



Colorado Mineral Society

Mineral Minutes



Volume 77, Issue 2

February 2013

"May 04, 2013"

Please put this date on your calendar

WHY??

The Colorado Mineral Society (CMS) will have its annual silent auction of mineral hobby items on May 4th at the Holy Shepherd Lutheran Church located at 920 Kipling, 3 blocks north of 6th Avenue in Lakewood, from 11:00 A.M. to 3:00 P.M. Admission is free. 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 1:00 P.M. 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.

MORE TO COME NEXT MONTH.

Submitted by Rich Nelson

President's Message

By Bruce G. Sales

Hello everyone. I hope that everyone managed to stayed warm during the recent period of "Stock Show Weather". I have made a point of trying to stay inside and try to keep out of the elements.

I want to thank Jessica Blackburn and Donna Roberts for taking on the duties of Greeters at the monthly meetings. I also wish to thank Mark Danuser for volunteering to be the backup greeter if Jessica and Donna cannot be at the meetings. *A special thanks to Aaron and Trevor Smith for their volunteer service as CMS greeters for the last 2 years!* I need to thank Bill Jones for becoming the CMS representative for the Denver Show. Last but not least, thanks go out to Leslie Osgood for becoming the Membership Committee Assistant.

We have several positions that need to be filled. This month will be the last month that Mike and Jennifer Senary will be the Hospitality Chairpersons, if we don't have anybody volunteer to fill this position, we will probably not have snacks or beverages during the break between the general meeting and the guest presentation portions of our monthly meetings. In addition to Hospitality, we need to find someone to take over Displays, both Gary Rowe and myself have full plates and really could use some help with this task. Gary is also searching for someone to assist with planning and coordinating field trips, one of our major recurring annual events. If you have any questions and/or are interested in filling any of these important functions, please contact me or any board member for more information.

This month we do not have a speaker scheduled and have a video on the Adelaide Mine for our presentation (more information on Page 3). Amber Brenzikofer is presenting a display of Denver International Airport (DIA) fossils and minerals she has collected.

I will be continuing my 10 minute lecture series on crystallography; this month we will discuss the Isometric System.

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COLORADO MINERAL SOCIETY OFFICERS 2013

Elected Board Members

President: Bruce G. Sales
First VP-Programs: Gary Rowe
Second VP-Education: Debbie Kalscheur
Secretary: Sandra Gonzales
Treasurer: Eva Siemonsma

Appointed Board Members - Committee Chairpersons

Annual Auction: Richard Nelson Family
Door Prizes-Guests: Jessica Blackburn and Donna Roberts
Library: Kevin Atwater
Exhibits: *OPEN*
Membership: Cara Reynolds
Field Trip Leader: Gary Rowe
Field Trip Leader Co-Chair: *OPEN*
Nominations: Daryl Lamb
Grab Bags: Dale Block
Editor: Amber Brenzikofer
Historian: Amber Brenzikofer
Youth Activities: Lori Lamb
Hospitality: *OPEN*
Donations: Debbie Kalscheur
Web Master: Julio Edwards
coloradomineralsociety@comcast.net

Representatives (Board Members)

Denver Council Rep: Daryl Lamb
Denver Show Rep: Bill Jones

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 Colorado Federation of Gem and Mineral Societies, 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 \$5.00.

ANNUAL EVENTS: Yearly activities include a silent auction of minerals, fossils, gems, jewelry, equipment and other items related to our interests; participation in the Colorado Contin-tail the largest mineral swap show in Colorado; participation as a member of the Greater Denver Area Gem and Mineral Council in sponsoring the largest gem and mineral show in Colorado; and the Founder's Day dinner.

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.

MINERAL MINUTES is the official publication of the COLORADO MINERAL SOCIETY and is published monthly October through May with special editions as needed. All correspondence to Mineral Minutes should be sent to Editor, P.O. Box 280755, Lakewood, Colorado 80228-0755. 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 the Colorado Mineral Society assumes any liability for their use. Advertiser's claims are their own, and their products are not warranted by the Colorado Mineral Society. Any article written without an author is your editors. If you have anything you want printed in this newsletter, contact the editor by the 24th of the month prior to publication at:

Amber Brenzikofer
brenzikofer@yahoo.com

Denver Gem & Mineral Show Mini Report January 2013

Planning is already underway for the 2013 Denver Gem & Mineral Show. The dates are September 13 – 15, 2013. The featured mineral is tourmaline. As everyone knows, tourmaline is a beautiful mineral with such variety including colors of pink, blue and green. Wait until you see the poster for the show. It is spectacular! There will also be small flyers in a new format for advertising the show. One side will be a small poster, featuring a tourmaline specimen, with usual show information on the reverse side. The Show Chair remains Larry Havens. This is Larry's third year as Show Chair and he has done a superb job. If you have any questions, concerns or ideas for the show, contact Larry at lwrnchavens@comcast.net or 303-757-6577.

The show is sponsored by the Greater Denver Gem & Mineral Council, which is made up of the eight local gem, mineral and fossil clubs. These clubs are: Colorado Mineral Society, North Jeffco Gem & Mineral Club, Flatirons Mineral Club, Littleton Gem & Mineral Club, Denver Gem & Mineral Guild, Mile Hi Rock and Mineral Society, Friends of Mineralogy Colorado Chapter, and Western Interior Paleontological Society. All the planning and operation of the show is done by the Show Committee, which consists of volunteers from these clubs. 2013 is the 46th annual show. Forty-six years is a long time for an annual show which is put on by all volunteers. Plus the show keeps getting better every year. The Show Committee meets at the Denver Museum of Nature & Science the first Tuesday every month of the year except for December, February and July (see Page 6 for dates). To keep the show a great show year after year takes commitment by the members of the Show Committee. New members are always needed and welcome on the Show Committee. If you enjoy the show and would like to become more of a part of it, consider joining us. There are probably several members of your club who are already members of the Committee. Talk to them about their experiences and reasons for being on the Committee. Come with them to a meeting to see what it is all about. You will meet people from the other clubs and make new friends. The show is a great way to enjoy the gem, mineral, and fossil hobby.

Respectfully submitted, Judy Knoshaug, Secretary

Movie Night

We'll be showing a couple movies at our meeting on Friday, February 1st. The first is a video on the Adelaide Mine in Tasmania. This mine is world famous for specimens of the beautiful red-orange lead chromate mineral crocoite. The video documents the history of the mine and a new find of world-class crocoite specimens that occurred in 2012. Many of the specimens from the 2012 find will be offered at the upcoming Tuscon Gem and Mineral Show. For those interested in the mine and specimens being offered for sale you can visit the Adelaide Mine Company website at:

www.theadelaidemine.com/website/Index.html

The Adelaide Mine video runs about 20 minutes so we'll bring a selection of other mineral-related videos and we'll have attendees vote on what they'd like for the second movie. We'll have a display case and we have arranged for a few members to bring their crocoite specimens to display. If you have a crocoite specimen you would like to display (or any other specimens from Down Under...hereby defined **Tasmania, Australia, South Africa, or even Antarctica**), please bring them to the meeting with a label to share with the rest of our members.

Submitted by Gary Rowe, First VP

DENVER
MERCHANDISE MART
~ EXPO HALL ~
451 EAST 58TH AVE.
(1-25 AT EXIT 215)

Denver Gem & Mineral Show

Featuring
Tourmaline

September
13 - 15,
2013

PHOTO © JEFF SCOVIL
WWW.DENVERMINERALSHOW.COM

CSM (Colorado School of Mines) Geology Museum Musings

By Dr. Bruce Geller, Director

Activity in our Geology Museum continues at a rapid pace. My fifth year at the helm of the Museum has seen more change and improvements. I'm proud to announce that we were recently selected by Tripadvisor.com as the #2 ranked tourist attraction in Golden, in terms of visitor satisfaction, out of 28 Golden attractions, and were awarded their Certificate of Excellence. This resulted from the help of our Advisory Council, Student Aides, staff, FCSMGM, donors, volunteers, specimen loaners, visitors, visiting researchers, CSM faculty, administrators, and students who support us in so many ways. Our 2012 Gift Shop sales were up 42% and our donations box was down 1%. Our facebook fans increased by 36%.

Here is the year in review. Our Advisory Council has met monthly. Among other things, we ratified an optical instruments protocol. Continuing projects include improving our database and cataloging many new donations in two warehouses.

I have met monthly with our twelve Student Aides. Nine Aides are currently geology majors, and five are women! I've written many graduate school recommendation letters this past year for those who have graduated from our program.



I held weekly meetings with our Collections managers and volunteers. These are the folks who maintain our collection, prepare new displays, and keep our Gift Shop well stocked. Our volunteer ranks have now risen to roughly 55. They created a marvelous display for the Denver Mineral Show last September. As far as I know, this was the first time that a group of museum volunteers has erected a display of their own collections in a major mineral show in North America.

We reprinted 20,000 museum brochures through the generosity of Jane and Marshall C. Crouch III. We are also grateful to have received grants from the Golden Civic Foundation and the Greater Denver Area Gem and Mineral Council.

The Friends of the CSM Geology Museum now has over 120 members from around the world, an increase of 52%. They have generously provided several stunning pieces for our collection and became members of the Rocky Mountain Federation of Mineral Societies. The Friends have ratified their new logo, are currently reviewing their by-laws, and are investigating becoming recognized as a 501c(3) organization. During the past year, they ran very popular field trips to the Royal Ontario Museum in Toronto, Marty Zinn's mineral collection, the Henderson Mine, North Table Mountain, Lake City, the Picketwire Canyon dinosaur trackway, and two trips near Socorro, NM in conjunction with the New Mexico Minerals Symposium. As always, Friends members receive 20% discounts in our Gift Shop, and an e-mail newsletter. A membership renewal form can be found at: http://issuu.com/csmgeologymuseum/docs/friends_app.

Other 2012 events deserving mention included processing numerous donations, identifying many specimens, and securing many impressive loans. Our fifth Museum Book Sale combined with our Garage Sale last February was very well attended. We held a sealed bid auction of 13 high-end specimens that was a mild success. Our geology trail continues to be enjoyed by our guests. We received full ownership of over 8000 specimens given to us in 1965 by the Colorado State Historical Society. A team of CSM students did a fine job installing new digital controls for our UV display and a remote control device for our tour guides to use. Five of our staff graduated in May, which created many staffing challenges, but some really great rookies have done a fine job as their replacements. I gave a paper in August in Dresden, Germany at an international conference for mineral museum curators, about the people that help run our Museum, which was well received.

Our Annual Open House last September was an overwhelming success. Over 283 guests enjoyed our refreshments, music from the CSM string quartet, and our ten new and three updated exhibits. We are innovatively using a new generation of LEDs in six exhibits. The ten new exhibits include: Vasily Konovalenko's gem carving entitled "Gold Prospectors" on loan from the Denver Museum of Nature and Science, Mexican minerals from Kerith Graeber, Arizona minerals from Les Presmyk, American turquoise from John Haney, Copper minerals from Marty Zinn, Elmwood Mine specimens from Stephen Neely, Chinese snuff bottles from an anonymous collector, Petrified wood

continued on page 5

identified by species from Melvin and Bertina Lentz, Self-collected specimens from one of our Collections Managers named Tom Hughes, and Colorado barite specimens from many local collectors. Our three updated exhibits involve fossils, micromounts, and mining artifacts. In late September, I gave two lectures at the Baltimore Micromount Symposium. Our Garage Sale last November 3rd was very popular.

As for upcoming events, we look forward to another combined book and garage sale from February 18-22 in the large Conference Room across the hall from our Museum entrance. Prices will decrease on most items every day of that week. Please see the flyer elsewhere in this newsletter. (We gladly accept your book, journal, and specimen donations throughout the year). Second, our Annual Open House is scheduled for September 11, 2013 from 6 to 9 P.M.

Finally, come visit our Museum during our normal hours: Monday – Saturday 9 A.M. to 4 P.M., Sundays 1 P.M. – 4 P.M., except for certain legal and school holidays. Admission to our Museum is free (donations are greatly appreciated), but parking fees are required in our lots and on campus streets Mondays through Fridays before 5 P.M. Further information is available on our website, or by phone.

Happy New Year!

Bruce Geller

Announcing another wonderful Book Sale (& Garage Sale)



CSM Museum



1310 Maple Street, Golden, CO

February 18-22, 2013

9 A.M. - 4 P.M.

Hundreds of books, journals, professional and hobbyist magazines, U.S.G.S. folios, maps, some specimens, equipment, etc.

Prices individually marked. Most prices will be cut daily.

Information: 303-273-3815

The Colorado School of Mines (CSM) Geology Museum will host a used book sale February 18-22 from 9-4 daily. These are the same days and hours as the CSM library book sale. Similarly, most prices will decrease about 50% each day. **Our Museum book sale will be in the Museum building, in the room across the hall from the Museum entrance.**

We have sorted through dozens of boxes of books, several hundred maps, and several hundred U.S.G.S. folios. **There's a wide range of interesting publications for rock hobbyists, as well as explorationists.** The Museum address is 1310 Maple Street in Golden and our phone number is 303-273-3815. We accept cash, checks, and credit cards. Members of the "Friends of the CSM Geology Museum" receive a 20% discount on all their purchases.

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

Greater Denver Area Gem & Mineral Council 2012 Approved Grant Requests

The Council receives, evaluates and approves grant requests twice each year in March and September. This report is being sent to all eight clubs that are members of the Greater Denver Area Gem & Mineral Council to be published in their newsletter.

1. Friends of Dinosaur Ridge received \$4,500.00 for two different projects:
 - a. \$500.00 to help defray the costs for Dinosaur Discovery Day.
 - b. \$4,000.00 for video equipment and associated expenses for an Arthur Lakes video they were producing.
2. The Bessemer Historical Society received \$1,000.00 for supplies to store the rock and mineral specimens they have collected from the CF&I.
3. The Observant Naturalist received \$2,700.00 for rocks, supplies and other costs to produce a Teachers' Rock Program.
4. The Morrison Natural History Museum received \$500.00 to pay for stylus replacements for the tools they use to extract fossils from hard rock.
5. The Western Interior Paleontological Society received \$3,000.00 for publicity materials for their 2013 symposium.
6. The Denver Museum of Nature and Science received \$5,649.75 for a SPOT Insight Mosaic 4 Megapixel microscope camera and control software.

The total amount of grant money paid to these organizations in 2012 was **\$17,349.75**.

Each of the eight clubs can receive a \$250.00 grant from the Council to help defray their newsletter expenses. Each club must have a representative attend all four Council meetings each year. Seven clubs met this requirement in 2012. They will receive their grant money after the March 2013 Council meeting. The Grant money comes from the proceeds of the 2012 Greater Area Gem and Mineral show. Grant information and the application form is available at: denvermineralshow.com

Submitted by Sharon Hannu – Council Secretary

Wanted

Wanted - one fluorescent box (excluding the lamp). Contact Star.

CMS Membership Reminder

The CMS annual dues were due on January 1, 2013 and need to be paid as soon as possible if you want your name in the CMS Directory and get a Field Trip Guide at the May meeting. You can pay in two ways:

1. 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. A membership card will be mailed back to you.
2. Pay with cash or check at the CMS general meetings the first Friday of each month. Look for the Membership Chairperson to obtain a receipt and membership card.

CMS Membership Fees:

Family: \$16 per year

Single: \$14 per year

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

Junior: \$12 per year

Remember you can receive color electronic and/or black and white hardcopies of Mineral Minutes. However, CMS is trying to be "green" and cut back on paper copies, so please indicate if it is OK to send you an electronic copy only. Also, make sure to give us your updated email address so you can continue to get the newsletter and other important CMS updates. Thanks!

Calendar for the Greater Denver Area Gem & Mineral Council and Long Range Planning Committee for 2013



Meeting place: Upper T-rex room, Denver Museum of Nature and Science

March 20, 2013 @ 6:30pm Planning Committee
7:30pm Council Meeting

June 19, 2013 @ 7:30pm Council Meeting

September 25, 2013 @ 6:30pm Planning Committee
7:30pm Council Meeting

November 20, 2013 @ 7:30pm Council Meeting

Messages

Hello CMS,

Thanks for the great newsletter & field trips. We appreciate all the effort of our club volunteers – Thank You!

Carol & Bill Evans



Hi there - I am Kevin Grenier. My wife and I are the activities directors at the Jellystone Camp-Resort in Larkspur. Our campground has a limited history in mining (clay mining). However, we would like to encourage our campers to learn more about geology and perhaps get them interested in rock collecting. Our problem is that neither of us have any real experience in this area. So we are looking for someone who could teach us, help us create some displays, and perhaps even help teach our campers sometime this summer.

Is there someone at the Colorado Mineral Society that could help us or do you know someone who could?

Thank you,

Kevin Grenier

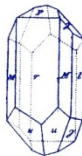
kevin@jellystonelarkspur.com



Sandra Gonzales
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Cell:(303) 898-9674
pattucci@comcast.net

WELCOME!!!

New CMS Members

Bill and Maryanne Simon Owens
Mary Schons

New CMS Members Second Listing

Stephen and Jami DiRose
Avery and Justin DiRose
Alan and Lynn Hines
Kevin Magouirk
Katherine and Paul Little
Sabrina and Casey Little

Richard Owens

Judith Holmes

January 4th Raffle News

The raffle continues to be a success with your never-ending support. January's tickets sold amounted to \$145, with the retail value of \$248. These funds will be spent on the state science fair awards, CMS education, and the purchase of library reading material. The pyrite specimen (\$35) donated by **Sandra Gonzales**, was won by a very happy *Jesse DeOllos*. *Jesse DeOllos* – winning a second time in one night - claimed the calcite specimen (\$28) that was donated by **Richard Owens**. The anglesite & cerussite (\$28) donated by **Judith Holmes** was won by *Tom Peierce*. *Boyd Cook* was all smiles when he won the willemite sphere (\$24) donated **anonymously**. *Jessica Blackburn* claimed the calcite specimen (\$18) donated **anonymously**. Last but not least, *Sheri DeOllos's* ticket won the fossil fish (\$12) that was donated by **GEOdyssey**.

Thank you to those who donated these great specimens, it is fun to see the happy smiles when their number is called to be a winner!!!

Thanks go to John Kleber and Amber Brenzikofer for helping with the raffle.

Congratulations to all our lucky winners.

Submitted by Eva Siemonsma, CMS Raffle Manager

It's Time Again For Another Thrilling Chapter of A Tow-Truck Driving Rockhound

By Eric Hedricks

Greetings to all out there in CMS newsletter land. Since I missed last month's, newsletter let me start off by wishing all of you a Happy New Year. Hope you are all doing well and staying warm, what with the flu epidemic and the arctic blast we have been living with for the last month. December was a hard month on my end. Shortly after our holiday party, I was hit by the flu bug and was at home in bed for about nine days. At least I was lucky enough this time to have a home with a bed to stay in. After I recovered, I returned to work just in time for the winter blast to hit. I was loading a crashed Mini Cooper in the blizzard on Kenosha pass when I slipped off the step on the truck and twisted my right ankle. This is the same foot that I crushed in the cave on Mt. Antero many years ago, and have banged up a few times since then. By Christmas day I could not walk and I ended up missing another week of work, much to the delight of my employer and coworkers. By New Year's Eve, I was still not moving too well so I sat in my chair at home, turned off all the lights, and watched the fireworks from the top of Pikes Peak. I had seen them before, but this was the warmest and best view I have ever had.

My roommate has had a much warmer time than I have. Mike has been down in Arizona digging Fire Agate and other stuff. He was supposed to be sending cutting rough back to me, but so far the only thing I have received in the mail has been bills and a head gasket for the dead VW in the driveway. I really can't wait to see what comes back with him though. The last load was great. I have had a friend of mine working the Amazonite claim for the last few months. He has pulled out some nice vain material, but still no pockets yet. If all goes according to the plan, we should be putting in a good deal of time down there as soon as spring rolls around. I am looking forward to getting out and getting my face in the ground again; this sitting around freezing really bites. I'm also looking forward to getting back to the ranch. My stonework is almost done there and by the time the kids get there this year, I should be able to spend more time digging with them. The "mining" program that my sister Julie started there two years ago is one of the most popular programs offered to the kids at camp. We don't have to go anywhere because the stuff is there on the ranch, so the cost of the program is next to nothing for the camp. There are those people who tell me that I spend too much time there, but I do like doing it. And I don't care what other people think anyway.

Some time ago my "friends" had the nerve to tell me that if I went digging with this person or that person that they could not be associated with me because they had a reputation in the mineral world to live up to. Well, I am not going to be told who I can dig with and who I can't. And one of the guys they are objecting to is a guy they introduced me to in the first place. I can't keep track of who is feuding with who and why, and I'm not going to try, all I want to do is dig.

As far as I can tell, my Tucson trip is out this year. I will be sending some material down, but I will not be able to get the time off work to go with it. For those of you who are going I wish you all safe travels and good luck at the shows. For those of you who are not going, I hope to see you at the next meeting, if I can make that one. Until the next time stay safe out there, stay warm, and keep on rocken!

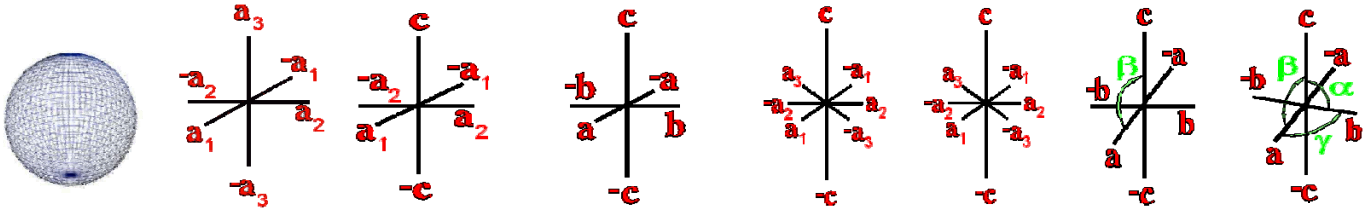


Crystallography 101

By Bruce G. Sales

All minerals fall within one of the crystal systems depicted below. This month we will examine some of the properties of the Isometric System.

Amorphous Isometric Tetragonal Orthorhombic Hexagonal Trigonal Monoclinic Triclinic



(1)

THE ISOMETRIC SYSTEM

The crystals of all of the classes of the Isometric System are referenced by three axes of equal length that are at right angles to each other. As the axes are identical, they are interchangeable, and are all designated by the letter *a*. When properly oriented, one axis a_1 , is horizontal and oriented from front to back, a_2 is horizontal and oriented from right to left, and a_3 is oriented vertically; with all three axes having positive and negative designations respective of the aforementioned orientations.

Crystals of the Isometric System possess various elements of symmetry, these elements are: the center of rotation, various axes of rotation, and various mirror planes. In Colorado, the most familiar minerals that we see in the Isometric System are Pyrite, Galena, Fluorite, and Garnet.



Pyrite



Galena



Fluorite

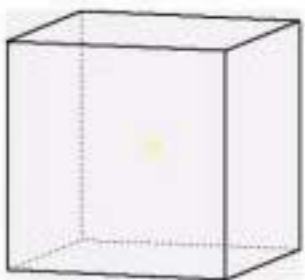


Garnet

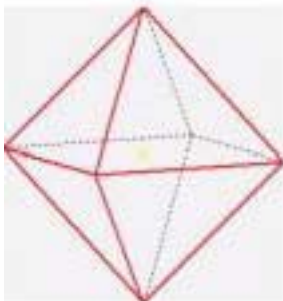
Pyrite is in the Diploidal class and has a center of symmetry (C), the three crystallographic axes are axes of two fold symmetry ($3A_2$), the four diagonal axes are axes of three fold symmetry ($4A_3$), and the three crystallographic axes are planes of mirror symmetry ($3P$). The most common forms encountered in Pyrite are the cube, the pyritohedron, and the octahedron (see figures on the next page).

Galena, Fluorite, and Garnet are in the Hexoctahedral Class. Minerals in the Hexoctahedral Class have a center of symmetry (C), the three crystallographic axes are axes of four fold symmetry ($3A_4$), the four diagonal axes are axes of three fold symmetry ($4A_3$), there are six diagonal axes of symmetry ($6A_2$) and there are nine planes of mirror symmetry that correspond to the three crystallographic axes and to the six planes that bisect the angle between any two axial planes ($9P$). Galena most commonly exhibits the form of the cube and the octahedron. The forms found in Fluorite most often are the cube and penetration twins composed of multiple cubes, and forms that appear to be octahedral are due to Fluorite having perfect octahedral cleavage. Garnet most commonly has the form of a dodecahedron and sometimes the form of the trapezohedron, often in combination thereof. (2)

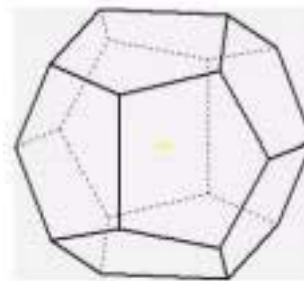
Crystallography 101 (continued)



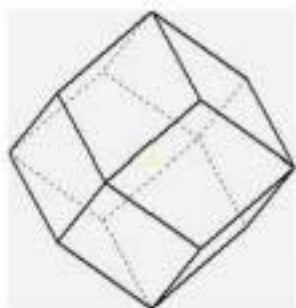
Cube



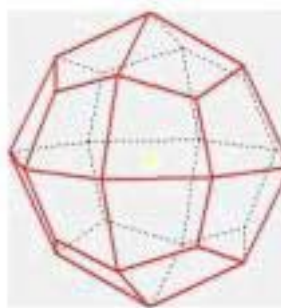
Octahedron



Pyritohedron



Dodecahedron



Trapezohedron

- (1) Illustrations borrowed from the Crystallography section of the website: webmineral.com
(2) Paraphrased and condensed from: Dana's Manual of Mineralogy, Sixteenth Edition, Revised by Cornelius S. Hurlbut, Jr., January, 1952

Online Resources:

<http://webmineral.com>

<http://www.mindat.org>

<http://www.minsocam.org>



Pyrite cubic crystals on marlstone, from Navajún, Rioja, Spain
Photo Credit: Carles Millan

CMS Club Meeting Notes for January 4, 2013

Board Member Updates:

Bruce Sales, CMS President welcomed all new members and visitors.

Announced that Jessica Blackburn & Donna Roberts will be the new greeters.

A special thanks to Aaron and Trevor Smith for doing an outstanding job the last 2 years as CMS greeters.

Eva Siemonsma, CMS Treasurer updated members on the CMS financial report.

Amber Brenzikofer, CMS Newsletter Editor updated CMS member that a copy of the newsletter is on the website and that encouraged CMS members to change the way they are getting their newsletter from mail outs to email. The goal is to “go green” using less paper & using less stamps.

Bill Jones, Show Committee Chair updated CMS members on the Denver Show and encouraged everyone to get involved.

Care Reynolds announced all new CMS members.

Boyd Cook made an announcement on the Homeless Shelter Project regarding the mineral donations given to young children who are homeless. Any donations are appreciated.

Bruce Sales presented a 10 minute educational seminar Crystallography 101.

Bill Harrison presented on “Fossil Wood” a well done presentation that everyone seemed to enjoy.

CMS members in attendance – 68 Total

Congratulation to our Door Prize Winners:

Nels Gravstad
Ron Pearson
Carol Gray
Mark Danuser
John Nieto
Barton Wiggins
Marilyn Pearson
Felix Beall
Shari Deollos



CMS Board Meeting Notes for January 15, 2013

Attendees: Bruce Sales, Eva Siemonsma, Leslie Osgood, Gary Rowe, Sandra Gonzales, Cara Reynolds, Amber Brenzikofer, Debbie Kalscheur, and Bill Jones

Old Business:

1. 2013 Board and Committee Chair status:

Hospitality: Responsible for providing supplies and setting up basic refreshments at each meeting. A special thanks to Mike & Jennifer for volunteering last couple of years. Their last day to host hospitality is at the February meeting. No one has stepped up to take their place.

Greeter: Jessica Blackburn & Donna Roberts will be taking over the greeter responsibilities. Mark Danuser has volunteered to be the backup greeter.

A special thanks to Aaron & Trevor Smith for their volunteer service as CMS greeters for the last 2 years!

Field Trip Co-Chair: Assists field trip chair in setting up field trip schedule, identifying new trip locations, arranging permission for field trips and recruiting trip leaders. Open Position

Exhibits – Set up at meetings & special events. Open Position
Membership Assistant – Leslie Osgood has volunteered to assist Cara Reynolds

Door Prizes – Open Position

CMS Show Committee – Bill Jones has volunteered to step into the role of CMS Show Committee

2. Amber has passed all the test for her Gaming License and is waiting for her license to be mailed.

3. Debbie made a proposal at the last meeting to have CMS business cards for the club. An example of the card was presented to the board, and pricing will be obtained and presented at the next meeting.

New Business:

Cara Reynolds

- Reported CMS membership count - 228 Total.
- Working on sending a receipt confirmation to CMS members after memberships are paid.

Bruce Sales

- Hardware for Display cases was proposal and approved by the board.
- Review of the By Laws were discussed.
- Getting a proposal on new name badges to possibly cut costs for members.
- Educational Seminar on Crystallography will continue for each meeting.

Bill Jones

- Suggests we start recruiting now for the Denver Show.
- Information will be submitted to the newsletter.
- Club packet passed on to Bruce Sales.

Announcements: The Colorado School of Mines is having their Book & Garage Sale on February 18th for 1 week.

Meeting Adjourned

The next Board meeting is scheduled for February 19, 2013 at Leslie's house.

Meeting Notes Submitted by Sandra Gonzales



Colorado Mineral Society
PO Box 280755
Lakewood, CO 80228

FIRST CLASS MAIL



UPCOMING EVENTS

Regular CMS Meeting - February

Date: February 1, 2013 Time: 7:30pm

Place: St. Paul's Church, Lakewood

Denver Gem and Mineral Guild Show

Date: February 22-23-24, 2013

Place: Jefferson County Fairgrounds

Time: Fri & Sat 10am - 6pm, Sun 10am-5pm

FREE ADMISSION AND PARKING

Regular CMS Meeting - March

Date: March 1, 2013 Time: 7:30pm

Place: St. Paul's Church, Lakewood

**If the Metro Denver area
declares the roads on accident
alert during a snowfall on
meeting night, consider the
CMS general meeting canceled.**

<http://www.coloradomineralsociety.org>