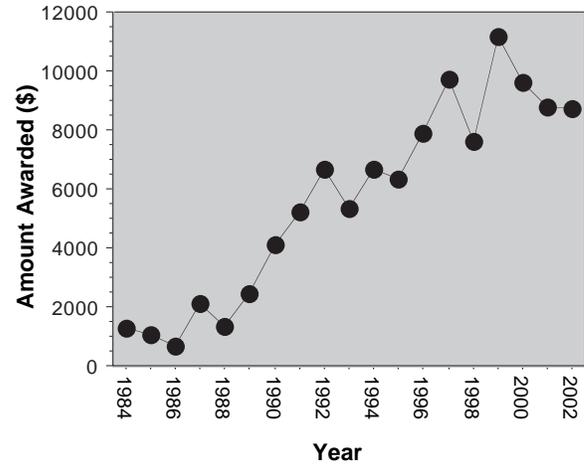
Laura I. Net, \$800, Oriel Fund, University of Texas, Austin, MS, “*Diagenesis and reservoir quality of the eolian Nugget/Navajo Sandstone*”



Paul A. Petersen, \$600, Eckel Fund, Utah State University, MS, “*Finding thresholds for gully erosion of archaeological sites, Grand Canyon National Park: An empirical prediction analysis*”

Erin H. Phillips, \$1,000, Tweto Fund, New Mexico Institute of Mining and Technology, MS, “*The nature of resurgence in the Valles Caldera, Jemez Mountains, New Mexico*”

During the past 19 years, the Society has helped support the graduate research of 143 students, awarding a total of \$106,832 (an average of nearly \$750 per grant). This achievement is extraordinary for an organization of our size and exemplifies the commitment of its members to promote high quality research in the field of earth. It was an honor and pleasure to serve as Memorial Fund Chair this year and I want to extend a “thank you” to all the Memorial Fund donors”who have made these grants possible.



The Society’s Memorial and Endowment Funds

Donald Sweetkind, Colorado Scientific Society Treasurer

The Colorado Scientific Society oversees a group of Memorial Funds and the Endowment Fund.

Memorial Funds: The Colorado Scientific Society Memorial Fund Program was started in 1984 with the Ogden Tweto Fund. It has blossomed to include five funds, the most recent of which is the George Snyder Fund, which was added in 1998. As a result of generous contributions by family, friends, and Society members, each of these funds has grown substantially since its inception. As of December 1, 2001, the total market value of our Memorial Fund investments was about \$180,000. The principal dollars that are donated to each fund are invested in a conservative mix of GNMA and FNMA bonds and preferred corporate stocks that are managed for us by an investment firm. The goal of these investments is to protect our principal and generate interest income. We use only interest generated from the Funds to finance our Memorial Fund awards. Since 1996, the Society has awarded grants that total between about \$8,000 and \$11,000 each year.

Endowment Fund: The Colorado Scientific Society Endowment Fund was started in 1990 at the suggestion of Barney Poole (1987 CSS President) in order to cover unanticipated increases in our operating expenses or to fund special activities. As Treasurer of the Society, I invest this fund in bonds, preferred stocks, and mutual funds as per the suggestions of our financial advisor. In the past, we have used the fund to conduct a membership drive, to sponsor student attendance on GSA field trips, and a variety of other activities not covered by the members’ annual dues. We typically receive \$500-\$750 in donations to this fund each year; in the past three years we have made withdrawals of \$1,000 and more each year to cover operating expenses of the Society.

Memorial Fund accounts have reached the point where we are generating enough interest income to support an average award of \$800 for each student grant. However, our long-term goal is to increase the average amount of individual grants to at least the \$1,000 level. As we expand our Society activities, our Endowment Fund has been under increasing pressure and the balance in that fund is slowly declining. Your continued support of both of these important funds will be much appreciated. Please remember that your *entire* contribution goes towards generating interest for the grants and that your contribution is 100% tax deductible because the Society is a nonprofit Section 501(c)(3) organization.

Rhodochrosite (MnCO₃) Named Colorado’s Official State Mineral

For details see the supplement following page 8 in the PDF file, or log onto the CSS web page at: <http://www.coloscisoc.org>

Geological Sign Project Update

Paul Belanger, CSS Sign Committee Chairman

The SCFD proposal for three signs located at Buffalo Bill Museum, Green Mountain and at a third, undetermined site was submitted February 25th. On April 10th, Paul Belanger and Parker Calkin presented the proposal and met with the SCFD board. The board was receptive, even complimentary. We are currently working on a list of action items requested by the board, and expect to hear in October whether they approve of the proposal and the amount they are willing to fund. We thank the American Association of Petroleum Geologists Foundation for a commitment of \$1000, the Rocky Mountain Assoc. of Geologists for \$500, the Colorado Geological Survey for \$500, Buffalo Bill museum for sign installation (worth some \$600), CSS and CSM for a combined commitment \$500, and a group of neighborhood geologists organized by Susan Landon of Thomasson Partner Associates for \$200. Assuming the proposal is approved, installation of the signs is expected to be early 2003.

Active members of the sign proposal and development committee are: Paul Belanger, Bob Weimer, Bruce Bryant, Greg Holden, Kyle Murray, Sue Hirschfeld, Parker Calkin (proposal/interview) and Pete Modreski (sign making info).

A View Through the Brown Cloud

by Lisa Ramirez Bader



Spring has sprung and so has my back after two full days of weeding the yard. But, my step is lighter now that the days have lengthened and flower blossoms reach for the sun. Ahhhhhh, sniff sniff, the air is scented with Eau d' Bumblebee rather than the usual Denver reek of carbon monoxide. It is time for my yearly pilgrimage to a little-known mom and pop (and grandma) greenhouse on 44th for annuals to color up the yard on Mother's Day. The prices are unbelievably low. A twelve pack of pansies is \$2.49... a mere 20 cents per budling and that is unbeatable. The owner also grows the *nonWalMartus* species of varietals, which is nice for adding a little zip to the yard. Naturally, I

am a firm believer in patronizing the independent shopkeeper, and of course they are always happy to see me stroll through the door with my checkbook. Happy sunshine days to everyone and I will see you next autumn!



Current USGS Research in Colorado

A River Through Time—a USGS-BLM cooperative project in the Gunnison Gorge

Karl Kellogg, former CSS President

The Gunnison Gorge National Conservation Area (NCA) near Montrose, Colorado, encompasses a large area, including the rugged Gunnison River gorge, just west and north of Black Canyon of the Gunnison National Park. The outstanding scenery and recreational opportunities (river running, fishing, hunting, hiking, and camping) of the NCA have prompted the BLM, which administers the land, to protect this remarkable landscape so that future generations can enjoy one of the last, great open spaces in the region. Consequently, the BLM and the USGS have jointly funded a partnership to: (1) document the geologic evolution of the Gunnison Gorge NCA through a series of drawings, geologic cross sections, photographs, and explanatory text, (2) study the environmental impact of selenium and salt input into the river from the Mancos Shale, which forms much of the table lands above the gorge, and (3) investigate environmental degradation due to ever-increasing off-road vehicle use so the BLM can better balance recreational opportunities and natural preservation in the NCA. All this information is crucial for the implementation of the overall NCA plan and will, among other purposes, provide material for displays,



posters, signs, and environmental education projects. Several USGS scientists are participating in the Gunnison Gorge project: Karl Kellogg (Geologic Discipline) is taking the lead on creating a geologic database for public outreach, while Dick Grauch (Geologic Discipline) is working with Paul von Guerard and John Elliot (Water Resources Discipline), Dave Catts (National Mapping Discipline) and Steve Hamilton (Biological Discipline) on the investigations of the Mancos Shale.



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 information, 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. May 23rd - Jill Litt (University of Colorado Health Sciences Center), **Surveying the Urban Environmental Health Landscape: Opportunities for Public Health and Earth Scientists.** May 30th - Steffan Mehl (USGS/WRD), **Evaluation of local grid refinement methods for block-centered finite-difference groundwater models.** For cyber talk and other information call Laura Strickland at 303-236-5302, or email: lstrickland@usgs.gov.

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. May 2. - Ms. Leslie Noyes, Author, in collaboration with Earl Beistline and Ernest Wolff. **Rock Poker to Pay Dirt: A History of Alaska's School of Mines and Its Successors, and the History of Alaska's Mining and Oil Industries (A book review and book signing).** May 9. - Roman A. Popielak, Principal, Knight Piesold and Co. **Water Resource Development in the Arid Andean Antiplano, Southern Bolivia.** May 16. - Bruce Geller, Consulting Mineralogist, Advanced Geologic Services. **The Prospectors & Developers Association of Canada (PDAC) Conference, March 2002.** May 23. - Terry J. Crebs, Consulting Geophysicist, Lakewood. **The Voisey's Bay, Labrador, Nickel-Copper-Cobalt Discovery and Its Colorado Connection.** 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 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 Keith Murray at (303) 986-8554 for information.

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> May 6, 2002, **"Copper deposits of the Kuperschiefer in southwest Poland,"** Richard L. Nielson, Consulting Geologist

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 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 not required for talk only-cost is \$3. Meeting location: Denver Petroleum Club, Anaconda Tower, 555-17th St, 37th floor May 3, 2002, **"Influence of wrench tectonics on hydrocarbon production in the Rockies."** Richard F. Inden, Consultant. May 17, 2002, **"Aeromag on depositional patterns in the Green River Basin."** John Horne, Orion International.

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. May 29, 2002, Tim Connors will present a lecture and slide show **on new geologic mapping techniques.** Join now. Web page: <http://www.dinoridge.org>

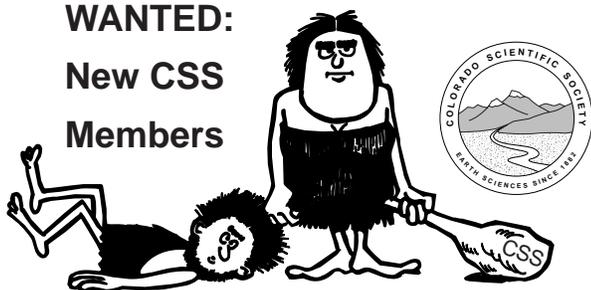
Colorado School of Mines, Van Tuyl Lectures Check this month's locations on webpage : http://www.mines.edu/Academic/geology/van_tuyl/van_tuyl.l.shtml

For a constantly updated, online geo-calendar, visit the Colorado Geological Survey at <http://geosurvey.state.co.us>

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

<http://www.coloscisoc.org>

**WANTED:
New CSS
Members**



OFFICERS

President: Eric Nelson, CSM, 273-3811, enelson@mines.edu
President-Elect: Jim Cappa, CGS, 866-3293, jim.cappa@state.co.us
Treasurer: Don Sweetkind, USGS, 236-1828, dsweetkind@usgs.gov
Secretary: Lisa Finiol, CSM, 567-2403, lfiniol@mines.edu
Past President: Michele Tuttle, USGS, 236-1944, mtuttle@usgs.gov

COUNCILORS

2000-2002: Bob Fleming, USGS, 279-8122, juvafleming@msn.com
2000-2002: Scott Lundstrom, USGS, 236-7944, sclundst@usgs.gov
2001-2003: Graham Closs, CSM, 273-3856, lcloss@mines.edu
2001-2003: Parker Calkin, UCB, 442-2184, calkin@spot.colorado.edu
2002-2004: Jim White, UCB, 492-5494, jwhite@colorado.edu
2002-2004: John McCray, CSM, 384-2181, jmccray@mines.edu

COMMITTEE CHAIRPERSONS

Best Paper Award: Mark Hudson, USGS, 236-7446, mhudson@usgs.gov
Database Manager: Cynthia Rice, USGS, 236-1989, crice@usgs.gov
Field Trips: Emmett Evanoff, UCB, 492-8069, evanoff@colorado.edu
Graphics: Lee-Ann Bradley, USGS, 273-8613, bradley@usgs.gov
History: Marjorie E. MacLachlan, USGS-retired, 986-7192, jmemaclachlan@aol.com
Membership: Jim Yount, USGS, 236-5397, jyount@usgs.gov
Memorial Funds: Michele Tuttle, USGS, 273-8626, mtuttle@usgs.gov
Newsletter Editor: Van Williams, USGS, 236-1289, vwilliam@usgs.gov
 Assoc. Editor: Scott Minor, USGS, 236-0303, sminor@usgs.gov
 Assoc. Editor: Mary-Margaret Coates, TECH Edit, 422-8349, mmcoates@att.net
 Assoc. Editor: Vince Matthews, CGS, 866-3028, vince.matthews@state.co.us
Outreach: Paul Belanger, Thomasson, 436-1930, p.belanger@att.net
Program: Donna Anderson, CSM, 273-3883, dsanders@mines.edu
Publicity: Mearl Webb, 810-1296, mearlwebb@qwest.net
Science Fair: Chuck Weisenberg, 238-8806, cweisnbrg@aol.com
Webmaster: Bill Wingle, 720-544-8830, wwingle@uncert.com



**** STOP!** Don't recycle this until after the talk! Please help us with publicity by posting at least the front page of this Newsletter on a bulletin board. *Thank you!!*

Supplement:

Platte Canyon High School Students Nomination of Rhodochrosite (MnCO_3) as Colorado's state mineral is enacted into law.

Paul Belanger, CSS Sign Committee Chairman



CSS member John Ghist (highlighted), an oil company foram micropaleontologist turned teacher, has been living in Bailey and teaching Earth Science at Platte Canyon High School since 1995. Last fall, Beth Simmons, president of the Western Interior Paleo Society (WIPS) sowed the seeds for nominating a state mineral. Although Colorado has a gemstone (aquamarine) and a state fossil (*Stegosaurius*), Colorado had no official state mineral.

John asked this year's Earth Science classes to research state and county minerals for likely candidates. They narrowed their choices down to two minerals: amazonite and rhodochrosite. The class considered various criteria and student polls to arrive at the following results:

- Both found in Park County - even up
- Red Color of rhodochrosite - Spanish - Colorado - color red - 1 for rhodochrosite
- Amazonite – traditional, unofficial - 1 for amazonite
- Uniqueness – 1 rhodochrosite (found mainly in Colorado, Montana, Bulgaria and Argentina)
- Awareness - associated with state - 1 for rhodochrosite
- Recent news - big display in Denver Musium of Natural History - 1 for rhodochrosite

John's class wrote a letter (<http://jghist.tripod.com/rhodochrosite.htm>) to Carl Miller that resulted in submission of **Bill HB02-1346**. The letter was read to the Committee of Agriculture, Livestock and Natural Resources on **February 27, 2002**. The Spring Earth Science class was present for this reading as were a number of persons testifying as to the suitability of rhodochrosite to be our state mineral.



Testifying in support for rhodochrosite were:

Mr. Carl Miller, State Representative

Dr. Vicki Cowart, State Geologist (CSS member)

Dr. John Trefny, President of the Colorado School of Mines

Dr. Jack Murphy, Curator of Geology, Denver Museum of Nature and Science

Mr. Bryan Lees, owner of the Sweet Home Mine

The decision: 10-0 in favor of rhodochrosite

The Bill HB02-1346 was then read to the Senate Committee of Agriculture and Natural Resources at the State Capitol on **March 21, 2002**.

The decision: 7-0 in favor of rhodochrosite

The bill was signed into law April 17th by Governor Bill Owens at the Denver museum of Nature and Science as the Platte Canyon Earth Science class and their state representatives looked on.

For more on the mineralogy of rhodochrosite (MnCO_3) see: <http://jghist.tripod.com/mineralogy.htm>