

The Sierra Pelonaagram



September 2012

... Member of the California Federation of Mineralogical Society Inc. ...

The Sierra Pelona Rock Club is a non-profit organization founded in 1959 with the objective to sponsor activities and promote interest and education in: mineralogy, lapidary, geology, paleontology and related subjects.

It has been a long hot and humid summer and now it is time to get back to school and get into our fall activities. This month at the General Meeting, be sure to bring your goodies collected over the summer. It doesn't matter if you bought it, found it, polished it, cut it or cabbed it—just bring it!

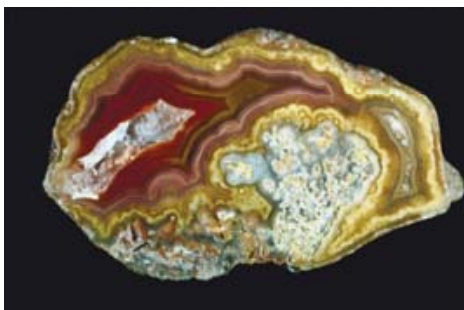
Greg has some great field trips planned over the next several months, which he will be discussing at the meeting. Shep is working on programs that will educate and hopefully entertain you at the same time. Don't forget, visitors are welcome, so feel free to bring a friend or two.

The Publicity Chair position is still open. Diane Southwell has continued to do this very important function for the club, but her health dictates that she be relieved of this duty. She will be more than happy to guide her replacement and assures me that it literally takes only a couple minutes a month, basically emailing the months' program to the Signal. If you think you have that few minutes, please let Ron know.

Enjoy this month's Pelonagram and we will see you at the General Meeting on the 18th.

Heidi

Editor/Publisher of the Pelonagram



You don't have to know
what it is to say:
"Ooh, Pretty Rock!"

Birthdays

**Bob Caudill
and
Stephanie Holgren**

**We hope your day
was special.**



Officers:

President – Ron Lawrence

Vice-President – Bill Webber

Secretary: Heidi Webber

Treasurer – Greg Mazourek

Federation Director (CFMS/AFMS) – Shep Koss

Chairpersons:

Claim - Mike Serino

Donation Rock Table - Akiko Strathmann

Facebook--Greg Langewisch

Field Trips – Greg Langewisch

Historian - Frank Humelbaugh

Hospitality – Evelyn Velie

Membership – Janelle Williams

Pelonagram Publisher, Editor – Heidi Webber

Programs – Shep Koss

Publicity –Open

Storage - Vlad Litt

Sunshine - Brigitte Mazourek

Website – Greg Mazourek

The Sierra Pelona Rock Club, is a member of the California and American Federation of Mineralogical Societies, Inc. (CFMS/AFMS). The general club meetings (Open to the public) are at 7:30 PM, on the 3rd Tuesday of each month at:

**The Clubhouse of the Greenbrier
Mobile Estates EAST
21301 Soledad Canyon Rd
Canyon Country, CA 91351**

Contact the Club or the Sierra Pelonagram Editor at:

Sierra Pelona Rock Club

P.O. Box 221256

Newhall, Ca. 91322

Or e-mail: hwebber@pacbell.net

Visit the *SPRC* website <http://www.sierrapelona.com/>

**Sierra Pelona Rock Club
Business Meeting
September 2, 2012
Greenbrier Estates Club House**

The September business meeting of the SPRC was called to order by Ron Lawrence at 7pm. In attendance were Shep Koss, Evelyn Velie, Ron Lawrence, Heidi and Bill Webber, Greg Mazourek and Vlad Litt.

The June minutes were approved.

The June-August Treasury Report was approved.

Shep Koss gave the Federation Report: A field trip to Jade Cove is planned this weekend. (Sept 8 and 9) The nickel drive will continue until the end of October. A Federation workshop will be announced at the General Meeting. The locations will be Paradise in Northern California and Zyzyx in Southern California. You can also find more information on the CFMS website.

Evelyn enquired about a return trip to Rose Hill. The area is closed, but Shep will see if there are any collecting areas we can legally go to.

Lombardi: This year Lombardi is October 13 and 14. Bill will be in charge of getting club supplies over there, and will need help setting up and tearing down. Heidi will pick up candy and trinkets for the wheel. Also, this is the main fundraiser of the year and help will be needed that weekend to man the booth. Please mark the dates on your calendar and plan to come out, even if for a couple hours.

The Trona/Searles Lake Gem Show is the same weekend as Lombardi.

Ron asked for ideas on how to encourage more participation in polishing rocks, tumbling, etc. Right now most of this is done by a handful of members.

Bill made a motion, which was passed, to buy a motor for the 10" saw. He said it should cost about \$30.

Chair Reports:

Claim: Mike Serino will email Heidi the paperwork for the claim payments to attach to the minutes.

Field Trips: Greg Langewisch will discuss upcoming field trips at the General Meeting on September 18.

Hospitality: Evelyn is already planning the Holiday Party and will put out a sign-up sheet for upcoming general meetings' snacks and drinks at the September general meeting.

Program: September will be show and tell. Bring your goodies collected/bought/made over the summer. October will be a video.

Publicity: We STILL need a person to take this over. Diane Southwell will help guide you and said it literally takes only a couple minutes a month.

Storage: Greg paid the storage fees for the next 6 months.

Website: Greg said that the membership form has been removed from the website. A person interested in joining the club has to come to a meeting to get one. Exceptions can be made.

The meeting was adjourned at 8:05pm.

President's Message

Vacations are pretty much over, kids are back in school and it's time to get the rock club back on track. First stop will be our show and tell meeting on September 18th, followed soon after with a great field trip to the Panamint Valley. This is with a couple of other clubs and can be an overnigher or a day trip. A couple of weeks later is our big fund raiser of the year at Lombardi. We have always done very well there and it's fun to visit with club members and see the little ones pick out their pumpkins.

We had two dinners with the club and a number of outings this summer and even though we haven't had a meeting in a few months I don't think anyone has forgotten where the club house is. I just want to remind everyone that we hold a business meeting at seven on the first Tuesday of the month at the club house and meetings are at seven thirty on the third Tuesday. Field trips should be the weekend following the general meeting.

We will let everyone know if there are any changes to this schedule so mark your calendars and join us if you can.

The club has been running smoothly the last few years and I want to take a moment to thank those who have made Bill's and my job so easy. All the chair people are doing great and I thank you.

One more thing, the club went through a growth period the last few years and it would be great if this continued. Tell your friends or if you come across someone interested in minerals or lapidary, invite them to join us.

See you all on the 18th.



Ron

The World of Minerals

What is a mineral? By definition, a mineral is a solid, inorganic (not made by a living organism) compound that is made by nature and has a regular crystal structure and a predictable chemical formula.

How many pounds of minerals will you use in your lifetime?

According to The Mineral Information Institute*, the average American will use . . .

- 1,600 pounds of copper (from azurite, malachite and cuprite) ~ 32,300 pounds of salt (halite)
- 920 pounds of zinc (from sphalerite) ~ 42,000 pounds of iron ore (hematite and magnetite)
- 1,000 pounds of lead (from galena) ~ 5,700 pounds of aluminum (from bauxite)
- 1.7 Troy ounces of gold ~ 20,500 pounds of phosphate rock
- 61,000 pounds of other minerals (like gypsum, spodumene, sulfur, silver, quartz, and fluorite)

Add this all up. 2,000 pounds = 1 ton. How many tons of minerals will you use in your lifetime?

*Visit The Mineral Information Institute at www.mii.org

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The poster features several illustrations of minerals: Garnet (orange), Fluorite (purple), Copper (orange), Gold (yellow), Azurite (blue), Tourmaline (pink), Amethyst (purple), Malachite (green), Feldspar & Smoky Quartz (orange), Silver (grey), Rhodochrosite (red), and Garnet (red).

Corundum

Corundum is Famous because of Rubies and Sapphires

Most people are familiar with corundum; however, very few people know it by its mineral name. A gemstone-quality specimen of corundum with a deep red color is known as a “ruby”. A gemstone-quality corundum of with a blue color is called a “sapphire”.

Rubies and sapphires are famous throughout the world, but most people do not know that they are color varieties of the same mineral, corundum.

Properties and Occurrence of Corundum

Corundum is an exceptionally hard and tough form of aluminum oxide (Al_2O_3). As a primary mineral it is found in igneous rocks such as syenite, nepheline syenite and pegmatite. It is also found in metamorphic rocks in locations where aluminous shales or bauxites have been exposed to contact metamorphism. Schist, gneiss and marble produced by regional metamorphism will sometimes contain corundum.

Corundum’s toughness, high hardness and chemical resistance enable it to persist in sediments long after other minerals have been destroyed. It thereby becomes concentrated in alluvial deposits. These deposits are sources of rubies and sapphires in several parts of the world. Notable deposits of alluvial rubies and sapphires occur in: Burma, Cambodia, Sri Lanka, India, Afghanistan, Montana and other areas.



© geology.com
Corundum (ruby) in zoisite from Merkestien, Transvaal, South Africa. Specimen is about six inches (fifteen centimeters) across.



© geology.com
Emery rock rich in corundum and spinel from Peekskill, New York. This specimen is approximately six inches (fifteen centimeters) across.

Hardness and Use as an Abrasive

Corundum is very hard. It serves as the index mineral with a hardness of nine on the Mohs Hardness Scale. It is the third hardest mineral known, with diamond and moissanite being the only minerals with a greater hardness.

This high hardness makes corundum especially useful as an abrasive. Crushed corundum is screened to produce uniformly-sized grits and powders. These are used as grinding media and used to manufacture polishing compounds, sand papers, grinding wheels and cutting tools.

Emery

Emery stone is a granular metamorphic or igneous rock that is rich in corundum. It is a mixture of oxide minerals, typically corundum, magnetite, spinel and/or hematite. It is the most common form of natural corundum used to manufacture abrasives.

The use of corundum as an abrasive has declined in the last few decades. It is being replaced by manufactured abrasives such as silicon carbide. Silicon carbide has a Mohs hardness of 9 to 9.5. It is inexpensive and often performs better than natural abrasives made from corundum or emery.



© geology.com
Common corundum showing parting and hexagonal habit from the Zoutpansberg District, Transvaal, South Africa. Specimen is approximately two inches (5 centimeters) across

Red Corundum: Ruby

Most corundum occurs as white, gray, dull blue or dull red crystals. However, a very small amount of corundum has a transparency, purity and color that make it suitable for use as a gemstone. These colorful corundums are among the most popular and valuable gems.

Some gem-quality corundum contains trace amounts of chromium that substitutes in the crystal for aluminum. A very small amount of chromium gives corundum a pink color. Larger amounts produce stones that are a deep traffic light red. These deep red corundums are known as “rubies”. Transparent rubies of gem quality are cut into faceted stones and translucent rubies of gem quality are cut into cabochon-shaped gemstones.



Deep Red Corundums are known as “Rubies” © iStockphoto / Wilson Valentin

Corundum



Deep Blue Corundums are known as "Sapphires" © iStockphoto / mirajewel

Blue Corundum: Sapphire

Corundum that has small amounts of iron or titanium substituting for aluminum in the crystal structure has a blue color. Deep blue corundums are known as "sapphires". When used alone, the word "sapphire" always refers to deep blue corundum.

Gem quality corundum occurs in a wide range of colors, including pink, pale blue, yellow and green. These stones are also known as "sapphires", however, when the color of a sapphire is any color other than deep blue the color of the stone is always used as an preceding adjective. For example: pink sapphire, yellow sapphire, green sapphire. Used alone, the word "sapphire" refers to the deep blue corundum.

The color of corundum can be artificially altered by heating or radiation. Sometimes cloudy or translucent stones can be heated to yield brighter color

or more transparent stones. When these color treatments are done the stone is supposed to be labeled as "heat treated" when it is presented for sale.

Mining Rubies and Sapphires

Most gem-grade corundums form in metamorphic rocks such as schists or igneous rocks such as syenite. However, they are rarely mined from the rocks in which they form. Instead, they are usually mined from stream sediments.

Rubies and sapphires are very hard and resistant to chemical weathering. These characteristics enable them to survive the abrasive actions of a stream. Their high specific gravity, relative to other sediment particles, often causes currents to concentrate them in small deposits. Most rubies and sapphires are produced by washing the gravels of these stream deposits.

Noteworthy locations where gem-quality corundums have been produced include: Myanmar, Thailand, Cambodia, Vietnam, India, Pakistan, Afghanistan, Sri Lanka, China, Australia, Montana, Kenya, Tanzania, Nigeria and Malawi.



Colorful rough corundums (sapphires) from Sri Lanka. Specimens are about 1/4 inch (six millimeters) across © geology.com

Synthetic Corundums

Natural deposits of corundum are often impure and not available in large quantities where it is needed for manufacturing abrasives. This need is often met by producing synthetic corundum from bauxite. The synthetic corundum is of high quality and cost-competitive with corundum from natural sources.

Synthetic rubies and sapphires are also produced. The manufacturing process can produce large, flawless single crystals which can be cut into attractive gemstones. The color in these stones can be controlled by adding small amounts of chromium, titanium or other substance.



A deep blue star sapphire 8 mm x 6 mm cabochon from Thailand. Inclusions within the stone align with the crystallographic axis to produce the star - which is only clearly visible and centered when the back of the stone is cut at 90 degrees to the C-axis of the crystal. This stone has been heat treated to darken the stone and enhance visibility of the star. © geology.com

Special optical effects such as asterism can be imparted to the stones by adding titanium or another material which crystallizes in the form of needles (such as rutile). These needles can be in alignments which produce a "star" appearance when the stones are cut and polished. These synthetic stones must be labeled when sold. It is often difficult for even an expert to distinguish them from natural stones.

Contributor: Hobart King

Physical Properties of Corundum	
Color	Frequently gray, but also white, brown, red, blue, yellow, green.
Streak	Corundum is harder than the streak plate. When it is scratched across a streak plate a white powder is produced - powdered streak plate.
Luster	Adamantine to vitreous.
Diaphaneity	Transparent to translucent.
Cleavage	None. However, corundum does display parting perpendicular to the long axis of its hexagonal crystals (see photo in right column).
Hardness	9
Specific Gravity	3.9 - 4.1
Distinguishing Characteristics	Hardness, high specific gravity, often found as six-sided hexagonal crystals that sometimes tapers into a pyramid - often with parting, high luster. Conchoidal fracture.
Crystal System	Hexagonal

CFMS Shows

September 15 - 16: DOWNEY, CA NEW DATE

Delvers Gem & Mineral Society
Woman's Club of Downey
9813 Paramount Blvd.
Hours: 10 - 5 daily
Contact: Jon Fults, (714) 856-7548, (714) 287-5743 cell

Email: jhfults@verizon.net

September 15 - 16: BORON, CA

Mojave Mineralogical Society
Boron Community Park & Building
27177 - 20 Mule Team Road
Hours: 8 - 4 daily
Contacts: Steve Breckenridge (760) 559-0872, Rock5b@starband.net
David Eyre, (760) 762-6861, david_eyre@mail.com

September 15 - 16: PASO ROBLES, CA

Santa Lucia Rockhounds
Pioneer Park & Museum
2010 Riverside Avenue
Hours: 9 - 5 daily
Contact: Dale Conrad, (805) 226-0719

Website: www.slrockhounds.org

September 15 - 16: REDWOOD CITY, CA

Sequoia Gem & Mineral Society
Community Activities Building
1400 Roosevelt Avenue
Hours: 10 - 5 daily
Contact: Mary Lou Froese, (650) 755-8753

Email: mfroese@sbcglobal.net
Website: <http://sgms.driftmine.com>

September 22 - 23: CHICO, CA

Feather River Lapidary & Mineral Society
Silver Dollar Fairgrounds
2357 Fair Street
Hours: Sat 10 - 5; Sun 10 - 4

Contact: John Scott, (530) 321-6331
Email: jweazel@sbcglobal.net

Website: www.rovillerocks.com

September 29 - 30: MONTEREY, CA

Carmel Valley Gem & Mineral Society
Monterey Fairgrounds
2004 Fairgrounds Road
Hours: Sat 10 - 6; Sun 10 - 5
Contact: Janis Rovetti, (831) 372-1311, cell (831) 521-8226

Email: janis12@sbcglobal.net

Website: www.cvgms.org

September 29 - 30: SANTA ROSA, CA

Santa Rosa Mineral & Gem Society
Wells Fargo Center for the Art
50 Mark West Springs Road
Hours: Sat 10 - 6; Sun 10 - 5

Contact: Jolene Coon, (707) 849-9551

Email: coons@sonic.net

Website: www.srmgs.org

September 29 - 30: STOCKTON, CA

Stockton Lapidary & Mineral Club
Scottish Rite Masonic Center

33 W. Alpine Avenue

Hours: 10 - 5 daily

Contact: Dorothy Tonnacliff (209) 603-4539 or Jan Bradley (209) 629-3878

Email: slmcsnow@juno.com

Website: www.stocktonlapidary.com

OCTOBER 2012

October 3 - 8: JOSHUA TREE, CA

Hi-Desert Rockhounds of Moronga Valley

Joshua Tree Sportsman's Club

6225 Sunburst Street

Hours: 9 - 7 daily

Contact: Wayne Hamilton, (760) 366-2915, cell (760) 401-0375

Email: waylin2000@msn.com

Website: www.jtsportsmansclub.com/gemshow.htm

October 7: FALLBROOK, CA

Fallbrook Gem & Mineral Facility

123 W. Alvarado Street

Hours: 10 - 4 daily

Website: www.fgms.org



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