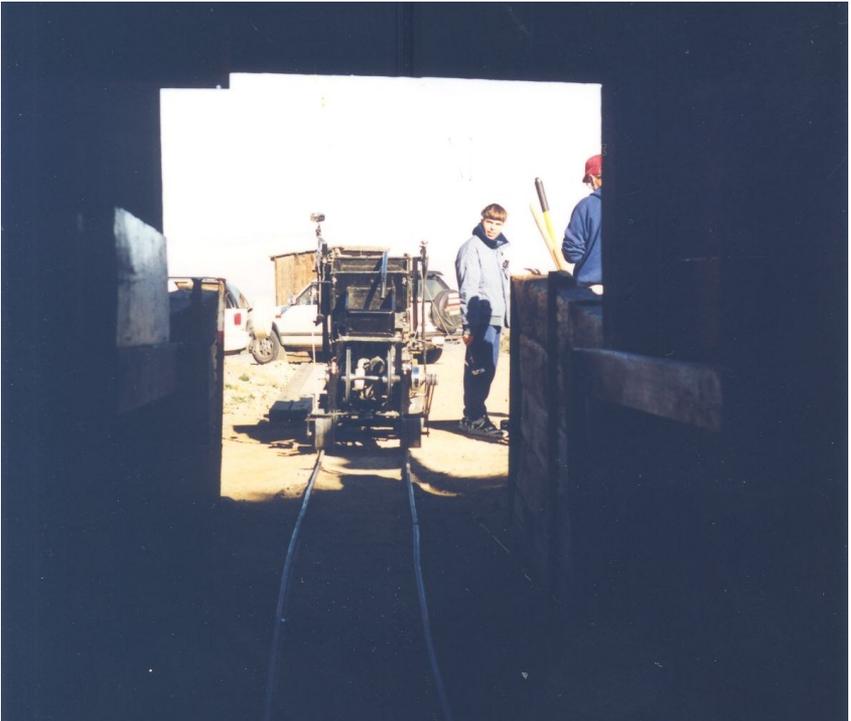


WHITTIER

**ROCKHOUNDER**  
GEM & MINERAL  
SOCIETY

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Special Summer E-Mail Only Edition



Looking out of Schmitt Tunnel, Last Chance Canyon Area  
Circa 1998

# ROCKHOUNDER

## THE ~~PREZ~~ Editor SEZ:

**A**lrigh!!! Summer is half gone. A lot of rockhounds enjoy the long summer days and heat with barbeques and trips to the beach. I do not (we do enjoy our BBQ year round, though).

The desert is my favorite destination, but it provides additional challenges this time of year. Between the heat, the always very real risk of injury, and the possibility of mechanical failure in some remote and inaccessible spot, it is always a calculated risk to go in that direction. Cell phones do not always work in the more remote places we explore, and having a second person along does not necessarily ensure a safe trip (sometimes it just places more people in harm's way).

Yet we go out during the hot days of the season anyway. Carrying sufficient water and bringing our own shade are common sense things which can preserve your life should the unexpected occur. And though cell phones are not absolutes, you might be surprised to know that 911 sometimes works through repeaters located throughout some mighty remote places, even though your phone swears there is no connection in range. No guarantees on that but it might provide that life-or-death difference.

It is good to have some basic knowledge of heat related illnesses as well, and be prepared to deal with them should they rear their ugly heads. Know where the nearest medical treatment can be obtained. Should you be severely injured but able to reach a highway, you can call for a rescue and they will come, with the big Medi-Vac helicopter if needed. Anyway, I'm just rambling on. Enjoy your summer as you like it.

*WWBart*

**Field Trip for August  
Saturday, August 18, 2012**

**T**his month we will take a trip back into prehistoric times when savage creatures roamed Southern California. We will see the bubbling pools of oil and water which trapped the unwary creatures and will visit their remains!

**Where: Page Museum at the La Brea Tar Pits**

**When:** Saturday, August 18<sup>th</sup>, 2012

**Time:** 9:30am - 3:00pm

**Cost:** Seniors 62+, and college students with I.D = \$6.75, Adults 18-61 = \$9.25, Youths 13-17 = \$6.75, Children 5-12 = \$4.25, Children 4 and under, EBT cardholders with I.D., CA teachers with I.D., and active military with I.D = Free.

Note: these prices are a 15% discounted rate over regular admission.

**Meet:** 9:30am at the grassy circle directly in front (south side) of the Page Museum at the La Brea Tar Pits - 5801 Wilshire Blvd., Los Angeles, CA 90036, (323) 934-PAGE (7243).

**Parking:** The museum parking lot on Curson Avenue (east of museum) is \$7 per day and has some handicap parking. There is some free parking and \$1/hr metered parking on 6<sup>th</sup> street (north of museum)

**Activities:** We will have 1.5 hours for a self-guided visit to the tar pits (maps will be distributed) where we can:

- explore plants from the last Ice Age in the Pleistocene

Garden

- discover what an actual excavation site looks like at Pit 91
- see the Columbian Mammoth statues at the Lake Pit
- stop by Project 23 where excavators are currently working.

We will meet back in front of the Page Museum for a guided tour of the museum's fully articulated fossil exhibits discovered during Rancho La Brea excavations.

The afternoon is free to remain in the museum, visit the gift shop, return to the tar pits or leave the museum/tar pits.

**Also in the area is**

- Los Angeles County Museum of Art [LACMA] [www.lacma.org](http://www.lacma.org),
- The Peterson Automotive Museum [www.peterson.org](http://www.peterson.org),
- The Craft and Folk Art Museum [www.cafam.org](http://www.cafam.org),
- The Zimmer Children's Museum [www.zimmermuseum.org](http://www.zimmermuseum.org),
- The Original Farmer's Market [www.farmersmarketla.com](http://www.farmersmarketla.com),
- The Grove [www.thegrovela.com](http://www.thegrovela.com),
- The Westfield Shopping Center at Century City [www.westfield.com/centurycity](http://www.westfield.com/centurycity),
- Rodeo Drive in Beverly Hills [www.rodeodrive-bh.com](http://www.rodeodrive-bh.com).

**Tickets need to be pre-purchased.** If you are going to attend the field trip, notify this month's field trip leader - Mark Nelson at (909) 592-1322 or [mnelsonair@aol.com](mailto:mnelsonair@aol.com).

**La Brea Tar Pits/Page Museum: <http://www.tarpits.org/>**

**Phenomenal Gems**  
by Wanda Tilsit

When you hear the phrase “phenomenal gems”, what do you think the meaning is? The dictionary definition of phenomenal gives the impression that these are really great stones, by gem standards very exceptional. In some respect that is correct. However, in gemological circles, the term “phenomenal” holds a very special meaning. It is minerals or gemstones classified in a way which it exhibits special optical characteristics -- or phenomena.

Special optical characteristics... what do we mean by special optical characteristics? Well if you see a star sapphire, the star effect, which is referred to as asterism, is an optical characteristic or phenomenon

**Asterism**

A star may have four, six, or 12 legs (rays) radiating outward from a central point. They will also follow the light source as it travels over the surface of the stone. To fully exhibit this effect, gemstones or minerals need to be cut en cabochon, a style that has a domelike appearance on top. While many minerals and gemstones exhibit stars, some are extremely rare and highly prized by collectors and jewelry designers. Stars can be found in Quartz, Garnet, Sapphire, Ruby, Scapolite, Spinel, and Diopside.



Star Sapphire

**Chatoyancy**

Another types of phenomena, is where some gemstones exhibit the optical effect called chatoyancy. A chatoyant gemstone, if properly fashioned, will display a line of varying thickness that will glide over the surface of the host material as it follows the light source. To fully appreciate chatoyancy, materials need to be fashioned in the same way that stars are -- en cabochon.



Chrysoberyl

The word chatoyant is derived from a French phrase that translates as “eye of a cat.” Large or small, feral or domesticated, all cats have one trait in common - a characteristic slit that runs through the center of the eye; hence the more well known term “cat’s eye”. It should be noted that the term cat’s eye always refers to the mineral Chrysoberyl. However there are other minerals which exhibit this effect.

Such as Tourmaline, Quartz, Tiger-eye, zircon and moonstone.

So how do stars and cat's eyes occur? They are due to a special arrangement of inclusions in the mineral. As incoming light strikes the surface of the host material, it comes into contact with and reflects off of a series of fine fibers or needles. If the needles are arranged parallel to one another, this creates a Cat's Eye effect. If the layers of parallel needles or fibers are arranged at definite angles throughout the material, stars are produced. In case of simple chatoyance, for instance Tiger's eye, most pieces are a yellow to light brown color, but enhancements can create reds or other colors, and a naturally occurring variant called "hawk's eye" has a grey-blue to greenish color. Less familiar to many, but greatly admired for their displays of chatoyance are the Charoite, Pietersite, and Seraphinites.

### **Seraphinite**

The gem variety of Clinocllore, is a lovely dark green stone that changes sparkle and light as you view it from different positions. It comes from mine Korshunovskaia which is situated not far from Baikal Lake in Eastern Siberia, Russia. This mineral got its name from the Greek words for inclined and green since its structure is monoclinic and its common color is green.



Seraphinite

### **Charoite**

From Russia, discovered in 1978 in the Murun Mountains in Yakutia. Named after the nearby Charo river. It is opaque bright purple, with wild swirls of fibrous material and is one of the strangest looking natural gemstone.

### **Pietersite**

Pietersite crystallizes in the form of masses, the structure a result of inclusions in jasper where the inclusions are pseudomorphs after asbestos. The color is blue/black/red/yellow with a strong chatoyant quality. It was discovered by Sid Pieters, on his farm in Namibia.

### **Color Change**

Another very important phenomenon is color change. You may occasionally

*(Continued on page 8)*

## **Phenomenal Gems**

*(Continued from page 7)*

hear the more technical term photochromism (photo:light and chromis:color) used to describe the effect. The most famous color-change gemstone is Alexandrite, a member of the chrysoberyl species. When exposed to daylight and then incandescent light, it will change colors. The most highly prized material changes from a bluish green to a reddish color. The more intense the change, the more valuable the material becomes. Color change, while highly prized by collectors, is not present in many mineral species. In some cases, such as Tourmaline, the phenomenon is extremely rare. While Alexandrite is the most well known and expensive color-change mineral, there are less expensive alternatives, such as color change Garnet or Sapphire.



Alexandrite  
(incandescent  
light)



Alexandrite  
(daylight)

### **Iridescence**



Iris Agate

Iridescence is a phenomenon which shows as a multicolored, surface effect, which is caused by diffraction. As white light passes through very small openings such as pores or slits, or through thin layers of material which differ in refractive index, a prism effect causes it to separate into spectral colors. These may then be seen on the surface, or in some cases in the materials interior. Sometimes when combined with interference, i.e where the slightly out of phase color waves bounce off of different layers overlap as they reflect, a loss of some colors or a reinforcement of others colors can take place giving rise to dramatic color blocks, which may shift with viewing angle.

Iridescence is the most wide-spread of the optical phenomena, we see its effects in pearls, the display of fire agate, “rainbow calcite”, certain obsidians, and iris agate. It also creates the rainbow display of fractures, the beautiful colors of Labradorite, and, the most well known occurrence in Iris Agate the “color play” of precious opal.

### **Pearls**

The orient of pearls, is a delicate, shifting, iridescent color layer that is distinct from the basic body color of the pearl or from its luster. Both luster and orient are a function of the thickness and perfection of the layer of nacre on the pearl’s surface. Nacre is composed of thin plate-like layers of Aragonite crystals accounting for over 90% of its weight, along with conchiolin protein,

and water. Although most pearls have that characteristic “pearly luster”, only fine quality pearls have orient. It can also be present in the “mother of pearl” lining of shells, and is especially vivid in the shells of some species of abalone.

**Fire Agate**

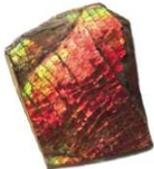
The aggregate quartz known as fire agate, gets its iridescence from thin coatings of iron oxide (limonite) layered over its botryoidal chalcedony surface. The best specimens of this material can be very striking.



Fire Agate

**Ammolite**

This gem is the result of the fossilization of extinct, shelled mollusks, called ammonites. Although many ammonite fossils are found, only a certain type from a restricted area in Canada shows the iridescent effect, which has preserved, and enhanced, the thin, tablet like aragonite crystal layering of the shell. The thickness of the preserved layers controls the colors that will be seen. Thicker layers produce red or orange colors, and thinner ones, the blues and violets. Due to the fragility of the thinnest layers, specimens with blue or violet color are especially rare and costly.



Ammolite

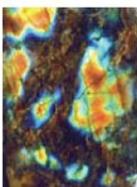
**Phenomenal obsidian**

Most obsidian is pretty plain looking, in mostly drab shades of brown and black. Certain types, however, display iridescent patterns due to dense congregations of minute suspended inclusions that act like diffraction gratings. This is sometimes given the trade names of “velvet” or “rainbow” obsidian.



Rainbow Obsidian

**Labradorescence**



Labradorite

Labradorescence is a type of phenomenon, whereby a form of iridescence caused by repeated, microscopically thin layer (lamellar) twinning in Labradorite feldspar. One of the characteristics is that the twinning is very specifically

*(Continued on page 10)*

## **Phenomenal Gems**

*(Continued from page 9)*

oriented within the crystal, thus making the iridescent display highly directional. At some angles the light encounters no thin layers and no effect is seen, in other directions of view we see a bright blue, gold, green or multicolored surface.

### **Adularescence**

Adularescence is another phenomena which occurs when a gem displays a billowy floating light which appears to come from below the surface. The name comes from the most prominent gem displaying the phenomenon: moonstone, known historically as “adularia”. The term “shiller” or “schiller” is sometimes used to describe the light. In Moonstone, adularescence is due to a layer effect, where thin inner strata of two types of feldspar intermix, (exsolution regions of sodium feldspar in potassium feldspar). These layers scatter light either equally in all spectral regions producing a white shiller, or as in the most valuable specimens, preferentially in the blue or the blue and orange. As in so many cases of optical phenomena the size or distance from layer to layer influences the colors we see.

### **Aventurescence**

Aventurescence is a phenomenon which owes its beauty and distinctiveness to structural features which diffract or scatter light. Aventurescence is a consequence of reflection. When disk or plate-like inclusions of another mineral are present, and are of a highly reflective nature, they act as tiny mirrors, which causes the gem to sparkle and glitters. This glitter is called adventurescence.

The term shiller, is also used to describe this sparkly glow. The most common reflectors are copper, hematite and mica. The name is derived from the Italian word for “chance” or accident, and has no “d” in it, but the word is mispronounced as “adventurine”. The most commonly encountered species showing this effect are certain feldspars and one variety of quartz.

“Goldstone”, a manmade aventurescent glass with copper particles deliberately added to it, has been an inexpensive and popular gem imitation since the Victorian period

*Article from the Gem Cutters News, June-July 2010  
Via Goldrush Ledger, July 2012*

Field Trip Report  
**Wrightwood Trip – July 21, 2012**

The day started out clear and cool. The traffic was light and flowing well. We got up to Wrightwood with time to spare. So, we checked out the other possible locations to find our prey - a prey that just waits patiently for you to find it and take it home.

Well, we decided to go to the first bridge when coming into town. The flood control channels on the south side were freshly shaped by bulldozer and everything was covered with a gray dust. But below the two bridges, where the creek is wild and not shaped by man proved to be far more productive for everyone to find our prey which is actinolite.



Once Marcia and I determined where the collecting would be done, we headed over to Jensen’s and parked away from their main parking area. There were a couple from the South Bay Club were already there. While we were waiting for people to arrive, Marcia and I tried out the bakery. The smells that wafted toward us as we opened the door were incredible. We got what we wanted to try and went back to see who had arrived.



Soon Art and Ginger were there and shortly after Tanner, Heather and Tanner’s mom pulled up. Soon Fergie and family poured out of their van. When clock struck 8:35 a.m. we headed over to the collecting site. In all we had eighteen people participate, six of them kids.

The question was, “What does it look like?” So I pointed west and said to them “You see that dark boulder in amongst all of the light colored rocks that is the actinolite”. “When you get closer to it will be green and with the sun at your back it will glisten”.

*(Continued on page 12)*

**Wrightwood Trip**

*(Continued from page 11)*

Once the kids knew what to look for, they were off like a herd of turtles, and soon young voices could be heard whenever a piece of actinolite was found. Most people headed west toward the second bridge and there was plenty of material to be found. Art and Ginger headed in the other direction to see what they could find. They too were successful finding actinolite in sizes from a golf ball to a large door stop. One of these door stop size was rolled and lifted into their jeep.



Art told me later he left the other large pieces for me to get. I thought it best to leave them for someone else who might be more energetic than I was at that time.

After a couple of hours everyone had found all they wanted. So we all headed back to the vehicles. And since this is a single site trip, participants started heading home. Soon Marcia and I were alone. We headed into town to go have lunch at a café I wanted to try. Unfortunately, the parking lot was blocked off for a private party. Oh well, we'll have to come here at a later date.

So we drove around a bit to do some site seeing. Once we had our fill, we decided we would leave Wrightwood on Lone Pine Canyon Road. It proved to be more interesting scenery wise. As we rounded a curve, in the distance we saw a vehicle on the side of the road. As we got closer the vehicle began to look familiar. Soon we saw one person on the right side walking slowly while scanning the hillside. It was Art and Ginger; they were looking for and finding some more of our prey.

We chit chatted for a few minutes before we continued on our way. As we headed down the road it was pleasantly comfortable until.....we turned a corner at the intersection of Hwy 2 and we bore the brunt of the heat as if we had driven into an oven. Soon we were home and the air conditioner was turned on, thus ending a successful and short fieldtrip.

Having an adventure (being lost) somewhere in Southern California  
*Joe Goetz*

**a ROCKHOUND'S HAPPINESS is ...**

- ◆ BEING IN THE WIDE OPEN SPACES to hear and see the quietness and beauty of nature;
- ◆ To breath the pure air with the aroma of sage and juniper;
- ◆ To feel the isolation of being completely distant from the smog and noises of the city;
- ◆ To see occasionally the silent movement of the animals of nature and watch the almost effortless flight of the golden eagle as he soars and dips in his relentless search for food;
- ◆ To sip the coffee and taste the foods that were never equaled in the dining room;
- ◆ To find a stone, or maybe two or more, that may polish into a beautiful gem to be forever cherished as a memento of the day;
- ◆ To gaze beyond the normal reach of vision into the far distant world of hill and glen, a world created for all of us, but millions have never really seen;

Towards evening you slowly wend your way to the crest of the hill, and there you relax to watch the setting sun in all its glory, and the distant mountains become silhouettes, while the mysterious shadows slowly envelope the nearby desert below you. And as the first shiny star appears you lift your eyes toward the heavens above and thank The Great Creator for this day of rockhound happiness.

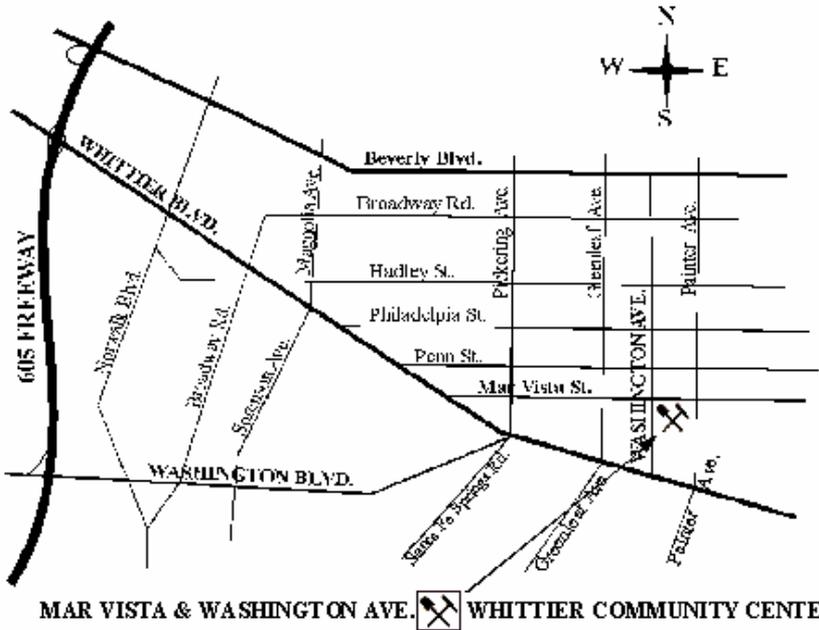
—by WM. J. BLAKE

*Rocks & Minerals, February 1970, pg. 146*

**Upcoming CFMS Gem Shows**

- Aug 3-5 NIPOMO, CA.** Orcutt Mineral Society  
Nipomo High School, 525 North Thompson Ave.  
Hours: 10 - 5 daily  
[www.omsinc.org](http://www.omsinc.org)
- Sept 8-9 DOWNEY, CA.** Delvers Gem & Mineral Society  
Woman's Club of Downey, 9813 Paramount Blvd.  
Hours: 10 - 5 daily
- Sept 15-16 BORON, CA.** Mojave Mineralogical Society  
Boron Community Park & Building, 27177 – 20 Mule Team  
Road  
Hours: 8 - 4 daily
- Sept 15-16 PASO ROBLES, CA.** Santa Lucia Rockhounds  
Pioneer Park & Museum, 2010 Riverside Avenue  
Hours: 9 - 5 daily  
[www.slrockhounds.org](http://www.slrockhounds.org)
- Sept 21-23 SAN BERNARDINO, CA.** Orange Belt Mineralogical Society  
Western Regional Little League Ball Park  
6707 Little League Drive  
Hours: 9 am to Dusk daily  
<http://OBMSrocks.yolasite.com>
- Oct 3-8 JOSHUA TREE, CA.** High Desert Rockhounds of Moronga  
Valley. Joshua Tree Sportsman's Club, 6225 Sunburst Street  
Hours: 9 – 7 daily  
Website: [www.jtsportsmansclub.com/gemshow.htm](http://www.jtsportsmansclub.com/gemshow.htm)
- Oct 7 FALLBROOK, CA.** Fallbrook Gem & Mineral Facility  
123 W. Alvarado Street  
Hours: 10 – 4 daily  
Website: [www.fgms.org](http://www.fgms.org)
- Oct 20-21 WHITTIER, CA.** Whittier Gem & Mineral Society  
Whittier Community Center  
7630 Washington  
Hours: 10 - 5 daily

**WGMS MEETING LOCATION!**  
**Whittier Community Center**  
**7630 Washington Ave. Whittier**



**Editor:** Jay Valle, 1421 Latchford Avenue, Hacienda Heights, CA 91745  
 Home: (626) 934-9764; E-Mail: res19pnb@verizon.net  
**Bulletin exchanges** are welcome and should be sent to the editor.

**Affiliations**



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**Whittier Gem and Mineral Society, Inc.**  
Post Office Box 865, Whittier, California 90608-0865  
**Editor: Jay Valle, 1421 Latchford Ave.**  
**Hacienda Heights, CA 91745**

**No Meetings in July and August.  
Enjoy your summer vacation!**