



Colorado Mineral Society Mineral Minutes



Volume 81, Issue 3

March 2017

Next CMS General Meeting March 3, 2017

The next Colorado Mineral Society (CMS) general meeting will include a presentation by Pat Tucci and Zelda Bailey on their "Mineral Tour in Bulgaria". An abstract and photos are included on Page 3.

Guests and visitors are welcome at the general meetings. The meeting starts at 7:30pm at the St. Paul's Episcopal Church, 10th and Garrison in Lakewood.

Save the Date - May 6th Auction
See Page 5 for more details!

CMS Membership Dues Reminder!!

To be included in the 2017 CMS Membership Directory, you must pay your dues by April 7, 2017. You can pay at the March and April general meetings or mail a check to the CMS P.O. Box in Lakewood before April 7th. Our Member Chairperson, Cara, will not be at the May general meeting, so it is best to pay your dues ahead of the May meeting (which is the field trip meeting) to avoid congestion at the sign in table. You need to be a CMS member to sign up for trips at the May meeting. When you renew, please provide any updated email addresses so you can receive period CMS announcements.

President's Message

Due to John Smith being under the weather the past couple of months, he apologizes for not being able to prepare a President's message for this issue. Stay tuned for next month's message.

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A Special Thanks!!

CMS would like to thank Dale and Virginia Block for many, many years of volunteer service to CMS that included stuffing grab bags each year for the Denver Gem and Mineral Show. CMS is one of eight member clubs that put on the annual non-profit Denver Show at the Mart. Each member club is responsible for contributing 600 grab bags each year that are sold for \$1 each at the show to raise money for grants and scholarships.

Dale and Virginia have recently retired from the Grab Bag Chairpersons position. These CMS Life Members were presented with a recognition award and gift card at the February general meeting. Marchelle Carlton has volunteered to be our next Grab Bag Chairperson (thanks Marchelle for stepping up). Thanks to all the volunteers who sew grab bags as well. Donations of small specimens for the grab bags are always welcome. Watch for details in future newsletters on fun grab bag stuffing parties.



Dale and Virginia Block receiving a recognition award at CMS February 2017 general meeting. Leslie Osgood, who presented the award, is standing in the background. Photo by Amber Brenzikofer.

COLORADO MINERAL SOCIETY OFFICERS

2017

President: John W. Smith

First VP-Programs: Gary Rowe

Second VP-Education: Debbie Kalschauer

Secretary: Sandra Gonzales

Treasurer: Eva Siemonsma

Appointed Board Members - Committee Chairpersons

Annual Auction: Ben Geller

Auction Co-Chair: Rob Deschambault

Door Prizes-Guests: Cindy and Paul Hatfield

Library: Kevin Atwater

Display Chair: **OPEN**

Membership: **OPEN**

Field Trip Leader: Gary Rowe

Field Trip Leader Co-Chair: Nels Grevstad

Nominations: Bruce Sales

Grab Bags: Marchelle Carlton

Editor: Amber Brenzikofer

Historian: Amber Brenzikofer

Scrapbook: Jennifer Knies

Jr Rockhound Coordinator: Lewis Reynolds

Jr Rockhound Assistant: **OPEN**

Hospitality: Star Edwards

Donations: Debbie Kalschauer

Web Master: Julio Edwards

coloradomineralsociety@comcast.net



Representatives (Board Members)

Denver Council Rep: Bruce Sales

Denver Show Rep: Amber Brenzikofer

COLORADO MINERAL SOCIETY (CMS) was founded in 1936 by a group of distinguished individuals within the mineralogical field. The organization was incorporated as a non-profit, educational organization in 1948. The Society is affiliated with the Rocky Mountain Federation of Mineralogical Societies and the American Federation of Mineralogical Societies, a founding member of each group.

PURPOSE: To promote the study of minerals and other geologic materials, to encourage mineral collecting as a hobby and to conduct public meetings, lectures, and field trips, and to engage in all activities which relate to said purposes of the organization.

MEETINGS: General membership meetings start at 7:30 PM on the first Friday of each month, October through May, at St. Paul's Episcopal Church, at 10th and Garrison in Lakewood, CO. Displays are set up by members about one-half hour before meetings. Specimens may be available for sale and trade.

VISITORS and GUESTS are welcome.

BOARD MEETINGS: The board members meet once a month to complete the executive business and affairs of the Society. Meetings will start at 7:00 PM usually the third Tuesday of each month. Additional meeting times, if necessary, may be called by the President or any three members of the board and will be announced at the general or board meetings.

MEMBERSHIP: Open to all persons who agree to abide by Society rules and rules of the Federations. Annual fees: \$16.00 for a Family or Newsletter Membership, \$14.00 for a Single Membership, \$12.00 for a Senior Membership (single or family

over 65), and \$12.00 for junior members under the age of 18 who are not included in a family. Name badges are available for a one-time fee of \$7.50.

ANNUAL EVENTS: Yearly activities include a silent auction of minerals, fossils, gems, jewelry, equipment and other items related to our interests; participation as a member of the Denver Greater Gem and Mineral Council and the original Denver Gem and Mineral Show; and the Founder's Day celebration.

FIELD TRIPS: The Society sponsors several field trips from Spring through Fall for the purpose of collecting minerals, crystals, and fossils. These trips are one-day, two-day, and occasionally several-day adventures. A field trip guide is published each year in May.

NEWSLETTER GUIDELINES: CMS has a proud history of promoting the education and pure enjoyment of the mineralogical world. At the very heart of its existence are the many volunteers and contributors who spend their time and efforts in direct support of the club's mission. The CMS official newsletter **MINERAL MINUTES** is published monthly during the active meeting season (October through May) and a summer edition, and is the primary way the club's activities and mission are communicated to its members and prospective members. On that basis, the Board of Directors would like to offer the following content guidelines for CMS newsletter contributions:

- Formal announcements concerning club business and/or membership
- Information around mineral-related education opportunities or fundraising activities
- Stories or history that concentrate on the edifying aspects of mineral collection and education
- Sharing of personal mineral-related experience from field trips or other related adventures serving an educational purpose
- Announcements of volunteer/leadership opportunities for the club or club representation
- Worthy news events or discoveries related to mineralogy or geology that align to club's core interests
- Appropriate announcements regarding mineral shows, one-time mineral related events, mineral auctions, sale of private collections and/or equipment, etc.
- Information around relevant donations and/or gifts made available to the club or club members

Please note that the editor may correct spelling, syntax, or content to conserve space and is also entitled to bring contributions in compliance with newsletter guidelines.

Any material herein may be reproduced by any club if proper credit is given. Material from many sources is used in the Mineral Minutes. While it is believed that these items are accurate, neither the editor nor CMS assumes any liability for their use. Advertiser's claims are their own, and their products are not warranted by CMS.

Deadline for publication is the 20th of the month prior to publication. All correspondence to Mineral Minutes or questions should be sent to Amber Brenzikofer, Editor, P.O. Box 280755, Lakewood, Colorado 80228-0755; phone: 720-480-5234; or by email to:

editor.coloradomineralsociety@gmail.com

MARCH GENERAL MEETING PRESENTATION

MINERAL TOUR IN BULGARIA

by Pat Tucci & Zelda Bailey

A couple of years ago in Tucson, we came across a mineral dealer from Bulgaria advertising mineral tours of his country. The tour was organized and led by Ivan Pojarevski of Bulgaria Minerals & Gems, from whom we had bought several specimens over the years. Ivan has been in the business for many years, and he is very knowledgeable and personable. Last year we decided to take the tour, and our friends who own a rock shop in Taos also signed on.

The tour was scheduled to begin on September 25 and go through October 13 of this year. Ivan communicated with us, by both email and phone, to help us plan the trip. We wanted a mix of mineral collecting and buying, seeing the cultural and scenic sites of the country, and sampling the local foods. Unfortunately, our trip got cut short when Zelda broke her ankle, but more on that later.

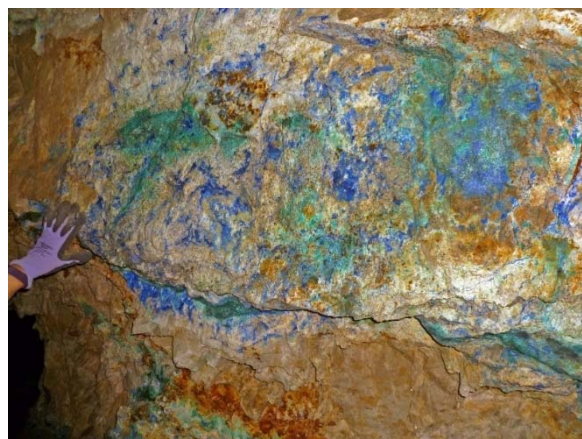
We arrived in Sofia, the capital of Bulgaria, after flying from Denver to Munich. Sofia is a modern city complete with shopping malls, good hotels and restaurants, and traffic. There are also many Soviet-era buildings and apartment complexes. We spent a couple of days in Sofia touring some of the many museums and attractions, as well as shopping for supplies, such as rubber boots, that we'd need for mineral collecting. Prices for most things were quite reasonable, and it was fun to wander through the grocery stores and shops to see the similarities and differences between stores there and in the US.

After loading up the van that we would use on the tour, we left Sofia to head out to our collecting areas. The first day on the road, we visited a monastery and a ski area, and spent the night at a village known for its hot springs. Our hotel had several hot spring baths in the basement, and it was relaxing to soak in them and then to walk around the village. Almost all of the homes have gardens and grape arbors, which were loaded with ripe fruit.

The next couple of nights were spent at the Chemernik biofarm, where we got to sample some of the organic produce, and even had fresh milk right from the cow. We visited 2 copper mines while in this area. At the Venetca mine, we collected malachite, azurite and linarite, and at the Zapachitca mine we collected similar minerals as well as tyrolite (a copper arsenate).



Rila Monastery near Sofia.



*Azurite and malachite in the Zapachitca mine
(Zelda's hand for scale).*

We left the biofarm to head to Madan, in the Rhodope Mountains, where we collected at the 9 September lead-zinc mine, and visited several mineral dealers. On the way we stopped for several hours at Plovdiv to view the Roman ruins, including an amphitheater where a jazz concert was being held that night, and to wander the streets looking at 18th century houses. We also visited another monastery, a winery, and bought local, hand-made pottery.

The next day was collecting at the 9 September mine. After crossing a small river (hence the need for rubber boots), we hiked for more than an hour scrambling over rocks up a small stream to the mine entrance. After a nearly 2-hour hike through the mine tunnels, most of which was through calf-deep water, we arrived at a large room to collect quartz, sphalerite, galena and other minerals. We filled our packs with these heavy specimens and retraced our steps back to the car. Given the wet and slippery conditions we encountered on this hike, it was a miracle that no one got hurt.

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MINERAL TOUR IN BULGARIA (Continued)

The next morning, we were supposed to drive to Greece for a couple of days. As Zelda walked down the stairs of our hotel, she slipped on the bottom step and broke her ankle. A trip to the emergency room verified that it was a bad break, which would need surgery, and we decided to cut the trip short and head home. We had to spend another night in Madan before returning to Sofia, so while Zelda rested the rest of us did some shopping with a few of the mineral dealers in town.

Fortunately, Zelda was not in a lot of pain, because it took us a few days to arrange for the flight home. We spent a couple nights in Sofia waiting for the return trip, and even did some more sight-seeing while there because Ivan had a wheel chair at his home that we could use. After purchasing one final souvenir (crutches) and buying some specimens from Ivan, we boarded the plane for the long trip home. Our friends continued with the tour, collecting agate and amethyst along the way, and they flew home a week later.



At the entrance to the 9 September Mine.

Zelda's surgery went well, and she is well on the road to full recovery. If you want to hear more about the trip and see a "few" more pictures, join us at the March CMS meeting.

February 3, 2017 Raffle News

WOW, another month of happy smiles - February's ticket sales amounted to \$188, with the retail value of \$69. The most popular specimen was the selenite specimen (\$51), it was donated by **Rocky Mountain Gems & Minerals** and won by a very, very happy *John Smith*. The mica on quartz specimen (\$40) donated by **Rocky Mountain Gems & Minerals** was won by *Ron Wanker*. The malachite, chrysocolla and tenorite specimen (\$33) donated by **GEODyssey, LLC** was won by *Lisa Stone*. The next two specimens were of equal value (\$22) the first was a ferberite specimen from the **Charles Spletz Collection** was won by Robert Murphy and the second specimen of sylvite (\$22) donated by **GEODyssey, LLC** was won by the smiling *Bruce Sales*. Last but not least picture stone (\$20) donated by **GEODyssey, LLC** was won by that lucky *John Smith*.

Thank you for the donations of these great specimens, without you we wouldn't have this successful raffle. The proceeds are spent on CMS education, the purchase of library materials, and the state science fair awards. Thanks John Kleber and Tom Saluno for helping with the raffle.

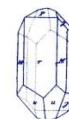
Congratulations to all the lucky winners!!!!

Submitted by Eva Siemonsma, CMS Raffle Manager



**Charles Spletz
Collection**

GEODyssey LLC
Minerals, Fossils, Jewelry



**Zelda Bailey
Pat Tucci**

P.O. Box 16339
Golden, CO 80402
www.geodyssey-rocks.com

Tel:(303) 279-5504
Cell:(303) 898-9674
pattucci@comcast.net

2017 CMS Education Update

by Debbie Kalscheur

Thank you to all who have shared your interest and ideas around possible class offerings as well as people who may be interested in teaching them. Unfortunately, we have not been able to confirm a venue for the Mineral Identification Course and will need to cancel that course for this Spring. We will work to confirm a venue and offer it this Fall. If you have given me a check to secure a position in the course last Fall, please come see me at the March meeting. We will work on other course offerings targeting this Fall.

The good news is that we will be able to offer the Gem Identification Course this Spring. Please see details below. If you are interested in this class, please bring your checkbook to the March 3 meeting to secure your spot. The first 12 people to give me a check for \$35 made out to CMS will be confirmed for the class.

Gemology Course – Spring 2017

(4 classes meeting all Monday nights in April from 6:30 – 8:30 pm at the School of Mines across the hall from the Geology Museum)

Star Edwards has agreed to teach this course again this year. Star has earned the Graduate Gemologist credential from the Gemological Institute of America (GIA) and has worked in the industry for many years. This course is designed to be a user friendly and practical course in gemology, concentrating on gem identification of colored stones. Colored gems will be provided, but no diamonds. On the last day of class, there will be a gem identification challenge to test the knowledge you have acquired.

This will be a hands-on course. Please plan on bringing locking tweezers and a corrected 10X loupe. Also bring a microscope and visors if you have them. Suggestions for where to purchase any required equipment will be provided in advance of the class starting. Star has limited extra equipment she will bring and microscopes that can be shared. Please note that we will be working in teams throughout this course as the team approach has proven to be most effective for learning how to identify the key characteristics of the popular stones. Above all, Star wants to emphasize that this course is designed to be FUN and extremely complimentary to what we are all so passionate about. Star is also open to adding topics and/or adjusting course content to address the particular interests of people participating in the class. Particular interests/desires will be gauged at first meeting.

Confirmed Dates: April 3, 10, 17 and 24

Location: School of Mines, General Research Laboratory (GRL) building, 1310 Maple St., Golden, CO 80401

Time: 6:30 pm to 8:30 pm

Required to Bring: Locking Tweezers, cut stone to be included in the gem identification challenge on the last class. Please contact Debbie (kalscheur2004@yahoo.com) or Star Edwards with any questions.

Number of Participants: maximum 12

Age: Minimum age 16

Per person Cost: \$35, CMS Members ONLY (Total cost is \$70 – CMS will cover other \$35/person)



CMS May 6th Auction

CMS will have its annual silent auction of mineral hobby items on May 6th at the Holy Shepherd Lutheran Church located at 920 Kipling, 3 blocks north of 6th Avenue in Lakewood, from 11:00am to 2:45pm. Admission is free. Checkout begins at 2:45pm (**cash or check only**). We need volunteers and a sign-up sheet will be available at the upcoming general meetings. The auction features reasonably priced minerals, fossils, faceted stones, lapidary equipment, books, and jewelry to the general public. A unique aspect of this auction is the ability for visitors to view and bid on fluorescent minerals in a special ultraviolet powered Fluorescent Room! There are door prizes every half hour, and a special verbal auction at 1:00pm of museum quality specimens donated by special dealers. There is abundant parking, refreshments, and easy handicap access without any stairs. As always, the club will have a few auction tables reserved for only children to bid on. All sellers are requested to pre-register by phoning Leslie Osgood at 303-986-4488. Please leave a message for Leslie and she will call you back. Sellers can get extra copies of bidding slips in the May CMS newsletter or on our club website at www.coloradomineralsociety.org. The website version of the forms can be filled in electronically.

Volunteers Needed:

* Set up team	* Cashiers
* Food service help	* Back room help
* Check-in help	* Clean up
* Verbal Auction help	* General help
* Table clearers & movers	* Raffle helper

Contact Ben Geller at geller520@gmail.com for more information.



CMS Junior Rockhounds Program – March 2017 Meeting

Preparing for a Field Trip: Planning, Tools, and Strategy

by Dr. Lewis Reynolds, Junior Rockhound Chairperson



CMS members Jeff Self and Donna Ware quip at their website, “The worst day in the field is better than the best day sitting at home watching television.”¹ Our members indeed value the summer field trips, especially for the adventure, beauty, camaraderie, digging, and euphoria of finding a grand specimen. We are indeed thankful for the work of our field trip coordinators (currently Gary Rowe and Nels Grevstad) and many field trip leaders who arrange and guide our club’s quests to collect various minerals and fossils. Having a successful field trip requires *each participant* to prepare, particularly to minimize the likelihood of having “the worst day.”

At the March 2017 meeting, the Junior Rockhounds will discuss expectations for CMS field trips and introduce common tools that aid the extraction of specimens. Although we will focus on trips appropriate for our young people, the key ideas are pertinent to all of our society’s excursions.

Parents or guardians are strongly encouraged to attend the Junior Rockhounds Program with their children. Because our field trips require the participation of parents, our program is intended as much for adults as for their children. A pencil

or pen and a notebook may be helpful for taking notes. At the March meeting, hard hats will be given to youth whose families are planning to join CMS field trips this summer. Please bring permanent markers and stickers to personalize your hard hat! (A mineral gift from the Ditty Trust Estate will be given to those who bring their own hard hat or who are not quite ready or able to join us for a field trip.)

For the benefit of those who are unable to attend this meeting, let us consider how to be prepared, be safe, and be successful.

Be Prepared. As we venture outdoors, it is necessary for each participant to bring along basic supplies. After years of pursuing various adventures in the wilderness, the Boy Scouts have distilled their experience into a list called the Scout Outdoor Essentials which is also known as the Ten Essentials.² Perhaps not surprisingly, these items also appear as “Recommended Field and Safety Gear” in the annual *CMS Field Trip Guide*. Each participant is expected to bring the following items on every CMS field trip.

- water (approximately 2-3 liters per person per day)
- food (snacks, lunch, and a little extra)
- sun protection (sun hat, sunscreen, *etc.*)
- rain gear
- extra clothing (multiple layers of clothing especially suited for cold-mountain weather)
- whistle (to signal for help in an emergency)
- medications (daily or rescue medications, if needed)

Each family is encouraged to take along supplies useful in a crisis, especially if the field trip is located in a remote area. In sharing these resources, it is assumed that the family will generally be together during the trip.

- basic first aid kit or supplies (including adhesive bandages, butterfly closures, sterile gauze, medical tape, moleskin, an elastic bandage, scissors, tweezers, antiseptic, soap, hand sanitizer or disposable gloves, and pain reliever)
- basic survival equipment (including a pocket knife, matches or a fire starter which are subject to fire restrictions or bans, a headlight or flashlight, 10 m paracord, safety pins, a water purification system or extra water left at the vehicle, a pair of pliers, and a couple of trash bags per person)
- “mountain money” (*i.e.*, toilet paper)

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Preparing for a Field Trip: Planning, Tools, and Strategy (Continued)

Note that the basic first aid supplies can be used to treat common injuries: abrasions, small cuts, minor puncture wounds, blisters, splinters, strains, sprains, and a few cases of simple fractures. Of course, some of these injuries will need medical attention once the patient is back in civilization. More severe injuries will require a call for emergency medical care at the accident site. The proposed basic survival items can be helpful during an unexpected late-evening finish, overnight stay, sudden storm, or rescue.

Some areas of preparation should begin well before the day of the trip. Many of our field trips are physically demanding, so a reasonable level of personal fitness and health make hiking, digging, and carrying loads more comfortable. The family's vehicle should be in good condition with adequate fuel for the expedition.

Be Safe. On our field trips, we are not only looking for minerals or fossils, we are also looking for trouble! Table 1 on the next page contains a list of possible hazards that just begins to capture the risks we face when prospecting. One challenge confronting new collectors and children is that the field environment is unfamiliar. This scary list of hazards is therefore intended to broaden each participant's situational awareness. That is, each of us must learn to pay careful attention to what is happening around us. Recognizing hazardous situations improves with experience, so let's all respect and obey directions given by concerned field trip leaders and more experienced collectors.

Some of these risks are associated with behaviors that we can control. For example, setting rocks carefully aside during digging rather than throwing them will keep the rocks from falling out of control. Walking carefully about a site rather than running or playing reduces the risk of falls. Leaving plenty of space near a person working in a prospect hole may prevent a side wall from unexpectedly collapsing or a surface item from falling on top of a friend. Children should ask their parents or guardians for permission to climb steep slopes so that potential hazards can be assessed first. Parents are expected to discuss safe practices with their children prior to and during a field trip as a way of enforcing a culture of safety.

Many of these hazards can also be reduced by wearing appropriate safety equipment noted below. An asterisk * means that the item *may be required* at some sites like mines or quarries, and a double asterisk (**) means that the item is *required* for junior rockhound participation. The remaining items are strongly recommended.

- ** sturdy, closed-toe shoes (*steel-toed work boots)
- durable pants
- shirt with appropriate coverage
- work gloves
- ** goggles or eye protection
- * hard hat (in place of a **sun hat)
- insect repellent



Knee pads can also improve a prospector's comfort while working on the ground. Specialized safety equipment such as dust masks or snake gaiters may be recommended for specific localities.

Not all hazards or dangers can be mitigated, and this is why we must be prepared. As noted in the *CMS Field Trip Guide*, "At a few locations (for example old mine sites, operating quarries), safety issues or regulations may prevent minor children from attending the trip. Such restrictions will be noted in the trip write-ups." Parents should consider the ability and responsiveness to directions of each of their children before enrolling in specific field trips.

Be Successful. Consider the following common sayings, "By failing to prepare, you are preparing to fail" and "failing to plan is planning to fail."³ In May, the CMS publishes the *Field Trip Guide* for the summer collecting season. Each trip description represents a plan for success based on the previous experiences of our society's members. So after enrolling in a trip, begin planning the day and discussing expectations with the entire family. Three basic questions require some homework: Where are we going? For what are we looking? How do we collect it? Research and preparation may raise more questions, so be sure to contact the field trip leader with any logistical concerns and be ready to ask good questions at the collecting locality. Let's consider some resources for these questions in turn.

First, review the trip description's logistic notes and then plan travel to the meeting location to get there with time to spare. Google Maps and Google Satellite are excellent tools for generating driving directions and for visualizing the general collecting area.⁴

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Preparing for a Field Trip: Planning, Tools, and Strategy (Continued)

Second, review the list of target minerals or fossils and the geological setting of the field trip site offered in the trip description. Any references cited with the trip overview can be consulted for additional information. Images of prepared minerals (*i.e.*, cleaned and trimmed specimens ready for display), descriptions of localities, and lists of minerals associated with a collecting locality may also be available for study at the mineralogical database mindat.org.⁵ It is especially advantageous to train one's eyes to recognize the basic shapes of desirable minerals, for other identity clues are often masked by dirt or other surface coatings when potential specimens are pulled from the ground. Sight recognition is improved using images published in books, magazines, or the Internet, and it can be practiced by viewing real specimens in museum collections or in others' collections.

Third, add the tools and other equipment recommended in the trip description to the basic supplies mentioned above. Many of the field trips well-suited for our junior rockhounds involve digging in dirt or sifting through gravel. Recall from our earlier lessons that coarsely crystallized pegmatite and foliated schist tend to break down into soil more quickly, thus leaving some fine crystals to be recovered from the dirt or gravel. Therefore, a small shovel or another gardening tool (*e.g.*, hand mattock, hand trowel, hand cultivator) may be the most useful tool for a junior rockhound. An old paintbrush or toothbrush can brush away soil to aid the inspection of potential specimens. Each collector should bring newspaper or other packing material, for if a specimen is worth bringing home, it is worth wrapping up! All the field trip supplies can be kept together in a day pack (recommended) or a bucket (also popular).

A parent may want to bring a crack hammer with chisels to open up, say, a pegmatite outcrop with the assistance of their junior rockhound. These tools are too difficult for most youth to use. For a blunt evaluation of the geologist hammer or rock pick and for suggestions of other good tools, the article "Tools for Mineral Collectors" by John Betts is recommended.⁶

An excellent collecting strategy for a junior rockhound is this: *look carefully and patiently* at the rocks encountered on the field trip, for it is amazing what young, sharp eyes will find! Once one beautiful specimen is found, look for more nearby. Each gallon of rocks collected will weigh about twenty to forty pounds depending on the densities of the minerals – an important rule of thumb to consider for the hike back to the vehicles at the end of the day.

A successful field trip is not necessarily measured by the specimens that a participant collects. Field collecting helps build experience in nature that will complement studies in a wide range of subjects in school. Furthermore, the discipline

Table 1. Examples of Field Trip Hazards

Natural Environmental Hazards

- Severe Weather
 - Lightning
 - Thunderstorms
- Dangerous Topography
 - Steep Slopes (Falling Rocks or Persons)
 - High Elevations (Altitude Sickness)
 - Dead Forests (Fire Danger and Falling Trees)
 - Arroyos and Canyons (Flash Flooding)
- Water
 - Slipping and Falling
 - Hypothermia
 - Drowning
 - Water-Borne Illnesses
- Aggressive, Biting, or Stinging Animals
 - Insects (Ants, Bees, Wasps, and Mosquitoes)
 - Arachnids (Ticks, Chiggers, Scorpions, and Spiders)
 - Poisonous Snakes
 - Domestic Dogs and Other Wild Mammals
- Troublesome Vegetation
 - Cacti, Yucca, and Thistles
 - Poison Ivy
- Rocks
 - Sharp, Heavy, and/or Unstable

Common Prospecting Hazards

- Holes
 - Old Mine Shafts or Pits
 - Collapsing Prospect Holes
 - Items Falling into Holes
- Tools
 - Eye, Hand, or Other Bodily Injuries
- Falls
- Exertion Injuries
 - Dehydration
 - Heat Exhaustion
 - Heat Stroke
 - Fatigue
 - Muscle Strains
- Repetitive Motion Injuries
- Other Careless Prospectors

Mineral Hazards

- Toxicity
- Small Mineral Fibers or Particles in Dust
- Radioactivity

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Preparing for a Field Trip: Planning, Tools, and Strategy (Continued)

required for productive prospecting helps develop important character traits that are valuable throughout life: curiosity, learning from others, patience, perseverance, self-confidence, and self-control.

As the day appears to be coming to a close, it is best to “leave while you are still having fun.”⁷ Was the field trip better than the best day in front of the television? Let’s plan to go again!

With best wishes for a successful field trip season, *Lewis Reynolds, CMS Junior Rockhounds Program Coordinator*

References

- [1] Jeff Self and Donna Ware, “Self A Ware Minerals.” <http://www.selfawareminerals.com/>. Accessed 23 Feb 2017.
- [2] “Scout Outdoor Essentials.” https://en.wikipedia.org/wiki/Scout_Outdoor_Essentials. See also “Ten Essentials.” https://en.wikipedia.org/wiki/Ten_Essentials. Both accessed 23 Feb 2017.
- [3] These aphorisms are often attributed to Benjamin Franklin, Winston Churchill, John Wooden, or Alan Lakein, but their authenticity remains to be established by original sources.
- [4] To get started, point your web browser to <https://www.google.com/maps/@40,-105,7z>.
- [5] <https://www.mindat.org/>. Accessed 23 Feb 2017.
- [6] John Betts, “Tools for Mineral Collectors.” <http://www.johnbetts-fineminerals.com/jhbnyc/articles/tools.htm>. Accessed 23 Feb 2017.
- [7] Good counsel from Joy Reynolds, a wise mother and teacher, *ca.* 2008.

CMS New Members

First Listing

Jerry Anderson
Amy & David Lawson and family
Lisa Stone
Sheri Atencio-Church & Daniel Church and family

Second Listing

Dave & Rebecca Rittinger and family
Doug & Ynonne Wilder and family
Jon & Ruth Barker
Donald & Virginia Shobe

**Per CMS Bylaws, comments concerning new, first listing members should be formally submitted to the President.*

Announcing another ridiculously exciting Book/Garage Sale



CSM Museum



1310 Maple Street, Golden, CO

**April 29+30, 2017
9 A.M. - 4 P.M.**

Thousands of maps; hundreds of books, journals, minerals, fossils, etc.

Prices vary by item or box. Most prices will drop throughout the event.

Information: 303-273-3815

CMS Membership Dues Reminder!!

CMS memberships run from January 1st to December 31st. Here are ways to pay your dues:

1. Pay with cash or check at the general meetings the first Friday of each month from October through May. Look for the Membership Chairperson to obtain a receipt and membership card.
2. Send a check made out to “Colorado Mineral Society” or “CMS” to P.O. Box 280755, Lakewood, Colorado 80228-0755. Please do not send cash through the mail. Membership cards will be mailed to you.
3. Fill out a membership form and bring cash or check to a field trip to receive a temporary membership card. A new membership form is located on the CMS website at www.coloradomineralsociety.com.

CMS Membership Fees:

Family: \$16 per year

Single: \$14 per year

Senior 65+ (single or family): \$12 per year

Junior (<12 years old): \$12 per year

Also, due to RMFMS insurance and liability purposes, we need to know the month and year of your children's birthdays, so please provide this information when you renew your membership. The children's information will not be published. If you ordered a name badge, they will be available at the general meetings to pick up.

Colorado Science and Engineering Fair: Connecting with Kids Through Earth Science

by Craig Hazelton

Hello Fellow Rockhounds!

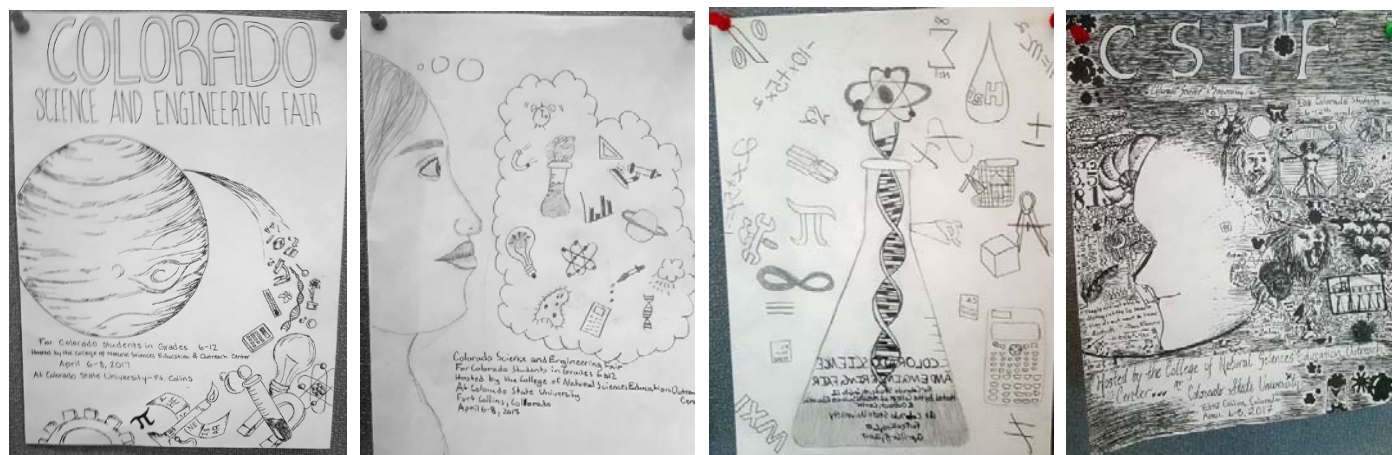
Kids these days! As I get older and remain kid-less, I seem to increasingly appreciate the experience of teaching and learning with our younger population. How do I relate to these curious and growing minds? Next week I am teaching jewelry making to a group of 9 and 10-year-old girl scouts, and I am clueless as to what kind of jewelry they might like to make. Something that Taylor Swift or Katy Perry might wear? I really have no idea, although I do enjoy listening to these talented pop singer/songwriters from time to time. We'll see how this jewelry class goes...

Pursuing another avenue for relating to kids, I am currently in an intensive "Naturalist for Kids" training program given by Boulder's Open Space and Mountain Parks nationally renowned naturalist staff (<https://boulder.colorado.gov/osmp/nature-hikes>) In addition to studying nature we are learning how to relate to kids, teach them, and inspire them to appreciate preserving nature. A lot of effort I admit, but I'm really excited about this training. However, the easiest way, by far, I have found to relate to our younger generation is by judging at the Colorado Science and Engineering Fair (CSEF, <http://www.csef.colostate.edu/>) for our club.

Good news, kids are very easy to relate to and connect with at the CSEF! They really want to tell you about what they are doing, and the generation-independent subjects (science related to rocks and minerals, scientific method, and technical communication) promote interaction. The 2017 CESF will be my fourth year in a row of judging. This is one of the experience treasures *available to you* as a member of the Colorado Mineral Society. By the way, club members have been relating to kids at the CESF for over 60 years!

Now for some highlights of last year's (2016) CSEF:

- First, thanks to Bruce Geller, Lee Brown, and Nina Geller for spending the day on the CSU campus judging these sharp kids. Special thanks also to Eva Siemonsma for procuring awards and providing excellent background support!
- How about a little science themed artwork? The young scientists are encouraged to create and enter their creation in the CSEF poster contest, and here's some entries I saw for this year (which would you choose?):



And now the winners (2016):

Juniors (6th and 8th grade)

First- "The Earth Moving the Waves" Charlotte Heeley, 8th grade, Boulder

Second- "Tsunami", Logan Kilgroe, 8th grade, Berthoud

Seniors (9th - 12th grade)

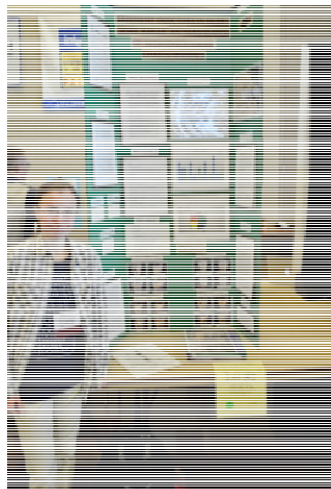
First - "Sediment Injectites in Fault Zone Areas: An Investigation of Sedimentological Characteristics", Jenna Salvat, 9th grade, Colorado Springs

Second - "Deadly Stratification: The Role of Temperature on Limnic Eruptions", Drake Ludgate, 9th Grade, Brush

Continued on Page 11

Colorado Science and Engineering Fair (Continued)

Winners received \$50 (first place) or \$35 (second place), a mineral, and the wonderful book *Messages in Stone: Colorado's Colorful Geology*.



Featured Geologist In-Training, Jenna Salvat

Meet Jenna Salvat, a particularly bright 9th grader from Colorado Springs, you may have met her at the Denver Gem and Mineral Show. Jenna conducted an interesting and very impressive study of sedimentary formations within igneous formations near Helen Hunt Falls outside of Colorado Springs. Check out her abstract below (I say, "Wow!").

Project Title: Sediment Injectites in Fault Zone Areas: An Investigation of Sedimentological Characteristics

Individual Name: Jenna Salvat

School & City: Coronado High School, Colorado Springs

Sponsor's Name: Christine Siddoway and Steven Veatch

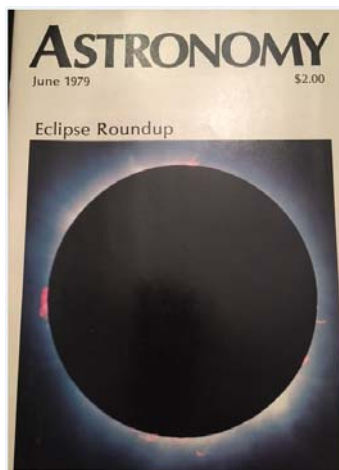
Category: Earth & Space Sciences

Division: Senior, 9th grade

Abstract— The purpose of this experiment was to analyze how the density of igneous rock and the rate of injection of liquefied sediment would impact the sedimentary structures created in fault-bounded clastic intrusions into plutonic basement rocks. This was tested by creating desiccated gelatin-water mixtures with varying concentrations of gelatin in each mixture. By increasing the gelatin concentration, the density of the sample also increases, which decreases the permeability of the mixture. Samples of the experiment could also be aided by a replica fracture, which simulated the geologic features and characteristics that were analyzed in the field. Samples were injected with plaster-of-paris as a substitute for liquefied sediments. In samples excluding a fracture, dominant tabular bodies were present in all sample densities, and no tubular structures were created; secondary tabular bodies or fluted structures could be present, but were not as common. In fracture-aided samples, the injection followed the fracture and created complex sedimentary structures, ranging from tubular to fluted. Regardless of injection rate and density, all samples without a fracture exhibited a range of 1-4 tabular structures, 0 tubular structures, and 0-2 fluted structures; all samples with a fracture exhibit a range of 1-2 tabular structures, 1-6 tubular structures, and 1-2 fluted structures. Samples with a fracture overall exhibited more sedimentary structures, regardless of sample density. This demonstrates a high correlation of numerous, complex sedimentary structures to pre-existing fractures, that were created in response to the agitation caused by fault zone earthquake episodes.

Come join me at the next CSEF (Thursday April 7, 2017) and meet some of these young scientists. I need one more volunteer for judging.

Take care, Craig Hazelton
Craig.Hazelton@hotmail.com



For the Love of All Things in Nature

As rockhounds, we spend most of our time looking down, but coming up early this Fall, we will have a rare treat of seeing an amazing sight by looking up. There will be a total solar eclipse on August 21, 2017 that will be cutting a direct line across the US. While the center line of the moon-sun alignment will not cut a path through Colorado directly, it will be just to the north of us making a direct line through Casper, Wyoming and then through Nebraska, Illinois, etc. This is the first time since 1979 that a full eclipse will be visible from the Continental US. As always, if you plan on viewing the solar eclipse, but will not be directly on the centerline, please take care to use proper viewing equipment as to avoid an eye injury. The next total eclipse visible from the Continental US will be in 2024.

Submitted by Debbie Kalscheur

CMS General Meeting on January 6, 2017

John Smith, CMS President, opened the meeting with greeting all new members and visitors.

Attendance: 64

General Announcements:

John Smith indicated there are numerous CMS Board and Chairperson positions available. Marchelle Carlton volunteered for the grab bag chairperson position. Thanks Marchelle! There was a discussion on grab bag duties and volunteers needed, including putting together a grab bag party to stuff grab bags. Will need volunteers to sew bags.

Bruce Sales reported for the show committee and the need for volunteers:

Debbie Kalscher, Education coordinator, reported that she is currently working on education and is wanting any ideas that would be of interest to the members. She took a poll on several topics that members were interested in. Currently Debbie is working with Ed Raines on establishing dates for the mineral identification class. If interested in participating, please see Debbie.

Ben Geller and Rob Deschambault discussed the annual CMS May 6th auction and sent around a volunteer sheet.

Eva Siemonsma, Treasurer, presented a brief financial report for the members, and have made the report available for anyone to review.

Cara Reynolds reported on new members

On behalf of CMS, Leslie Osgood presented Dale and Virginia Block with a service award and gift card for their many years of volunteering as the CMS Grab Bag Chairpersons.

Star Edwards reported that Julio Edwards wants photos for the CMS website.

Gary Rowe was not able to attend the meeting so Amber Brenzikofer gave a brief update on field trip updates and will be ready for the May meeting to rollout the 2017 field trip guide.

Amber Brenzikofer asked members to sign up for emails for the newsletter and special events.

Door Prize Winners:

Cailin Bateman

Don Bray

James Knoll

Lewis Reynolds

Virginia Block

Amber Brenzikofer

Robert Murphy

Rigel Reynolds

Laura Bornemann

Loni Cole

Al Powers

Jean Sprowls

Thanks to Robert Mackenna for helping draw ticket numbers.

Presentation: a video on Tanzanite.

Raffle (see Raffle news in this newsletter)

Meeting adjourned

Notes taken by Amber Brenzikofer for Sandra Gonzales, Secretary

Rocky Mountain Federation News

The Rocky Mountain Federation of Mineralogical Societies (RMFMS) is made up of 81 clubs representing 13 Western states. CMS is a member of RMFMS. The Rocky Mountain Federation News is published monthly and is located at www.rmfmts.org.



A.F.M.S Newsletter

The American Federation of Mineralogical Societies (A.F.M.S) serves seven regional federations, including RMFMS. The A.F.M.S Newsletter is published monthly and is located at: <http://www.amfed.org/news/default.htm>.



APRIL 14-16, 2017

COLORADO MINERAL & FOSSIL
SPRING • SHOW

Crowns Plaza Hotel & Convention Center
15500 E. 40th Ave.
Denver, CO 80239

Minerals
Fossils
Jewelry
Retail & Wholesale
70+ Vendors
Kids Activities

2nd Annual
Colorado School of Mines
Geology Museum
Fundraiser & Social
SATURDAY 8-9PM

FREE
ADMISSION!
Doors Open Daily:
9AM-6PM
Sunday: 9AM-5PM

MORE INFO AT
WWW.ROCKYGEMS.COM

Colorado Mineral & Fossil Spring Show
Hosted By
Rocky Mountain Gems & Minerals
P.O. Box 100187
Denver, CO 80250

Colorado Mineral Society Board Meeting February 21, 2017 Agenda

Attendance: John Smith, Bruce Sales, Sandra Gonzales, Eva Siemonsma, Debbie Kalscheur, Amber Brenzikofer, Ben Geller, Cara Reynolds, Rob Deschambault, Gary Rowe (via phone)

Call to Order – John Smith

Old Business:

Board-Appointed Positions Available for 2017:

- * Secretary – Open
- * Membership Chair – Opened
- * Junior Rockhound Assistant – Open
- * Denver Show Committee Rep - Open
- * Donations Assistant: Open
- * Display Chairperson: Open
- * Grab Bag Chairperson – Marchelle Carleton - Debbie will write protocols for Grab Bag procedures

Education Funds:

Update on Ed Raines' Mineral ID Class this spring – Debbie working with Ed Raines on educational Class and place to have the class. Star Edwards has agreed to do the GIA class again – Class will potentially be on 4 Mondays in the month of April. Debbie will let everyone know when the class dates and times have been established.

Club Assets:

Eva has asked that we record all inventory assets that the club owns so we have documentation.

- Inventory is still being conducted

Bylaws Update:

There was a motion to update the bi-laws at last meeting, and John Smith will be working on updating as needed.

- This will be discussed at the March Board meeting

St Paul's Church New Manager:

St Paul's Church has a new manager and Eva plans on setting up a meeting to introducing herself to the new manager.

Membership:

A request was made at the last meeting to purchase a new Access program for membership

- Cara updated the board on pricing for Access Software and the possibility of purchasing a new lap top for the membership information.
- Debbie has donated 1 lap top that will be used in addition to purchasing another lap top. Once research has been done on the lap top, sometimes software comes with the new purchase, so Cara will continue her search for the laptop.
- A motion was made to approve a new updated Lap Top for up to \$500 and a 2nd motion was made and approved by the board. Cara will research the best deal for the lap top and software.
- Thanks to Debbie, Cara and Ben Geller for looking into all options and report back to the board

The membership cut- off date is April 7th in order to get your name in the CMS Directory

New Business:

Treasurer's Report –

- Eva Siemonsma provided a detailed Profit and Loss report to the board and was approved
- Filled out a 990N with the Federal Government for taxes

General Meeting Presentations – Gary Rowe

- March – Pat Tucci (confirmed) – will bring specimens so will need display case
- April – Pyrite – Larry Haven (will bring specimens to give away with a quiz)
- May – Field Trip meeting

Field Trips – Gary Rowe still working on field trip for the May meeting

Denver Council Report –

- Bruce Sales will miss the next Council meeting and Debbie will be his backup
- We need volunteers for the show, please sign up

May Auction Planning Committee – Ben Geller and Rob Deschambault

- There will be a meeting set for March 9th to discuss the CMS Auction to work out the details for the auction
- Rob will be working on recruiting volunteers for the auction, see Rob if you are available to volunteer
- This is a major fundraiser for CMS, so we need everyone to get involved
- Ben will be setting up a Facebook page so we can advertise the auction through social media

Newsletter Deadline – Amber Brenzikofer February 24th.

Next scheduled CMS Board Meeting: **March 21, 2017 7:00pm**

Notes taken by Sandra Gonzales, Secretary



Colorado Mineral Society
PO Box 280755
Lakewood, CO 80228

FIRST CLASS MAIL



Calendar of Events

**March 3, 2017, CMS February
General Meeting** at St. Paul's Episcopal
Church, Lakewood, 7:30pm

**April 7, 2017, CMS April General
Meeting** at St. Paul's Episcopal Church,
Lakewood, 7:30pm

**May 5, 2017, CMS May General
(Field Trip) Meeting** at St. Paul's
Episcopal Church, Lakewood, 7:30pm



SNOW ALERT!

If Lakewood is on accident
alert, the CMS general
meeting will be canceled.

If a general meeting is
canceled, an announcement
will be posted on the CMS
website and emailed out to
members.

<http://www.coloradomineralsociety.org>