

# The Opal Express

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



Member

Member



Volume #32 Issue #10 October 2000

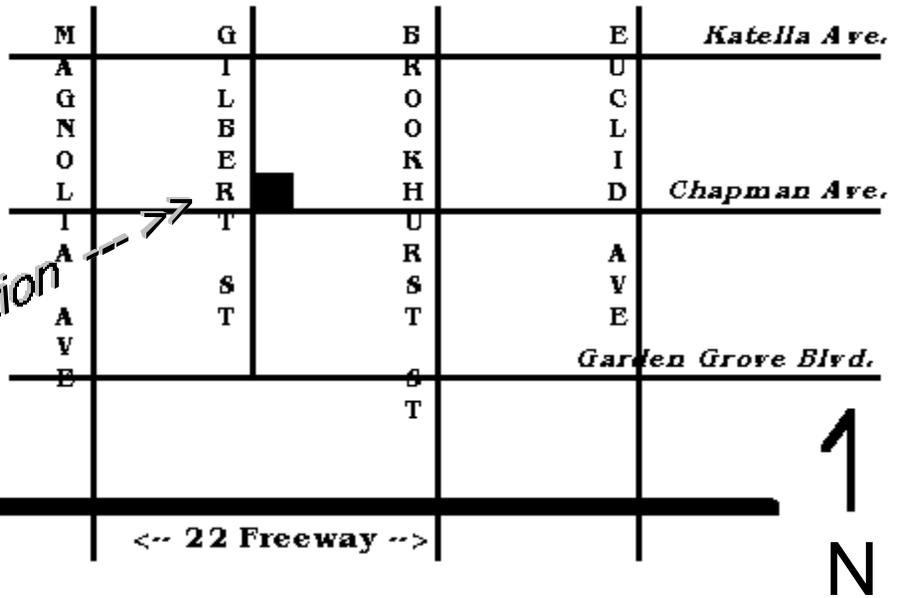
**General meeting Thursday  
 October 12 7PM**

TO:

**GENERAL MEETINGS —**  
 2nd Thursday 7:00-9:00 PM  
 Garden Grove Civic Women's Club  
 9501 Chapman Ave.  
 (NE corner of Gilbert & Chapman)  
 Garden Grove, CA

**MEETING ACTIVITIES**  
 Opal Cutting Advice Guest Speakers  
 Slide Shows Videos Other Activities

*Meeting Location* →



## American Opal Society Officers

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American Opal Society website		<a href="http://www.opalsociety.org">http://www.opalsociety.org</a>	

# The OPAL SHOW is nearly here!

LAND OF WONDER

LAPIDARY INTL

## SHOW DEALERS

AMORE GEMS

LASCO DIAMOND

SK INTERNATIONAL

STAN PEGRAM

OPAL & GEM SHOW 2000  
NOV 4TH 10AM - 7PM  
NOV 5TH 10AM - 4PM

OUTBACK GEMS

HOUSE OF TIBARA

MATTI TIKKA

BOVA GEMS

KP CUSTOM DESIGNS

CASA DE LUMBRE

FREEFORM CREATIONS

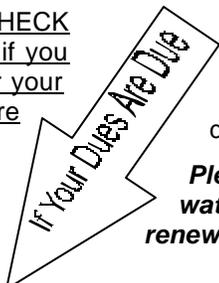
GREG HOWELL

OPALCUTTER

CAMPBELL GEMSTONES

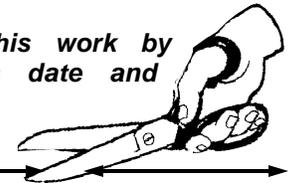
**Are Your Dues Due Now?** PLEASE CHECK YOUR ADDRESS LABEL or the membership roster if you are listed. If your label shows the current month/year your dues are DUE NOW. If the date is older, your dues are **OVERDUE**.

Renewal Grace Period of two months will be provided. If your dues are due now you will receive two additional issues of the newsletter. Please note



however that as the system is now 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.

Please help us make this work by watching your expiration date and renewing promptly. Thanks!



## DUES RENEWAL FORM

(membership renewal form rev. 1/1/98) d:\ameropal\news\tr\forms\dues\_due.pub



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

Thank you for continuing to support your American Opal Society!!

Make check or money order payable to: American Opal Society, Inc.  
Please mail payment and renewal form to the club address at left.

### DUES RENEWAL RATES (select one)\*\*

- 1) LOCAL AREA member \$26.00 (addresses in Los Angeles, Orange, & Riverside counties)
- 2) CALIFORNIA & USA \$20.00 (all addresses outside local area counties)
- 3) FOREIGN \$30.00 (all addresses outside USA)

\*\* \$5 SENIOR DISCOUNT = Age 65 or over <deduct \$5.00 from above>

DEALER LIST: Yes, include my name/address on a list provided to Opal Dealers selling at the most recent Opal Show...

(if yes, please sign or initial here) \_\_\_\_\_ date \_\_\_\_\_

without your signature here you will not be included in the dealer info list

MEMBERSHIP ROSTER: Yes, include my name and/or address and/or phone information in a published AOS membership directory... [Please circle any of these —> NAME / ADDRESS / PHONE if you prefer a partial listing.]

(if yes please sign or initial here) \_\_\_\_\_ date \_\_\_\_\_

without your signature here you will not be included in the member roster

NAME: \_\_\_\_\_  
 ADDRESS: \_\_\_\_\_ APT #: or PO BOX: \_\_\_\_\_  
 CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_  
 COUNTRY (IF OUTSIDE U.S.) \_\_\_\_\_ TELEPHONE: Home ( \_\_\_\_\_ ) \_\_\_\_\_  
 Business ( \_\_\_\_\_ ) \_\_\_\_\_ FAX ( \_\_\_\_\_ ) \_\_\_\_\_  
 Email: \_\_\_\_\_

Please indicate any name or mailing address changes

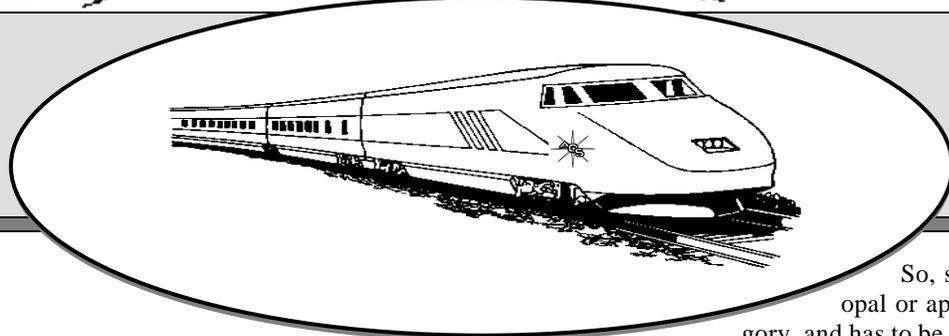
NAME BADGE ORDER FORM: (OPTIONAL)  
 Number of badges ordered \_\_\_\_\_  
 (\$5.00 EACH - includes engraving)  
 PLEASE PRINT NAME AS YOU WISH IT TO APPEAR ON YOUR BADGE using up to two (2) lines of text for your name, nickname or name of your opal related business.

# The Opal Express

OCTOBER 2002

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by the  
American  
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Society

Volume 32, Issue 10



So, seems to me that inking the back of an opal or applying black epoxy falls into this category, and has to be disclosed.

## President's Message from Carol Bova

This month, I have more questions than answers! I'd really appreciate hearing from you if you have an answer to these:

From our website, <http://www.opalsociety.org>

*I'm new to this. Are opals in Colorado? A few names of good books would help too. Thank you, Dan and Madeline P*

Another website contact inquired if we had heard of laser cut opals, and if so, where to find them. So far, the Board hasn't come up with anything on this. Have any of you? Let us know if you have please!

Now here's a case, where I had an answer, and it was wrong, so I'm trying to make public amends by sharing the correct info. I stuck my foot in my mouth recently in trying to comment on something when half asleep. The issue under discussion had to do with putting a black epoxy on the bottom of an opal to enhance the color. My fatigued brain said it had to be disclosed as a doublet....which, of course, is wrong! What I should have said, is that putting black epoxy or inking the back of an opal has to be disclosed as having a 'coating'. (Before anyone gets angry at me, this is not my rule, it's from The Gemstone Enhancement Manual which is an industry publication that describes how to meet the Federal Trade Commission Guides on enhancement disclosure in the U.S.!! I am not telling anyone outside the states what their respective country or territory might be saying on this issue, but I'd be curious to know if there are similar rules.)

*The Manual says the term coating should be used for such surface treatments as waxing, lacquering, enameling, inking, foiling, or sputtering of films to improve appearance, provide color or add other special effects.*

So that's it for now for questions and answers, please share your point of view!

=====

### **The Opal Show is almost here!!**

Show dates are Nov 4th and 5th. Please contact any board member if you have a donation for a door prize. Opal rough, cut stones, jewelry or lapidary supplies are all welcome gifts!

### **See you at the October meeting and the show in November!**

Carol



## Work Shop Information...

**The LOCATION for the Opal Society workshop** is the lapidary classroom at Walker Jr High School, 8132 Walker St., La Palma, CA 90623

Directions: (Choice of 3 Freeway approaches)

**[1]** Exit the 605 at Carson St and proceed east, or **[2]** exit the 5 or 91 Fwy at Valley View and proceed south, or **[3]** exit the 22/405 Freeways at Valley View and proceed north.

Walker Jr HS is on Walker St north of Lincoln Ave. It is on the east side of Walker between Crescent Ave. and La Palma Ave. Drive to the far back of the school to the Lapidary Arts classroom.

Only AOS members may use the equipment and workshop. You will be required to sign a release form as well.

Workshop Schedule on Page 5 shows dates/times and appointment instructions. ☼

### DATES TO REMEMBER

General Meeting  
Thurs Oct 12th 7PM

Directors Meeting  
Mon Oct 9th 7PM

OPAL & GEM SHOW  
NOV 4TH & 5TH

### INSIDE THIS ISSUE

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# The McCondra Report

By Barbara McCondra

Mother Nature's laboratory secrets are being ferreted out daily. The hottest puzzle on the opal block seems to be that microbes could have produced precious opals in only a few months. Elizabeth Smith, author of Black Opal Fossils of Lightning Ridge, gave me a printed page of info labeled New Scientist. [www.newscientist.com](http://www.newscientist.com) July 15, 2000 at the Lightning Ridge Gem Expo. Rachel Nowak of Melbourne wrote it. I will paraphrase and condense the information in it.

It said that a team of geologists and microbiologists including John Watkins, a geologist at the New South Wales Department of Mineral Resources in Sydney, Australia and geologist Hans Behr along with Karen Behr, both of Gottingen University in Germany, found fossils of bacteria that appear to have grown through several layers of silica spheres. It is these spheres that make up the structure of opal.

Using an electron microscope, the team studied both rocks and opals from Lightning Ridge opal mines. They came up with 80 micrographs showing that each rock sample that contained opals also seemed to hold the closely packed fossils of more than 20 different types of bacteria and fungi. Watkins said, "At least nine of the bacterial fossils look similar to soil-dwelling bacteria of today." The article went on to say that the researchers found that these rock samples also contained feldspar minerals--a group of rock-forming aluminosilicates. Watkins reported that, "In some cases, you can clearly see a grain of feldspar being attacked by bacteria and at the edge of the bacteria there's opal."

(It has been known for some time that bacteria play a part in a variety of mineral forming processes both deep in the earth and in the oceans. See my article on Gold Bacteria in ROCK & GEM'S January 2000 issue).

At the 15<sup>th</sup> Australian Geological Convention this July in Sydney, Hans Behr told of the possibility that acid conditions would encourage the silica spheres to settle out quickly ( as opposed to the popularly held theory that due to silica's very low solubility conditions would have to remain stable for thousands of years for spheres to settle into the regular arrays that make up precious opal with gem fire) The scientists theorize that organic acids secreted by the bacteria rapidly produce silica from aluminosilicates in the rock. The bacteria only live for a few months so perhaps the spheres were laid down in that same short time. Again in opposition to the widely held theory of silica gel in-filling cavities, cracks etc. after being dissolved and leached out of sandstone by ground water. The article states that Simon Pecove, executive chairman of the Pan Gem group of mining companies agrees that Australian opals formed over short periods of time but suggests an alternative process to explain the shorter time to settle out the silica spheres in the opal forming process. He proposes that as pressurized hot water from the Great Artesian Basin flowed into fractures and cavities in the rock, the pressure and temperature dropped, allowing silica dissolved within to rapidly precipitate into opal.

More to ponder about our favorite gemstone, eh? ✨

## How to Care for Opals & Opal Jewelry

(our thanks to Peter Brusaschi for his kind permission to reprint articles from his web site <http://opalmine.com/>) by Peter Brusaschi

There seems to be much confusion about the proper way to care for and clean opals and opal jewelry. Here's a simple guide that will let you preserve your beautiful opals and keep them looking their best.

**Buy quality stones from a knowledgeable dealer or jeweler, preferably someone who is a cutter.** Now this may sound like strange "care" advice, but the stone you purchase is as important as the care you give it. Here's why. Many jewelers don't know one opal from another, and cannot offer you the right opal care advice. If you know what you've got...you can know how to look after it.

**Can I put my opals in water?** Yes, there is no problem in doing this, but if the stone is an opal doublet or triplet, it would be unwise to leave it in water (particularly hot water with detergent...as in washing up water) for long and extended periods of time. The opal triplet I gave my sister was used in all sorts of situations and was still going strong after 15 years of constant use...but this is not recommended for triplets and doublets as it may effect the cement that holds the protective crystal cap on the stone. Of course in the case of solid opals, hot water or detergent or oils will not effect them.

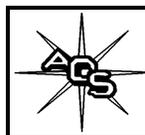
**How do oily substances affect an opal?** If you mean wearing it under the car when you change the oil or pack the wheel bearings,...the oil won't soak into the stone or hurt it in any way,...but the grime and the possibility of scratching it would be the biggest problem. However, oily hand and face creams will not hurt the stone, except that it may build up around a ring and make it look unsightly.

**What should I do to avoid damaging an opal?** Don't wear it doing the gardening, because the sand or soil may take the polish off the stone, or, if you get too energetic, you could smash the stone against a rock,...and opals don't like being treated that way. (Neither would you or I)...And of course, there is the chance that the gold or silver claws will be damaged, and you could loose the stone altogether. Take it off if you are doing any sort of work that could bring the stone in contact with hard surfaces. A flick of the wrist in the wrong direction could chip it.

**What do I do if my stone loses its polish or becomes scratched?** Now, this is why we suggest that you buy from people who cut the stone. For example if you get a stone from the Opalmine.com site, and you damage your stone, in most cases it can be re-polished very cheaply. If you have stones already that need repolishing, send us an email for instructions.

**How do I store my opals for long periods of time?** Generally it's safe to store them away, as long as the area is not overheated. It's

(Continued on page 5)



**PLEASE NOTE!!! The American Opal Society assumes no responsibility for injury or damage due to accidents or carelessness. Members and guests assume all risks during club activities.**

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(Deadline for items: 15th of the month prior to each issue)

# Safety Report

## by Cathy Gaber

### Put out that Fire

The best advice about putting out fires is to make sure they don't happen in the first place. Even in the safest circumstances though, fires ignite anyway. The next line of defense is a smoke alarm. Each home should have one on every level and each homeowner should check it monthly to make sure it is still working. Replace the batteries when Daylight Savings time changes in the spring and fall. Replace the whole alarm unit every 10 years.

So, worst case scenario, you have a fire to deal with. What do you do? First, you need to know what kind of a fire it is and have the right fire extinguisher on hand. The basic principle for extinguishing a fire is actually to suffocate it, to deprive the fire of oxygen so it can no longer burn. Common substances such as water, baking soda and sand have their uses in putting out fires, but it is very important to use the right substance. For instance, never use water on an electrical fire as the water can cause the fire to spread. Baking soda is the best choice for your burning toaster (believe me, I've used it several times). On a camping trip, water may work for an out of control camp fire, but sand or even dirt will do the trick too.

Another alternative is commercial fire extinguishers. They are inexpensive and, used properly, very effective. The first caveats though are to make sure that you have the right kind of extinguisher for a specific fire and to know how to work the extinguisher. It is worth sacrificing an extinguisher just for practice to make sure that everyone in the family is comfortable with its use. Commercial extinguishers also require regular maintenance (as outlined in the user's manual) to maintain their efficacy.

There are four basic kinds of fires. Class A refers to fires involving wood, paper, cloth, leaves, etc. Fires involving flammable liquids, gas, oil, oil based paints and grease are Class B fires. Electrical fires are Class C, and Class D covers metals such as magnesium, potassium and sodium. No single fire extinguisher is right for all classes, though some brands work for up to three classes (A-C). You need to assess your likelihood of a potential fire based on what kind of materials you have in your home or workshop, so that you know what kind of extinguishers to buy. Classes A and C are a possibility almost anywhere, while Class B may be restricted to the kitchen, garage and workshop. An appropriate extinguisher should be placed in each room.

The effective ingredient in a Class A fire extinguisher is usually water based. Compressed air expels the water. Carbon dioxide, dry chemical and aqueous film forming foam are the choices in Class B extinguishers. They work to exclude or displace oxygen and thereby "starve" the fire. Class C agents must be electrically non-conductive. Carbon dioxide is often preferred as it leaves no residue, but other dry chemicals such as compressed nitrogen can also be used. A heat-absorbing, non-reactive extinguishing medium is used for Class D fires. The dry powders cover the burning metal to create a smothering effect.

These class codes are listed on the extinguisher along with a number that denotes the relative amount of the extinguisher's fire fighting power. A rating of 20 means that the extinguisher can control 20 times more fire than one with a rating of one. Ask how long the extinguisher will expel the effective agent. A

# ITEMIZATION

**ITEM: NEW PO BOX REMINDER** our new PO Box is open for mailings — American Opal Society, Inc., P.O. Box 4875, Garden Grove, CA 92842-4875. Once again, we are keeping the former box for a few months, too. ❁

**ITEM: Cathy Gaber honored** East coast AOS member (and our esteemed Safety Chairperson) Cathy Gaber was recently awarded the Each One, Teach One award of the Eastern Federation of Mineralogical Societies. This is the second highest honor bestowed by the Eastern Federation. Congratulations Cathy!!

Cathy was also recognized with a trophy for Features at the Federation Editors' breakfast for her President's message about what to do with your collection (for the Micromineralogists of the National Capital Area) plus a first place award for a member profile of Fred Schaefermeyer (former AFMS president). Cathy's husband Bruce also got a first place award in Features for a President's message (for the Mineralogical Society of the District of Columbia).

Congratulations to you both!!! ❁

**ITEM: OPAL SHOW – Volunteers Needed** Please plan to help out with running the annual Opal Show. We will be passing around a sign-up sheet at the meeting Thursday night. A few hours of your time will contribute greatly to the success and smooth running of our show. Thanks in advance!! ❁

**ITEM: OPAL SHOW – Demonstrators** While the list of folks who will be demonstrating was not available at press time, we want to thank **Clare Gagnon** for his efforts in contacting people and arranging for them to demonstrate at the show. ❁

**ITEM: September Door Prizes** Congratulations to Prize Winners at the September general meeting:

Door Prize – a set of needle files was won by **Pete Goetz**

Raffle Prizes – **Annette Bryant** won a piece of tiger eye rough; and a plier tool set was won by **Bob Dixon**. ❁



few seconds is probably not enough. Those with greater power generally weigh more, so you want to also make sure that you can handle the weight and still be able to control the action.

Now that you have purchased the appropriate extinguishers, some thought needs to be given to their placement. They should be within easy reach, in plain view (not in a cupboard for instance), but not in the reach of children too young to properly use them. They should also be located somewhere that leaves a clear exit for the user in case the fire can not be controlled. Do not store them near a stove, heater or fireplace.

If you ever need to actually use a fire extinguisher, remember the acronym PASS. 1) Pull the pin (to activate the device), 2) Aim low, toward the base of the fire, 3) Squeeze the lever to eject the extinguishing agent (some devices have a button to push instead), and 4) Sweep the extinguisher from side to side until the fire is out. Then, after you are sure the situation is under control, don't forget to replace or recharge your extinguisher.

If your fire is even remotely likely to get out of control, clear peo-

not a bad idea to put them in a sealed plastic bag with a little water in case of drying out. Don't store them for long periods of time under hot lights, as this could crack the stones if the heat builds up and is magnified in a showcase.

**Some common sense advice.** This advice comes from my wife Renate's personal experience. She was sporting a beautiful blue boulder opal, about 4 carats in size, mounted in nice 18k gold, surrounded with diamonds. Worth around \$2000. On the way back from the snowfields one year, she went into the ladies room at a fuel station, and after washing her hands with soap and water, she wiped them on a paper towel, and at the same time, pulled off her ring and threw it into the waste paper basket...and didn't even notice it till we got home, about 1000 km's up the track. This problem is more pronounced for people who have rather straight fingers with little or no enlarged knuckle. You just have to have a little extra hand cream on, and it will slip right off. ...so just be conscious of it.

**Caring for opals with diamond accents.** If you have accompanying diamonds with your opal jewelry, in the case of rings particularly, the diamonds become very dull after a while, even if you've given the ring a clean. The main reason for this is that many people only clean the front of the ring and not the back. So...just pour some pure washup detergent into the back of your ring, and scrub it from the inside with a soft toothbrush in hot water. The diamonds will sparkle again, and it will not hurt the opal as long as you don't do it all the time.

**Check your jewelry.** Inspect your jewelry regularly for claw damage. You can do this yourself if you have a magnifying glass. There's no mystery to it. If you can see that the claw is loose and the stone moves a little, it's good to get something done about it. If you hold the item up close to your ear and rattle it, if the stone is very loose you can hear it. If you want to be sure about it, talk to your jeweler.

**Cleaning gold jewelry.** Any paste or fluid designed to polish brass, will also polish gold or silver. Just use a soft rag, apply the paste, and polish it off. After that, pour on a few drops of household detergent, give it a scrub with a fine toothbrush and wash it off under hot water. This will bring the gold back to what it was like when you purchased the jewelry.

**Secure and Insure your Opals.** *House security:* A good addition to every home is a deadlock. Usually they cost around \$50 per door, but the money is well spent, *if* you install them on all external entries. An experienced thief can pick these locks too, but it is not likely as there are too many other locks that are a snack to open. If you have a room in the house where you put your valuables, put a deadlock on the internal door as well. Your insurance company will give you a smile of approval for this initiative, and probably a healthy discount too, that can go toward the cost of the locks....See your broker for negotiations along this line.

*Also, on the subject of opal insurance...*If you think your opals are insured under your household policy, make sure you have a good talk with your broker or agent. Ask the following questions.

- How much coverage do I have for any one item?
- Do I need to give you a list of all my jewelry items?
- Do you require extra money to make sure expensive items are covered?
- Is my jewelry covered outside my home?
- Am I covered if I lose something?
- What documentation do you require if I file a claim?
- Will you accept my purchase invoice or receipt as proof of value or do I need to get an official appraisal?
- How much do you suggest I insure an item for in case the replacement costs more than I paid for the original?

("Care of Opals" reprinted with permission From <http://opalmine.com/>)

## Workshop schedule

**Be sure to check here** for workshop schedule updates. The dates listed below are those available to the AOS in our WORKSHOP AT WALKER Jr HIGH SCHOOL. The shop can be opened to members on Wednesday nights. **Please continue to contact Stan McCall by calling him at Gems & Opals (714) 827-5680 if you plan to attend a shop session.**

### October 2000

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

### November 2000

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

= Available Workshop dates

= General Meeting date

= Board Meeting date

= OPAL & GEM SHOW

## WORKSHOP RULES

Please see calendar above for monthly shop schedule.

- ⇒ 1) Shop may only be used by AOS members.
- ⇒ 2) Shop users must sign liability waiver.
- ⇒ 3) Shop users must sign in. Shop supervisor will maintain sign-in list and collect usage fees.
- ⇒ 4) Shop usage fees: effective immediately...SHOP USAGE FEE IS \$3 PER SESSION.
- ⇒ 5) To assist us in scheduling, shop sessions need to be reserved in advance. Please contact Stan McCall or any member of the board of directors to reserve shop time.

# What's happening???

## Calendar of Upcoming Events Dates and Locations of Shows

**Oct 9 – 10 9AM-5PM Victor Valley Gem & Min Club, San Bernardino County Fairgrounds, 14800**

**Oct 4 – 15 Fri & Sat 10AM-11PM, other days 10AM-10PM Fresno Gem & Min Society, Fresno County Fair, Fresno County Fairgrounds, 1121 Chance Ave., Fresno, CA**

**Oct 14 8AM-5PM Oct 15 8AM-4PM Searles Lake Gem & Min Society, Trona Lapidary & Show Bldg., 13337 Main St, Trona, CA**

**Oct 21 – Oct 22 10AM-5PM El Cajon Valley Gem & Min Society, El Cajon Masonic Temple, 695 Ballantyne St., El Cajon, CA**

**Oct 21 9AM-5PM Oct 22 10AM-5PM Mineralogical Soc. of Arizona and Arizona Mineral and Mining Museum, 1502 W. Washington, Phoenix, AZ**

**Oct 21 10AM-6PM Oct 22 10AM-5PM Whittier Gem & Min Society, 7604 Greenleaf Ave., Whittier, CA**

 **Nov 4 10AM-7PM Nov 5 10AM-4PM** 

### **AOS Opal & Gem Show**

**Quality Hotel 616 Convention Way,  
Anaheim, CA**

**Nov 3 – 4 10AM-6PM Nov 5 10AM-5PM Palomar Gem & Min Club, Al Bahr Shrine Auditorium, 5440**

**Nov 4 – 5 9AM-5PM Kaiser Rock & Gem Club, California Steel Industry, 9400 Cherry Ave.,**

**Nov 4 – Nov 5 9AM-5PM Indian Wells Gem & Min Society, Desert Empire Fairgrounds, 520 S.**

**Nov 18 9AM-5PM Nov 19 9AM-4PM Oxnard Gem & Min Society, Oxnard Community Center, 800**

## Interference

Among the several types of light phenomena, interference is perhaps least discussed yet most interesting to opalholics. Interference is the term which describes interaction between two or more (usually different) energy waves. White light is composed electromagnetic energy of various wavelengths. Opal separates these waves by the process of diffraction; once they are separated inside an opal they are free to interact.

The underlying principle of interference is that waves consist of pulses of energy followed by lulls – much the same as waves emanating across water. There are many forms and types of energy waves but the important notion is that they are a push-pull of energy pulses. If two waves blend, the energy pulses of each add to those of the other. In the case where two waves compliment because they are very similar, the resulting energy pulses are increased. This is termed constructive interference. Where the waves are opposing, their energies cancel. This is termed destructive interference.

This is important to opalholics because the result of adding or subtracting the energies of complimentary and/or opposing lightwaves is a variety of colors not produced by simple diffraction. Diffraction of sunlight yields red, orange, yellow, green, blue and purple (and graded shades between each). But diffraction will not produce some of opal's most dramatic colors such as the brilliant lemon yellow of the Dragon's Tear, or the deep cherry glow of the Mojave Flame. Nor will diffraction produce the brilliance of cyan or magenta. These colors are among those which result from interference. They are produced when interference alters the component colors of the source light.

If two light waves are precisely opposed the combination of their energies will be a complete absence of light. This is the same principle which is used to cancel sound in an office equipped with "white noise" soundproofing. An equal but opposite "noise" is produced and the result is a "sound curtain" of hushed silence. The effect is quite eerie.

Another example of colors resulting from interference phenomena are the swirling magenta and turquoise hues one often sees in an oil slick. Here the source light is broken up by thin film diffraction. Then interference takes over and produces the familiar hues any opalholic will no doubt appreciate.

Exceptionally high quality opal frequently exhibits many colors. We most often expect to find red as the "value" color but quite often an enthusiast will talk about finding a red-multicolor and will describe it by noting the red is graced with a number of other visible colors. An example I recall was a fellow who was proud to note he came upon a piece of red-multicolor with 9 colors visible.

Opal lovers often derive great enjoyment viewing a variety of colors which a unique stone produces. We have interference to thank for much of this pleasure. ✨

## COATING IT ??? PLEASE DISCLOSE IT !!!

by Russ Madsen

In her President's Message, Carol Bova did a nice job of sharing for us the definition of a coating applied to the back of an opal. Her comments stemmed from an online discussion earlier this year about a particular opal which the cutter felt was visibly enhanced by application of a layer of purple epoxy on the back of the stone.

The discussion at that time was about the value of the resulting stone given that it's appearance was enhanced by the epoxy.

One contributor wrote:

>> *Now, as you say, you are selling loose cut stones and it is perfectly obvious that the color has been painted on. It could likewise be removed. So, I do not feel that the value of the stone has been effected. If the stone is worth say \$500 and you paint it with purple epoxy, what you now have is a \$500 opal painted with purple epoxy, in my opinion.* <<

Another suggestion (which Carol addresses in her comments) stated that the value of the stone should be reduced to the level of a doublet (all other things being equal).

While I agree in principle with the author above and concur that an epoxy coated stone is not a doublet, it is certainly clear that such a stone is "enhanced" or modified.

I get a sense that "selling with disclosure" is being viewed in an almost cavalier light in this case. John Slocum went to great lengths to avoid unscrupulous mis-identifications of his product down stream - and it still happened regularly. Once a stone coated with epoxy is mounted the buyer is not going to be able to ID the treatment unless the setting is open-backed, and I challenge any seller of a cut stone to guarantee the nature of the final setting done by someone else. The final retail transaction is clearly beyond the scope of a cutter's efforts at disclosure.

More than that, it is my opinion that the treatment is not going to leave the stone's value unaffected. At least in the sense that face-up appearance IS value (especially with opal), the ultimate owner of the finished stone-in-setting is going to have something of better appearance than if the stone were not coated with epoxy - and unless great pains are observed (on earth? Sorry, but I doubt it) the "value" of this stone is going to migrate to what it looks like. Again, especially if it's a closed back setting.

While it is true that such a stone should be understood and marketed as being altered, the real difficulty is that the value of opal is entirely based on what it looks like viewed face-up. To digress a moment on this point. I about fell out of my chair watching one of those cable channels selling cut stones a few years ago. The seller offered a "BLACK AUSTRALIAN OPAL" coming up next.

The turntable rotated and there it was, an average Coober Pedy White! He went on and on about the black stone's value exceeding \$12,000 at \$1,000 a carat. Blah blah blah. Then he offered it for about \$4,000. The way it presented, the stone was probably worth less than \$50 a carat ( maybe \$600 total). After many words about the value of rare black

opals, he picked up the stone, turned it over and, sure enough, it was black as night on the back. "See there," he pronounced, "black Australian opal." It was what Paul Downing has sometimes termed a "natural" doublet. A fully natural stone comprised of a layer of white gem opal which formed along with a layer of black patch which in this case did NOT show through to the face. The stone was not a black, it faced white.

If the cutter of the stone being discussed presently was able to enhance it's appearance with a coating of purple epoxy I say more power to her, and I would do the same in a flash (ulp, baaad pun). But to even delve into whether that coating has or has not changed the value is, I think, a witch's hunt. If the stone's appearance is different it's \*value\* is bound to be different. In the cutter's defense, with the caveat below, I do not believe the stone should be devalued, especially not to the level of a doublet. It's far too easy to "make it whole again" simply by removing the coating.

What is it worth then? As a baseline, approximately the value it carried prior to application of the epoxy coating. There's going to be an ancillary issue of whether the stone can survive removal of that epoxy in the event a buyer down the line wanted to do that. This risk might be factored into the valuation process.

In that regard I personally favor putting colored epoxy in the setting rather than on the stone. I've never had to deal with removing an opal set like this but to aid in releasing the stone later, and because I'm generally paranoid, I wipe a very thin layer of non-stick cooking spray onto the back of the stone before it goes into the semi-hardened epoxy bedding.

There used to be another product out there: don't know if it's still available as I got it from S-west who have since gone out of business. The product is Rey "**ChemBlack**". It is applied with a small brush much like a paint and it dries jet black with a flat lustre. It is then baked on gently at about 150-175 degrees for 30 minutes, after which it will have hardened enough to be treated much like a baked on enamel. It makes a very nice, utterly black "fill" for a closed-back opal setting.

*So...Is ChemBlack applied to the setting an enhancement of the opal?* I believe the answer is yes. Can it be said that ChemBlack changes the value of the opal in the setting, no - at least it shouldn't. Does it invite unscrupulous price manipulation, I'm afraid so. It certainly makes some opals look great and as a hobbyist I have no qualms about using this product.

I once interviewed a gentleman, now deceased, who entered the opal business in 1922. He was 87 at the time we had this conversation and had been a professional opal buyer and had worked as a manufacturing jeweler most all his life. He said he REGULARLY used colored epoxy in opal settings. Showed me a pallet of color samples he maintained to test the appearance of a stone over red, brown, black, green, yellow, blue, even (whispering now) purple epoxy.

If a coating, whether it be applied to a stone or a setting, enhances the finished appearance of a set opal, it certainly makes sense to use it. But let us be honest and exercise full disclosure in reaching a fair price for the result. We must also do our best to insist that others do the same. ❁