

The Opal Express

Published
monthly by
The
American
Opal
Society

February 2023

Volume 56 Issue 2



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President's Message

Happy Valentine's Day Opalholics!

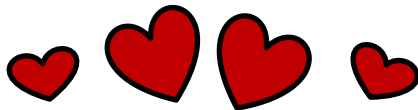


Don't forget to get your sweetheart something special.
Opal jewelry is always a great gift!

Well we didn't make it to Quartzsite this year. There were unforeseen circumstances that prevented us from going, but barring any illnesses or natural disasters, we plan on being there next year!

There will be a February meeting at the Downtown Anaheim Community Center on Thursday, February 16th, starting at 7:00 p.m. Hope to see you there!

Stan McCall
AOS President
Custom Creative Gem Cutting





Fantastic Facts About February

Over time, the length of February kept changing. At one point, it had as little as 23 days.

In Welsh, February is sometimes known as "y mis bach," which means "little month."

The Saxons called February "Sol-monath" which means "cake month," because they would offer cakes to the gods during February.

February is the only month where it's possible to go the entire time without having a full moon.

The odds of being born on February 29th are about 1 in 1,461. Those born on a leap day can be called a "leaper" or "leapling."

The name of February comes from the Latin word "februum," which means purification.

February was named after a purification ritual which was like an early Roman spring cleaning festival.

Of all the words you can misspell, February is one of the most misspelled words in the English language. Even the White House has misprinted the word "February" before in a press release!



Source: <https://www.thefactsite.com/february-facts/>

Tiptoe Through the Tulips . . . Toe Ring

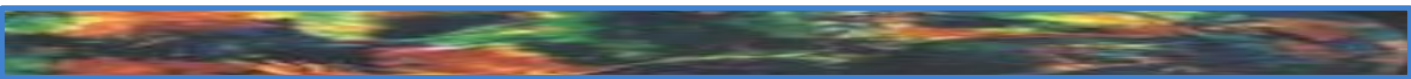
by William Russell

as portrayed by

Metal Stone & Glass Magazine – Summer 2005

as told to AOS editor, Kathleen James

by Mary Aracic



As time goes by, this couple was enjoying a quiet moment without the children, whom they realized growing up, that they had their own ideas of what they were talking about and verbal sparring seemed natural to them.

Therefore, Mum wanting a toe ring seemed so trivial that to her surprise her husband said, “Sure!” “How about I make one in silver first and see if you like it before I make it in gold.” A flood of relief shrouded her as he ventured forth to make the first toe ring for his wife.

So here is how it was done! Perhaps there was a secret toe ring wearer in the family just waiting to get out.

So where to start? A toe ring is just a small wedding band, and so it can be engraved, shaped, carved, etc. just as a wedding band is. The only difference being there is a gap cut at the bottom of the ring to allow it to be squeezed tighter over the toe. So he started by making a simple wedding band, 1mm thick and 3mm wide.

Just like finger rings, the size will depend on the size of the toe. For this one he made it “D-1/2”. Joined with hard, medium or easy solder, as the join will be cut later. Make the ring around using a steel ring mandrel and rawhide mallet. A hammer will give the ring a finish that could be useful, if you choose to go that way. You could taper the ring towards the join by 2mm.

If you decide to add a pattern, it is best done before cutting the gap at the join. The hallmark is also put in before decorating or cutting out the gap. This is where you creative/artistic talents come into play. Make it your way. Is it going to be stone set, carved, engraved or textured? Whatever you choose, leave a gap in the pattern at the join approximately 10mm long so that the section can be cut out without affecting the pattern.

Once all the work is done, cut out the 10mm section including the join, using a 2/0 jeweler’s saw blade. Then round the ends of the toe ring by filing and emerying. This makes it more comfortable to wear. Emery and polish to a fine finish. Voila! Your first toe ring!

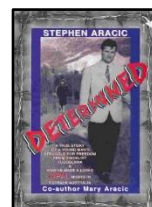
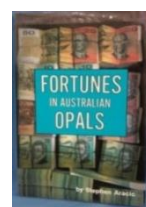
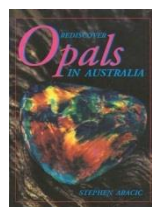
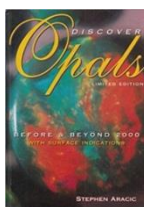
His wife loved the toe ring so much that he never need to make a gold one. If you use soft, curved shapes and low settings, the ring is less likely to snag any footwear that may be worn.

As an extra bit of excitement, it wasn’t long after making the toe ring for his wife that they were at a friend’s home enjoying their company and a fine meal, when he saw his friend’s wife toe ring through their glass table. He commented on how he would like one for himself, which his wife never knew about.

So there was a possibility that the last man standing will make his own toe ring.

For further ideas on patterns, etc. look at the “Lazy Jewellery”, “Get a Wriggle On” or “Lisa’s Heart Ring”.

As AOS Editor, I would like to thank Mary and Stephen Aracic once again for allowing us to share their wonderful stories from Lightning Ridge. I look forward to sharing more opal stories from Stephen and Mary in future newsletters!



You’ll find more opal stories from Stephen and Mary in these books.

Petrified Opal Tree Trunk Situated In Arizona Its About 225 Million Years Old

22 March 2020
Archaeology World Team



Photo by Patrick Fuchs

What happened to the wood that made it that way in the beautiful petrified trees in the forests of Arizona? They believe that petrified wood is so old that in the prehistoric period it has emerged. But do you know how petrified wood was made? This guide will show you how. What is petrified wood and how is it formed?

Fossil wood is considered to have grown when the material of the plant is buried by sediment. When the wood is buried deep in the muck, it is protected from decay caused by exposure to oxygen and organisms.

Because the wood is stored in deep water, the minerals in the groundwater flow through the sediment, replacing the original plant material with minerals such as silica, calcite, and pyrite.

Even very expensive minerals can infiltrate wood-like opal. The result is a fossil made from the original woody material, which often shows preserved details of tree bark, wood, and cellular structures.

This is probably the most popular petrified park in the world. The Petrified Forest National Park near Holbrook in northeastern Arizona was established millions of years ago. About 225 million years ago, this was simply a lowland with a tropical climate with a dense forest.

Rivers made by tropical rainstorms washed mud and other sediments. This was where you would find giant coniferous trees 9 feet in diameter and towering 200 feet lived and died.

Fallen trees and broken branches from these trees were buried by rich river sediments. Meanwhile, volcanoes nearby erupted numerous times and the ash and silica from these eruptions buried the area.

Eruptions caused large dense clouds of ash that buried the area and this quick cover prevented anything from escaping and of course, nothing can also move in, even oxygen and insects. In time, the soluble ash was dissolved by groundwater through the sediments. The dissolved ash became the source of silica that replaced the plant debris.

This silication process creates petrified wood. Aside from silica, trace amounts of iron, manganese and other minerals also penetrated the wood and this gave petrified wood a variety of colors. This is how the lovely Chinle Formation was made.

So how was this area discovered? Millions of years after the Chinle Formation was created, the entire area was cut by rivers and the rocks found on top of Chinle have eroded away.

What was discovered was wood here was much harder and resistant to weathering compared to the mudrocks and ash deposits in Chinle. Wood that was taken from the ground surface as nearby mudrocks and ash layers washed away.

Continued on Page 4

The park covers 146 square miles. It's dry and often windy, but the elevation of 5400 feet means that it's not as hot as desert areas at lower elevations, and it's mostly covered in the grass rather than cacti and other desert plants.

Of course, the big attraction here is the petrified trees, which grew about 225 million years ago when this part of Arizona was at a much lower elevation near the shores of a large sea to the west.



Petrified Forest National Park is another world-class tourist site in the area, straddling Interstate 10 about 70 or 80 miles east of Meteor Crater.

As well as the trees, many fossilized animals such as clams, freshwater snails, giant amphibians, crocodile-like reptiles, and early dinosaurs have been found here.

The silica in the logs crystallized into quartz, but often iron oxide and other minerals were mixed in, producing extraordinarily beautiful kaleidoscopic patterns and colors.

The petrified trees are often so attractive that a whole industry grew up around hauling them out from where they lay and cutting them up to make decorative furniture, wall displays, bookends and other items. Theft from the park has always been a problem and it's estimated that around 12 tons of fossilized wood are stolen each year.



At times volcanic ash was deposited on fallen trees in the forest here, and silica in the ash was dissolved by water and entered the trees, fossilizing them.

Source: <https://archaeology-world.com/petrified-opal-tree-trunk-situated-in-arizona-its-about-225-million-years-old/>

Herringbone Sequoia

These cabochons were cut from an opalized wood known as Herringbone Sequoia. The rough was found in the Snake River / Hell's Canyon area by an old-time rockhound in the mid-1900s and was sold as part of his estate. It is uncertain if it was found on the Idaho or Oregon side of the canyon. Whichever state it came from, it is a beautiful and unique material. It is definitely opalized wood (specific gravity = 2.106, spot refractive index = 1.48). These cabochons were cut by Greta Schneider of [Copper Creek Cabs](#).



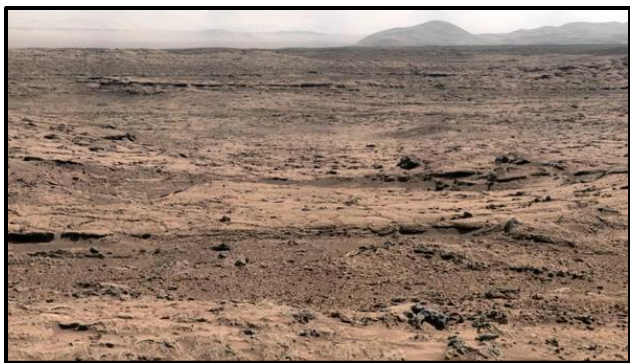
Source: <https://geology.com/gemstones/opal/opalized-wood.shtml>

Curiosity Rover Discovers Opal Gems on Mars with Clues to Watery Past

by Elizabeth Rayne
10 January 2023

Pam Strong, you were right!

Water-rich opals may one day provide a source of water on the Martian surface.



A view of Gale Crater captured by NASA's Curiosity Mars rover. (Image credit: NASA/JPL-Caltech)

More than just a shimmering stone, opal — which is rich in water — has now been found in Mars' Gale Crater by NASA's Curiosity Rover.

Martian water ice is abundant at the [poles](#) but not so much at the equator (where Gale Crater is located). NASA's [Curiosity Mars rover](#), which is currently exploring the crater, had previously beamed back data from its [DAN \(Dynamic Albedo of Neutrons\)](#) (opens in new tab) spectrometer, which was then analyzed by a team of researchers. In both older and newer Curiosity images, they noticed fracture halos, rings of light-colored sediment, that stood out because of their color; further tests proved that the light rock was actually opal.

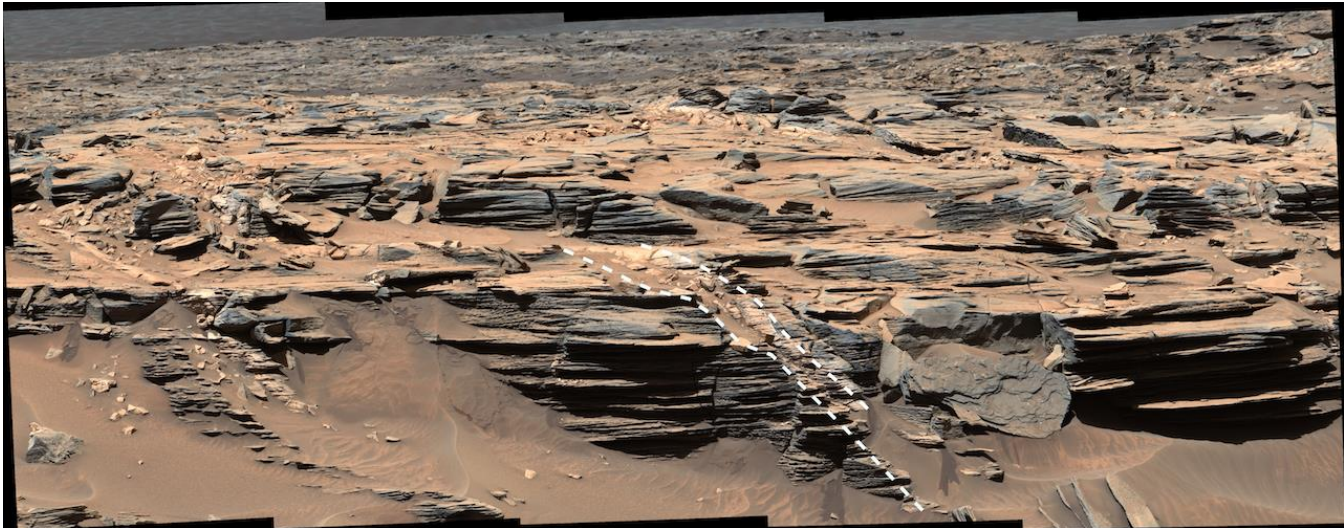
Because opal is predominately composed of water and silica, the presence of this mineral could mean that there was once enough water there to possibly make the depths of these cracks habitable.

Furthermore, the opal currently on Mars may one day be able to be harvested for the water stored inside, offering a source of water for any crewed missions to the Red Planet.

Mars is a barren and sun-blasted planet. The amount of [radiation](#) on the planet's surface makes it inhospitable to life as we know it. However, inside subsurface fractures, there is a much darker environment better protected from the intense radiation that is constantly bombarding Gale Crater on the outside. Water-rich opals inside these fractures makes their discovery even more exciting.

"Seeing that these fracture networks were so widespread and likely chock-full of opal was incredible, research physicist Travis Gabriel, formerly of the University of Arizona, said in a [statement](#). "Given the widespread fracture networks discovered in Gale Crater, it's reasonable to expect that these potentially habitable subsurface conditions extended to many other regions of Gale Crater as well, and perhaps in other regions of Mars. These environments would have formed long after the ancient lakes in Gale Crater dried up."

Continued on Page 6



Light-toned fracture halos as seen crosscutting the bedrock extend into the subsurface. These fracture networks would have served as safe havens from harsh surface conditions in a modern period on Mars. (Image credit: Malin Space Science Systems/NASA/JPL-Caltech)

Gabriel and his colleagues think evidence of opal possibly means that the fracture halos on Mars were some of the last places that had an abundance of liquid water, and that Mars may have dried up after they formed.

Opals form from a solution of water and silica. On Earth, solutions like this occur in geysers and hot springs as well as at the bottom of bodies of oceans and other bodies of water. When particles of silica settle at the bottom of the solution, they begin to create an opal. It is possible to harvest water from opals because while they may sparkle, they are not actually minerals.

Minerals have a tightly bound crystalline structure, but the structure of an opal is more loosely bound, meaning water can be extracted from it. Astronauts who explore Mars in the future might have a significant water source in fracture halos if more opal

can be found. According to the statement, a fracture halo 1 meter in diameter "could house roughly one to 1.5 gallons of water in the top foot of the surface."

This find has now given the [Perseverance rover](#) a new focus. If fracture halos containing opal exist on Gale Crater, they may also be somewhere in [Jezero Crater](#), where Perseverance is searching for signs of past life. Jezero Crater is already confirmed to have once been a lake, so there may be more Martian opal waiting to be unearthed.

The research is described in a paper published in the [Journal of Geophysical Research: Planets](#) (opens in new tab).

Source: <https://www.space.com/mars-opals-water-habitable>

~ Bench Tips ~

This page will be dedicated to bench tips and techniques from our readers. If you have bench tips you'd like to share, let us know! Bench tips can be anything - metal work, lapidary, wirework - anything creative that you would like to share. Send your tips to: aos.editor.02@gmail.com

CUTTING MOLDS

by Brad Smith

Cutting molds is easier and more precise with a sharp blade. A new Xacto blade is sufficient for cutting RTV molds but is usually not sharp enough for vulcanized rubber molds. For that it's best to use scalpel blades available from most jewelry supply companies. The #11 blade is triangle shaped, and the #12 is hawksbill shaped. I find the hawksbill is particularly nice for cutting the registration keys of the mold.



USING YOUR THUMB

by Brad Smith

When using multiple bits in a Foredom, we often have to deal with several different shaft sizes - the usual 3/32 inch burs, the larger 1/8 inch shafts sizes and of course the many different sizes of drills. For some reason I really dislike having to turn the key multiple times to open or close the jaws of the handpiece chuck.

So I have two ways to speed up that task. For opening up the jaws, I just remember "four", the number of turns I have to make to open the chuck just enough from the 3/32 bur shaft size to the larger 1/8 bur shaft size.

For closing the jaws around a smaller shaft, there's a neat trick. Hold the new bit in the center of the open jaws of the chuck, put your thumb lightly onto the outer toothed collar of the chuck, and gently start up the Foredom. As the chuck turns, it will naturally tighten the jaws around the bur shaft or the drill bit. Then all you have to do is a final tightening with the key.



Work Smarter & Be More Productive with Brad's "How To" Jewelry Books on [Amazon.com/author/bradfordsmith](https://www.amazon.com/author/bradfordsmith)



UPCOMING EVENTS

Reader: If your organization has an opal or rockhound-related event, please email particulars to info@opalsociety.org. Upcoming Event listings will be included at the discretion of The Opal Express editor as space and scheduling permit.

February 18-19, 2023 – Antioch, CA 94509

Antioch Lapidary Club

Contra Costa County Fairgrounds, 1201 West 10th St. Antioch, CA 94509

Hours: 10 AM to 5 PM Saturday and Sunday

Jewelry, Gems, Findings, Supplies, Auction, Grab Bags, Exhibits and hands on projects for kids

Contact: (925) 301-6957, edysnyder@gmail.com

Website: <http://www.antiochlapidaryclub.com>

February 25-26, 2023 – Vallejo, CA

Vallejo Gem and Mineral Society

Solano County Fairgrounds, McCormack Hall, 900 Fairgrounds Drive, Vallejo, CA 94589

Hours: 10 AM-5 PM

Gems, geodes, fossils, beads and minerals from around the globe.

Discover lapidary and stone crafts from vendors and live demonstrations. Something for everyone! Silent auction, geode cuttings, and games of chance and discovery for kids!

Contact: (415) 254-1506, ddahonvgms@gmail.com

Website: <http://vjgems.co/>

March 3, 4 & 5, 2023, Newark, CA

Mineral and Gem Society of Castro Valley

Newark Pavilion, 6430 Thornton Ave., Newark, CA

Times: Friday and Saturday, 10 AM – 6 PM, Sunday 10 AM – 5 PM

MGSCV Annual Show. 40+ dealers, display cases, demonstrations, door prizes. Sunday auction of donated items from society members. Fluorescent displays and dealers. Free parking.

Contact: Showchair@mgscv.org

Website: <http://MGSCV.org>

March 4-5, 2023 – Ventura, CA

Ventura Gem & Mineral Society

Ventura County Fairgrounds, 10 W. Harbor Blvd., Ventura, CA 93001

Hours: Saturday 10 AM-5 PM, Sunday 10 AM – 4 PM

50 exhibits of gems, minerals, fossils and lapidary arts; ongoing demos of lapidary and jewelry making; raffle prizes & silent auctions; a Second-Hand Treasures Store & plant sale; 15 dealers; children's activities and free resources for teachers. A SoCal tradition for 6 decades and counting!

Contact: (805) 312-8467, info@vgms.org

Website: <http://www.vgms.org>

March 10-12, 2023 – Stoddard Wells

Victor Valley Gem and Mineral Club

47th Annual Stoddard Wells Rockhound Tailgate

Time: Friday, Saturday & Sunday – 9 AM – 5 PM

Come visit us and our vendors for Handcrafted and Faceted Jewelry, Slabs and Cabs, Findings, and Equipment, Minerals and Fossils. TONS of Rough Material and More

Contact: (909) 657-7200, marklantz53@gmail.com

Club Address: 15056B Seventh St., Victorville, CA 92395

Phone: (760) 243-2330 and leave a message. Email:

president@vvgmc.org

Website: <http://vvgmc.org>

[Tailgate-2023-Info.jpg](#)

March 11-12, 2023 -Turlock, CA

Mother Lode Mineral Society

Stanislaus County Fairgrounds, 900 N. Broadway, Turlock, CA

Saturday 10 AM – 5 PM, Sunday 10 AM – 5 PM

Admission: Adults \$8, 12 & under free w/paid adult

Parking: Free

Activities: Jewelry, Beads, Tools, Educational Exhibits, Demonstrations, Fossil Exhibit, Sharks, Fluorescent room, Speakers, Geode Cutting, Dinosaur Walk-about, Gold Panning, Gem & Mineral Identification. Chat with Paleontologist Neal Larson, Large Fluorescent Room, Kids Activities, Rock Sale – old collections, Earth Science Tables, Food Court, Gemstone & Fossil Dig bags, Raffle, 45 Dealers

Website: <http://www.turlockgemshow.com> or

<http://www.motherlodemineralsociety.com>

March 18-19, 2023 – Lemoore, CA

Lemoore Gem & Mineral Club

Trinity Hall, 470 Champion St., Lemoore, CA

Hours: Saturday 10 AM – 6 PM, Sunday 10 AM – 4 PM

Featuring gems and minerals from around the world! Fossils, Jewelry, Beads, Stone Carvings, Lapidary Rough, Geode Cutting, and Artesian Jewelry.

Website: <https://facebook.com/AndLemoore>

March 18-19, 2023 – San Jose, CA

Santa Clara Valley Gem & Mineral Society

Santa Clara County Fairgrounds, 344 Tully Rd, San Jose, CA 95111

Hours: Saturday & Sunday 10 AM-5 PM

Fun for children of all ages. Free Parking.

Active Duty, Retired Military, Their Dependents & First Responders Free with Valid Military ID or First Responder ID

March 24-26, 2023 – Clovis, CA

Fresno Gem and Mineral Society

The Clovis Rodeo Grounds, 748 Rodeo Dr., Clovis, CA 93612

Hours: Friday & Saturday 10 AM – 5 PM, Sunday 10 AM – 4 PM

Central Valley Gem and Mineral Show: Showing Crystals, Gems, Jewelry, Minerals and Fossils. There will be Silent Auctions and Door Prizes. Free Parking and Free Admission

Website: <https://www.fgms.online>

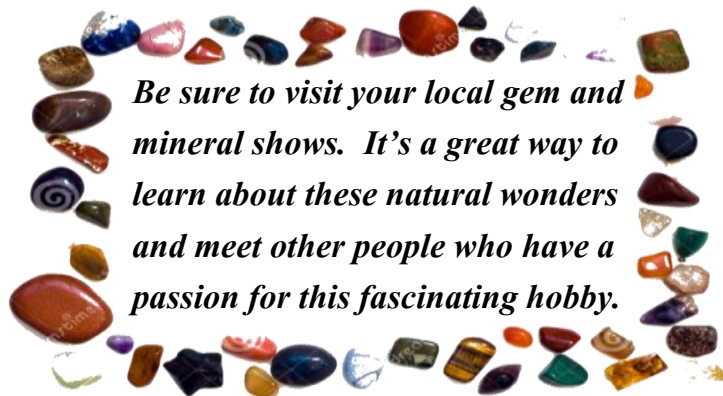
March 25-26, 2023 – Angeles Camp, CA

Calaveras Gem and Mineral Show

Calaveras County Fairgrounds, 2465 Gun Club Road, Angeles Camp, CA 95222

Contact: clairemathison1@gmail.com

Website: <https://calaverasgemandmineral.net/>



Be sure to visit your local gem and mineral shows. It's a great way to learn about these natural wonders and meet other people who have a passion for this fascinating hobby.

American Opal Society Membership Application

FILL IN APPLICABLE INFORMATION		DUES / FEES	AMOUNT PAID
DUES:	RENEWING MEMBERS	\$35.00	
SELECT ONE	NEW MEMBERS	\$45.00	
INTERNATIONAL MEMBERSHIP FEE (All addresses <u>outside</u> of USA)		\$15.00	
PRINTED NEWSLETTER FEE (Paper copy postal mailed instead of PDF file by e-mail)		\$10.00	
ADDITIONAL BADGES (Your first badge is <u>free</u> when joining)		\$15.00	
TOTAL PAID DUES plus International, Print or Badge Fees if Applicable:			

Please make check or money order payable to "American Opal Society". Mail payment and application to:

American Opal Society: PO Box 4875, Garden Grove, CA 92842-4875

An optional quicker method of payment is via the internet. To pay via PayPal, please visit the membership page on our website at http://opalsociety.org/aos_application_by_web.htm to complete the form and make your PayPal payment. You may pay with a credit card or via PayPal account. The transaction is completely secure and the AOS never sees your credit card number. The AOS PayPal account is membership@opalsociety.org.

NAME	
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ADDRESS	APT # or PO BOX
CITY	STATE
ZIP OR POSTAL CODE	COUNTRY (IF OUTSIDE USA)
PHONE - Home ()	PHONE - Business ()
E-MAIL	
WEBSITE	
OCCUPATION	HOBBIES and INTERESTS

NAME BADGE ORDER FORM:

PLEASE PRINT NAME AS YOU WISH IT TO APPEAR ON YOUR BADGE using up to two (2) lines of text for your name, nickname, or name of your opal related business.

MEMBERSHIP ROSTER: The AOS publishes a membership roster once per year in its newsletter, The Opal Express. Your name will be included. Please check what additional personal information you listed for other members. If it is different from the information above, please note that on the application.

☐ Address ☐ Phone-landline ☐ Phone-cell ☐ E-mail ☐ Website

Please sign here: _____

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Are Your Dues Due Now?

PLEASE CHECK YOUR ADDRESS LABEL OR NEWSLETTER E-MAIL.

There will be a date that shows the current month/year of your membership. If the date is older than the current date, your dues are overdue.

A Renewal Grace Period of two months will be provided. Please note, that as the system is set up, if your renewal is not received you will be AUTOMATICALLY dropped from membership thereafter. It is your responsibility to assure your dues are current.

Thank you.

The Editor

(revised 11/27/19)

The Opal Express

American Opal Society
P.O. Box 4875
Garden Grove, CA 92842-4875

Volume 56, Issue 2

— GENERAL MEETINGS —

3rd Thursday of the Month
7:00 p.m. - 9:00 p.m.

Anaheim Community Center
250 E. Center Street
Anaheim, CA 92805



TO:



**Next meeting will be
Thursday, February 16th at
7:00 p.m. at the Anaheim Downtown
Community Center.**



General Meeting Location at:

Anaheim Downtown Community Center

**250 E. Center Street
Anaheim, CA 92805**

**Next meeting will be Thursday, February 16th, at
7:00 p.m. at the Anaheim Downtown Community Center**

American Opal Society

Website: <http://OpalSociety.org>
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Pinterest: <https://www.pinterest.com/opalsociety>
YouTube: https://www.youtube.com/channel/UCegTIH1IEyO7y8wdqvRfyUA?view_as=subscriber

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