

Mineralogical Society of the District of Columbia



MINERAL MINUTES

The Mineral Minutes is the award winning bulletin of The Mineralogical Society of the District of Columbia, Inc.

The purpose of this Society is to promote interest in mineralogy, geology, and related earth sciences and to encourage mineral collecting. An annual scholarship is awarded to a deserving student in the related field.

The Mineralogical Society of the District of Columbia is one of the founding Societies of the Eastern Federation of Mineralogical and Lapidary Societies.

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October 2013

October 2, 2013 Presentation by **Patricia Flavin: A Fossil Hunt Along the Calvert Cliffs of the Chesapeake Bay**



(Photo: P. Flavin)

My Rockhound hobby started in 2009, after seeing the Travel Channel's show called "Best Places to Find Cash and Treasures". This was a comprehensive 10-part series hosted by the "spunky" Becky Worley. Many featured places were within several hours drive from Northern Virginia. Enter Tom Taffee, who I met at his "Viva Vienna" gem and fossil booth May 2009. I put the question to him, "Are there really places nearby that you can collect and descend into a mine?" His answer has changed my life. He urged me to join the Northern Virginia Mineral Club. I also joined MSDC. I visited Morefield Mine, Amelia, Virginia to collect Amazonite, the very next week. I coordinated with Ted Carver and experienced my first mine tour, 65 feet underground. I got to wear all the cool safety equipment, too.

TABLE OF CONTENTS

	Page
<i>The Prez Says</i>	2
<i>An Armchair Visit to "the World's Oldest Mine?" 2013</i>	3-5
Mineral Specimen Cleaning Techniques	6
Lou Henry Hoover, First Lady, Geologist, and Nature-Lover	7
Sparkly Crystals	8
Is Himalayan Pink Rock Salt Worth Its Salt?	9-10
Secretary's Report	11
<i>Officers & Board Members & Treasurer's Note</i>	12
<i>Speaker Flash Back, Upcoming Events & EFMLS News</i>	13
<i>Meeting Photos (June)</i>	14-16
<i>Meeting Photos (Sept.)</i>	17-20
Broken Hill	21-22
Misc. Info	23
Linked-In and Federation News	24
<i>Membershin Application</i>	25

Next, in 2010, Robert Windsor suggested that I “go to the Super Dig at Sterling Hill Mine, New Jersey.” I did and I brought back 75 lbs. of fluorescent minerals: Willamite, Franklinite, Calcite, Hydrozincite, and toured their mine. I urge you to go.

Jim Kostka introduced me to club members, John Mills and his wife, who educated me on Lake Superior Agates. They also gave me a cabochon lesson from his lapidary workshop. Jim also helped me collect at the Manassas Vulcan Quarry, and taught me how to clean minerals in a solution of acid.

Not long after that came Jerry Cox and Karen, who generously mentored me at the April 2011 Wild Acres workshop, for my first Cabochon class. I left there with two cabochons that I treasure and wear often.

Sheryl Sims stirred my interest in meteorites, after reading her article in the Northern Virginia Mineral Club Newsletter concerning the “Lorton Meteorite” landing. I even went out in the January 2010 blizzard to look for meteorites in the parking lot of the impact site.

Lastly, my interest in fossil hunting came from hearing stories from fellow boaters, who found sharks teeth along the Calvert Cliffs of the Chesapeake Bay, Maryland. My interest was fueled by the website www.FossilGuy.com. It is a comprehensive tutorial on every fossil found on the Western Shore.

Since so many club member’s hands and hearts have reached out to me down this mineralogical path, I have tried to “pay it forward” by encouraging others to collect and get *their* hands dirty. **Go for it!**

By Patricia Flavin (pattiflavin@gmail.com)

THE PREZ SAYS...

By Stephen Johnson



(Photo: S. Sims)

By Stephen Johnson, MSDC President

Tom was gracious enough to coordinate our trip to JMU in February – 22 February 2014. For those that haven’t been, it is well worth the drive. If you have any specimens you need to identify, bring them along. We will be able to use the x-ray diffraction machine and also the scanning electron microscope. Additionally, Dr. Kerns is the curator of a great mineral collection there and generally has specimens, both large and small, available for a small donation to the department.

At the next meeting I will have some mock-ups of potential membership cards and various potential club logos.

Even shorter this month. Look forward to seeing everyone at our October meeting.

An Armchair Visit to “the World’s Oldest Mine?”

By Andy Thompson



From Wikipedia, the free encyclopedia. Size of this preview: 622 × 599 pixels. <http://en.wikipedia.org/wiki/File:Hematite.jpg>
This is Kidney ore hematite from Michigan. The yellow is the reflection of the lamp used for lighting. The surface is very shiny. Hematite is a type of iron ore.

Here’s a question for mineral experts and amateurs who have a special interest in mining. Where is the world’s oldest mine and what resource did people discover there?

Mineral collectors and armchair anthropologists can readily imagine that early humans would risk digging underground for whatever resources met their most practical needs. But what would those needs be: flint for making hunting implements and tools? Or, would our early human ancestors seek metals that could hold a sharp edge, or even salt for flavoring and preserving food?

Having no such expertise about the history of mining, I simply wondered if two claims I recently heard had any validity in reality. Specifically, some friends recently returned from an eight-day cruise along the Danube River. They traveled upstream from Budapest, Hungary to Passau, Germany. That river, the second longest in Europe, originates in the Black Forest of Germany and flows south east, through Germany, Slovakia, Austria and Hungary, finally emptying into the Black Sea. One stop my tourist friends made along the way was to visit the town of Salzburg, Austria, a two-hour bus ride south of the Danube.

There they saw the house of Wolfgang Amadeus Mozart, walked the enchanted streets and heard local lore. The guide told them about the historic importance of salt mining for which the city of Salzburg (Salt Fortress) and its Salzach River (Salt River) were named. In that same general region is a tiny lakeside town, Hallstatt, Austria, which some locals claim has the *oldest mine* in the world. Other Hallstatt residents more modestly claim it as simply the *oldest salt mine* in the world, dating from about 5,500 BC. Those are the two claims I wanted to investigate.

For thousands of years, the practical value of salt for preserving meat and fish made it a highly sought-after resource available primarily to royalty, rich households and armies that were on the move. So there is no doubt that for many millennia, salt was a source having great value. At various times in the distant past, salt was even used as a form of currency. Today, the English language continues to bear witness to that ancient connection between salt and money. For example, we continue to use the term “salary” to refer to the compensation for our labor. Salt’s importance for food, linguists tell us, was the origin of the word “salad”. Further, today we hear a valuable worker described as being “worth his

October 2013

Mineral Minutes

salt” although originally, that phrase was used only to describe the cost for buying a hard working slave.

The geological context for the origins of the Austrian salt mines is interesting to note. About 40 million years ago, much of today’s Austrian countryside as well as much of Europe were at the bottom of a saltwater inland sea. But by about 5 million years ago, the African continent’s drift north and its crashing into the Euro-Asian plate lifted the previously submerged European continent above water. So, the earlier sea bottom now became part of the central European landscape and eventually its various mountain chains. That orogeny, or mountain formation, brought the prehistoric sea’s salt depositions above ground and became the mountainous salt mines for enjoyed by Europeans, both ancient and modern.

As a result of these geological forces, there is a stretch of land spanning from Salzburg in the east to the Alps and Dachstein mountains to the west. That area today is known for its recreational lakes and mountains, but it is named Salzkammergut, which means the “Estate of the Salt Chamber.” That name documents the historical role and the financial wealth the mines provided the Habsburg Monarchy from the 13th to the 18th centuries.

In more recent decades, several factors have resulted in a greater availability of salt and a decrease in its cost. The discovery of additional mines, the rise of inexpensive systems for its transportation, the development of evaporation pond recovery processes and the advent of modern refrigeration, all resulted in salt becoming readily available and much less expensive.

So, with that geologic and commercial background in mind, we can now return to the

first of our original questions. Was the Hallstatt mine in Austria really the oldest mine in the world as a few locals touted? That claim seems rooted only in the Austrian locals’ personal pride and is without any historical validity. The oldest documented mine in the world, whether for salt or any other resource, seems to be the “Lion Cave” in the southern African nation of Swaziland. According to recent archeological research findings, radiocarbon dating of tools found within the mine points to it being a 43,000 years old site where early humans mined iron-rich hematite for its ochre red pigment.

The geologists exploring the cave named it after one of their favorite brands of beer, Lion ale. Their sober conclusion, however, was that this hematite mine was not developed to obtain iron for tool making. Rather, its particular form of hematite was specularite which has a silvery appearance because it includes tiny flakes of mica. It also has a greasy feel which makes it perfect for body painting and so was highly desired for ceremonial rituals of life and burials. Anthropologists tell us that painting the body with the blood of a hunting kill celebrated life. Early humans saw painting themselves with red ochre as a way of empowering themselves with the “blood of the earth.” So for millennia, specularite was sought as the premier cosmetic. This interpretation is consistent with the relatively recent practices of some Aboriginal peoples of Australia who use red ochre for ceremonial painting of their body and hair.

While the Lion Cave in Africa seems to be the oldest and best-documented mine that this writer could discover, the research continues. Archeologists have found mines in Hungary, not far from the Danube River, where about 30 thousand years ago, Neanderthals did mine chert for their flint tools and weapons. But, given the “out from Africa” view of human

advancement, it makes sense that the oldest mines would be found where humanity had its origins, namely Africa.

Having considered the question of the oldest mine, what about the second claim that the Hallstatt mine in Austria is the oldest *salt* mine in the world?

Researchers today continue to discover ancient mines and adjust their dates of origin. But, at this point, historians and archeologists award that “oldest salt mine” honor to the Duzdagi salt mine in Azerbaijan, the tiny nation which shares a border with Iran to its south and is a bit east of Turkey. A joint French and Azerbaijani archeological team has spent over ten years documenting the mine’s use which extends back as far as the 4th millennium BCE, several thousand years earlier than the Hallstatt mine’s dating. In the Duzdagi salt mine, the researchers recovered pottery which dates from the 2nd millennium BC and much older hard rock dolerite and basalt hammers. Again, the claims of the local Austrians tell us more about their pride than their mine’s actual provenance.

Many readers of MSDC’s *Mineral Minutes* newsletter have considerable knowledge about the history of mines. Throughout the Eastern Federation of clubs, similarly, many mineral collectors may be able to correct and augment the information provided in this article. This author, who admits considerable dependence on articles derived from the internet, welcomes any additional historical information and would appreciate hearing different views on these two questions about the oldest mine and the oldest *salt* mine.

The links below elaborate various aspects of what researchers have discovered about the Lion Cave, the world’s oldest mine. The Academia.com link cited below provides an interesting in-depth archeological report of the researchers’ findings. The Monacorarecoins.com link below provides a clear and short overview of that mine’s history, while the s8int.com link describes the qualities of specularite.

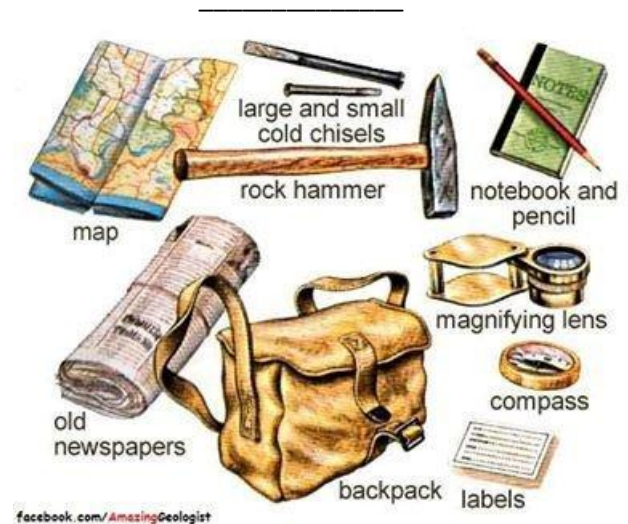
http://www.academia.edu/3202010/Archaeological_investigations_on_the_salt_mine_of_Duzdagi_Nakhchivan_Azerbaijan_

<http://www.s8int.com/sophis20.html>

<http://www.monacorarecoins.com/rare-coin-articles/mining-history-lion-cave/>

<http://en.wikipedia.org/wiki/File:Hematite.jpg>

(Andy Thompson:- thompson01@starpower.net)



Special thanks to Andy & Betty Thompson; Ed & Susan Fisher; and Ann & Rebecca Siegal for the delicious refreshments at our September meeting! We appreciate your time and generosity.

October 2013

GEORGE REIMHERR'S MINERAL SPECIMEN CLEANING TECHNIQUES

By Sheryl E. Sims

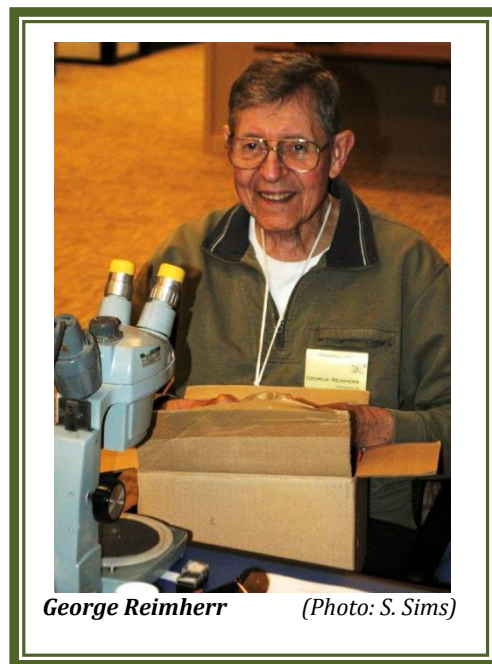
In response to a special request from our own club president, Steve Johnson, I asked George Reimherr, a very mineral savvy Northern Virginia Mineral club and Micromounters member, about his mineral cleaning techniques. George was kind enough to provide me with the below response. (Steve obtained some minerals from George in the past and he recalled how clean they were when given to him.)

George stated that the following are his methods to clean minerals found at local club field trips. He added that he has no special solution or “magic elixir” to clean his rocks.

First, if the specimens can take the vibration (most of our local finds can), then George said that he uses an ultrasonic cleaner, with a few drops of dishwashing detergent in the ultrasonic bath. He stated that some people may object to use of detergent, but that he thinks that it makes the specimens cleaner and, perhaps, brighter). George suggested that you do not use the ultrasonic cleaner longer than necessary to clean the specimen. It should be noted that sometimes the ultrasonic cleaner won't do the job—especially if the dirt is located deep within a cavity.

As a second step, George tries using a water pik. He stated that the jet of water usually brings out the dirt. As an alternative, he may try using a fine-pointed needle while working on the specimen under the microscope.

As a final step, there is quality control. George examines the cleaned specimens under low power magnification. If more cleaning is needed, then he repeats the above-mentioned steps. George stated that some specimens will not come clean after all that effort. Fortunately, other specimens in the batch will usually clean up.



George Reimherr (Photo: S. Sims)



(Photo: http://upload.wikimedia.org/wikipedia/en/4/47/Ultrasonic_cleaner_copy.jpg)



(Photos: http://en.wikipedia.org/wiki/Lou_Henry_Hoover)

Lou Henry Hoover: First Lady, Geologist, and Nature-Lover

By Sheryl E. Sims

In today's world, when it comes to professions, the sky is literally the limit for women. It's hard to imagine an area of study or interest where women have not entered and excelled. This, however, was not the case prior to the turn of the century. Women's lives were limited to serving their families and husbands primarily. If they chose to work outside the home, they had the option of becoming nurses, teachers, or governesses. Knowing that the past held such limitations is what makes Lou Henry Hoover such a remarkable woman.

Born on March 29, 1874, the Hoovers gave birth to a little "Lou Henry". She was raised much like a boy, her parents encouraged her to enjoy such male-focused activities as camping, hunting, and hiking.¹ They even called her "Lou Henry".

Bright and inquisitive, Lou, while attending Stanford University, had the good fortune of attending a geology lecture. The lecture was given by a Professor J.C. Branner. He was a famous geologist during that time, and what he had to say that day, truly hit home with Lou Henry. In fact, she spoke with Professor Branner after his lecture and professed her love for the outdoors. She asked him about the possibility of a woman studying geology. Professor Branner encourage her to pursue her passion. Her parents did as well. As a result, Lou Henry, enrolled in the Department of Geology at Stanford University. She became the first woman to major in Geology at Stanford. She also studied Latin. That was extremely helpful to her in later years.

The rest of Lou Henry's story is history as one might say. Lou Henry met a man who would eventually become her husband. He was a senior assistant of Dr. Branner, and his name was Herbert Hoover. Herbert Hoover actually had a lot in common with Lou Henry. Not only were they both geology majors, but they enjoyed fishing and were born within 100 miles of each other in Iowa.² Lou Henry's being self-reliant didn't scare Herbert away. In fact, he fell in love with her and married her. Herbert's proposal came by way of a cablegram. He had been mining in Australia while Lou Henry completed her degree in 1898.

Not long after marrying, they boarded a ship and headed to China. Lou Henry sailed on into the history books as First Lady of the United States when Herbert Hoover was elected president. She died in 1944 from heart failure, but lives on historically as one of the World's most ambitious, adventurous, and worldly, women.

¹ http://en.wikipedia.org/wiki/Lou_Henry_Hoover

² <http://www.nndb.com/people/190/000128803>

Do not judge a rock by its cover.
Smash it open with a hammer and look inside.
You might get a surprise.
You might find sparkly crystals inside.
If you do then you can add it to your collection.



Helen Padgett is the granddaughter of Michael Pabst (our June 2013 guest speaker). She is 7 years old and she has just started the 2nd Grade. Helen attended the June meeting with her grandparents and mother. Above is her mineral shelf. It occupies the front of one of the glass shelves in Michael's mineral cabinet. Already off to a good start as a seasoned rockhound, Helen's personality sparkles as brightly as her minerals. She has even attended the Tucson show with her grandfather, where she, according to Michael, found a few treasures.

--Editor

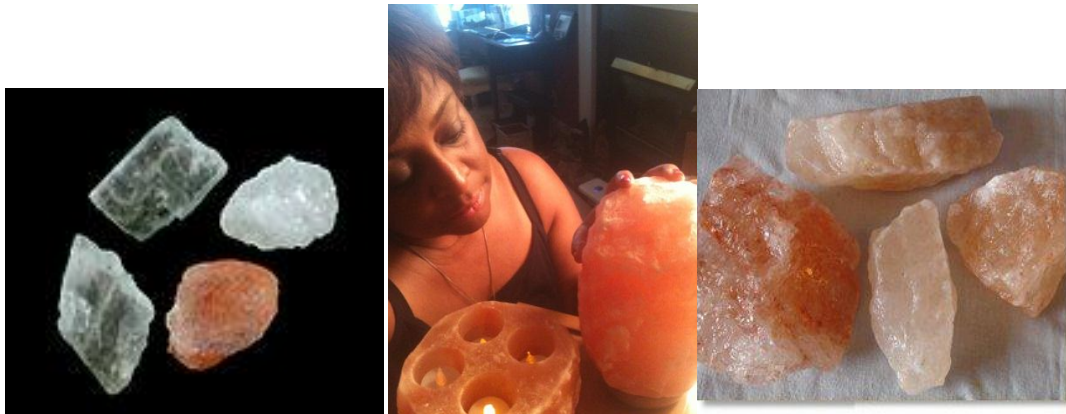
Helen Padgett's Mineral Shelf



(Photo: Michael Pabst)

IS HIMALAYAN PINK ROCK SALT WORTH ITS SALT?

By Sheryl E. Sims



(Photos: http://en.wikipedia.org/wiki/Himalayan_salt & S. Sims)

Himalayas



The north face of Mount Everest as seen from the path to the base camp in Tibet, China. The Himalayas are among the youngest mountain ranges on the planet and consist mostly of uplifted sedimentary and metamorphic rock.³
(photos: <http://en.wikipedia.org/wiki/Himalayas>)

While standing in line at my office cafeteria, a co-worker of mine began telling me about how she uses Himalayan salt on her food rather than regular salt. She very health conscious and said that Himalayan salt, as opposed to regular table salt, is far healthier due to the extra minerals that it contained. This surprised me. I had never heard of anyone consuming Himalayan salt before. I mentioned that I knew that it was used for health purposes in terms of the lamps that are frequently made from blocks of Himalayan salt. My co-worker's comment made me curious as to the chemical make-up of Himalayan salt or "halite". (Commonly referred to as "rock salt".)

³ <http://en.wikipedia.org/wiki/Himalayas>

Rock salt typically comes from North America, Pakistan, Europe and Australia.⁴ Rock salts have been mined all over the world, including such places as: Bolivia, Peru, Utah, Chile, Hawaii, the Murray-Darling basin of Australia, and Poland. The salt is often a pink or reddish color with crystals that are an off-white color and transparent.⁵ The pink color comes from iron oxide. The Khewra Salt Mines is an extremely large salt mine located in Punjab, Pakistan. It's about 300 km from the Himalayas

In 2003 the Bavarian consumer protection agency Bayerisches Landesamt für Gesundheit und Lebensmittelsicherheit analyzed 15 specimens of Himalaya salt sold in Germany and could detect at least ten different minerals, in addition to sodium chloride (98%). The agency stated that the salts come from Pakistan and can, like all salts, cause hypertension (high blood pressure) if over used. German public television broadcaster ZDF presented the analyzed chemical composition of Himalayan salt, stating that the specimen contained 95–96% sodium chloride, contaminated with 2–3% polyhalite (gypsum) and small amounts of ten other minerals.

Many people believe that, when heated, the salt crystals produce negative ions or positive energy waves into the air. However, there is no scientific prove of this or any purported health benefits. In fact, salt, in general is the cause of hypertension when over used.

The following page contains a table which lists some minerals typically found in Himalayan pink salt. Different parts of the deposit will differ slightly in their composition. Even though some samples might only contain trace amounts, I was amazed at the variety and number of different minerals that could be found in Himalayan salt.



(Photo: http://en.wikipedia.org/wiki/Himalayan_salt)

Some chemicals and minerals typically found in Himalayan pink salt.⁶

Elements: Hydrogen, Lithium, Beryllium, Boron, Carbon, Nitrogen, Oxygen, Fluoride, Sodium, Magnesium, Aluminum, Silicon, Phosphorus, Sulfur, Chloride, Potassium, Calcium, Scandium, Titanium, Vanadium, Chromium, Manganese, Iron, Cobalt, Nickel, Copper, Zinc, Gallium, Germanium, Arsenic, Selenium, and Bromine.

⁴ <http://www.saltnews.com/chemical-analysis-natural-himalayan-pink-salt/>

⁵ Ibid.

⁶ <http://www.saltnews.com/chemical-analysis-natural-himalayan-pink-salt/>



Secretary's Report

By Patricia Flavin

Meeting Date: September 4, 2013. **Meeting Place:** Cathy Kerby Rm.-CE 340, The Smithsonian National Museum of Natural History. **Attendees:** 28

Agenda Club President Steve Johnson recognized past presidents: Andy Thompson & Ed Fisher

Minutes Approved: June 2013

Visitors: Steve Winegartner, new member, Caron Gala, new member, Kerri Junger, Beatrice & Jim Ryan

Treasurer's report: Rebecca Siegal accounted for the club funds.

Two new members have joined.

Old Business: Steve Johnson commented on the new membership cards. There was follow-up discussion about the Adopt-A-Class program for kids.

New Business: Bring in your donations of minerals so the club can have more numerous specimens for the monthly raffle. Rick Rieber, VP, announced the upcoming club lecture schedule: October-"Fossil Hunting Along the Calvert Cliff Formation, Chesapeake Bay, Maryland". There will also be an additional short video-"April 2013 Sterling Hill Mine, New Jersey, Super Dig". A "Show & Tell for Club Members" has been mentioned for November or a discussion from Mike Kaas' new discovery.

Geology in the News: Earthquakes.

Club Show Announcements: September 14-15th, Harrisburg, Pa. 48 Annual Rock, Mineral & jewelry Show. West Friendship, Md. Mineral Show

Motion to Adjourn to the Program

Program: Real CSI cases from Erich P. Junger, Ph.D., Prince William County, VA., Police Department Crime Scene Analyst in the identification bureau, retired October, 2009. Dr. Junger currently works as a forensic scientist for U.S. Customs and Border Protection.

The program included 2 murder cases that he investigated that were solved using minerals to link the criminal to the victim and crime scene. "Copper, Bentonite & Brutality," which happened in California, involved the disappearance and murder of a female child in a quarry.

The second case was more local—a Shenandoah River scene near a quarry. It was the location for a drive by shooting in a drug deal. Both cases led to an arrest of the criminals. Erich said, "It would have been impossible to solve these cases without using, Forensic Geology, the mineral sample evidence from the clothing, cars, etc. of the criminals".

Meeting adjourned at 9:45 p.m. Refreshments were served.

Announcements: Please check out our website and Facebook page.

2013 Officers and Board Members



(left to right: Steve Johnson, Rick Reiber, Patricia Flavin, Rebecca Siegal, Dave Hennessey, Dave Nanney, Andy Thompson, & Sheryl Sims)
(photos provided by B. Thompson, A. Cameron Siegal, & S. Sims)

Officers & Board Members Contact Information

President: Steve Johnson - StevikJ@gmail.com; **Vice President:** Rick Reiber - Mathfun34@yahoo.com
Secretary: Patricia Flavin - pattiflavin@gmail.com; **Treasurer:** Rebecca Siegal - dcm mineralclub@gmail.com
Directors: Dave Hennessey - dhennessy@spa.com; Dave Nanney - DNanney@cox.net;
Andy Thompson - thompson01@starpower.net; **Editor:** Sheryl Sims - sesims4@cox.net

Thank You to all who donated door prizes last year, provided refreshments, took photos, brought guests, shared mineral news, and made our club a great one by attending our meetings!

THANK YOU for your wonderful articles and photos! Your contributions make our club bulletin a great read. Please continue to support our club bulletin by sending me your mineral-related news, articles, photos and/or links. The *Mineral Minutes* newsletter deadline is the 15th of each month. You may email your submissions to me at <sesims4@cox.net>. Again, thank you! (Note: The Editor reserves the right to edit all submissions as necessary.)

THANK YOU to Andy Thompson for proofreading the *Mineral Minutes*!

Treasurer's Note:

Treasurer, Rebecca Siegal

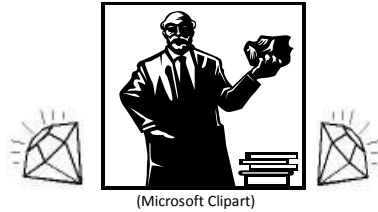


2013 Dues! \$20 for single memberships. \$25 for family memberships. Why not invite your friends and family to join MSDC?

Please send all treasurer-related emails to:
dcm mineralclub@gmail.com

MORE REFRESHMENTS, PLEASE! If you are able to bring refreshments to our monthly meetings, please do so. Your contribution will be greatly appreciated! **We are also looking for a volunteer or two to coordinate refreshments for our meetings. Please let Steve Johnson or a board member know if you can assist.**

WELCOME! WELCOME! WELCOME! Guests are always welcome to attend MSDC meetings. Please continue to invite your friends!



Speaker Flash Back

- January 2013: Michael A. Wise, Ph. D, geologist in the Division of Mineralogy, for The Smithsonian National Museum of Natural History, gave a very interesting presentation on cathodoluminescence.
- February 2013: Cathleen Brown, Museum Specialist Rocks and Ores Division, for The Smithsonian National Museum of Natural History, addressed MSDC members on the topic of Pegmatites: What they are and where to find them.
- March 2013: Meeting cancelled due to inclement weather.
- April 2013: Robert Simonoff – “Mineral Photography”
- May 2013: Casper Voogt – “Mineral Trip to Morocco”
- June 2013: Michael J. Pabst – “Colorful Rare Earth Minerals”
- July-August 2013: No meetings held.
- September 2013: Erich Junger – Forensic Geology

Upcoming Events

Oct. 26: 29th Annual South Penn Fall Rock Swap Sponsored by: The Central Pennsylvania and Franklin County Rock and Mineral Clubs. South Mountain Fairground.

NEWS FROM OUR EFMLS WEBSITE:

[Visit a Show in Your Area](#)

If you are an EFMLS member club and would like to have your show or swap listed in the calendar, please contact me at lapidry@aol.com.

October 2013

26: Fairless Hills, PA - The Rock and Mineral Club of Lower Bucks County, PA presents our Annual “ULTRAVIOLATION” an all Fluorescent Mineral Show, at the First United Methodist Church, 840 Trenton Road, Fairless Hills, PA., 9:00 AM – 5:00 PM, Cost \$2.00 Donation, Children 12 years old and younger FREE, Information contact Chuck O’Loughlin, 130 Maple Terrace, Merchantville, NJ 08109, Phone: 856-663-1383, Email: ultraviolation@yahoo.com

26-27: Rochester, NY - 44th Annual Rochester Gem, Mineral, Jewelry & Fossil Show sponsored by the Rochester Lapidary Society. Saturday, October 26, 2013 — 10 a.m. to 6 p.m., Sunday, October 27, 2013 — 10 a.m. to 5 p.m. Main Street Armory, 900 East Main Street, Rochester, NY 14605. Adult - \$6, Children under 12 free with an adult., 2-day pass only \$9. Students receive half price admission with valid school issued ID. For more information: <http://www.rochesterlapidary.org/show.htm>. E-mail: lapidry@aol.com

November 2013

2-3: Exton, PA - 44th Annual Gemarama 2013: Shades of Red” sponsored by the Tuscarora Lapidary Society. The School at Church Farm, Business Rte. 30, 1 / 2 mile west of Frazer Rte. 30 exit off Rte. 202, Exton, PA.

March 2014

22-23: Sayre, PA - Che-Hanna Rock & Mineral Club Show will be held on March 22 (9-5) and March 23 (10-4) . Held in the Athens Twp. Vol. Fire Hall, Sayre, PA Contact 570-928-9238 uvbob@epix.net

June 2013 MSDC Meeting Pics

(Photos: S. Sims)



Michael Pabst, June Speaker



Jean Charsky, EFMLS Region IV Regional VP & Matt Charsky, EFMLS Past President; Chair, Nominating Committee and Convention Advisory Committee.



Show & Tell



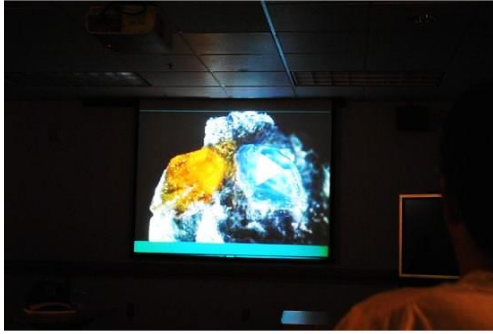
Michael Pabst's Family: Diana & Helen Padgett; Karen Pabst

Matt Charsky and MSDC President, Steve Johnson



Andy Thompson receives EFMLS award

Awards Night



September 2013 Meeting Pics



MINERAL MINUTES



Forensic Geology

- The application of the geosciences to matters of law
- Can encompass multiple disciplines, such as mineralogy, petrology, sedimentology, hydrology and many others
- Within criminal investigations the identification and individualization of soils and geologic evidence is paramount

Individual Nature of Soils

- There are over 5,000 recognized minerals within the Dana System of classification
- Each of these minerals have varying levels of occurrence and depositional environments
- The sequence of these depositions can vary greatly over a very limited terrain
- Soil evidence is very resilient
- Research has shown that soils can vary greatly in distances as proximate as ten meters to one another*

*Junger, E.P. Assessing the Unique Characteristics of Close-Proximity Soil Samples: Just How Useful is Soil Evidence? *Journal of Forensic Sciences*, JFSCA, Volume 41, No. 1, January 1996, pp. 27-34.

Methodologies

- Several methodologies have been employed to get the most forensic value out of a geologic investigation
- The methodology used will vary depending on the forensic question involved (groundwater contamination, engineering failure, HAZMAT environmental releases, crime scene associations, etc.)

Crime Scene Associations

- Typically, the purpose of these types of examinations are ultimately directed towards linking the victim, suspect and crime scene together.
- Often times materials found in a suspect home that are foreign to it may lead investigators to other locations or scenes.

The Forensic Triad



(Photos by S. Sims. Slides by Dr. Erich Junger)

CONGRATULATIONS TO MARY BATEMAN!

For those unfamiliar with Mary Bateman, she is MSDC club member and the proud recipient of the **2013 EFMLS Citation Award!** This award is presented in recognition of those who have been “of the utmost support” to the Eastern Federation. Mary is just such a person! Mary was chosen by three Eastern Federation of Mineralogical & Lapidary Societies “EFMLS” past presidents. Over the years, Mary has worn many federation hats: President, 2nd VP, 1st VP, Secretary, nominating committee chair as well as Budget & Finance Committee head, just to highlight a few. She has also served as MSDC’s editor and is a regular Wildacres participant. While Mary has voted for others to win such an award, she never thought that she would one day be a recipient. We applaud Mary’s leadership and service; as well as her dedication to both our club and to the Eastern Federation as whole.



Congratulations, Mary! -- MSDC Editor

(Photo: *EFMLS News*, September 2013)

BROKEN HILL

NEW SOUTH WALES, AUSTRALIA

By Sheryl E. Sims



(Photo: http://en.wikipedia.org/wiki/Broken_Hill,_New_South_Wales)

Broken Hill township backed by the man-made mullock heaps from the mines along the *Line of Lode*

Australia has always been a place of wonder for me. It holds both beauty and mystery within its boundaries. Also, Australia possesses an array of wonders beneath its soil just as it does above. One day, I hope to visit. In the meantime, I reflected on a video presentation that I saw a couple of years ago about Australian opals. They were magnificent! I would never have imagined the beauty of those fire opals had I not seen them in all of their glory as dedicated claimholders fiercely protected their property in hopes of finding great wealth.

Then, at a mineral show last year, back copies of *The Mineral Record*, were given away. I managed to procure a few copies. What a wonderful publication! In it were several articles about Broken Hill. One in particular, was written by Wendell E. Wilson. After a bit of research, I discovered that Broken Hill is Australia's longest-lived mining city.⁷ It was named by an explorer named Charles Sturt in 1844. Broken Hill's actual name was Barrier Range, but he referred to it as Broken Hill and that was due to the fact that a number of hills made up the range, and gave the appearance of being broken. A boundary rider named Charles Rasp discovered silver ore on a particular hill of Broken Hill, an area called Willyama, but that hill has been mined away.⁸

Broken Hill has a large orebody. This was formed over 1,800 million years ago.⁹ It's said to be one of the largest silver-lead-zinc mineral deposits found.¹⁰ The orebody is also said to be boomerang-shaped.

The orebody is shaped like a boomerang plunging into the earth at its ends and outcropping in the centre. The protruding tip of the orebody stood out as a jagged rocky ridge amongst undulating plain country on either side. This was known as the broken hill by early pastoralists. Miners called the ore body the Line of Lode. A unique mineral recently identified from Broken

⁷ http://en.wikipedia.org/wiki/Broken_Hill,_New_South_Wales

⁸ Ibid.

⁹ Ibid.

¹⁰ *The Mineral Record*, volume 19, November-December, 1988, p. 417.

Hill has been named Nyholmite ¹¹ after one of the city's famous sons Ron Nyholm (1917–1971).¹²

Once word spread amongst mineral collectors as to the vast amount of specimens to be found and collected at Broken Hill, trade quickly developed between the collectors and business owners in town. Over 200 minerals have been discovered at Broken Hill. Some lead, copper, zinc and silver sulfides are very rare. More well-known minerals found there are: Anglesite crystals; Axinite crystals; Azurite, Calcite, Copper, Malachite, Pyromorphite, Gemmy Rhodonite, Silver, Spessartien, and Bustamite.¹³ Marshite, Raspite, Miersite, Costibite, Paradocrasite, and Willyamite are also species found at Broken Hill.¹⁴



(Photo: <http://en.wikipedia.org/wiki/Axinite>)
Clove-brown axinite crystals to 2.3 cm set atop matrix from the West Bor Pit at Dalnegorsk, Russia.



Yellow pyromorphite from Australia.
(Photo: <http://en.wikipedia.org/wiki/Pyromorphite>)



Anglesite crystal. Touissit District, Morocco
(size: 2.8x1.6x0.5 cm) (Photo: <http://en.wikipedia.org/wiki/Anglesite>)



Raspite. (Photo: <http://en.wikipedia.org/wiki/Raspite>)

Heads Up From Robert Clemenzi: See: <http://makerfaresilverspring.com/>. Silver Spring Mini Maker Faire, Sunday, September 29, 2013. 12 pm-5 pm. Free. Flying Machines • Robots. Crafts • Inventors • Games. Wearable Art Projects. 3D Printers. If you are interested in providing a mineral display, please contact show host. See: <http://callformakers.org/silverspring2013/default/overview>. I will have a science display. Joe Murter will have a woodworking display and will display his wonderful “mineral shop”. Karen Lewis and Lois Dowell will display their jewelry.

¹¹ <http://minmag.geoscienceworld.org/content/73/5/723.abstract>

¹² http://en.wikipedia.org/wiki/Ronald_Sydney_Nyholm

¹³ The Mineral Record, volume 19, November-December, 1988, p. 424.

¹⁴ Ibid.



**22nd Annual
GEM, MINERAL
AND FOSSIL SHOW**

Presented by the Northern Virginia Club, Inc. www.novamineralclub.org
Sponsored by the Dept. of Atmospheric, Oceanic and Earth Sciences at GMU

Date: November 23 & 24, 2013
Place: The Hub Ballroom (Student Union II Building)
George Mason University Campus
Braddock Rd. & Route 123, Fairfax, VA

Hours: Saturday 10am-6pm, Sunday 10am-4pm

Admission: Adults: \$5, Seniors & Teens (13-17): \$3
Children 12 & under, Scouts in uniform,
and GMU Students w/valid ID are FREE.

\$1 OFF
1 Adult admission
with this card

Demonstrations, Exhibits, and Door Prizes. Mini-mines for children to dig in and get free fossils and minerals.
Over 20 Dealers with Fossils, Minerals, Crystals and Gems for sale.

Use Parking lot A, enter Lot A from Nottoway River Lane.
Look for our Courtesy Shuttle to Mineral Show

CHECK US OUT ON FACE BOOK!

Please help us keep friends and members interested and informed. Search for, or visit, "Mineralogical Society of the District of Columbia" to share your comments, links, and photos. (Administrators are: Steve Johnson, Betty Thompson, Bob Simonoff and Sheryl Sims.)

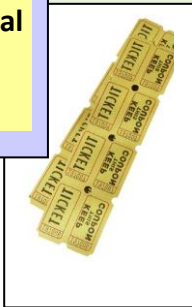
S.C.R.I.B.E. – Special Congress Representing Involved Bulletin Editors – is not just for editors! Webmasters, authors, and former editors may also join. Please visit the S.C.R.I.B.E website for more information: <<http://scribe.rbnet.net>>

**THANK YOU,
CASPER VOGT!** –
For making our
phantom MSDC
website disappear!



We have your winning ticket in the bag!
(photo by S. Sims)

**Thank you for your mineral
donations. They will be
used as door prizes.**



MSDC RAFFLE!

Linked-in:

- ✚ <http://www.smithsonianmag.com/history-archaeology/Irelands-Forgotten-Sons-Recovered-Two-Centuries-Later.html>
- ✚ <http://www.mineralcalendar.com/php/calendar.php>
- ✚ EFMLS Events: <http://www.amfed.org/efmls/calendar.htm>
- ✚ <http://geogallery.si.edu/index.php/en/gems/>

MEET, GREET, & EAT!



Join MSDC club members for dinner at Pier 7 at 6:00 p.m. before each meeting.

FEDERATION NEWS

AFMS Officers for 2012-13

President - Don Monroe (SFMS) President-elect - Richard Jaeger (RMFMS)
1st Regional Vice President – Marion Roberts (CFMS)
2nd Regional Vice President – Matt Charsky (EFMLS)
3rd Regional Vice President – Ann James (SCFMS)
4th Regional Vice President – Sandy Fuller (MWF)
5th Regional Vice President – Doug True (NFMS)
Treasurer – Pat LaRue (2 year term)
The position of Secretary was not up for election this year.
Anne Cook will complete the 2nd year of her 2 year term.

EFMLS Officers for 2012 - 2013

President - Cheryl Neary, ciervo.neary@gmail.com
1st VP - Hazel Remaley, northridge5@verizon.net
2nd VP - Merrill Dickinson, medsearchnorth@comcast.net
Secretary, Gerry Cox, gerryannec@verizon.net
Treasurer, Lou Budell, labudell@windstream.net
Asst. Treasurer, Michael Patterson, Michael.Patterson@pgparks.com
Editor, Carolyn Weinberger, PO Box 302, cscrystals2@gmail.com

MINERAL MINUTES

Pre-Meeting Dinner: Join us for dinner at the Pier 7 Restaurant at 6:00 PM for dinner before the club meeting. 650 Water St SW, (at S L St), Washington, DC 20024, (202) 554-2500, www.pier7restaurant.com/Menu. **Please call Susan Fisher at 703-830-9733 to make a reservation if you wish to attend.**

Visitors are always welcome at our monthly meetings and dinners!
MEMBERSHIP APPLICATION OR RENEWAL
THE MINERALOGICAL SOCIETY OF THE DISTRICT OF COLUMBIA (MSDC)

- Family ~ \$25.00 per year. One address.
- Individual ~ \$20.00 per year.
- New * Renewal Dues are for Year _____ *

For new members who join in the last months of the year, membership will extend through the following year with no additional dues.

ANNUAL DUES – PLEASE PAY YOUR DUES PROMPTLY.

Pay at next meeting or mail to:

Mineralogical Society of DC
P.O. Box 9957
Alexandria, VA 22304
Name(s) (First and Last)

Address _____
City _____ **State** _____ **Zip** _____
Phone(s): Home/Work/Mobile _____
Email(s) _____

OK TO INCLUDE YOU ON CLUB MEMBERSHIP LIST? Distributed to Club members only.

- Yes – Include name, address, phone, email.
- If you want any information omitted from the membership list, please note:
Omit my: Email, Home phone, Work phone, Mobile phone, Address, Name

SPECIAL CLUB-RELATED INTERESTS?

MINERALOGICAL SOCIETY OF THE DISTRICT OF COLUMBIA

(2013 Officers & Board Members)

- President: Steve Johnson, stevikj@gmail.com
- Vice President & Program Chair: Rick Reiber, Mathfun34@yahoo.com
- Secretary: Patricia Flavin, pattiflavin@gmail.com
- Treasurer: Rebecca Siegal, dcmineralclub@gmail.com, (mail: c/o MSDC, P.O. Box 9957, Alexandria, VA 22304)
- Director: Dave Nanney
- Director: Dave Hennessey
- Director: Andy Thompson, thompson01@starpower.net
- Editor: Sheryl Sims, sesims4@cox.net
- Co-Web Master: Betty Thompson & Casper Voogt, http://mineralogicalsocietyofdc.org/

Meeting Dates, Time, and Location: The first Wednesday of each month. (No meeting in July and August.) The National Museum of Natural History, Smithsonian Institution, 10th Street and Constitution Ave, Washington D.C. We will gather at the Constitution Avenue entrance at 7:45 PM to meet our guard who will escort us to the Cathy Kirby Room. Street parking: **THERE ARE NOW PARKING FEES, PAYABLE AT THE KIOSKS, AND ENFORCEMENT UNTIL 10 PM.**

MINERAL MINUTES



Newsletter of the Mineralogical Society of the District of Columbia

Mineralogical Society of DC
P.O. Box 9957
Alexandria, VA 22304
U.S.A.



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