

# Palomar Gem and Mineral Club Newsletter

P.O. BOX 1583 | ESCONDIDO, CA 92033-1583

760-743-0809 | [www.palomargem.org](http://www.palomargem.org)

## Letter from the President

*Jef Wright – President 2018*

We are very fortunate that our club is one of the few in San Diego that has a lapidary shop available to our members. The shop gets lots of use which is a good thing. With lots of use comes lots of wear and tear on our machinery. For those of you who use the shop on a regular basis, please take some time to go over the care and use of our machines. Our shop supervisors are there as guides and teachers on our machinery. They can provide refresher courses on the proper technique to using the Titans and Genies so as to utilize the entire wheels and not just the center section. We have noticed quite a bit of wear on the center of the wheels and not the outside of the wheels which is causing us to replace the wheels more often which increases our shop maintenance costs. If you're not sure if you're using it right or need a refresher course please take the time to ask one of the shop supervisors for assistance. Everybody's effort to do use the machines properly will keep the club's costs to a minimum.

## Inside This Issue

Letter from the President	1
Programs	1
Workshops	2
Upcoming Special Classes	3
Tales from an Old Geologist	4
Rainbow Lattice Sunstone	7
GIA Field Trip	8
2018 Gem Show	9
County Fair Volunteer	10

## May's Program

**May 16, 2018 | 7:00 pm**

Dittus Hall | Redwood Terrace | 710 West 13<sup>th</sup> Ave, Escondido

### Opals

*Gerry Alvarado*

What can be more magical and alluring than a glowing opal? Winking colors of the rainbow changing with movement and light. Red, green, yellow, and blue. Body colors of white, black, or even colorless. Sometimes just intricate thin veins making fascinating patterns in the matrix.

Gerry Alvarado, otherwise known as the Gem Guru, owns The Miner's Gems shop in Old Town- a well-known landmark for many, many years. He'll be telling us all about opals, one of his favorite stones, and his experiences with them. He'll bring lots of eye candy to show us and will also have some items for sale.

***So wear your opals and come join us for an exciting talk and some great refreshments!***

***See ya there!***





## Workshops

The Lapidary and Silversmith Workshops are held weekly. There is a shop fee of \$7 per person to attend these workshops.

### **Cabochon and Lapidary Class & Open Workshop**

Learn to cut and polish a rock into a beautiful stone suitable for wire wrapping or fabricating in metal. A fantastic assortment of material is available for purchase on site. The workshop is also open for general use. No prior registration needed.

Tuesday: 6:30pm – 9:30pm

Wednesday: 11:00 am – 2:00 pm

Thursday: 2:00pm – 5:00 pm

### **Silversmith Workshop**

This workshop is open to all students who have had metal smithing instruction or experience and/or have instructor approval. If you have attended an introductory class, you can continue to improve your skills at this weekly workshop.

Thursday: 6:00pm – 9:00pm

You must be a member of the PGMC in order to partake in any of the workshops or classes provided by Palomar Gem and Mineral Club.

**Lapidary Workshop  
2120 W. Mission  
Suite S  
Escondido, CA**

### **Faceting Workshops**

Contact Bob Johnson for registration  
email: [Facetguru@palomargem.org](mailto:Facetguru@palomargem.org)  
phone: 760-809-0152

#### **Introduction to Faceting –**

An informative introduction and hands-on experience in the world of gem cutting. Learn how to create a gem out of a piece of rough, during a weekend class. No machine required. Return students welcome with or without their own machine. Each class can accommodate 3 new students without machines and 3 returning students with their own machines.

Sat., May 12 & Sun., May. 13– 9:00am – 5:00pm

\$80 for new students      \$70 for returning students

#### **Faceting Continuation Class**

This is a class for continuing students who have completed the Introductory Class and is held once per month, from 9 to 5 on the Saturday following the general meeting.

January Workshop: Sat., May 19 9:00am – 5:00pm

\$35 for all students



## Special Classes

### Introduction to Silversmithing

This is a 10-hour introductory silversmith class. The students will learn to develop their designs, use a jeweler's saw to cut out a pattern, solder a bezel to a backing and add a bale or a ring shank, creating a wearable piece of jewelry. Intermediate students can work on a project of their choosing with instructor approval. At the completion of this introduction the student can continue learning in the Thursday night workshop.

*Please bring a cabochon to set in silver or let us know if you need one ahead of time!*

Saturday June 2 and Sunday June 3, 2018

10:00 am – 4:00 pm

Cost is \$60 plus materials.

Register by contacting Diane Hall

phone: 760-741-0433 and leave a message

email: [silversmithing@palomargem.org](mailto:silversmithing@palomargem.org) (preferred method)

*Next class will be held September 29 & 30, 2018*



### Woven Bracelet Class

In this two day class you will learn to make a woven sterling silver bracelet. The student will learn to do a basic weave of 16 gauge sterling silver. A material packet and vice will be provided but you will need a rawhide or plastic mallet.

Saturday July 7 and Sunday July 8, 2018

10:00 am – 4:00 pm

Cost is \$60 plus materials (material cost approximately \$30 for silver)

Register by contacting Diane Hall

phone: 760-741-0433 and leave a message

email: [silversmithing@palomargem.org](mailto:silversmithing@palomargem.org) (preferred method)



### Website

Our new website is up and running. Please check it out at [www.palomargem.org](http://www.palomargem.org).

You will find calendar of events, past issues of newsletters as well as information regarding the club. This will be updated on a timely basis as items come up and you can find the latest and greatest info at your fingertips!



# Old Geologists Tale

BY GENE CIANCANELLI

## SCAMS, SWINDLES, AND THEFT (Part 1)



Mining scams and swindles have been around since the days of the Pharaohs and some of the tricks being used haven't changed in 4,000 years. There are many types of swindles in both the energy and mining businesses, but all basically feed on the greed and gullibility of people wrapped up in the romantic image of the investor as a genius oil or mining man worth millions (women are less prone to be victims to these swindles).

In one common swindle, the conman "salt" an abandoned mine with gold ore. This con is easy to spot because the host rocks, which contain the ore, never match the property's barren rocks and there are other geologic clues. One classical ploy is to load shotgun shells with gold and shoot the walls of an abandoned mine. The victim sees the gold and catches gold fever. The conman then reels the sucker in. The techniques used to fool investors are numerous, but usually easily recognized unless the geologist is lazy or stupid (there are a lot of those). A famous swindle is The Great Diamond Hoax of 1872. You can read that fascinating story at:

<https://www.smithsonianmag.com/history/the-great-diamond-hoax-of-1872-2630188/>

### A COPPER SCAM

In the mid-1960's Phelps Dodge receives a submittal describing a "fabulously rich" copper property east of Phoenix. The accompanying photos show a large pit filled with rock heavily stained with green and blue copper oxide minerals. These colorful pictures suckered the chief geologist into sending me on another forlorn wild goose chase. There is no one present when I arrive at the property and this alone is going to make it a better day. Exiting the jeep, I see that the surrounding rock is a very old basalt lava flow. Basalt is not a typical copper host rock in Arizona, but there are the famous basalt hosted Native Copper deposits in Michigan's Keweenaw Peninsula. These were known and mined by Native Americans and later from the mid 19th Century onward by American companies. I once found Native Copper in a small basalt flow north of Phoenix, but the tonnage was insufficient to become a mine.

Down in the pit, the basalt is mineralized with oxide copper minerals, primarily Chrysocolla and Malachite. I break several rocks to examine the copper minerals and the host rock. I'm looking for copper sulfide minerals such as Chalcopyrite and Bornite or remnant structures called boxwork, where the sulfide minerals were leached out. Examination of the rock in the pit's wall should show the same copper minerals, but there are none. Not a single speck of copper mineralization. Now very suspicious, I compare the basalt in the pit's wall to the basalt containing the copper minerals. The basalt samples are different, which means the mineralized rock was trucked in from some other locality. The property has been salted. The examination is over in 10 minutes.

### A URANIUM SWINDLE

While we're living near Las Vegas, Phelps Dodge assigns me to evaluate a uranium property near Barstow, California. The property is a large pegmatite that has been core drilled. The two promoters, who submitted the property, meet me at the pegmatite. They escort me around pointing out each core hole location where lying alongside each hole, they have left drill-core samples that they say came from the hole. The scintillometer goes off scale at each hole, but between holes it barely registers any radioactivity. The promoters are making the hard sell and interfering with the examination while dodging my questions. In frustration, I tell them that I'm returning to the office to recommend the property receive a more thorough study. Out at the highway, they happily turn west to Los Angeles and I turn east to Las Vegas. Fifteen minutes later, I'm back on the property. With no distraction, I realize the core samples are the same diameter as the core holes. This cannot be, because there has to be space for the drill bit to pass between the core sample and the hole's

*Continued next page*

## Old Geologists Tale *cont.*



sidewall. Obviously, the core did not come from these holes. Since only the core samples show anomalous radioactivity, what happened to the core extracted from these holes? Standing on the ridge top, I can see a cleared space among the creosote plants in the valley below. That area is an old campsite and the original core samples are lying among the creosote plants. The core samples are not radioactive. The promoters “salted” their property with radioactive core from a different pegmatite that did contain uranium. Another day wasted with fast talking conmen in silk shirts.

### CROOKED GEOLOGISTS

Most promoters and many mining and energy companies employ the services of crooked and unethical geologists, who have the reputation to write “puff” reports, give presentations endorsing the project, and conduct on site property visits for the purpose of deceiving potential investors, and government regulators. Most companies prefer to employ the services of geologists, who will rubberstamp their program, because the executives have an investment of time, money, and their reputations in the project. Approximately 10 percent of our clients refused to pay for our services and expenses, when we refused to falsify or change reports to support their delusions, scams, or worthless properties. Even large respectable companies on occasion use shady geologists to deceive investors and government regulators. Typically consulting geologists write very favorable reports because they are sure to get paid and there is a near certainty they will get future work from the client. Very few companies will again employ a consultant, who writes a report condemning a property or project. What has always been a mystery to me is why do people pay experts for advice and then not follow that advice?

A large national corporation purchased a smaller energy company and I was hired to review the smaller company’s technical files. Inserted inside one report was a letter from the prominent consulting firm that wrote the report. The letter was addressed to the company president and stated, “I received your letter voicing disappointment over our conclusion that your property was capable of 80 megawatts of electrical generation. We have rewritten the report to state the property can support 300 megawatts of generation. Let me know if that figure is sufficient?” The property in all likelihood is capable of 0 megawatts and it has never been placed into production. I have reviewed dozens of reports written by that same company and all their reports are always positive.

We wrote a negative report on a property that a large utility company was planning to purchase. Unknown to us the property was to be part of an elaborate shell game that would allow the utility to pass on the cost of another failed venture to the rate payers. (you regular folks). Fortunately, for those of us living in San Diego, it was not a local utility. Appearing before the government regulators, the utility lawyers submitted our report and said we placed an 80 million dollar value on the property’s geothermal resources. The report actually concluded the property contained no geothermal resources and therefore had no value. Subsequently, I was contacted by telephone to justify my “positive” evaluation. Due to a confidentiality agreement with the utility company, all I could say was “You need to read the report”, but the lazy regulators never read the report and the utility was able to fleece their customers.

### INCIDENT AT INDIAN HEAVEN

This is a tale of inept geologists, greed, and incompetent government employees wasting your money. As you read this, I hope you laugh because we all paid taxes to put this circus on. There is a mountain peak, called Steamboat Mountain, in the Cascade Mountains of southern Washington. The peak’s name derives from the fact that when viewed from a specific direction, the mountain has the profile of a steamboat.

In 1973, the Federal Government announces it is going to open the previously closed federal lands for geothermal resource exploration and development. This is going to create a leasing frenzy. The U. S. Geological Survey has identified areas they consider to have a high likelihood to contain geothermal resources and these are designated Known Geothermal Resource Areas (KGRA). The U. S. Geological Survey’s work mainly identifies hot springs as KGRA localities. Leases within KGRA localities will be put up for bid at KGRA auctions. The major oil companies assume the U. S. Geological Survey knows what it is doing and has identified the best prospects. The KGRA leases will be those the big companies plan to acquire. All other lands will be open for leasing on a first come basis with the exception that during the first month of leasing, if two or more



## Old Geologists Tale *cont.*

As many of you know, Gene Ciancanelli is a long-standing member of the PGMCI. Gene had a long career as an exploration geologist searching for energy and mineral resources throughout North America and Asia. These Old Geologist's Tales are excerpts from a book Gene wrote for the Huntington Library's archive of The History and Development of the Western United States. That book documents the life of a geologist and his wife working in the west during the latter half of the 20th Century. We hope to include many of these tales in this newsletter for your entertainment and perhaps another perspective of how our hobby can become a lifetime career.

companies try to lease the same area then it will automatically become a KGRA. Those leases will also be put up for bid at KGRA auctions.

In 1969, I wrote a report for Geothermal Resources International that identified the best geothermal prospects in the United States. Unfortunately, most of these prospects are on federal lands, which were then closed to geothermal leasing. In 1973 the government decides to open federal land to geothermal leasing. I am now employed by a consortium of Canadian Oil Companies planning to lease properties that I select. There is however a problem. My former bosses, J.Q. and Noeth, have left Geothermal Resources International and they have my report. They are working with the Stewart Capital Company, an organization of wealthy speculators, whom they have convinced to lease the prospects, which I identified. This will result in creating a lot of KGRA areas. By this time, my geothermal expertise is well known to the major oil companies and their landmen watch for areas that I lease. Bidding wars will certainly erupt on these new KGRA leases and the major oil companies will outbid our clients. During the first month of leasing, the Canadians and Stewart Capital agree to work together and lease each prospect in a checkerboard fashion. Each group will lease alternate sections of land to prevent causing a KGRA situation.

At the end of the first month, both groups have gained control of the best geothermal prospects. They are now the largest geothermal leaseholders in the United States. Meanwhile, the big oil companies have all entered the KGRA bidding wars. Eventually virtually all the KGRA areas identified by the U.S. Geological Survey will prove worthless. Then the major oil companies come after our leases, but that is another story.

After the first month of leasing ends, J.Q. and I are having a victory lunch. I ask him. "J.Q. you took leases in an area in Washington that has become known as the Indian Heaven KGRA. That was not one of the areas I selected. Why did you lease in that area?" (J.Q.) "After we leased all the areas you recommended, we still had money left and I needed to spend it. I noticed a peak in southern Washington called Steamboat Mountain. I thought, since we're exploring for steam, what a great name for a geothermal project; so I filed for leases at Steamboat Mountain. Stewart Capital's investors don't drill wells; instead they file leases and try to sell them at a profit to oil companies. Then the thought occurred to me that if this were a KGRA area then those big dumb oil company geologists would assume these leases are very valuable. All I had to do was have two or more Stewart Capital investors apply to lease the same section of land and that would create a KGRA. So on a bunch of sections in the middle of the area, I filed several investors on the same sections of lands and created an instant KGRA. The Federal Government has now designated the area as the Indian Heaven Known Geothermal Resource Area. Now when the bidding war starts, we just sit back and make a killing selling our adjoining non-KGRA leases to those big dumb oil companies." Unfortunately for J.Q. he soon died before he could see the years long circus that evolved from his little prank.

The Federal Government decides to first evaluate the Indian Heaven Known Geothermal Resource Area before putting the leases up for auction. For the next several years so called learned scientists and self-anointed experts from the U. S. Geological survey, the Department of Energy, and the State of Washington Department of Natural Resources spend millions of dollars performing studies and drilling holes to evaluate the Indian Heaven's geothermal resources. The only problem is there are no geothermal resources because there is no geologic reason why there should be geothermal resources in this area. Any geologist worth his salt should have immediately recognized this, but then they have millions of your dollars to waste. J. Q. was a prankster and I imagine him sitting up in Heaven laughing as he enjoys the circus he created. He was right that companies and government agencies employ a lot of dumb experts, who are adept at wasting billions of dollars annually.

*(to be continued)*



## 5 Things to Know About Rainbow Lattice Sunstone

By [Brecken Branstrator](#)  
[brecken.branstrator@nationaljeweler.com](mailto:brecken.branstrator@nationaljeweler.com)

*from the National Jeweler April 2018*

There's something so striking about geometry and perfect patterns found in nature.

For one small area in northern Australia, these features are presented in the form of “lattice” pattern inclusions in a gemstone that would make any rock hound stop in her or his tracks.

Rainbow lattice sunstone is unusual in its appearance—showing both aventurescence, caused by small inclusions of a mineral with a highly reflective surface, and the optical phenomenon adularescence—and rare to find.

It is rare for aventurescence to occur together with adularescence, and the material is made even more interesting when you add the presence of the colorful lattice.

Asterism Gems Australia, a company formed in 2015, is working to get approval on a mining lease for the small area from which it is sourced.

Here are five things to know about rainbow lattice sunstone.

### 1. It's relatively new, in mining terms.

Darren Arthur and a late friend, Sonny Mason, were the original discoverers of the material in 1985. Arthur said Mason had a small claim on it for some years, with small amounts of rainbow lattice sunstone filtering into the market over time, but that claim lapsed a few years ago.

In 2015, Arthur and a second gemologist created Asterism Gems. They then assessed and sampled the area that showed potential for a mining lease, and, having enough stock to supply the market, started the lease application process. Arthur said the company expects it be approved later this year.

### 2. It has an interesting composition.

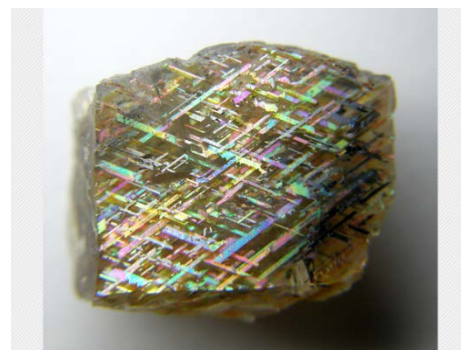
Rainbow lattice sunstone is a feldspar comprised of 75 percent orthoclase and 25 percent albite. (The material has been referred to as “rainbow lattice sunstone” since its discovery, but Arthur said the company recently decided to drop the “sunstone” moniker for marketing purposes and to avoid comparison to regular sunstones. However, since much of the educational material about it still uses the whole name, including an article referenced below, I decided to keep it.)

It originally was believed that the black blades and triangle inclusions were ilmenite, but improved technology over the last three decades has shown them to be magnetite.

In fact, the Gemological Institute at the China University of Geosciences recently took another look at the material and just published an article in the Gemological Association of Great Britain's Journal of Gemology (36(1), 2018, pp. 44–52) confirming this and more about the science behind rainbow lattice sunstone.

The material, it said, features a rare combination of phenomena including aventurescence (as seen in sunstone), adularescence (as seen in moonstone) and a distinctive lattice pattern created by its inclusions.

The Journal also noted that the inclusions causing the aventurescence have been identified as hematite, while the lattice patterns consist of “orangey brown” platelets of hematite and black platelets of magnetite.





Rainbow lattice sunstone is found in Australia's Northern Territory.

### 3. It only comes from one place.

Rainbow lattice sunstone is found in a remote area of desert named the Mud Tank Zircon Field, located in Harts Range in Australia's Northern Territory. Once Asterism's mining license is approved, the company will have the only mining claim for the area, both Arthur and Gem-A said. Arthur said they will mine using only hand tools. (According to the aforementioned Gem-A article, there is another rainbow lattice sunstone occurrence a little more than 4 miles away, but it produces lower-quality material.)

### 4. Production is small.

According to Asterism Gems, rainbow lattice sunstone is a difficult material to work with and has a lot of cracks, so it can be hard to find any sizeable, clean pieces. Arthur said the mining lease will be smaller than 500 x 400 meters, an area which includes the entire deposit. He added they have found material in less than 10 percent of this area. He called it a "very finite deposit" that "rarely" provides good size and the fine quality needed to cut the best gems. "Indications are that over 90 percent of what we will mine will only suit the metaphysical and collector's market," with only a small amount of gem quality being produced per day.

It is sold as both partially polished rough pieces as well as cabochons. When it comes to pricing, though, rainbow lattice's value has steadily increased over the past few years, he added.

### 5. There is opportunity in the U.S. market.

For the past two years, Asterism Gems has exhibited at the Riverpark Inn in Tucson, Arizona, when the gem shows take over the city. "Rainbow lattice has been well accepted in the U.S. and, to date, it is our biggest market," Arthur said. He added that the Chinese and Japanese markets are starting to learn about it, and the company expects demand to increase over the next year as full-scale mining begins.

## GIA Field Trip

### Centuries of Opulence: Jewels of India

#### EXHIBIT DESCRIPTION

This exhibit features 50 exquisite gemstone jewelry pieces and objects from India on loan from a private collection. Never seen in public, these pieces - including several from the magnificent Mughal Empire (1526–1857) - showcase more than 300 years of adornment from the 17th to the 20th centuries. The exhibit explores the distant sources of the diamonds, rubies, emeralds, sapphires and other gems decorating these pieces, their religious and cultural symbolism, the wars fought for them and the historical tradition of gemology in India.

Chris Toft is organizing a field trip to this exhibit on Wednesday, June 13, 2018 at 2 PM – 3:30 PM. If you are interested in attending this exhibit, please contact Chris at [vp@palomargem.org](mailto:vp@palomargem.org) and she can put your name on the list. There are a limited number of seats available, so please register early! Signups will be accepted until June 8. There are 45 slots and 31 people have already signed up! Get your name on the list!





## 2018 Gem Show Report

It is hard to believe we are only one month away from our show! The committee is working very hard to make this the best show yet. Very soon you will see our flyer and ads in various publications throughout San Diego.

Press releases have gone out to all southern CA clubs and interest groups and media.

Posters and flyers are going up all over where the public can see them.

Our booths are almost sold out! If you count the vendors who said they want a booth but haven't sent in their contract and deposit, we are **OVERSOLD!** So, if you are a vendor reading this and want space at our show, don't hesitate to send us your contract and deposit so you don't miss out! We met with the Center for Arts Escondido last week to work on the event and logistics. They are so wonderful to work with and are truly friends of PGMC!

In case you haven't already seen it, our Grand Prizes this year are fabulous! We have a 13ct amethyst faceted by our own **Charles Shupe**, adorned with 4 zircons cut by **Cheryl Kellermen**, and the beautiful setting designed and made by **Justin Engelmeyer**. **Chris Toft** once again came through with a beautiful Amethyst Cathedral 11X13X6.

### *Here are the critical dates and times:*

Set-up: Friday June 8: 12:30-2:30 **WE NEED YOUR HELP PLEASE VOLUNTEER**

Vendor Load In: Friday June 8: 2:30-6:30  
Saturday June 9: 7:30AM-10:00

Show Times: Saturday June 9: 10:00AM-5:00PM  
Sunday June 10: 10:00AM-4:00PM

Clean-up: Sunday June 10: 4:00PM-6:30PM **WE NEED YOUR HELP PLEASE VOLUNTEER**



64th Annual Palomar Gem and Mineral Club's  
**Gem, Mineral & Jewelry Show**

California Center for the Arts, Escondido  
340 N. Escondido Blvd  
Escondido, CA

Saturday June 9, 2018 10am - 5pm  
Sunday June 10, 2018 10am - 4pm

**Featuring**

- Precious & Semi-Precious Gems
- Collectable Mineral Specimens
- Unique Custom Jewelry
- Rough Material
- Jewelry Findings & Supplies
- Gem Identification
- Lapidary Art Demos
- Rock Treasure Dig for kids!

**Admission \$5 for Adults**  
Children 12 and under FREE

**Details at: [www.palomargem.org](http://www.palomargem.org)**



# Palomar Gem and Mineral Club Newsletter

## Board of Directors - 2018

Ever had an idea for the club and wanted to get it to the right people? Here is your opportunity. Here is our Board of Directors. We have given each of them their own palomargem.org email. Feel free to use it and send them your ideas!

PRESIDENT – Jef Wright – president@palomargem.org

VICE-PRESIDENT – Chris Toft – vp@palomargem.org

SECRETARY – Fred Floyd – secretary@palomargem.org

TREASURER – Toni Floyd – treasurer@palomargem.org

DIR. OF COMMUNICATIONS – Dawn Vickers – publicity@palomargem.org

SHOW CHAIRS – Archie Kuehn & Michele Shepard – PGMCSHOW@palomargem.org

PROGRAMS – Michele Shepard – programs@palomargem.org

MEMBERSHIP – John Raabe – membership@palomargem.org

## PALOMAR GEM AND MINERAL CLUB

The Palomar Gem and Mineral Club, a non-profit corporation open to all adults and young people, was organized to promote the study of rocks, minerals, gems, fossils and related subjects, such purpose to be developed through regular meetings with educational programs, field trips for the collection of geological specimens, and classes for teaching lapidary arts. The Palomar Gem and Mineral Club shares its knowledge of the earth sciences by sponsoring Gem and Mineral shows featuring exhibits, displays and demonstrations. The Club was founded March 20, 1954.

PGMC IS AFFILIATED WITH



## San Diego County Fair

Every year our members volunteer at the San Diego County Fair. We're looking for volunteer for the kid's dig at the gem and mineral exhibit. If you are interested in volunteering for a 2-3 hour time slot, please contact Chris Toft at vp@palomargem.org and she can get you assigned. All volunteers receive free admission to the fair for the day!



### Volunteer Days

Wednesday, June 20	Friday, June 22	Sunday, June 24	Sunday July 1
11:00 AM to 1:00 PM	11:00 AM to 1:00 PM	10:00 AM to Noon	10:00 AM to Noon
1:00 PM to 3:00 PM	1:00 PM to 3:00 PM	Noon to 2:00 PM	Noon to 2:00 PM
3:00 PM to 5:00 PM	3:00 PM to 5:00 PM	2:00 PM to 4:00 PM	2:00 PM to 4:00 PM
		4:00 PM to 6:00 PM	4:00 PM to 6:00 PM

It's a fun time and for your efforts you get free admission to the fair!