



From the President's Pen

In my effort to find something thought provoking to provide the society members, I thought I would do a web search for "Geological Events October 2019". What I found is a wonderful website that I have probably reported on in the past, but believe it is necessary to provide the attention it deserves once again; especially for a group such as ours: www.Geology.com.

This website covers rocks, space rocks, gemstones, earthquakes, hurricanes, and all other levels of geological and earth science. One can get buried in any level of details that is desired. This website is a great source for our Rookies as well as our seasoned rock hound, perhaps even a reference source for a few of our Geologists.

Some really interesting stories that I ran across were a report from University of Utah, covering Utah's Red Rock Metronome; ruptures in Ridgecrest Quake provided by CalTech and NASA; and even information on tourmaline crystals (rather detailed too). Just reading each of the above listed stories and information, I found myself lost for greater than an hour learning something new, and I was supposed to be writing to you all!

So take the opportunity and bookmark the website and randomly check in from time to time just to learn a little tidbit of new information.

— Glenn Fiala

SLATE OF RRR OFFICERS FOR 2020

After receiving nominations in September and October, we are scheduled to vote for our 2020 slate of officers at the November 12 Educational Meeting. There will be a voice vote.

The newly elected officers will be sworn in at the December Educational meeting. They will assume their duties after the December Business (Board) meeting.

President Glenn Fiala

Vice President (open)

Secretary Florence Brady

Treasurer Terry Yoschak

Federation Director Michael Hunerlach

Librarian/Historian Karla Shannon

Bulletin Editor Terry Yoschak

Directors - (2) serve for a two year term

Cathy Nelson

Lindy Summers-Bair

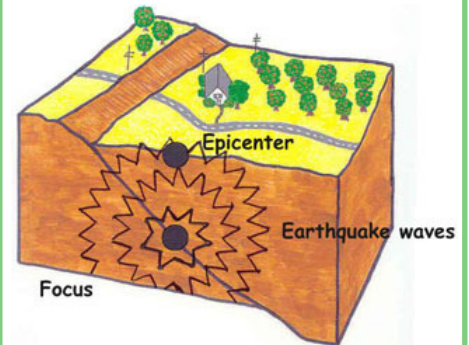
Field Trip Chairperson Gene Doyle

Juniors' Advisor Carole Kowalik



Educational Program for November 12, 2019

"Earthquakes"
By Dick Hilton



In the Garden Room

**We will vote for club
officers for 2020 at
this meeting**

Inside this issue:

Meeting Minutes	2
Rookie News, Announcements	3
Renewing RRR Annual Dues for 2020, Lapidary Shop News, Lapidary Classes	4
More Lapidary Classes, Thank You's, The Whitney Flame Topaz	5
Rocks & Minerals of the Native Americans	6
Calendar, Membership Renewal Form	7
Upcoming Northern California Shows, Ammonite and Ammolite	8



MINUTES FOR ROSEVILLE ROCK ROLLERS EDUCATIONAL MEETING OCTOBER 8, 2019

Call to Order by President Glenn Fiala at 7:02 p.m.

Flag Salute.

Present: Members 61+, Juniors, 5 and Guests 2+.

Treasurer – Terry Yoschak had no report.

Secretary – Florence Brady reported she is accepting membership applications and renewals.

Programs/Vice President – Jan Kessler reported Dick Hilton will give a program on Earthquakes for the Ed. Mtg. on Nov. 12th.

CFMS Director – Mike Hunerlach was absent.

Vests, tee shirts, patches – see Jan Kessler if you want any.

Field Trips – Gene Doyle reported on the field trips to the Fallon, NV area and reported on the upcoming field trip Oct. 19th.

Librarian – Karla Shannon was absent.

Show Chair – Jim Hutchings reported the Fairgrounds is still working on the contract. No payments have been made. Kelley Ballard discussed the work needed in regards to emptying the old Show Storage Trailer and outfitting the new trailer. Work parties will be set up.

Lapidary Shop – Denise Coyne – has available at the meeting or at the shop, rocks to tumble for the Kids' Junction during the show. Grit is also available. She invited any members who did not finish their orientation class to return and complete it and if desired, in order to use the big saw, get in touch with an instructor.

Juniors – Carole Kowalik reported 8 juniors attended the Rookies meeting. They studied about Chatoyance and made bracelets. Next month's program, TBD.

Refreshments – we have received enough signups for November's Ed. Mtg.

Class Coordinator – Cathy Nelson reported there will be a Silversmithing III class in the future. Also, to be offered will be another session on opals given by George Comas. There is a wait list.

Old Business – report was given by Meg Zbierski, Nominations Committee Chair. She reviewed the slate of Board Officers for 2020. Nominations were asked for each Office. No nomination has been received for the Office of Vice President. The slate of Board Officers will be voted on at the Nov. 12th Ed. Mtg.

New Business –

Repairs to Lapidary Shop – Glenn reviewed the needed repairs which will be coordinated by Rob Blazina. Four volunteers will be needed to help Rob.

Show Storage Trailer – Kelley Ballard reviewed the process (see previous report under #11) for setting up the new storage trailer.

Drawings – winners were: Member, Carole Lockhart; Junior, Veronica Healy and Guest, David Milas.

Upcoming Shows – members were reminded to check the bulletin for upcoming shows.

Program – Jim Hutchings gave a power point presentation on the "Origins and Chemistry of Gold"

Silent Auction – members were reminded to check out the items on the silent auction tables.

Adjournment – meeting was adjourned at 8:40 p.m.

MINUTES FOR ROSEVILLE ROCK ROLLERS BOARD MEETING OCTOBER 8, 2019

Call to Order at 8:45 p.m. by President Glenn Fiala.

Present – 8 Officers, a quorum was present.

Repairs needed for Lapidary Shop – a motion was MSA to approve up to \$3500 for repairs to the outside of the Lapidary Shop Trailer.

RRR Exhibit Case – a motion was MSA for Kelley Ballard to take the RRR exhibit case to the El Dorado Co. M. & G. Society's show Oct. 19th & 20th.

Membership Applications – a motion was MSA to approve the membership applications for: Jeridan Compuesto, (JR); Veronica Healy (JR); Alan & Nancy Candee and Rachel McCaskill (JR) and Mark Peters.

Adjournment – meeting was adjourned at 8:50 p.m.

Respectfully submitted,
Florence Brady, RRR Secretary

MINUTES FOR ROSEVILLE ROCK ROLLERS BOARD MEETING OCTOBER 22, 2019

Call to Order by Vice President Jan Kessler at 7:02 p.m.

Roll Call – present, all officers except Stan Bollinger, Glenn Fiala, Mike & Rene' Hunerlach. Guests: Denise Coyne, Keith Lindholm and Kim Loe.

Minutes – a motion was MSA to approve the minutes for the Board Mtg. Sept. 24, 2019 and for the Ed. & Bd. Mtgs. on Oct. 8, 2019.

Treasurer – Terry Yoschak reported RRR will be receiving more donations for the building fund and she will open a savings account at Wells Fargo as we have reached the designated amount to open this account.

Correspondence – none.

Membership – Florence Brady reported we have 264 memberships for 2019 and only 49 membership renewals for 2020. More renewals were received during the meeting.

Programs-Vice President – Jan Kessler stated Sierra College instructor Dick Hilton will give a presentation on "Earthquakes" for the Nov. 12th Ed. Mtg.

Historian/Librarian – Karla Shannon reported she has received a lot of books and any duplicates will be given to the SA Chair, Tim Carlson.

Bulletin Editor – Terry reported the deadline for the November bulletin will be Nov 1st.

Field Trips – Gene Doyle reported on the field trip to Black Butte Lake. 10 people attended. He is working on future field trips.

CFMS Director – no report, Mike Hunerlach was absent.

Lapidary Classes – Cathy Nelson reported she is working on coordinating silversmithing classes with Dan Bender (Nov. 10th). She is hoping to have a wire wrapping class on Nov. 23rd.

Show Chair – Jim Hutchings reported he still does not have a correct contract for our 2020 show, but it appears that the cost will be several thousand above last year's rental costs. Entrance fees and inside vendors' rental will be the same, but outside vendors' space rental has increased to \$200 for a 10 x20 ft. space. Parking will be \$10. Discussed whether or not we should continue to skirt the show tables, it was decided to continue with this policy.

Lap Shop – Denise Coyne reported they had 3 new students on Monday. She and several other RRR members picked up

rocks from a former rockhound's collection. This availability will be publicized to RRR members. Denise shared the visit with Bob Rush and the discussions regarding our polishing machines. A repair will be attempted to one of the polishing machines. Denise has started to develop an inventory along with photos. The shed has a new door constructed by Sam and Barbara Manganello.

Directors – Martha Nichols reported on the Santa Rosa gem and mineral show.

Juniors – Juniors' Advisor Carole Kowalik reported the Nov. 12th Juniors program will be the study of Metamorphic Rock Progression over time due to pressure and temperature.

Old Business

New Show Storage Trailer – Kim Loe, Co-Chair with Kelley Ballard, gave a report on the progress made with emptying the old show storage trailer and outfitting the new trailer. Some items from the old trailer will be stored elsewhere, sold or taken to the dump. The new trailer will be relocated to Kim Loe's property and outfitted to hold exhibit cases and other items. Shelving will be installed. The old trailer will be offered for sale when emptied. When ready, work parties will be organized. Some miscellaneous items will be stored at Jim Hutchings property. Train track's board will be cut in half and hinges placed. To be taken into consideration is our present contract (expires Dec. 31st) for the storage space for the old show storage trailer.

2020 Slate of Officers – the slate will be publicized in the Nov. bulletin and voting will take place at the Nov. 12th Ed. Mtg.

Repairs to Lapidary Shop – outside repairs will start in a few more weeks. Rob Blazina will coordinate the volunteers needed

New Business – discussion regarding polishing machines in the shop. It was decided there is no need nor any room for a new polishing machine.

Next Board Meeting – November 26, 2019

Adjournment – meeting was adjourned at 7:55 p.m.

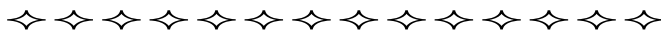
Respectfully submitted,
Florence Brady, RRR Secretary

November Show Meeting

The meeting will be held Tuesday, November 19 at 7:00 PM in the club Lapidary Shop at the Fairgrounds. Members are encouraged to attend and get involved!

November Board Meeting

The meeting will be held Tuesday, November 26 at 7:00 PM in the club Lapidary Shop at the Fairgrounds.



Sunshine

When you know of any member who is ill or has been hospitalized, please contact our Sunshine Chair, Heather Crane, at (818) 903-4433 or hmcrane7@gmail.com

Welcome New Members:

Alan & Nancy Candee
Mark Peters

Welcome New Junior Members:

Jeridan Compuesto
Veronica Healy
Rachel McCaskill

Rookie Rock Roller News



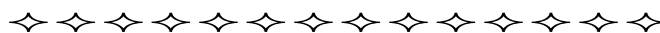
The Rookies will meet at 5:30 p.m. on Tuesday, November 12, 2019 in the lapidary shop. We will have a quick study of metamorphic rocks and how the changes occur. After the study, we will have a fun activity.

Last month, we studied a little about chatoyance in rocks and minerals. Each junior was given a tiger eye specimen for their collections as an example of chatoyance. After that study, we set about to make a key chain or bracelet using beads to represent each of the planets in the solar system. Since we ran out of time, the juniors were to finish at home. I hope they all bring their finished solar systems to the November meeting. I would love to see them.

As always, I am available to discuss badges earned. Call or text for an appointment day or night since I turn the sound off when I sleep.

See you at the meeting.

Carole Kowalik, Junior Advisor
(916) 871-0573 home3004@gmail.com



November Refreshments



Refreshments for the November 12 Educational meeting are to be provided by Carole Lockhart, Susan & Brian Bellew, Ed Ernst, Jim Barton, Darlene Beck, Kimberly Fiala and Justin & Kati Meredith. Thank you all in advance!

Renewing RRR Annual Dues for 2020

Just a gentle reminder, please US mail or bring to the November 12th Ed. Mtg. your dues payment along with the form.

Printed in this bulletin is a renewal form to be used for renewing your RRR membership dues for 2020.

Our dues membership year is from January 1, 2020 to December 31, 2020.

Checks can be payable to RRR. If paying with cash, please have the exact amount.

Please do not add a new member to the renewal form. Rather, use a membership application, which is available either on the RRR website (www.rockrollers.com) or at a meeting.

We appreciate your early payment for the 2020 dues! Renewal dues paid after December 31, 2019 will incur a \$ 5.00 late fee.

Florence Brady, RRR Secretary/Membership Chair
Terry Yoschak, RRR Treasurer

Lapidary Shop News



We still have tumbling material in the shop for making polished rocks for the Kids' Junction grab bags. There is rock, and grits to get you through the processes.

We had a treat in the shop one Wednesday evening! Bob Rush, an expert lapidarist whose displays are often featured in our shows, came in and gave a demonstration on dry polishing flat cabs. Very informative.

Vernon, Sam and Barbra went and picked up lots of new material for the shop from the Crockett family. Vernon has been slicing interesting slabs for cabbing in the shop. Rocks were also brought back for sale at the auction for the upcoming March show, and for sale at the monthly education meetings.

— Denise Coyne, Lapidary Shop Director



Lapidary Classes

Lapidary Classes - Introduction to Shop Use & Cabochon making is \$10 per class for 5 classes or \$45 paid in full. Our Shop is staffed Monday & Wednesday nights 5 pm - 9 pm! Learn more about the Lapidary Arts & Cabochon Making. A DVD is available for viewing at the Shop for Cabochon Making.

Regular \$5 per day or \$20 monthly rates apply for lapidary shop use after Orientation/Introduction classes.

Large & Extra Large Saws: \$2 per slab for 18 inch saw & or 24 inch saw for cutting large & extra large rocks.

Crafty Days - Crafty Days is an open get together/play day for anybody wanting to work on their craft while yakking and snacking! We always have fun! Bring whatever you are working on and a snack to share. We meet 1st and 3rd Mondays each month. No class or class fee, \$5 for use of the Shop is the only fee. 10-2pm at the Lapidary Shop.

Crafty Days this month are on November 4 and 18.



Wire Weave Medallion Pendant Class

(Just in time to make some great Christmas gifts)

Our Alexis Prince is going to teach a class on basic wire weaving class at the RRR's Lapidary Shop. at 200 Corporation Yard Rd., Roseville on Saturday, Dec. 7, 2019, from 9 AM to 1 PM.

This class is an introduction to wire weaving. Wire wrapping class familiarity is helpful, but not a requirement.

Please register early as classes can fill up very fast. Prepayment is needed to hold a space in the class for you. Please call Cathy Nelson, the Lapidary Classes Coordinator at 925-321-2024 or email her at canelson2@netscape.net to check if there is space available and for the address to mail the check to.

Each class will be limited to 6 students. The cost for each class will be \$25.00 (which includes the \$5.00 RRR shop fee). A materials list will be sent out to each person that registers for the class. Or the instructor can supply the materials for a fee of \$5.00 (to be paid to the instructor at the class).

If you can, please bring your own wire cutter and bent nose pliers.

* we will NOT be adding the channel set stone seen in the photo in this level class.

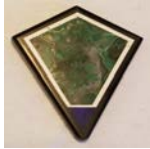
Class will review types of wire, tools, planning and process. Goal is to finish the pendant by the end of class to take with you.

(more Lapidary Classes next page!!)

More Lapidary Classes

Please pre-register with Cathy Nelson, the Lapidary Classes Coordinator 925-321-2024 or canelson2@netscape.net

Intarsia Classes (Offsite)



Bill Simpson, whose intarsia work was displayed at our latest RRR Show, is offering intarsia classes at his

shop in Meadow Vista. The classes are two 1/2 days, schedule to be determined.

Fee is \$80.00 which includes \$5.00 to the RRR as a shop fee. Please contact Bill Simpson 408-799-3243.

I have attached a picture of the wonderful intarsia that Bill Simpson does (green one) and a picture that I did (brown one) in his class.

— Cathy Nelson



The Whitney Flame Topaz Smolders in Vibrant Red

A visit to the local jeweler's and a request for topaz is likely to turn up an assortment of blue stones, ranging from near clear to cerulean. Mined transparent and subjected to color alteration via radiation in laboratories, these gems are inexpensive and ubiquitous—as Smithsonian minerals curator Jeffrey Post observes, you're liable to spend more on the gold of the band in which the topaz is set than the stone itself.

But the gem that just this morning went on display at the Smithsonian's Natural History museum, dubbed the "Whitney Flame" in honor of its donor, Coralyn Whitney, is a topaz of another color. As its name suggests, this topaz is shot through with rich, fiery red. Cut in the shape of an elegant teardrop, the Flame is a particularly pristine specimen culled from the mines of topaz mecca Ouro Preto, Brazil, and its debut at the Smithsonian promises to drum up renewed interest in topaz worldwide.

The reddish hue discernible in a number of Ouro Preto topazes is the result of atoms of the metal chromium making their way into the mineral's crystalline structure. "In addition to the basic components—aluminum, silicon, oxygen, fluorine—that make a topaz a topaz," says Post, "you have a trace amount of chromium that happens to get incorporated." Unlike the blue of mass-market topazes, the red of red topaz cannot be fabricated in a laboratory. If geological conditions at the source aren't right, a topaz crystal will never be red.

Even the Ouro Preto stones that make the final cut and are sold off as red topaz are almost always imperfect



in the red-to-amber color gradient, resembling the head and tail of a flame more than its fiery heart. What makes the Whitney Flame topaz such an astonishing acquisition is its homogeneous red color. "We recognized right away that this is something different than we'd ever seen," Post says.

Post, in the company of Smithsonian gem collection manager Russell Feather and longtime Smithsonian benefactor Coralyn Whitney, had first encountered the stone at Arizona's annual Tucson Gem and Mineral Show, a massive showcase of priceless stones that never fails to draw buyers and enthusiasts from all corners of the globe. "It's quite an extravaganza," Post says. "You never know what you're going to find."

At the 2018 show, Whitney revealed to Post and Russell that it was her intention to acquire a new gemstone to donate to the Smithsonian's collections. When a dealer presented them with the smoldering stone that would soon be christened the Whitney Flame, they knew instantly they had a winner on their hands.

"When we saw it," says Post, "we all collectively started weeping a little bit." The uniform red of the stone and the gentle glint of light off its facets instantly captivated the Smithsonian scouting party. They had never seen a gem of its kind.

Excerpted from <https://www.smithsonianmag.com/smithsonian-institution/whitney-flame-topaz-smolders-vibrant-red-180970336/>

Thank You's

To Barbara & Sam Manganello for installing the new door for the shed.

To Karla Shannon and Nancy Hood for getting items from an estate sale to use in the 2020 show.

To Carole Lockhart for donating a bola tie.

To David Milas for donating a faceted rose quartz cab.

We need more "guy" prizes for the Prize Tree!!



Rocks & Minerals of the Native Americans

Would you guess that on the first Thanksgiving, the American Indians made use of rocks and minerals to set the scene for the feast? Without tools to till the field, grind the flour, and light the fire, the feast of Native Americans and pilgrims may not have commenced!

Without modern day plastics and advanced tool-making technologies, the tribes of Native American Indians had thought up a wide range of ways to make use of rocks and minerals that naturally occur on Earth.

Sulfur was burned by the medicine man, flints were used as fire starters and arrowheads, and halite (salt) to tan animal hide and preserve foods. Some served decorative purposes such as hematite—that when grinded down—mixed in animal fat to form vibrant colors to be used in cave wall paintings. What made rocks and minerals so useful to American Indians was the natural hardness of rocks and special chemical properties of minerals.

1. Red Jasper

Red jasper was a common stone used by the American Indians for various ceremonial purposes. It was once used as an offering during rain-making rituals and was thought to offer the wearer guidance when dowsing for water. Some Native American tribes thought red jasper increased one's sensitivity to the Earth.



2. Quartz

Various types of Quartz were used by the American Indian tribes. Rose quartz was held in high value for its healing powers, and clear quartz was worn by some for good luck. Two derivatives of quartz, chert and flint, are both microcrystalline quartz used in the tools and weapons (arrowheads, spear points) of the Native Americans.



3. Turquoise

To some American Indian tribes, turquoise was a legendary gift. As the Indians rejoiced with the arrival of the rain, tears of joy mixed with this rain and fell to Mother Earth to create turquoise—"the fallen skystone". For this reason, turquoise was highly prized by various tribes and used to craft fine jewelry or talismans of beauty, spirituality and life-giving power for over 7,000 years.



4. Granite

Rocks that formed large flat slabs were often used by the American Indians to make the mortar and pestle. These "grinding stones"—the mortar and pestle could be used for various reasons, such as grinding ingredients for cooking or mixing materials for building purposes. Wild grains were crushed with this tool into flour, or long slabs of granite were also used to roll dough to be cooked over the fire.

5. Pumice

Various types of igneous rock were used by the Native Americans, and pumice is one such rock that was ground down and used in the clay to mix pottery. Pumice is a type of volcanic glass. White pumice is a particular type of the stone that can be found commonly used in the pottery of various tribes.



6. Sandstone



In addition to granite, sandstone was also a popular rock used by tribes in the mortar and pestle design. Some American Indians also created molds from sandstone for silver-casting. Another handy use for this particular stone was its ability to sharpen and sand tools, which provided a way to craft fine weapons from other materials.

7. Azurite

The stone azurite has always held mysterious sacred qualities, and was once used by some Native American tribes as an amulet to help the wearer contact a spirit guide. It was also used alongside alabaster in the Zuni tribe sculptures.



8. Alabaster



The softer stone alabaster was a common material of the Zuni fetishes or small statuary carvings by the peoples of the Zuni tribe. These highly prized sculptures were made for ceremonial purposes from the easy-to-carve alabaster and used as power objects or mediators by the Pueblo Indians of New Mexico.

(Continued on page 8)

ROSEVILLE ROCK ROLLERS – MEMBERSHIP RENEWAL for 2020

(Please do not add a new member to this form)

If your personal/contact information is the same, just write SAME on this form, under your name(s).

NAME(S) _____

ADDRESS _____

Street

City/State

Zip

PHONE # including area code (_____) _____

E-MAIL _____
 (e-mail address will be part of the Club's Membership Roster)

DUES:

Adult (one) Membership \$20.00 per year (receiving bulletin via E-Mail)

Family Membership \$30.00 per year (receiving bulletin via E-Mail)
 (2 adults, same address)

Junior Membership \$8.00 per Junior Member

_____ **Amount Paid** **Ck. #** _____

Dues not paid until after December 31, 2019 will be delinquent and an assessment of \$5.00 will be charged. Checks should be payable to RRR or Roseville Rock Rollers.

If paying by US mail, please mail to: Roseville Rock Rollers Gem & Mineral Society
 P.O. Box 212, Roseville, CA 95678



November Calendar

Birthstone: Topaz 

Sun	Mon	Tues	Weds	Thurs	Fri	Sat
For more class information, contact Class Coordinator: Cathy Nelson (925) 321-2024 Email: canelson2@netscape.net					1	2
3	4 Crafty Day 10-2 Lapidary Shop 5:00-9:00 pm Mineral ID	5	6 Lapidary Shop 5:00-9:00 pm	7	8	9
10	 Shop Closed	12 Meetings: Rookies 5:30 pm Club 7:00 pm	13 Lapidary Shop 5:00-9:00 pm	14	15	16
17	18 Crafty Day 10-2 Lapidary Shop 5:00-9:00 pm Mineral ID	19 Show Meeting 7:00 pm	20 Lapidary Shop 5:00-9:00 pm	21	22	23
24	25 Lapidary Shop 5:00-9:00 pm Mineral ID	26 Board Meeting 7:00 pm	27 Lapidary Shop 5:00-9:00 pm	28 	29	30

Upcoming Northern California Shows

November 2 - 3: CONCORD, CA

Contra Costa Mineral & Gem Society
Centre Concord, 5298 Clayton Road
Hours: 10 - 5 daily
Contact: Mike Hopkins
Email: mhopkins@ironhorsesdesign.net
Website: contracostamineralandgemsociety.org

November 9 - 10: YUBA CITY, CA

Sutter Buttes Gem & Mineral Society
Yuba-Sutter Fairgrounds, 442 Franklin Blvd
Hours: Sat 10 - 5; Sun 10 - 4
Contact: Karen Horita, (916) 677-6696
Email: horita@comcast.net
Website: sutterbuttesgemmin.org



9. Catlinite (Pipestone)



Many know that various types of mudstone were used to mix the clays of the American Indians, but this particular type held an even higher purpose. That is, catlinite or pipestone was a material used to carve the peace pipes of many American Indian tribes. This material takes on a

reddish-brown color. One particular mine of catlinite at forms the second softest rock in the world often found in a layer just underneath the Sioux quartzite sediment—the second hardest rock in the world!

10. Obsidian

Last is the black beauty, obsidian. This particular glass formed igneous rock was used by American Indians to create stunning jewelry with Apache Tears and was carved into sharpened tips on hunting weapons that were made to pierce.



From <https://rockology.net/blogs/news/10-rocks-and-minerals-of-the-american-indians>, via *The Nugget* 11/19.

Photos from crystalage.com, pinterest.com, eaglerocktradingpost.com, scvhistory.com, geologylearn.blogspot.com, keshi.com, wrightsgallery.com, www.firemountaingems.com

AMMONITE & AMMOLITE

By Carla Howard

The name “ammonite” is derived from the ancient Egyptian god Ammon who considered them to be divine. Ammonites were hard-shelled marine animals related to squid, octopus, and the chambered nautilus. They were abundant and lived about 70-135 million years ago in all



Ammonites

the oceans and in a subtropical sea that bordered the Rocky Mountains. They were able to swim, thanks to the unique construction of their shell, which was divided into a series of air chambers. The air in the chambers provided buoyancy for the animal to float, and they probably moved through the water using jet propulsion. As the seas receded, the ammonites were crushed by tons of vegetation and silt, and many were fossilized. They are usually preserved in chalky clay, limestone or limey shale.



Ammonite fossil

Rare trace elements in some areas caused radiant iridescent blue, green, red and gold to appear on the fossil surface. When the fossilized shell shows this rainbow of shifting interference colors in beautiful mosaic-type patterns it is then known as an ammolite. The gem ammolite was created when the ammonite died close to the shoreline of the Bearpaw Sea, near an inflow of fresh water. The water somehow changed the chemistry of the shell, possibly depositing iron in it, which accounts for the greens in the stone. It is recovered through pit mining with most coming from the badlands of Alberta. By law, intact fossils cannot be broken for specimens, and each pit mine must be filled and reclaimed before another pit mine can be opened.



Ammolite + jewelry

Ammolite has a hardness of 4.5 to 5.5, is also known as korite and calcentine, is made up of calcium carbonate, and has an orthorhombic crystal structure. The thin aragonite layer of

the ammonite shell is often assembled into triplets with a protective quartz top and a shale backing. Ammolite is far rarer than diamonds.

From *The Nisqually Rockhounder*, 5/02 via *Hound's Howl* 9/08, via *The Rockhounder* 6/09
Pictures from alamy.com and jewelers.org.

ROSEVILLE ROCK ROLLERS GEM & MINERAL SOCIETY
BULLETIN EDITOR
P.O. BOX 212
ROSEVILLE, CA 95678

Send exchange bulletins to
above address

*** First Class Mail ***

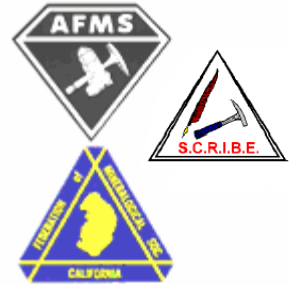


November 2019



the
**ROLLIN'
ROCK**

ROSEVILLE ROCK ROLLERS, INC.



**MEMBER, CALIFORNIA FEDERATION OF MINERALOGICAL SOCIETIES
MEMBER, AMERICAN FEDERATION OF MINERALOGICAL SOCIETIES
VOL. 60 NO. 11 NOVEMBER 2019**

**EDUCATIONAL MEETING 2ND TUESDAY OF EACH MONTH, 7:00 PM
EXECUTIVE BOARD MEETING 4TH TUESDAY OF EACH MONTH, 7:00 PM**

**EDUCATIONAL MEETING LOCATION: ROSEVILLE FAIRGROUNDS,
JOHNSON HALL, 800 ALL AMERICA CITY BLVD., ROSEVILLE, CA**

Changes and exceptions will be published in the bulletin.
GUESTS AND VISITORS ALWAYS WELCOME