

Whittier Gem & Mineral Society

**THE ROCKHOUNDER**

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**"A JOYFUL CHRISTMAS" ANTIQUE 1908 POSTCARD**

# ROCKHOUNDER

## THE PREZ SEZ:

**T**wenty four days till Christmas! I can't believe that the year is almost over. It's been a good year for the club. We had a successful show. Our "Rockhound Garage Sale" added a few bucks to the coffers, although I often wonder if we don't buy most of the stuff ourselves. And last but not least we had some great field trips.

Speaking of field trips, we just got back from the Thanksgiving field trip. This was a joint field trip with the Pasadena Lapidary Society. Both clubs were represented almost equally with Vern and Sylvia Cliffe representing both groups. Unfortunately it was a bit windy so we all piled into our motor home and enjoyed a Thanksgiving feast (see photo on pg. 11). As usual we had more delicious food than we could eat. The winds kept our campfires down to a minimum, one night only, so someone will have a readymade fire ring fully supplied with fire wood when next they camp at the site.

The CFMS was also holding a field trip for all members of the Federation clubs, so we hooked up with them for a trip to the Straw Beds for geodes, an agate location, and some psilomelane in placer deposits in a dry river bed. Vern and Sylvia led us to a black agate nodule area and out for chalcedony roses, with just a hint of fire agate. Another Federation trip took us to the chuckwallas for the ugliest looking geodes that you could imagine. Actually they are warty looking concretions of geodes. Ugly on the outside, but I hope, beautiful on the inside.

I didn't really mean to be doing a field trip report, but look on the bright side, I didn't slip in a reminder to start thinking about what you will be displaying at the 2011 Gem Show. Oops, I guess I just did.

Looking forward to seeing you all at the Christmas party

*Jerry*

**WGMS General Meeting**

**Sunday, December 19, 2010**

**Starting at 4:30 PM**

**Christmas Party Time!!!**

If it is December then the meeting must be a POTLUCK DINNER and Christmas Party. Members and friends of the WGMS will be coming together at Jerry & Kathy Turner’s house starting at 4:30 PM and eating at about 6:00 PM. Their home will be festively ornamented and prepared for our hopefully not yet holidayed-out guests. We will dine with friends and fellow members celebrating the season and the end of another year in the Whittier Gem & Mineral Society. BTW, if you want to join in the annual holiday gift exchange, the rule is bring 1 gift for each person in your group. Participation is, of course, your choice.

This event is RSVP so please contact Kathy Turner at (562) 696-3222 to let her know how many to plan for and to discuss what to bring.

*Marcia Goetz*

**12 Days of Rockhounding**

*This is an alternate rockhound version of a well-known Christmas carol found at the Surrey Rockhounds Club webpage. Enjoy singing it (I did) and Merry Christmas! ED*

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**On the first day of Christmas**, my true love gave to me,  
A branch from a petrified tree.

**On the second day of Christmas**, my true love gave to me,  
Two trilobites, and a branch from a petrified tree.

**On the third day of Christmas**, my true love gave to me,  
Three silver findings, two trilobites, and a branch from a petrified tree.

**On the fourth day of Christmas**, my true love gave to me,  
Four fluorite pieces, three silver findings, two trilobites, and a branch from a petrified tree.

**On the fifth day of Christmas**, my true love gave to me,  
Five golden nuggets, four fluorite pieces, three silver findings, two trilobites, and a branch from a petrified tree.

**On the sixth day of Christmas**, my true love gave to me,  
Six sapphire "star" stones, five golden nuggets, four fluorite pieces, three silver findings, two trilobites, and a branch from a petrified tree.

**On the seventh day of Christmas**, my true love gave to me,  
Seven sheets of copper, six sapphire "star" stones, five golden nuggets, four fluorite pieces, three silver findings, two trilobites and a branch from a petrified tree.

**On the eighth day of Christmas**, my true love gave to me,  
Eight agate nodules, Seven sheets of copper, six sapphire "star" stones, five golden nuggets, four fluorite pieces, three silver findings, two trilobites, and a branch from a petrified tree.

**On the ninth day of Christmas**, my true love gave to me,  
Nine rock hammers hammering, eight agate nodules, Seven sheets of copper, six sapphire "star" stones, five golden nuggets, four fluorite pieces, three silver findings, two trilobites, and a branch from a petrified tree.

**On the tenth day of Christmas**, my true love gave to me,  
Ten diamond saw blades, nine rock hammers hammering, Eight agate nodules, Seven sheets of copper, six sapphire "star" stones, five golden nuggets, four fluorite pieces, three silver findings, two trilobites and a branch from a petrified tree.

**On the eleventh day of Christmas**, my true love gave to me,  
Eleven quartz crystals, ten diamond saw blades, nine rock hammers hammering, Eight agate nodules, Seven sheets of copper, six sapphire "star" stones, five golden nuggets, four fluorite pieces, three silver findings, two trilobites and a branch from a petrified tree.

**On the twelfth day of Christmas**, my true love gave to me,  
Twelve tumblers tumbling, Eleven quartz crystals, ten diamond saw blades, nine rock hammers hammering, Eight agate nodules, Seven sheets of copper, six sapphire "star" stones, five golden nuggets, four fluorite pieces, three silver findings, two trilobites and a branch from a petrified tree.

<http://surreyrockhound.com/>

## **How the Quality of Turquoise Affects Its Use in Jewelry**

An article by Lee Anderson

**W**hat is the best turquoise for jewelry? The answer is, “it depends on the type of jewelry you desire.”

### **Gem Grade and Rare**

If the piece is to be one-of-a-kind, competition, top-investment-quality, the turquoise should be gem grade and rare. The stone should compliment the artist and the gold or silver work. The cost can exceed \$40 per carat.

### **Gem Grade**

Very high quality jewelry, also suitable for investment, requires gem-grade turquoise — but not necessarily rare stones. Such stones are beautiful but not as costly (\$10 to \$20 per carat). They are equal to one-of-a-kind stones in every respect but one — rarity. A breathtakingly beautiful spider web cabochon of Chinese or Tibetan turquoise can cost considerably less than a gem-quality piece of Lander or Lone Mountain turquoise, for example.

### **Very High- to High-Grade**

In some cases, the goal is to produce, in quantity, high-quality jewelry at a price that the top 25 percent of the market can readily afford. For this goal, a very-high-grade to high-grade turquoise, properly selected for color, matrix balance, etc., is appropriate. This turquoise should cost about \$5 to \$7 per carat.

### **Jewelry Quality, High Quality, and Investment Quality**

Most natural turquoise jewelry is made from stones classified as jewelry, high, and investment quality. These stones are good, they have nice luster, but they are not hard enough to preclude long-term color change. They are too good to stabilize and should please nearly everyone. Their cost will be \$2 to \$5 per carat.

### **Good Quality (Stabilized)**

Jewelry made from many matched cabochons or pieces of inlay nearly always uses good quality turquoise that is stabilized so the color will not change. A beautiful inlay or needle-point necklace will lose its appeal if the turquoise near the wearer’s neck begins turning green while the remainder remains sky

blue. This color change may occur as the turquoise absorbs skin oils. Good, stabilized turquoise is usually sold by the pound since so much is wasted in cutting and grinding. In this case, the value of the turquoise is simply part of the value of the artwork and overall material cost for the piece.

### **Good to Average, Mine Run, and Stock Qualities (Stabilized)**

These stones are used for carving and craft shop jewelry. By and large, this is an extremely valuable area economically. It is estimated that over 70 percent of Indian craftspersons, either individually or as shop workers, use this type turquoise. The result is a beautifully balanced piece that is priced remarkably low for the craftsmanship involved. This is the quality of turquoise that created the Indian jewelry market as we know it today. This stone typically sells for approximately \$80 per troy pound, but better color can double this cost.

### **Low Quality (Stabilized)**

The lowest qualities —chalk, chip stock, and bulk — must be stabilized to be used. Often this turquoise is “color shot”— in other words, artificially colored. Much of it is used for assembly-line manufacturing, machine stamped work, etc. It, too, has a place in the market: It is sterling silver, it is turquoise, and it portrays the “Santa Fe look” at a remarkably low price. Many collectors get their start here; they like the look and become interested in the whole field. As they learn more, their tastes change, almost always upward. This type of turquoise costs \$20 to \$30 a pound.

### **Fake and Synthetic**

This turquoise is often found in “Indian” jewelry made overseas. It, too, is available in the U.S., and is used by some Indians. It has a place in the market also, as long as you view it from the standpoint of art and craftsmanship. Look at the jewelry as you would a painting. Don’t look for material value...only the value of the art...the creation. Fake and synthetic turquoise costs about the same as chip stock or bulk stabilized turquoise.

As you can see, turquoise values range dramatically, and it’s not always easy to apply a value... even though it is easy to establish a cost. In other words, value often exceeds cost because of the artwork and craftsmanship involved. Sometimes we must view turquoise in the same way we view an oil painting. The individual components have little or no value individually, but as a whole, the artwork has significant value.

*The Cochise County Rock, 11/10*

**THE DISCOVERY OF TANZANITE**

Posted August 16, 2009 | By John Saul

**T**anzanite was not discovered in the way many believe. Geologist JOHN SAUL tells the true story behind this mysterious deep-blue beauty.

Many accounts of the discovery of the alluring blue tanzanite have found their way into print, most of them quite misleading or simply wrong.

The stone, which was the first new gem of commercial importance since the discovery of alexandrite in April 1834, was found on July 7, 1967 by Manuel de Souza.

De Souza, known as Mad Manuel due to his overwhelming passion for prospecting in the African bush unarmed and on foot, began his prospecting adventures on the Lupa Goldfields of western Tanganyika, India in 1939. But when it became unprofitable to mine gold after World War II, he moved to Dar es Salaam.

As there were no minerals to seek in the coastal region, de Souza departed for the Shinyanga diamond fields but Tanzanian prospecting licences for diamonds were nearly impossible to get, due to the monopoly of the Williamson Diamond Mines.

Following a period in the region of Lake Victoria, de Souza moved to Arusha to try his luck in the Kilimanjaro area.

On Easter weekend in 1967, his feet got particularly itchy and he hired a pickup and driver to drop him and his equipment at a destination he had selected southeast of Arusha.

Not having anticipated how bad the roads were, the driver refused to go further than a village called Mtakuja, deep in Maasai country. There, tens of miles short of the agreed-upon destination, de Souza was unceremoniously off-loaded from the vehicle.

He didn't know it yet but such serendipity had brought him to a spot about four miles from the future tanzanite find.

Jump forward to June 7 when de Souza, accompanied by four men he had hired in Mtakuja for mere shillings a day, stumbled across a transparent blue stone sitting on the surface of the ground.

From its colour he thought it sapphire but dismissed this when he tested its

hardness.

Back in Arusha, he consulted the only reference book on mineralogy in his possession and decided that olivine (also known as peridot) was the closest match to his stone.

He registered it as such on July 25, 1967 - a move prompted by the Tanzanian law that required prospectors to specify the minerals before registering a mining claim.

It did not take de Souza long to discover that the gem was not olivine, but he remained at a loss as to its actual identity. Some said it was dumortierite, others argued cordierite. Swahili-speaking prospectors fittingly-labelled it Skaiblu, meaning sky blue.

Around this time, de Souza sent samples to the Gemological Institute of America (GIA), perhaps the only lab with the equipment at the time to identify zoisite.

Ultimately, however, it was a Tanzanian government geologist named Ian McCloud who eventually identified the mysterious sky-blue gem as tanzanite, though the gem wasn't named until samples reached Tiffany and Company vice president Henry Platt.

Platt appreciated the beauty of the material and subsequently coined the name tanzanite, in reference to its country of origin.

De Souza died at age 56 on August 21, 1969, prompting the Northern News to run an August 29 proclaiming de Souza the "hero of the tanzanite rush". Yet, within a short time, fanciful versions of the tanzanite story began to circulate.

One is that Ally Juyuwatu made the find, but he and his then mining partner Alloys Anthony Duwe were quick to proclaim Manuel de Souza as the original discoverer.

Another was Habib Esmail, an erstwhile claim jumper in the employ of well-known Greek miner George Pappas. And yet another supposed discoverer is Jumanne Ngoma, a sometime employee of Esmail's.

An article in Life magazine in 1969 reported that de Souza was led to the find by a Maasai but this was rejected by Chief Soibhe, who had shared milk with de Souza at Naisinya manyatta in the traditional Maasai manner of signalling of acceptance. Notably, none of these alleged discoverers has ever come forth

*(Continued on page 10)*



**THE DISCOVERY OF TANZANITE**

*(Continued from page 9)*

to seek compensation.

In the years following the discovery, de Souza received great attention. "European gem dealers soon learnt the true story and Manuel's discovery and his success swelled throughout Europe courtesy of social and factual magazines including Bunte (Jan 1969), Der Spiegel, Jasmine (July 1969), Time (Jan 1969) and Life (May 1969)," wrote son Angelo de Souza. "This was undoubtedly the most fulfilling and productive phase of his life. Manuel's prospecting ventures never stopped and his discoveries found their way to the attention of leading gemmologists of the time.

"While notoriety from European socialite magazines was welcome, it was the recognition of his find by such notable academics as Professor Strunz (Germany), Dr. Baker (Germany) and Dr. Saul (American based in Kenya) that meant the most to Manuel. Dr Saul, for instance, did a Fission Track Dating published in the American Mineralogist that Tanzanite could be 550 million years old. It was the importance of these data linking his name to a gem crystallised hundreds of millions of years ago that made all the failings he endured on his journey worthwhile."

Manuel's children and other members of his family are now scattered all over the world in Tanzania, Denmark, Malta and the United Kingdom. The house where he lived is now the residence of the Bishop of the Diocese of Mount Kilimanjaro.

These days, the tin roofs and electric lights of the tanzanite mines are visible from the right-hand side of planes landing from the west at Kilimanjaro International Airport. Whether they recognize what they are glimpsing or not, the tanzanite mines are the first thing that many early-morning tourists arriving from Europe see of Tanzania.

*About the author: John Saul is a geologist and founding member of International Colored Gemstone Association. He also discovered and owned the famous John Saul Ruby Mine in Kenya. This article first appeared in the Spring/summer issue of InColor - the official publication of the International Colored Gemstone Association.*

*First published July 2008. From <http://www.jewellermagazine.com/Article.aspx?id=220&h=The-discovery-of-tanzanite>*

*Via The Opal Express 11/10*

**Wiley's Well Field Trip Report**  
**by Mark Nelson, Pasadena Lapidary Society**

The Whittier and Pasadena clubs combined their November Field Trip with that sponsored by CFMS and hosted by the Orange Belt Mineralogical Society. It was at Wiley's Well over the Thanksgiving weekend and was lead by CFMS field trip leaders Adam Dean and Robert Sankovich.. The weather was rockhound perfect - cool, clear days that became t-shirt warm.

On Thursday we were guided by Rob to search for Bay Laurel petrified wood by the Colorado River. We then had a potluck Thanksgiving dinner with all the trimmings.



Thanksgiving dinner at Wiley's Well

Friday, Adam Dean and Matt Boeck led a group to find the Paisley Agate and to the Straw beds for nodules/geodes, agate and psilomelane. Rob also led a group to the opal mine to dig

for fire agate. Most of our group elected to search for quartz crystals and chalcedony around the bottom of Opal Hill and in washes to the south.

While driving to the chalcedony wash we came upon Lynn and Ron Buchko, of the San Diego club, who's car was disabled by a faulty fuel pump. Rudy Lopez and I managed to tow their car back to the interstate where AAA was able to get them help in time to return to the collecting fields by the end of the day.

On Saturday we all went out collecting nodules, geodes and chalcedony in the Chuckwalla Mountains in the morning and in the afternoon Jerry and Kathy Turner led us to a site where we collected agate at a nice exposed horizontal cap seam only 2.5 miles from camp!

Sunday we went back to the wash below the Opal Hill Mine and explored the area. Sylvia Cliffe found a slope that was completely covered with chalcedony of various shades of white, red and brown. It was windy that day and we were all glad to get back to camp and have soup in our campers. All agreed that a good time was had that weekend!

*...Mark*

## **The Unleaded Pencil**

Making your mark with graphite or color pencils

**H**ere's a myth buster: There is no lead in pencils. Rather, the core is made up of a non-toxic mineral called graphite. The common name "pencil lead" is due to an historic association with the stylus made of lead in ancient Roman times. If you're looking for information on potential lead exposure risks in pencils,

### **Early Graphite Discoveries**

Graphite came into widespread use following the discovery of a large graphite deposit in Borrowdale, England in 1564. As the story goes, a passerby found bits of a shiny, black substance clinging to the roots of a fallen tree. The whole countryside was abuzz with talk about this mysterious mineral, which eventually came to be known as "plumbago" or, more commonly, "Blacklead." They found it left a dark mark, making it ideal for writing and drawing, but so soft and brittle, some type of holder was required. Initially, they wrapped graphite with string. Later, the graphite was inserted into hollowed out wooden sticks. The wood-cased pencil was born!

In 1795, a French chemist named Nicholas Jacques Conté patented a new process for making graphite pencil leads. This method mixed powdered graphite and clay in a water slurry, then formed sticks which hardened in a kiln. These composite graphite-clay "leads" allowed for more efficient use of graphite and revolutionized the pencil industry. Not only did the formula reduce costs, but by adjusting the ratio of clay and graphite powder, the changing hardness allowed more control of the lightness and darkness of the graphite mark left on the paper. It's proved a win-win for creative expressionists ever since!

### **Graphite in America**

In 1821, Charles Dunbar (author/Henry David Thoreau's brother-in-law) discovered a graphite deposit in New England that proved to be of a quality superior to any previously found in the United States (though not typically up to the European quality). Still, his finding spurred the U.S. pencil industry to develop writing cores close to these graphite deposits. Eventually, the Thoreau pencil factory came to be known as one of the finest makers of pencils in America.

### **Graphite Eureka in Siberia**

French merchant Jean Pierre Alibert was searching for gold in Siberian streams

when he came upon some very round, very smooth pieces of pure graphite. Reasoning that they must have been carried a long distance downstream, he trekked some 270 miles until he came to the source of his discovery.

Packing in supplies by reindeer, Alibert set up a mine at this mountainous site near the Chinese border. During the first seven years of operation, the mine produced graphite of marginal quality. Then a rich and unbroken deposit of the highest-quality graphite was uncovered; a find that yielded pieces of pure ore weighing as much as 80 pounds! Pencils using Asian graphite were painted yellow as an indication of the source of the superior material in the writing core.

### **Work the Core**

Today's graphite writing cores are a mixture of graphite and clay. By varying the graphite to clay ratio, pencil makers adjust the core "hardness"—usually identified by a number ( 2, 2-1/2 or 3) or letters ( HB,2B, H or F).

Beyond graphite pencils there are other types of pencil leads used for many different purposes.

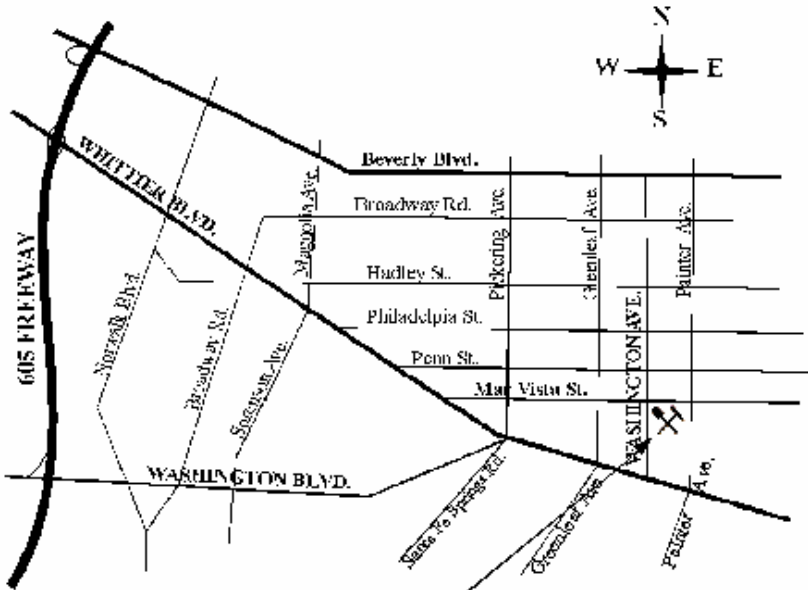
- Charcoal pencils, used primarily by artists, are another popular form of black lead pencil, made from a different form of carbon than graphite that is more like coal. These make a very dark black mark on the paper compared to even very soft graphite pencils, such as 8B.
- Color pencil leads, also used by artists and popular with children and students, are made through a similar process of creating a blend of pigment, china clay and wax that is extruded into a lead. Some basic sets of color pencils come with 12 or 24 colors per carton, but other high quality sets for art purposes include up to 120 different colors or more.
- Aquarelle or water color pencils are color leads with the added feature of being washable in water, producing an effect similar to watercolor paints
- Cosmetic pencils are special color leads used for make-up purposes, such as eye or lip liner.
- Finally, pastel pencils are another type of color pencils that make a mark resembling chalk, looking especially beautiful on dark papers.

<http://www.pencils.com/unleaded-pencil> via Rock Chippings, 10/10

**Upcoming CFMS Gem Shows**

- Jan 15-16 Exeter, CA.** Tule Gem & Mineral Society  
Exeter Memorial Bldg., 324 N. Kaweah (Hwy 65)  
Hours: Sat. 10 am - 5 pm; Sun. 10 am - 4 pm
- Jan 28-30 Redlands, CA.** Mineralogical Society of Southern California  
Micromounters Symposium  
San Bernardino County Museum, 2024 Orange Tree  
Hours: Fri. 5pm - 10pm; Sat. 9am - 10pm  
Sun. Field trip time to be set
- Feb 18-27 Indio, CA.** San Gorgonio Mineral & Gem Society  
Riverside County Fair & National Date Festival  
Gem & Mineral Building Bldg #1, 46-350 Arabia Street  
Hours: 10 am - 10 pm
- Feb 25-26 Northridge, CA.** Del-Air Rockhounds  
Northridge United Methodist Church, 9650 Reseda Blvd.  
Hours: Fri. 3 pm – 9, Sat. 10 am – 5 pm
- Mar 5-6 Arcadia, CA.** Monrovia Rockhounds, Inc.  
LA Co. Arboretum & Botanic Gardens, 301 Baldwin Ave.  
Hours: Sat. & Sun. 9 am - 4:30 pm
- Mar 5-6 Ventura, CA.** Ventura Gem & Mineral Society  
Seaside Park, Ventura Co. Fairgrounds, 10 W. Harbor Blvd.  
Hours: Sat. 10 am - 5 pm; Sun. 10 am - 4 pm
- Mar 11-13 Stoddard Wells, CA.** Victorville Valley Gem & Mineral Society  
Stoddard Well Tailgate (Stoddard Wells)  
Bell Mountain/Stoddard Well exit from I-15  
Website: [www.vvgmc.org](http://www.vvgmc.org)  
Hours: 8 am - 5 pm daily
- Mar 12-13 San Marino, CA.** Pasadena Lapidary Society  
San Marino Masonic Center, 3130 Huntington Drive  
Hours: Sat. 10 am - 6 pm; Sun. 10 am - 5 pm
- Mar 19-20 Bakersfield, CA.** San Joaquin Valley Lapidary Society  
Kern County Shrine Club, 700 south P. Street (P & Bell Terrace)  
Hours: 9 am - 5 pm daily

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



**MAR VISTA & WASHINGTON AVE.  WHITTIER COMMUNITY CENTER**

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**Affiliations**



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**(See page 4 for info)**