

The Sierra Pelonaagram



February 2014

... 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.

CFMS Shows

Listed are upcoming CFMS shows. For more detail, go to cfmsinc.org or contact the show directly.

February 15 - 24: INDIO, CA

San Gorgonio Mineral & Gem Society, Banning
Riverside County Fair & National Date Festival
Contact: Bert Grisham, (915) 849-1674, (951) 288-9025 cell
Email: bert67@verizon.net

February 21 - 23: NEWARK, CA

Mineral & Gem Society of Castro Valley
Contact: Cathy Miller
Email: info@mgscv.org
Website: www.mgscv.org

March 1 - 2: ARCADIA, CA

Monrovia Rockhounds
Contact: Jo Anna Ritchey, (626) 359-1624
Email: joannaritchey@gmail.com
Website: www.Moroks.com

March 1 - 2: VENTURA, CA

Ventura Gem & Mineral Society
Contact: Krishna Juarez, (805) 323-6725
Email: abaris2007@gmail.com
Website: www.vgms.org

March 8 - 9: SAN MARINO, CA

Pasadena Lapidary Society
Contact: Marcia Goetz, (626) 260-7239
Email: joenmar1@verizon.net

March 8 - 9: SPRECKELS, CA

Salinas Valley Rock & Gem Club
Contact: Karin Salomon, (831) 375-5233
Email: k1.salomon72@yahoo.com
Website: www.salinasrockandgem.com

March 8 - 9: TURLOCK, CA

Mother Lode Mineral Society, Modesto
Contacts: Bud & Terry McMillin, (209) 524-3494
Email: terry_mcmillin@yahoo.com
Website: www.turlockgemshow.com

March 15 - 16: LEMOORE, CA

Lemoore Gem & Mineral Society
Contact: Chris Wertenberger (559) 309-3433
Email: georgersilva@sbcglobal.net

March 22 - 23: ANGELS CAMP, CA

Calaveras Gem & Mineral Society
Contact: Robin Williams, (209) 728-8277
Email: amy95247@yahoo.com
Website: www.calaverasgemandmineral.org

February Birthdays

Roxanne Heagy Feb. 7
Jeff Legler Feb. 13
Brigitte Mazourek Feb. 1

March Birthdays

Jerry Fararr March 7
Roger Gibson March 3
Ruth Hidalgo March 10
Brenda Litt March 14
Evelyn Velie March 27
Bill Webber March 19



Officers:

President – Bill Webber
Vice-President – Ron Lawrence
Secretary: Heidi Webber
Treasurer – Ron Rackliffe
Federation Director (CFMS/AFMS) – Shep Koss

Chairpersons:

Claim - Mike Serino
Donation Rock Table - Akiko Strathmann
Equipment - Bill Webber
Field Trips – Open
Historian -Open
Hospitality – Tina White
Membership – Barbara Farrar
On-Line Presence (website) - Larry Holt
Pelonagram Publisher, Editor – Heidi Webber
Programs – Shep Koss
Publicity –Bruce Velie
Storage - open
Sunshine - Brigitte 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/>



President's Message

As we rapidly enter spring, so much will be happening in our club. First, I hope to see more of you attending the field trips and gathering new treasures. Then I hope to see you at a workshop, turning those treasures into something to be really proud of, whether a cabochon or another shape. Or tumble it, but regardless, it will be yours alone, uniquely. Then, when we get started up again, hopefully by March, I hope you will attend one of our wire-wrapping sessions and turn your treasure into a masterpiece that you can wear or gift to someone special.

We also have the Placerita Canyon Nature Center Open House on May 10. It is a Saturday, the day before Mother's Day. The weather is normally gorgeous and there is so

much for families to see and do. One of the things they like to do is visit the SPRC table where they can buy something or spin the wheel. This venue has been quite successful the last couple of years, and being right here in the Santa Clarita Valley, it is easy for club members to volunteer to work the table. If enough people sign up, we can take shifts while the rest of you enjoy the day checking out Animal Tracks, the Herpetology Society, pan for gold or do the treasure hunt. Something for everyone! More detail and sign-ups will be distributed as the date nears. Put it on your calendar now, so you won't be surprised!

Of course in June is the club start-of-summer picnic. Always a lot of fun and don't forget, a great way to clean out your closets and garages of good, working, clean items for the auction which earns funds for our treasury. Then we are off for the summer, meeting again in September.

So as you can see, we have a lot coming up for you to think about doing. I hope to see all of you at the meeting this coming Tuesday, Feb. 18.

Bill Webber

President, SPRC



Wrapped Amethyst (above)
and agate (below) by
Greg Langewisch



SPRC
General Meeting
Greenbriar Estates Clubhouse
January 21, 2014

The meeting was called to order at 7:35. 24 members and 3 guests were in attendance.

Barbara Fararr introduced Deb Clem to the club as the newest member. Welcome Deb!

Ron Lawrence said the January field trip would to be Cramer Corners for agate, green opal (which is very gemmy looking), andritic agate and petrified bog. Meet at 7:30 at Mammoth Lane.

The next workshop will be at Bill and Heidi's on February 1.

Bill reiterated the fact that the rock table runs mostly on donations. He also asked the membership to email Heidi with ideas and thoughts on what sorts of field trips and programs they would like to attend.

The March field trip will be Stoddard Wells near Victorville. This is a very casual rock meet with people selling out of the back of their trucks, pop-ups and so on. The dates are March 7-9 from 9-5. You can Google it for details.

Saturday, May 10 is the Placerita Canyon Nature Center Open House. The club has had a table there for the last few years with great success. We will want volunteers to work the table. Hours will be 10-4.

The meeting was adjourned for Shep's program, Benitoite which is found only near Coalinga, CA and in New Mexico.

Respectfully Submitted

Heidi S Webber
Secretary, SPRC

SPRC
Business Meeting
Greenbriar Estates Clubhouse
February 4, 2014

The meeting was called to order at 7:17. In attendance were Bill and Heidi Webber, Ron Rackliffe, Ron Lawrence and Shep Koss. A quorum was met.

We haven't heard any news yet from Mike Serino regarding the status of the Diablo Onyx claim.

Shep said the February program will be Ron Coleman's video on Crystal Mining. Please bring crystal samples for display after the video.

Ron Rackliffe said that only about ½ the membership has paid their dues. As of this meeting, unpaid members are considered past due and a \$1 surcharge will be implemented. Either mail your dues to Ron (he is on the roster) or bring them to the February 18 meeting.

Bill got the OK to buy blades for the club saws.
The treasurer's report was accepted.

Field Trips: We can join with the CFMS on February 22 to gather Thulite. Meet at 9am at the closed gas station in Ludlow. (this is very obvious as soon as you exit the freeway) The SPRC will have a field trip to the same basic areas that day and will also visit the Pisca Crater and Lavic. Meet at 6am at Mammoth. Bring water and lunch.

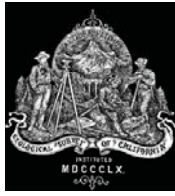
Stoddard Wells is March 7-9 and will be the March Field Trip with a regular collecting field trip to be announced.

The meeting was adjourned at 8:15.

Respectfully Submitted

Heidi S Webber
Secretary, SPRC

Ruth Hidalgo sent me this for the Pelonagram. There are quite a few pages, so I think it would be nice to post a different page monthly for the next few months. Thanks Loads, Ruth! There is an awful lot of neat information here. Read the next 12 facts presented below. (There just might be a test!)



California Geological Survey - 150th Anniversary 150 Geologic Facts about California



California's geology is varied and complex. The high mountains and broad valleys we see today were created over long periods of time by geologic processes such as fault movement, volcanism, sea level change, erosion and sedimentation. Below are 12 of 150 facts about the geology of California and the California Geological Survey (CGS).

13. During the ice ages 15,000 years ago, Death Valley contained a lake more than 100 miles long and 600 feet deep.

14. Marine terraces along California's coastline represent former sea level surfaces and can be used to measure uplift rates. A 125,000 year old marine terrace found in many of California's coastal areas represents the last time global sea level was high. Twenty-five marine terraces can be found on San Clemente Island, dating back as far as approximately 2.8 million years.

15. Fossils of mammoths, dogs, bears, cats, horses, camels, antelope, bison, sheep, turtles, shellfish, flamingos and palm trees have been found in sedimentary rocks in southern California near Barstow. A variety of other fossils such as oysters, snails, clams and vertebrates have also been found in northern California.

Geomorphic Provinces and Geology

16. California is divided into 11 geomorphic provinces: Basin and Range, Cascades, Coast Ranges, Colorado Desert, Great Valley, Klamath Mountains, Modoc Plateau, Mojave Desert, Peninsular Ranges, Sierra Nevada, and Transverse Ranges.

17. The geology and landforms of California were largely created by three episodes of subduction of the oceanic plate under the continental plate from the west, the initiation and growth of the San Andreas fault system, and the extension of the Earth's crust in the Basin and Range area.

18. The Sierra Nevada and the Coast Ranges provinces were formed from the collision of tectonic plates, while the Basin and Range and Mojave Desert provinces were formed from the extension of the crust.

19. The Salton Trough region of the Colorado Desert province is currently spreading, or undergoing extensional rifting, similar to the plate motion that created Baja California.

20. Racetrack Playa, in the Basin and Range province, (Death Valley) has grooves etched into the surface of the playa by "moving" rocks that are found at the end of the grooves. It is thought these grooves are formed by rocks entrained in ice being blown across the playa by strong winds.

21. Pillow basalts, like those found in the Coast Ranges, were formed when molten lava cooled under the ocean in shapes resembling the size and shape of a pillow.

22. Portions of old oceanic crust, called ophiolites, are visible today in the Coast Ranges, the Klamath Mountains, and in the Sierra Nevada.

23. Chert is a type of rock in the oceanic crust that formed from silica shells of microscopic organisms deposited on the deep ocean floor. Chert is present throughout California, but especially in the Coast Ranges and the Sierra Nevada.

24. Two blocks of granitic rock, known as the Salinian Block of the Coast Ranges, more closely resemble rocks of the Sierra Nevada rather than most of the rocks making up most of the Coast Ranges. One block lies between the Nacimiento and San Andreas Fault Zones in the southern Coast Ranges and west of the San Andreas Fault in the northern Coast Ranges, suggesting large displacement along the San Andreas and Nacimiento Faults.



Gem-cut moissanite set in a ring

Moissanite

Moissanite, originally referred to a rare mineral discovered by Henri Moissan having a chemical formula SiC and various crystalline polymorphs. Earlier, this material had been synthesized in the laboratory and named silicon carbide (SiC).

Background

Mineral moissanite was discovered by Henri Moissan while examining rock samples from a meteor crater located in Canyon Diablo, Arizona, in 1893. At first, he mistakenly identified the crystals as diamonds, but in 1904 he identified the crystals as silicon carbide. The mineral form of silicon carbide was named moissanite in honor of Moissan later on in his life. The discovery in the Canyon Diablo meteorite and other places was challenged for a long time as carborundum contamination from human abrasive tools.

Geological Occurrence

Until the 1950s no other source, apart from meteorites, had been encountered. Later moissanite was found as inclusion in kimberlite from a diamond mine in Yakutia in 1959, and in the Green River Formation in Wyoming in 1958. The existence of moissanite in nature was questioned even in 1986 by Charles Milton, an American geologist.

Moissanite, in its natural form, is very rare. It has only been discovered in a small variety of places from upper mantle rock to meteorites. Discoveries have shown that moissanite occurs naturally as inclusions in diamonds, xenoliths, and ultramafic rocks such as kimberlite and lamproite. They have also been identified in carbonaceous chondrite meteorites as presolar grains.

Meteorites

Analysis of SiC grains found in the Murchison carbonaceous chondrite meteorite has revealed anomalous isotopic ratios of carbon and silicon, indicating an origin from outside the solar system. 99% of these SiC grains originate around carbon-rich Asymptotic giant branch stars. SiC is commonly found around these stars as deduced from their infrared spectra.

Composition

All applications of silicon carbide today use synthetic material, as the natural material is very scarce. Silicon carbide was first synthesized by Jöns Jacob Berzelius, who is best known for his discovery of silicon. Years later, Edward Goodrich Acheson produced viable minerals that could substitute diamond as an abrasive and cutting material. This was possible as moissanite is one of the hardest substances known, with hardness below that of diamond and comparable with those of cubic boron nitride and boron. Since naturally occurring moissanite is so rare, lab-grown moissanite is the only commercially viable version of the mineral. More recently, pure synthetic moissanite has been made from thermal decomposition of the preceramic polymer poly(methylsilylene), requiring no binding matrix (e.g. cobalt metal powder).

Physical Properties

The crystalline structure is held together with strong covalent bonding similar to diamonds, that allows moissanite to withstand high pressures up to 52.1 gigapascals. Colours vary widely and are graded in the I-J-K range on the diamond color grading scale.

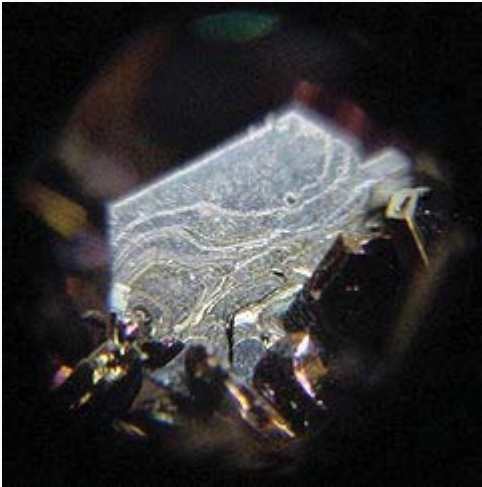
Applications

Moissanite was introduced to the jewelry market in 1998. It is regarded as a diamond simulant, with some optical properties exceeding those of diamond. Its lower price - and to a lesser extent its ethical production - makes it a popular alternative to diamonds. Due in part to the similar thermal conductivity between moissanite and diamond, it is a popular target for scams; however, an electrical conductivity test (with a check for birefringence) should alert any buyer to fraud. On the Mohs scale it is a 9.5, with a diamond being a 10. Moissanite is stronger than sapphire or ruby. In many developed countries, the use of moissanite in jewelry has been patented; these patents expire in 2015 for the U.S. and 2016 in other countries. Moissanite gemstones are sometimes marketed under the trademark "Berzelian," a reference to the work of Berzelius on SiC .

Because of its hardness, it can be used in high-pressure experiments, as a replacement for diamonds. Since large

diamonds are usually too expensive to be used as anvils, synthetic moissanite is more often used in large-volume experiments. Synthetic moissanite is also interesting for electronic and thermal applications because its thermal conductivity is similar to that of diamonds. High power SiC electronic devices are expected to play an enabling and vital role in the design of protection circuits used for motors, actuators, and energy storage or pulse power systems.

Reference Wikipedia

Moissanite	
	
General	
Category	Mineral species
Formula (repeating unit)	SiC
Strunz classification	01.DA.05
Identification	
Color	Transparent, green, yellow
Crystal habit	Generally found as inclusions in other minerals
Crystal system	Most common: 6H hexagonal (6mm), space group: P63mc
Cleavage	(0001) indistinct
Fracture	Conchoidal – fractures developed in brittle materials characterized by smoothly curving surfaces, (e.g. quartz)
Mohs scalehardness	9.5
Luster	Adamantine to metallic
Streak	greenish gray
Diaphaneity	transparent
Specific gravity	3.218–3.22
Refractive index	$n_{\omega}=2.654$ $n_{\epsilon}=2.967$, Birefringence 0.313 (6H form)
Ultravioletfluorescence	green or yellow
Melting point	2730 °C (decomposes)
Solubility	none
Other characteristics	Not radioactive, non-magnetic



February Birthstone

Amethyst

Amethyst, the gemstone believed by ancient Greeks and Romans to ward off the intoxicating powers of Bacchus, also is said to keep the wearer clear-headed and quick-witted. Throughout history, the gemstone has been associated with many myths, legends, religions, and numerous cultures. English regalia were even decorated with amethysts during the Middle Ages to symbolize royalty. It has been associated with many myths, legends, religions, and numerous cultures. Amethyst is purple quartz, a beautiful blend of violet and red that can found in every corner of the earth. Historically, the finest amethyst were found in Russia and were featured in much royal European jewelry. Today, while Brazil is the primary source of this gemstone, fine material can be found elsewhere, especially in Zambia.

Reference: americangemsociety.org

