

The Opal Express

Published
monthly by
The
American
Opal
Society

December 2023

Volume 56 Issue 12

Merry Christmas

Table of Contents

President's Message	1
Members Only Password	1
Welcome!	1
Pete Goetz and the Andamooka BBQ	2
History About Andamooka and How To Treat It	3
Auctioneer Shows off 118-Carat White Diamond	6
Bench Tips	7
Upcoming Event	8

President's Message

Greetings Opalholics!

I hope this message finds you busy getting ready for the Christmas holiday! Christmas will be here before we know it.

As promised, we found the story about Pete Goetz and the Andamooka BBQ – you'll find it on Page 2. It was quite an evening cooking up some Andamooka!

I would like to invite everyone to our December meeting (Thursday, December 21st) for some holiday cheer! Instead of a potluck this year, we are having a snack and dessert assortment. So please join us and bring your favorite snack or dessert to share. Sodas and water will be provided. Hope you can join us!

Stan McCall
AOS President
Custom Creative Gem Cutting

Member area access is available only to members in good standing. Any other entry is unauthorized.

USER NAME: member

PASSWORD: AOSGemOpal395&



Let's extend a hearty AOS
welcome to our newest
members!

James Fisher
Tina Galves
Greg & Yvette LaFrinere
Lily Perez
Cynthia Poettgen
William Strickland
Daniel Worshet
Nicole Zeleznick

Thank you everyone for
joining the
American Opal Society!

Pete Goetz and the Andamooka BBQ

August 2015

Pete Goetz cooked some Andamooka matrix at the last general meeting in July. In preparation for the meeting, Pete had stewed Andamooka matrix in a sugar soliton for 24 hours in a crock pot at his house.

He then brought the sugar-soaked matrix to the general meeting, where he then inserted the matrix in an acid solution, which turned the sugar absorbed in the matrix black. **DON'T TRY THIS AT HOME!** Acid is extremely dangerous and you must have the proper training, tools and safety equipment.

The opal was removed from the acid bath then neutralized in a baking soda solution.

Pete then gave a great slide showing the how's and whys of the process.



Some Andamooka matrix in a beaker being blackened in a heated acid bath.



AOS President Pete Goetz draining the acid out of the beaker into a neutralizing solution.



The finished product. Notice some opal is darker than others; the matrix with the higher opal content is lighter due to less pores.

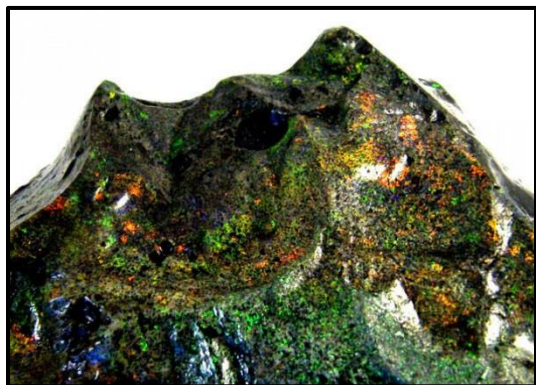
Did You Know?

The first Andamooka Opal was discovered by Sam Brookes and Roy Sheppard. Caught in a thunderstorm they sheltered under a tree when a pretty rock caught the corner of their eye. Smaller deposits were exposed afterwards including Lambina during 1930 and Stuart Creek in 1947.

Source: <https://www.opalauctions.com/learn/opal-information/history-about-andamooka-opal-and-how-to-treat-it>

History About Andamooka Opal and How To Treat It

In South Australia Opal was first discovered at Andamooka during the 1930's. The first Andamooka Opal was discovered by Sam Brookes and Roy Sheppard. Caught in a thunderstorm they sheltered under a tree when a pretty rock caught the corner of their eye. Smaller deposits were exposed afterwards including Lambina during 1930 and Stuart Creek in 1947. Opal at Andamooka exists in the thin marine 'Bulldog Shale' which is the significant portion of the Marree Subgroup of the Early Cretaceous period.



Andamooka specimen

Famous Andamooka Opal

Andamooka Opal is also known as the "Queen's Opal". It was cut and set into an 18 carat palladium choker band in 1954. It was presented to Queen Elizabeth II on the event of her first authorized state trip to Australia. Nowadays the necklace and earrings are considered a significant part of Queen Elizabeth II's special crown jewels. The final Opal weighed 203 carats.

Discovered during 1930, Andamooka is considered a one of Australia's most prominent opal fields. It has generated some of the most attractive pieces or sets of opal



Queen Elizabeth II's Andamooka necklace.

such as "The Andamooka Matrix Opal", which is also referred as "The Queen's Opal" mentioned above. The word Andamooka is derived from an Aboriginal name, meaning 'Large Waterhole'. It is situated 600 kilometres north of Adelaide, and is the only Australian city where none of the streets are named.



Andamooka specimen

Andamooka Opal Treatment

The Andamooka opal mines are well-known for producing light opal, which comprises white, crystal opal, it is sometimes referred as "milk" opal.

Matrix Opal is a permeable opal, which originates from Andamooka, South Australia. A variety of boulder opal also appears in Andamooka. Most of the rock in the surrounding area is quartzite and sometimes

Continued on Page 4

the Opal forms in between this very hard rock. These are referred as the “painted ladies”.



Andamooka matrix

Andamooka matrix opal is regularly treated to improve the colour by creating a black body using black carbon. This treatment involves a chemical treatment that is applied to the entire stone. When it comes out of the earth, it can look quite pasty, but by treating it by means of a carbon dye method it ultimately looks like a more appealing Opal.

Once it is totally treated, it is known as Andamooka treated matrix opal. With a rich solution of sugar with water, it is usually followed by a phase of simmering in a bath with a resolute sulphuric acid. The sugars pierce in the limestone matrix, and then the acid cooks it and that turns the white sugar around the pockets of opal into a black carbon. The outcome is that the darkened matrix encloses the pockets of opal, which does not diffract light. Some miners took the originals and sold them overseas as Lightning Ridge Black opal. After the scam was revealed, there developed a time when no one would purchase treated matrix. But the remarkable colours and rich black matrix of the best gemstones actually does present the attributes that make the Lightning Ridge black opal famous. Treatment of these matrix stones involves a moderately simple method of processing the stones.



Sometimes an epoxy glass resin is used to give the stones a beautiful shine.

Andamooka Dinosaur Bones

Dinosaur fossils and bones have been found in Andamooka and many are now in museums. Australian dinosaurs are from 100 to 240 million years old which puts them in the Jurassic and Cretaceous periods. Many countries have dinosaur bones but only in Australia have opalized dinosaurs been found as opalized fossil.

Andamooka Opal Price

Matrix opal can be quite reasonably priced, which is different with the authentic black opal. For the buyers, they should be aware with some opal dealer whether you are purchasing an authentic black or Andamooka matrix opal stones.

DISCLAIMER

The following paragraphs give instructions for treating Andamooka Matrix Opal. The American Opal Society **DOES NOT** recommend trying this on your own. AOS **will not** assume responsibility or be held liable for any and all injuries incurred by individuals or groups using this method on their own. Individuals or groups will be proceeding at their own risk.

How To Treat Andamooka Matrix Opal

The equipment used is very basic. For the heating, use an old electric frypan with a thermostat control. It is very important not to overheat the opal as it can fracture when too hot.

Place a mixture of 1 cup of sugar (white or brown doesn't seem to make any difference) in a pyrex or other heat resistant bowl with an equivalent amount of water and heated until the sugar is dissolved.

Continued on Page 5

Set the frypan to about mid-range for the heating process. The pyrex bowl can be placed directly onto the frypan.

Before treating the matrix opal it needs to be cut and shaped and sanded but not polished. The opal should be dried thoroughly by light heating to remove any moisture from the fine pores in the stone. Avoid touching the stone with your fingers as oil from your fingers can affect the treatment.

The stone or stones are then placed in the sugar syrup solution and cooked for 8 hours plus. The time of cooking is a bit of a guess and depends on the porosity of the stones. Very porous matrix will absorb the sugar solution much more quickly than dense matrix. I do not know how to assess how long it will take but 8 hours seems a good start.

After cooking let them cool down. It may be necessary during this stage to add some more water to the sugar solution if it becomes too thick due to evaporation due to the cooking process.

THE NEXT STAGE IS A VERY DANGEROUS ONE AS IT INVOLVES THE USE OF HIGHLY CONCENTRATED SULPHURIC ACID. THIS IS VERY CORROSIVE AND THE FUMES CAN ALSO BE DANGEROUS.

Use 93% sulphuric acid obtained from a chemical supplier.

Place a small quantity in a pyrex bowl and place it in the frypan. The frypan is in a well ventilated shed.

When putting the acid into the bowl it is recommended to use rubber gloves and eye protection as the acid will badly burn you if it splashes onto your skin, so do be careful. Also never pour the acid into water as it will react violently and could splash you. Preferably use a mask also.

The stones are then carefully removed from the sugar solution with plastic tweezers (not metal ones as they will react with the acid) and then

carefully placed in the acid after letting excess sugar solution drip off the stones. Don't attempt to wipe the stones at this stage. The stones can then be cooked in the warmed acid for two hours plus. At this stage they will have changed colour. They can then be removed carefully with plastic tweezers and should be placed in another bowl with a weak sugar solution or a solution of bicarbonate of soda. This is to neutralise the acid.

After a few minutes they can then be admired although there is still the final polishing to be carried out. While wet you will see the amazing transformation that has taken place. The colors of the opal will now be clearly showing.

If the matrix was quite dense you should now be able to polish the stone. It is better not to use cerium oxide or tin oxide as the polishing compound can get into the pores and be seen as tiny white spots which can mar the surface. Use a leather lap with 50,000 grade diamond for the polishing.

Extra care needs to be taken not to apply too much pressure as this will generate a lot of heat and could crack the stone. The more porous matrix may not polish at all. If this is the case the surface can be covered with liquid glass to produce a highly polished surface. I will discuss this treatment in a different post.

Don't forget to dispose the acid carefully. Add the acid to water very slowly and then bury it in the garden when it is very diluted. Do not add water to the acid as it will splutter and could easily splash onto you causing harm. If it does, liberally wash the affected area with water. If anyone has any comments on this treatment or any alternative treatments please feel free to comment. This process had worked for me and have some very beautiful stones which look very much like quality black opal and have cost very little in comparison.

Source: <https://www.opalauctions.com/learn/opal-information/history-about-andamooka-opal-and-how-to-treat-it>

Auctioneer Shows Off 118-Carat World's Greatest White Diamond in NYC

Associated Press, 04 September 2013

NEW YORK – A New York auction house is showing off what it calls the world's greatest white diamond on the block -- a 118-carat stone from Africa the size of a small egg.

The oval diamond glistened in its glass case Wednesday at Sotheby's Manhattan headquarters, not yet mounted after it was mined and cut two years ago. It will be auctioned in Hong Kong on Oct. 7 and has a pre-sale estimate of \$28 million to \$35 million.

In terms of size, quality, polish and color, "this is the greatest white diamond we've ever had the privilege to sell," said Quek Chin Yeow, deputy chairman of Sotheby's Asia and an international diamond expert.

The stone was discovered in 2011 as a 299-carat rough diamond in a southern African country whose name Sotheby's declined to disclose.

When asked why they could not give the exact source, auction house officials said the owner wishes to remain anonymous and that was the agreement.

The current record for any white diamond is \$26.7 million. That pear-shaped stone was over 101 carats. It was sold at Christie's in Geneva last spring.

Three other white diamonds over 100 carats were auctioned by Sotheby's -- in 1990, 1993 and 1995.

The white stone is part of a lineup of jewels up for auction that also includes a flawless, round, vivid blue diamond, worth an estimated \$19 million at 7.6 carats.

It's the largest, most significant such diamond graded by the Gemological Institute of America.



The reason these stones are going on the block in Hong Kong, Quek said, is that it has become a center for jewelry sales and it's there that the \$1.7 million record price per carat for vivid blue diamonds was set -- with the sale of a 6-carat blue diamond for \$10.2 million in 2011.

Blue diamonds -- more rare than white ones -- are from the same color family as the famed Hope Diamond, though a different hue. The Hope Diamond, which belongs to the Smithsonian Institution in Washington, is not for sale.

Read more:
<http://www.foxnews.com/us/2013/09/04/auctioneer-shows-off-118-carat-world-greatest-white-diamond-in-nyc/#ixzz2dzvoSq2P>

Five Fun Facts About Diamonds

1. The diamond is more than a billion years old.
2. Diamonds are the hardest natural substance on earth.
3. Diamonds are made of only one element: carbon.
4. Diamonds come in every color.
5. Scientists have discovered a planet that they believe is composed mostly of carbon, and is one-third pure diamond.

~ 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

TEMPLATES

by Brad Smith



Whenever I have to make more than 2-3 exact copies of a sheet metal component, I think of making a template. Templates let me easily draw the shape of an item to cut out.

Art stores or online sources like cooltools.us/ and kingsleynorth.com/ sell templates for common shapes like circles, ovals, hearts, etc., but for non-standard shapes, I make my own out of a scrap of sheet plastic or sheet metal. My preference is brass. I carefully lay out the shape using a steel ruler, a set of dividers, a scribe, and a fine center punch.

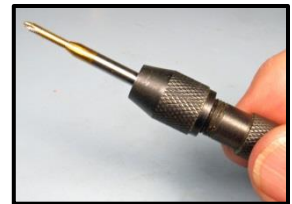
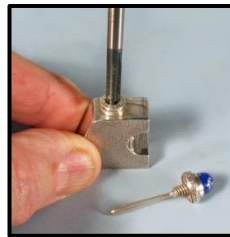
One example is the brass template in the pic below that let's me quickly trace the design of ginkgo leaf earrings onto silver sheet. Another is the nickel template which makes it easy to drill a pattern of holes for pin inlay into wooden handles.

THREADED FASTENERS

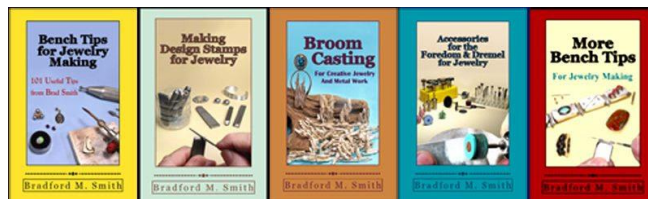
by Brad Smith

In some jewelry designs we need to join a couple elements together and cannot risk the heat of soldering. With other items, we may want to be able to disassemble the piece occasionally for cleaning or polishing. An easy solution for things like this is to use small bolts and nuts to hold components together.

Threaded fasteners come in all sizes from large ones on locomotives and earth moving machines to really small ones used in watches and cameras. A Google search will turn up specs and sources. Sizes are generally designated by a two digit code, the first denoting a diameter and the second describing the threads. Fasteners are made in a wide variety of materials (steel, brass, stainless, plastic, etc.) and come in both US and Metric sizes.



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.

December 2-3, 2023 – Barstow, CA

Mojave Desert Gem and Mineral Society
Cora Harper Community/Fitness Center
841 Barstow Road, Barstow, CA 92311
Hours: Saturday and Sunday 10 am – 5 pm
Contact: John Printz (760) 979-6138, MDGMSsecretary@gmail.com
Website: <http://www.mdgms.net>

2024

January 20-21, 2024 – Exeter, CA

Tule Gem and Mineral Society
Exeter Veterans Memorial Building, 324 North Kaweah Ave.,
Exeter, CA 93221
Hours: Saturday 10 AM – 5 PM, Sunday 10 AM – 4 PM
2024 Gemboree
Contact: Gayle Bingaman, Show Chairperson, (559) 802-6029,
bandgbing@aol.com
Website: <http://www.tulegem.com>

February 17-18, 2024 – Antioch, CA

Antioch Lapidary Club
Contra Costa County Fairgrounds, 1201 West 10th Street,
Antioch, CA
Hours: Saturday 10 AM – 5 PM, Sunday 10 AM-5PM
Jewelry, Gems, Findings, Supplies, Auctions, Grab Bags,
Exhibits and hands on projects for kids. Admission \$6.00,
Children 12 & under, scouts in uniform and Active Military
Free. \$1.00 off admission with show flyer.
Contact: (510) 693-9075, kellyplumb900@yahoo.com
Website: <http://antiochlapidaryclub.com>

February 24-25, 2024 – Vallejo, CA

Vallejo Gem and Mineral Society
Solano County Fairgrounds, McCormack Hall, 900 Fairgrounds
Drive, Vallejo, CA 94589
Hours: Saturday and Sunday 10 AM – 5 PM
Vallejo Gem and Mineral Show: We host vendors offering gems,
geodes, fossils, raw rocks and minerals, carved stone animals,
beads, findings and minerals from around the globe. The Vallejo
Gem and Mineral Society invites you to discover lapidary and
related crafts through our educational displays and live
demonstrations. There is something for everyone, for crafters,
jewelry lovers and science enthusiasts. We have a silent auction,
geode cuttings, drawings for beautiful hand-crafted pieces and
games of chance and discovery for kids!
Contact: (415) 254-1506, dduhonvgms@gmail.com
Website: <https://vjgems.co>

March 2-3, 2024 – Ventura, CA

Ventura Gem & Mineral Society
Ventura Co. Fairgrounds, 10 W. Harbor Blvd., Ventura CA
Hours: Saturday 10 AM – 5 PM, Sunday 10 AM-4PM
Dealers and exhibits, demos, gold panning, kids activities, raffle
& silent auctions, Country Store and plant sale, free resources for
teachers. A SoCal tradition for 60+ years.
Contact: (805) 312-8467, info@vgms.org
Website: <http://www.vgms.org>

March 23-24, 2024 – Angeles Camp, CA

Calaveras Gem and Mineral Society
2465 Gun Club Rd., Angeles Camp CA 95222
Hours: Saturday 10 AM – 5 PM, Sunday 10 AM – 4 PM
Annual Calaveras Gem and Mineral Show: Adults \$5.00, Children
under 12 FREE with paying adult. Amazing displays, vendors and
demonstrations, silent auction, Fun and interesting activities for
children. Treasure Hunt, Door Prizes! Food on sit. FREE PARKING.
Great Fun.
Contact: (209) 736-4892, dbrooks49@att.net
Website: <http://CalaverasGemandMineral.net>

April 13-14, 2024 – Mariposa, CA

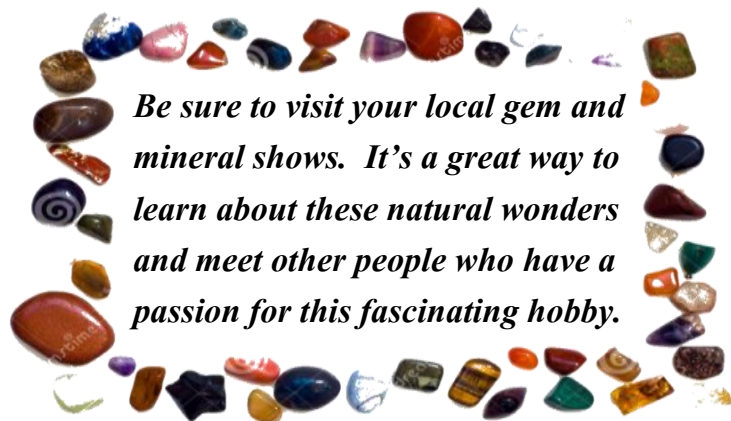
Mariposa Gem and Mineral Club
Mariposa County Fairgrounds, 5007 Fairgrounds Rd., Mariposa,
CA 95338
Hours: Saturday 10 AM – 5 PM, Sunday 10 AM – 4 PM
We'll have a great selection of vendors with all sorts of gems,
minerals, fossils, rough lapidary material and many other rock-
related items, a fabulous raffle, silent auction, geode cutting, and,
of course, food...
Website: <http://mariposagemclub.org>

April 13-14, 2024 – Placerville, CA

El Dorado County Mineral and Gem Society
El Dorado County Fairgrounds, Placerville, CA
Hours: Saturday 10 AM -5 PM, Sunday 10 AM – 4 PM
Contact: (530) 676-2472, office@edcmgs.org
Website: <http://edcmgs.org>

May 4-5, 2024 – Lancaster

Antelope Valley Gem & Mineral Club
2551 W Ave. H, Lancaster, CA 93536
Hours: Saturday 10 AM – 5 PM, Sunday 10 AM – 4 PM
AVGMC Rock, Jewelry and Gem Show. Parking and Admission are
free. Plenty of vendors, displays and activities for the whole family.
Contact: marylandoriele@gmail.com



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	
BUSINESS NAME	
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: _____

The Opal Express is published monthly by
The American Opal Society, Inc.
Copyright 2019. All rights reserved. Non-Commercial
Reprint Permission Granted Unless Otherwise Reserved.
-Editor
Please address all inquiries and exchange newsletters to:
Editor - Kathleen James
The Opal Express
PO Box 4875
Garden Grove, CA 92842-4875
E-mail: aos.editor.02@gmail.com

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 12

— GENERAL MEETINGS —

3rd Thursday of the Month
6:30 p.m. - 9:00 p.m.

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



TO:



**Meeting – December 21st
at the Anaheim Community Center**

Social Time: 6:30 p.m.

General Meeting - Call to Order: 7:00 p.m.



General Meeting Location at:

Anaheim Downtown Community Center

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

**Next meeting will be Thursday, December 21st, at the
Anaheim Downtown Community Center**

**→ Social Time: 6:30 p.m. ←
General Meeting - Call to Order: 7:00 p.m.**

American Opal Society

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

Stan McCall
Russ Madsen
Kathleen James
Bart Gampe
Veronica Purpura
Jamie Cassidy-Curtis

President (714) 220-9282
Treasurer (562) 884-2254
Editor (714) 828-1251
Webmaster (310) 736-5528
Show Chairman (714) 501-9959
Secretary

email: aos.president.01@gmail.com
email: aos.treasurer.01@gmail.com
email: aos.editor02@gmail.com
email: aos.webmaster.01@gmail.com
email: aos.showchair@gmail.com
email: jamiec275@gmail.com