



The Rockette

APRIL 2017

A Publication of the Sequoia Gem and Mineral Society (SGMS)

P. O. Box 1245, Redwood City, CA 94064

<http://www.sequoiagemandmineralsociety.org>

APRIL 17 is our next meeting.

At the normal location! Community Activities Building, 1400 Roosevelt Ave., Redwood City, CA 94062

If anyone has anything rock related they might like to sell, please come early to set up some table space at the meeting. Also if you have a "show and tell" we'd love to experience it!

**Geology quiz:
Name the three types of rock.
Here are some possible
answers!**

- 1. Classic**
- 2. Punk**
- 3. Hard**

SGMS DUES: If you haven't paid your dues, now is a good time. We have to turn in a list of dues-paying members to the Federation. I hate to say this, but my list of members is much longer than those who have paid dues for this year. I know there was some concern over the future of the club. Let me be very clear. We will survive. There is a lot out there in this world of rocks and minerals and people who love them to discover. And we will!!!! Dues are \$25 for one person, \$40 for your whole family. You can mail a check, made out to Sequoia Gem and Mineral Society,

SGMS Mission Statement

The Sequoia Gem & Mineral Society serves the community by providing education in the Earth Sciences and training in the lapidary arts and, in doing so, promotes ethical behavior, sound resource stewardship, and good fellowship. The Society fulfills its mission through year-round offerings of field trips, lapidary workshops, outreach presentations, public mineral displays, and monthly informational meetings open to the public.

Member of:

California Federation of Mineralogical Societies, Inc.
American Federation of Mineralogical Societies
North Bay Field Trip Association

Exchange bulletins are welcome. You are free to reprint if credit or citation is noted.

to me, Cathy Phalen, membership chairman, at 1000 Whitehall Lane, Redwood City, California, 94061. Or send to our PO Box or bring to a meeting. On May 1 I will have to take off my list all non paid members. cathy any questions...650-743-7447, or catphalen@comcast.net



Turk's Head Knot class

If you missed taking these classes, you really missed a lot. Larry Schemel shared his talents to teach a few lucky people how to make two different kinds of Turks Head knots using the same jig that he made himself. He supplied all the materials needed as well as the stones to be set. Really interesting and a great way to learn to set stones—we all have plenty of those! The photo shows Larry teaching the intricacies of the knot making to Cathy Phalen.

What would happen if an asteroid collided with Earth?

If a half-mile wide asteroid, or space rock, crashed into Earth, it would have the same impact as a hundred billion tons of dynamite. The collision would cause earthquakes for about a hundred miles. An even bigger asteroid would send up enormous clouds of dust that would block the sun and kill off most of the world's plants. It could also generate enough heat to make the oceans boil? Luckily scientists don't think an asteroid will strike any time soon. And they are coming up with ways to prevent one from ever hitting Earth, such as melting it with a laser or knocking it off course the a rocket. Sounds like some good rock stoppers!

ROCK SORTING PARTY

Brooke Thrasher, a very longtime member, just donated all his rock collection to our club. And I mean ALL! He is in his nineties, and a lifetime that long of collecting is huge. Right now it is all stored at Preston's, in his backyard. It was sorted, washed, sorted, washed by many last Sunday and it was a good weather day. This was an excellent chance to see many different kinds of rocks and minerals, and brush up on your identifying skills. Thank you to everyone who came to help. We will be selling a lot of these at our show. There were a lot of lovely specimens.

Maker's Faire

San Mateo County Event Center
1346 Saratoga Drive, San Mateo, CA 94403
— Friday, May 19, 2017: 1 pm – 5 pm; Special Preview Day
— Saturday, May 20, 2017: 10 am – 7 pm
— Sunday, May 21, 2017: 10 am – 6 pm



Get ready to participate in this years' Maker Faire! Coordinated by Leslie Gordon and supported by other clubs, we will once again teach people how to polish a cabochon. WE NEED YOUR HELP!

We need people to make pre-formed cabs. Bring some to the shop or come down and get busy! Need to have the rocks on dop sticks ready to polish.

ALSO- Consider volunteering to set up, work our booth and close up at the end. Contact Leslie Gordon for more information.

Arkansas Clear Quartz Crystals

Our March speaker, Catherine Fraser, (yes, your Rockette editor) brought quite a few specimens to view and shared details of her trip last Fall.

Arkansas is known as the 'Natural State', but many people are unaware that parts of the state are known for their natural abundance of quartz crystals. In fact, geologists agree that the two places in the world to find the best quality quartz crystals are Brazil and Arkansas. Arkansas is a veritable 'gold-mine' for rockhounds of all ages.

The Ouachita Mountains contain an abundance of quartz crystal, especially in Mount Ida, which is known as the Quartz Crystal Capital of the World. In 1976, the Arkansas General Assembly established Act 128 which designated the quartz crystal as the official state mineral. In Arkansas, Quartz Crystals are often referred to as "Hot Springs Diamonds" which are not to be confused with real diamonds found at Crater of Diamonds in Murfreesboro.

Evidence indicates that Native Americans in Arkansas were using quartz crystals in tools and weaponry as early as the 1500s.

Digging for crystals is still a prolific industry in the Ouachita Mountains. Digging crystals is a fun and educational activity for the whole family. Some crystals are lying right on the surface and can easily be picked up. Others may require only simple garden tools to dislodge.

There are several crystal mines and rock shops located throughout the Ouachita Mountains and areas northwest of the Hot Springs area. For a small fee, you can dig through the tailing piles or the mine waste dumps. These spots are perfect for finding small to moderate sized crystals without a lot of hard work. If you are excited and ready to spend a day digging crystals you will want to check out one of these crystal mines:

Wegner Crystal Mines , Jim Coleman Crystal Mines , Sweet Surrender Crystals to name a few.

INTERESTING FACTS: Quartz will produce an electric charge if pressure is applied. This is an important property called piezoelectricity, and gives quartz many uses. Also quartz is the most common mineral on the face of the Earth. It's found in pretty much every geological environment and is at least a component in most types of rock.

clear quartz point naturally has 6 sides

Quartz comes in different colors besides clear. Purple quartz is Amethyst. Brown quartz is referred to as Smoky Quartz. Yellow quartz is Citrine. Rose quartz is usually a milky pink color. It is rare to see natural points formed from rose quartz. When found with natural points, then the stone is called pink quartz.

Quartz (SiO₂), a common mineral, is the product of the two most prevalent elements in the earth's crust : silicon and oxygen . Quartz can be found as giant crystals or small grains, and is the main component of most types of sand . It is the hardest common mineral, and for

this reason is often used in the making of sandpaper, grindstones, polishers, and industrial cleaners. Though quartz is clear and glassy in its large crystal form, called rock quartz, it also can be found in several shades of coloration, the most familiar being rose quartz (pink), smoky quartz (brown), and amethyst (purple).

In the early 1900s, quartz was being mined for use in oscillators with demand especially high during World War II. An oscillator is a mechanical or electronic device that can regulate the flow of electricity. The frequency of oscillation is determined by a quartz crystal due to its ability to maintain a steady vibration. Common items that use an oscillator are computers, clocks, watches, radios and metal detectors.

Quartz has a variety of scientific and industrial uses, chiefly because it possesses piezoelectricity. Discovered by the French physicist and chemist Pierre Curie (1859–1906), the piezoelectric effect is a phenomenon demonstrated by certain crystals: when squeezed or stretched, a voltage is produced across the crystal's face. This effect is reversible as well, for when a voltage is applied to a piezoelectric crystal it will stretch; if the polarity of the voltage is alternated, the crystal will rapidly expand and contract, producing a vibration. It is this vibration that makes quartz especially useful. Every kind of piezoelectric crystal has a natural vibration frequency that is determined by its thickness—the thinner the crystal, the higher the frequency. When a crystal is made to vibrate at its natural frequency by the application of a voltage, the system is said to be in resonance. A crystal in resonance will maintain a constant, unflinching frequency. When coupled with vacuum tubes or transistors, this constant frequency can be changed into a radio signal. Such was the design of the quartz radio, used primarily during [World War II](#). Another common use of quartz is in timekeeping. All clocks rely upon some form of oscillator to keep regular time; for example, mechanical clocks sometimes use a pendulum to regulate the motion of their hands. In a quartz timepiece, a small ring-shaped piece of crystal is made to vibrate at its natural frequency. A microchip reads how many times the quartz vibrates each second and uses that information to keep accurate time. Because the crystal's vibration is unflinching, quartz clocks are among the most precise timekeeping devices, losing less than one hundred thousandth of a second each day. Quartz crystals can be used to regulate both digital and analog clocks and watches.

Because of the many applications for quartz, the demand for clear, flawless rock crystal is often greater than the supply.

Shortly after World War II, scientists developed a process by which quartz can be "grown" in the laboratory. Scientists begin with a small piece of natural crystal called a seed. Placing the seed within an alkaline solution, along with a supply of silica, they apply heat and pressure to the mixture. Slowly, the silica bonds with the seeds, eventually forming large, near-perfect crystals. Another type of man-made quartz, called fused quartz, is made by melting down many pieces of natural quartz and reforming it into almost any shape. Fused quartz displays many useful properties not found in natural quartz. First, because it neither expands nor contracts with changing temperatures, it makes an ideal component of precise scientific equipment, such as telescope and microscope lenses. It also is an unsurpassed conductor of heat, light, and ultraviolet rays, and in many cases it can be used to direct light rays through bends and angles. Additionally, fused quartz, which is nearly impervious to acids and other chemicals, is often used to make test tubes and other chemical containers.

In the 1950s, since General Electric developed this process for growing artificial quartz, the demand for quartz in Arkansas dwindled to include mainly tourist and museum industries.

Dates of SGMS meetings for 2017:

April 17, May 15

Unless specified, the meetings will be held at the usual place, The Sequoia Gem and Mineral Society holds its General Meetings from 7-9pm on the third Monday of the month (with exceptions for holidays, or during July and December). Each meeting features a presentation, raffle drawings for specimens, a member Show & Tell, and access to the club library. **Guests are welcome to join us!**

Community Activities Building, 1400 Roosevelt Ave., Redwood City, CA 94062

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If you are interested in providing material for our next newsletter, please contact your editor. If you have anything for sale that would be of interest to our club members, you can post that here too!