Hello everyone. This sure was an unusual turn of events. This Coronavirus-19 scare. The whole world closed down. Not just us but countries the world over. Thank God that we have a president, whether you like him of not, had the will to protect us or should I say US as in America. Could it had been prevented, I don’t know. Too many people are pointing fingers and saying things but how would they have handled it? It’s not fun to be a president. Everyone has their own idea of what should had been done, but they didn’t step up to be president.

Talk about coming together. So many companies and people stepped up to help make things that were needed. Proud to be an American, aren’t you? I know it’s been hard for all of you who had to stay at home and having to work from there with the children. Hats off to those of you who had to do it. I didn’t have to do it but I am stuck in home and around the yard. John does the shopping for us, so I’m fortunate that way. Don’t miss the sports as we don’t watch them.

Keeping an eye on the Democratic presidential Runnings. There were two different types of men. Now there is only one. Interesting to see what will happen. Time will tell.

I wonder what will happen with all of the Gem and Mineral happenings. I saved motel money on the CFMS show because it was canceled. I had been invited to demonstrate Soap Stone carving. It would had been fun but tiring, too. Now I’ve been wondering if Camp Paradise will also be canceled. It’s up in the air. Then there’s Our show and El Dorado’s show both in October. So many things have been canceled. Wait and see is all that I can say.

Please stay well and healthy. People on my Facebook from around the world are sending Get Well wishes to each other. That’s interesting. Hands across the world sort of thing.

Before I forget, I received word that Sandy Dent is looking for some place to live. So if any of you know of a place please call her at (805) 610-8547.

Edwina, President

In this issue:
Nuggets From the Prez
Minutes (none for April)
2020 Earth Treasures Show
May Program (cancelled)
May Birthstone/Birthdays
Field Trips
Home Education Links
Crystal Shapes
Amber Facts
CFMS Updates & Shows
Happy Birthday to our May Birthday members

We hope you have a wonderful birthday month! Emerald, the birthstone of May, carries the rich green color of Spring and radiates a beautiful vivid tone. They are considered to be a symbol of rebirth and love. Emeralds are the rarest gemstones and are typically mined in Colombia, Brazil, Afghanistan and Zambia.

Emerald is a hard gemstone that has a glassy luster (shine) and is either translucent or transparent. The elements chromium and vanadium give emerald its green color. Emeralds are one of the most rare and prized gemstones and can be worth more than diamonds if they are pure.

Emeralds are gem-quality specimens of the beryl mineral family with a rich, distinctly green color. They are found in igneous, metamorphic, and sedimentary rocks in a small number of locations worldwide.

For over 5000 years, emeralds have been one of the most desirable and valuable colored stones. Ancient civilizations in Africa, Asia, and South America independently discovered emeralds and made them a gemstone of highest esteem. In the United States and many other countries, emerald serves as the birthstone for people who were born in the month of May.

Today emerald, together with ruby and sapphire, form the "big three" of colored stones. The "big three" generate more economic activity than all other colored stones combined. In 2015 the value of emeralds imported into the United States exceeded the value of all colored stones outside of the "big three" combined.

Beryl, the mineral of which emerald is a variety, has a chemical composition of Be3Al2(SiO3)6. When pure, beryl is colorless and known as "goshenite." Trace amounts of chromium or vanadium in the mineral cause it to develop a green color. Trace amounts of iron will tint emerald a bluish green or a yellowish green color depending upon its oxidation state.

Emerald is defined by its green color. To be an emerald, a specimen must have a distinctly green color that falls in the range from bluish green to green to slightly yellowish green. To be an emerald, the specimen must also have a rich color. Stones with weak saturation or light tone should be called "green beryl." If the beryl's color is greenish blue then it is an "aquamarine." If it is greenish yellow it is "heliodor."

This color definition is a source of confusion. Which hue, tone, and saturation combinations are the dividing lines between "green beryl" and "emerald"? Professionals in the gem and jewelry trade can disagree on where the lines should be drawn. Some believe that the name "emerald" should be used when chromium is the cause of the green color, and that stones colored by vanadium should be called "green beryl." Calling a gem an "emerald" instead of a "green beryl" can have a significant impact upon its price and marketability. This "color confusion" exists within the United States. In some other countries, any beryl with a green color - no matter how faint - is called an "emerald."

Be careful if you are buying an "emerald". Make sure that you are getting a gem that has a rich green color instead of a "green beryl". Buying from a website where people from outside of the United States are acting as third-party sellers and photographs might not have representative color can be especially risky.
By definition, emeralds are gem-quality specimens of the beryl mineral family with a rich, distinctly green color. Because of that, it is inappropriate to use the name "emerald" when marketing a beryl of any other color.

The Federal Trade Commission publishes a set of Guides for the Jewelry, Precious Metals and Pewter Industries. They use "yellow emerald" as an example of an incorrect name that when used in marketing can be "unfair", "misleading" and "deceptive" (the words here in quotes are straight from FTC guidance for jewelers).

Emerald has a Mohs hardness of 7.5 to 8, which is normally a very good hardness for jewelry use. However, most emeralds contain numerous inclusions or surface-reaching fractures. These can weaken the gem, cause it to be brittle, and make it subject to breakage. These are expected characteristics of emerald. It is rare to find an emerald that does not have inclusions and surface-reaching fractures that can be seen with the unaided eye. Under low magnification, most emeralds are said to have a "garden" of inclusions.

To improve appearance, most cut emeralds are treated with oils, waxes, polymers, or other substances that enter the fractures and make them less obvious. Although these treatments might improve appearance, they often do not improve the durability of the gem and they may discolor or deteriorate over time.

Emerald is better suited for earrings and pendants that are usually subjected to less impact and abrasion than rings and bracelets. Settings that protect the stone are much safer than those that present the stone to impact and abrasion. Cleaning emeralds should be done carefully. Steam and ultrasonic cleaning can remove oils and other fracture-filling treatments. A light washing in warm water with a mild soap is safer for cleaning and should be done only when needed.

Emerald Mining in the United States

Very few emeralds have been mined in the United States. North Carolina a sporadic producer of emeralds in small quantities from a few tiny mines since the late 1800s. The Crabtree Emerald Mine was once operated by Tiffany and Company and a series of owners between 1894 and the 1990s. Many fine clear emeralds were produced, and tons of emerald-bearing pegmatite were sold as "emerald matrix" for slabbing and cabochon cutting. The cabochons displayed emerald and tourmaline prisms in a white matrix of quartz and feldspar.

North American Emerald Mines operates a small mine near Hiddenite, North Carolina. Between 1995 and 2010, over 20,000 carats of emeralds were produced, including a six-inch-long, 1,869-carat crystal that is now in the Houston Museum of Natural Science and valued at $3.5 million. A crushed stone quarry on the same property is operated with employees watching for signs of the hydrothermal veins and pockets that sometimes contain emerald. It is one of the only gemstone mines in the world that sells the country rock.

Emerald from North Carolina: A specimen of the Crabtree Pegmatite of western North Carolina. This granitic pegmatite filled a two-meter-wide fracture which contained emerald along the walls of the fracture and yellow beryl in the center. It was mined for emeralds by Tiffany and Company and a series of property owners between 1894 and the 1990s. Many fine clear emeralds were produced, but most of the emerald-bearing rock was sold as "emerald matrix" for slabbing and cabochon cutting. The cabochons displayed emerald and tourmaline prisms in a white matrix of quartz and feldspar. This specimen is about 7 x 7 x 7 centimeters in size and contains numerous small emerald crystals that are up to several millimeters in length and associated with schorl.
2020 Earth's Treasures Show
As you are all aware in the current national health climate, many gem shows have had to cancel or reschedule their dates. Since our show is in October, the current crisis may have subsided enabling our Earths Treasures Show to be staged. Planning for the 2020 show will continue to happen. However, a slower approach may have to be taken. This topic will be discussed in detail with the show co-chair Dan Chaplin and the Board at the next board meeting.

-Submitted by Frank Van Hecke, Show Co-Chair

NCGMS 2020 Field Trips (please double check before the trip to ensure it is still planned):

<table>
<thead>
<tr>
<th>Trip</th>
<th>Trip Leader/Contact/Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 7-8 - Nevada: Lapis, Quartz Crystals</td>
<td>John Dolman</td>
</tr>
<tr>
<td>June 20-23 – Chinese Camp: Opalite, Mariposite, Quartz. Crystals, Jade</td>
<td>John Dolman - multi-day/camping</td>
</tr>
<tr>
<td>July 5 to July 12: R.F.T.F trip planed digging for opal, pet., wood, agate, geodes, and more. Nor-cal &amp; S Or areas</td>
<td>Call Kris Rowe:- RFTF is Rockhound Field Trip Fanatics</td>
</tr>
<tr>
<td>Call Kris Rowe-(559)250-5057</td>
<td></td>
</tr>
<tr>
<td>July 12 - Placer County/Ford point: Quartz. crystals</td>
<td>John Dolman</td>
</tr>
<tr>
<td>Aug 15-17 - Nevada: Tuledad agate, Pet.wood</td>
<td>John Dolman -multi-day/camping</td>
</tr>
<tr>
<td>Aug 23-24 - Near Washington CA: Argillite</td>
<td>John Dolman</td>
</tr>
<tr>
<td>Sep 19, 20 - So. Markleeville, Ca: Crystals in Rhyolite,</td>
<td>John Dolman multi-day/camping</td>
</tr>
<tr>
<td>Sep 25-28 – Davis Creek CA, Geodes, Petrified Wood, Crystals</td>
<td>John Dolman -multi-day/dry camping or hotels in Alturas CA or Lakeview OR.</td>
</tr>
</tbody>
</table>

Home education/kids links:

https://sciencespot.net/Pages/kdzearthscience.html
https://www.canoncitygeologyclub.com/kids-links.html
https://kidsloverocks.com/educational-resources
https://sciencetrek.org/sciencetrek/topics/geology/links.cfm
https://www.usgs.gov/science-support/osqi/yes/resources-teachers
https://dggs.alaska.gov/popular-geology/kids/
https://littlebinsforlittlehands.com/geology-for-kids/
About Crystal shapes

Minerals can be identified by the shape of their crystals or crystallography. The shapes of crystals are determined by a number of factors such as the size and length of their surfaces (known as ‘faces’) and edges, as well as the angles between these. These shapes are named after their geometry - for example, crystals based on cubes belong to the 'cubic or isometric' crystal group. There are seven main crystal groups or systems, as shown here.

For More Learning:
http://www.oum.ox.ac.uk/thezone/minerals/detect/shape.htm
https://australianmuseum.net.au/learn/minerals/what-are-minerals/crystal-shapes/
https://geology.com/minerals/crystal-habit/
Organize and catalog your collection

Adapted from by Dave Babulski, Ed.D. (Georgia Mineral Society)

It is sad to see a collection of beautiful mineral micromounts with no organization to the collection. When I first started out as a micromounter one of my mentors was a retired gentleman who had a fantastic collection of world class micromounts. But he had no formal catalog of his collection. He did have a label for each mount which helped a bit. However when you consider that his collection had over 10,000 micromounts you can imagine the problem in trying to find a specific specimen. My point in relating this story is to stress that a specimen label does not a catalog make. Like mounting techniques I suspect that there are as many ways to catalog a collection as there are micromounters. Over the years I have tried a number of ways of cataloging my own collection and to this day that effort continues to evolve as my collecting interests change. In its basic form a catalog for your micromount collection consists of two basic parts: (1) The label on the micromount itself, and (2) an external list of the specimens in your collection. Let’s look at each of these elements individually:

The Label:
At a minimum the data you place on the micromount label should be the mineral name (spelled correctly, of course), location where the specimen was found, and a catalog number. Some micromounters also record the chemical formula along with the mineral name and locality information. Since I hand letter my labels that is a bit much for me to put on my own micromount labels. Now I choose to go against convention and I mount in the lid of the micromount box. I use plastic micromount boxes with lack lids. So when I mount the "lid" now becomes the "base". I mount this way because I use a home-brew gimbal stage with my microscope and this way just works better for me. I place a self-adhesive with dot in the upper right corner of the clear lid of the box. In that white dot I carefully write the specimen number. I choose to use a consecutive numbering system. Some collectors use a Dana system and some use a combination of letters and numbers. The point here is to provide a way to quickly locate the specimen when it is stored in whatever drawer arrangement you use. Then using a larger rectangular label I write the mineral name and locality information in ink on the label. This prepared label is attached to the top of the micromount box. On the bottom of the box, I use a smaller rectangular self-adhesive label and enter the specimen number on this label. That way if the lid and the base become separated I can always match them up. If the specimen is of special note, I sometimes place a colored adhesive dot in the upper left-hand corner of the box lid. (The same colored dot is placed in the catalog as well) As a final step, I coat all the labels with a thin coat of Modge Podge. This is a decoupage fluid that you can buy at craft stores. What this coating does is prevents the adhesive from out-gassing becoming brittle and falling off over time. Now, we are not done yet!

The Catalog:
Currently I use sheets of college ruled notebook paper organized in a three-ring binder as my external catalog. The specimen number is entered on the left side of the page and then the mineral name and detailed locality information is entered on the same line following the number. I used to enter chemical formula but this got to be too time consuming. If I need the mineral chemistry, I’ll look it up! I try and enter as much precise locality detail as I can. For me this adds to the enjoyment of the specimen. The internet is invaluable here. If you have not already seen it there is a site at http://www.mindat.org that has excellent locality detail for quite a few mineral species and localities. Often if you enter the name of the mine, a wealth of precise locality data comes up. I have a second external catalog that lists the specimen number and the chemical class of the specimen. For example I have a separate section for silicates, sulfides, arsenates. . . . it adds immeasurably to the enjoyment of a mineral collection. Whatever technique you use to organize your collection, I encourage you catalog your specimens, after all a specimen without a label and a catalog entry is just "a pretty rock".
FUN FACTS TO KNOW AND TELL ABOUT AMBER

- It has been poetically said of Amber that “Time has stopped inside it.”
- There are approximately 250 color variations of amber.
- Soft resin can be chewed as gum with disinfecting properties. It can be used to protect scabbed sores, preventing infectious bacteria and fungi from attaching to the wound.
- The ancient Greeks found that dissolving a little resin in the wine made it keep better. (I don’t keep wine around long enough to worry about it spoiling.) This knowledge is still put to use today in the making of retsina wines, whose distinctive taste comes from the resin of the Aleppo pine.
- Succinite, the scientific term to describe authentic amber, comes from the Latin, meaning “juice stone.”
- The parallel grooves sometimes found on larger amber pieces may be the result of ice movements.
- Yellow and brown are the most common colors of amber. Red develops over time through oxidation. Oxidation also causes crazing (shallow cracks along the surface).
- White amber is less brittle than clear, and is therefore easier to sculpt and shape. Because of its many air bubbles, white amber can float in ordinary water: no salt needed!
- The world’s largest piece of amber weighs 150 pounds and was found on the island of Borneo.
- The surface of amber is somewhat harder than the core which indicates that the hardening process occurs from the outside-in. Generally, the harder the amber, the older it is.
- Inclusions are almost always found in transparent amber and almost never in opaque stones. One theory is that clear amber is the result of a defense mechanism whereby the tree produced and released large amounts of resin in response to a threat.
- Amber inclusions of larger animals such as fish, lizards, etc. are almost always fakes. The local lizard population in Mexico is probably endangered from the amber forgers alone!
- Be careful when doing salt solution tests: Polystyrene has the same specific gravity as amber and will float.
- Amoebas have been found trapped in amber in the act of dividing.
- Dinosaur DNA has not been extracted from the bellies of mosquitoes in amber, but in May 1995, Raul Cano revived bacterial spores from a sting-less bee entombed in amber 25-40 mya. If this feat can be substantiated, he will have been the first person to resurrect life from the past. Some say a modern strain of bacteria contaminated the experiment despite all precautions.
- Dominican amber is too young to house dinosaur DNA but NJ amber formed 30my before the dinosaurs became extinct.
- DNA is largely similar for most organisms: it contains around 90% inactive information (perhaps a reserve for future evolution?)
- Not all tree resins can form amber, as most get broken down and decay. Only 2 types of tree living today produce stable resins that could, with time, fossilize into amber.
- “Spangles” are artificially produced in real amber by heating the piece in sand.
- Pressed amber (ambroid) is commonly found in Victorian jewelry and as the stems of tobacco pipes. It is formed by fusing small pieces of amber together under high temperature and pressure.
- It was once believed by ancient people that amber was hardened lynx urine.
- In 1264 Teutonic kings tried to control the collection and sale of amber. If you were caught collecting amber w/o permission, you were hung.
- Phenolic resin (Bakelite) is the most common material to be encountered in fake amber jewelry.
- Insects in amber: If the specimen is perfectly centered in the piece, and its legs neatly stretched out and arranged, beware! Genuine spiders, for example, usually have their legs tightly curled up under their bodies in death. In Mexico, green amber does occur naturally, but it’s quite rare. Necklaces, rings, etc. are commonly made from green plastic and sold as amber. Amber can also be irradiated or heat-treated to produce the green color.
California Federation of Mineralogical Societies Updates

Please start clipping any used stamps from your mail. Long time CFMS member Dick Panky, Contra Costa Gem and Mineral Society, collects bags of stamps from member societies at the annual CFMS Directors meeting, in November. These stamps are donated to the Easter Seal Society, which sells them to dealers and collectors as a fund raiser for Easter Seals. Please bring your stamps to any future meeting and give them to Frank Van Hecke, NCG&MS CFMS Director.

Camp Paradise Lapidary Camp is once again being held in La Porte, CA, with two sessions, late August and early September. Many of our members have attended this superb camp, with many of them being repeat attendees. Application forms will be available soon. For more information go to www.cfmsinc.org.

Submitted by Frank Van Hecke, CFMS Director

<table>
<thead>
<tr>
<th>CFMS SHOWS 2020</th>
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<tbody>
<tr>
<td><strong>Summer/Fall</strong></td>
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<tr>
<td>June 1-2: CAMBRIA, CA</td>
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<tr>
<td>San Luis Obispo Gem &amp; Mineral Club</td>
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<tr>
<td>Cambria Veterans Hall</td>
</tr>
<tr>
<td>1000 Main Street</td>
</tr>
<tr>
<td>Hours: 10 – 5 daily</td>
</tr>
<tr>
<td>Contact: Kim Noyes, (805) 610-0603</td>
</tr>
<tr>
<td>Email: <a href="mailto:kim@gmail.com">kim@gmail.com</a></td>
</tr>
<tr>
<td>September 26-27; Lancaster, CA</td>
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<tr>
<td>Palmdale Gem &amp; Mineral Club</td>
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<tr>
<td>Antelope Valley Fairgrounds</td>
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<tr>
<td>2551 West Ave H</td>
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<tr>
<td>Hours: 10-5 Daily</td>
</tr>
<tr>
<td>Contact: Allison McClung; 661-839-7403</td>
</tr>
<tr>
<td>Email: <a href="mailto:ali_cares@aol.com">ali_cares@aol.com</a></td>
</tr>
<tr>
<td>Website: palmdalegemandmineral.org</td>
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<tr>
<td>June 23-28; Lodi, CA 81st CFMS Show &amp; Convention</td>
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<tr>
<td>California Federation of Mineralogical Societies</td>
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<tr>
<td>Grape Festival Fairgrounds</td>
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<tr>
<td>413 E Lockeford Street</td>
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<tr>
<td>October 11: Fallbrook, CA</td>
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<tr>
<td>Fallbrook Gem and Mineral Society</td>
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<tr>
<td>123 W Alvarado St</td>
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<tr>
<td>Hours: 9-4</td>
</tr>
<tr>
<td>Contact: Michelle Shearer; 760-805-2184</td>
</tr>
<tr>
<td>Email: <a href="mailto:info@fgms.org">info@fgms.org</a></td>
</tr>
<tr>
<td>Website: <a href="http://www.fgms.org">www.fgms.org</a></td>
</tr>
<tr>
<td>October 10th and 11th</td>
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<tr>
<td>Nevada County Gem and Mineral Society</td>
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<tr>
<td>Nevada County Fairgrounds</td>
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<tr>
<td>More Details to follow</td>
</tr>
<tr>
<td>Check websites or call to ensure shows and field trips are still planned during the 2020 CORVID-19 crisis</td>
</tr>
</tbody>
</table>
Nevada County Gem & Mineral Society
P.O. Box 1686, Grass Valley, CA 95945

2020 Elected Officers

PRESIDENT
Edwina Swenson
VICE PRESIDENT
Keven Clark
SECRETARY
Vacant
TREASURER
Frank Van Hecke
DIRECTORS
Christie Harris
Eric Trygg
Christy Busch

2020 Committee Chairpersons

FEDERATION DIRECTOR
Frank Van Hecke
TREK LEADER
John Dolman
HISTORIAN
Beverly Glenn
HOSPITALITY
Vacant
LIBRARIAN
Beverly Glenn
MEMBERSHIP
Sue Valencia
JUNIOR PROGRAM
Vacant
CLUB PICNIC
Lori Woodhall
REFRESHMENTS
Birthday Honorees
SUNSHINE
Lori Woodhall
NEWSLETTER EDITOR
Blaze Baker (acting)
WEBMASTER
Charles Lindquist
2020 SHOW ORGANIZER
Frank Van Hecke
Dan Chaplin
SCHOLARSHIP
Joyce Emerson

* Call if sending email

Nevada County Gem & Mineral Society Meetings
The Nevada County Gem and Mineral Society meets monthly with few exceptions. Membership is informed of exceptions at meetings and through Rock Writings. You are welcome to attend any meeting.

General Membership Meeting: First Tuesday of the month, 7:00 p.m.
Executive Committee Meeting: First Tuesday of the month, 6:00 p.m.
Golden Empire Grange Building, 11363 Grange Ct., Grass Valley, CA

NCG&MS is a non-profit organization with the following objectives:
- To promote the study of mineralogy, geology & fossils
- To encourage the collection of minerals and gems
- To foster the study and practice of the lapidary arts
- To provide field trips to mineral localities
- To promote good fellowship, education and recreation

Membership Information
Yearly membership dues for NCG&MS are $25.00 for singles and $30.00 for families. *Deduct $5.00 if you receive your newsletter via email* For more information or an application, email our Membership Chairperson Sue Valencia at susanmoody08@comcast.net

Check out our website at: http://www.ncgms.org
Program: None Planned

Tuesday May 5 at 7:00 p.m.
Golden Empire Grange Guild
11363 Grange Ct., Grass Valley

** Bring a Friend! **