

The Opal Express  
 American Opal Society  
 P.O. Box 382  
 Anaheim, CA 92815-0382



Member

Member



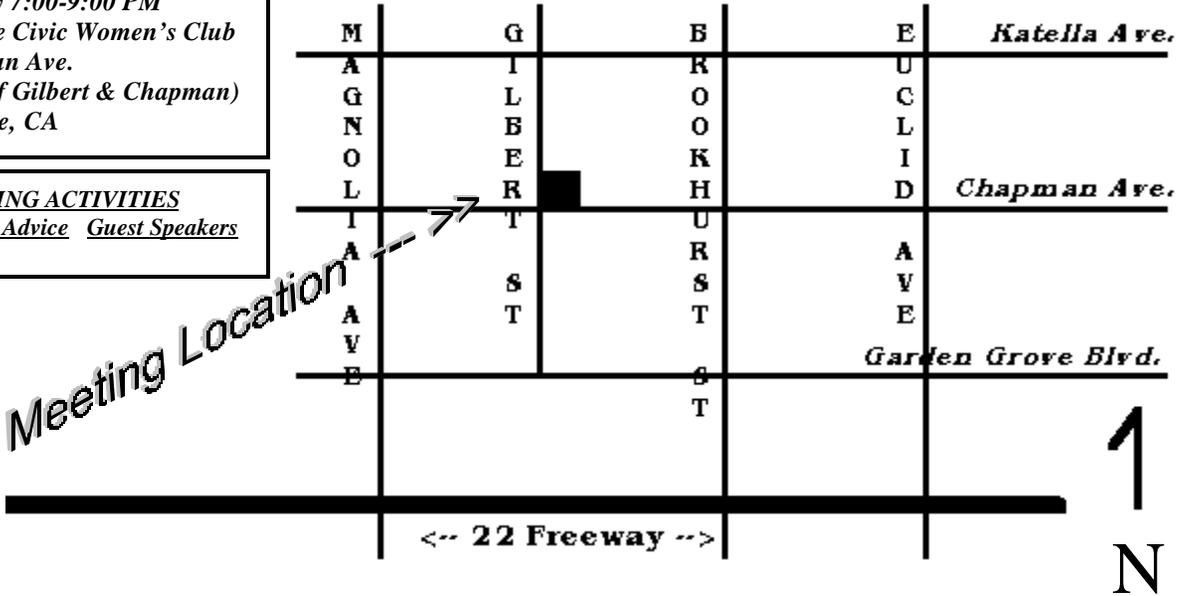
Volume #30 Issue #06 June 1998



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



**American Opal Society Officers**

Wes Roth	President	(714) 897-2984 email wesroth@earthlink.net
Carol Bova	Vice Pres.	(818) 845-8610 email bova@bovagems.com
Mike Kowalsky	Treasurer	(714) 761-4876 email mykowalsky@aol.com
Pete Goetz	Secretary	(714) 666-2084 email mpg1022@aol.com
Russ Madsen	Editor	(562) 425-9788 email 76550.1366@compuserve.com

# DUES POLICY REVISED - effective 1/1/98

**Henceforth**, memberships begin in the month a person joins the Opal Society. This simplifies the fee structure and will reduce questions and errors in dues payments.

**Three (3) Dues Rates** are for families and **are now based on your county of residence.**

**Rate #1 (\$26): Local area** = members who reside in Los Angeles, Orange, or Riverside counties.

**Rate #2 (\$20): California & USA** = all US addresses other than local counties.

**Rate #3 (\$30): Foreign** = all memberships outside USA.

**SENIOR DISCOUNT:** Age 65 and over, deduct \$5 from the above rates.

**Label Changes:** Your address label now displays your dues expiration date as MM-YY where MM is the month and YY is the year your dues expire. Expiration dates also appear in the membership roster.

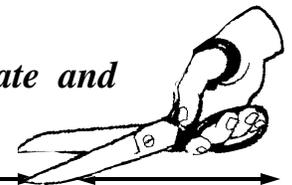
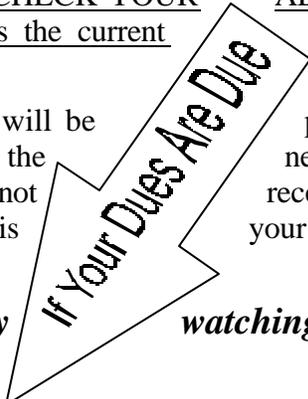
**Are Your Dues Due Now?** PLEASE CHECK YOUR ADDRESS LABEL or the membership roster if you are listed there. If your label shows the current month/year your dues are DUE NOW. If the date is older, your dues are **overdue.**

**Renewal Grace Period** of two months will be receive two additional issues of the system is now set up, if your renewal is not dropped from membership thereafter. It is current.

provided. If your dues are due now you will newsletter. Please note however that as the received you will be **AUTOMATICALLY** your responsibility to assure your dues are

*Please help us make this work by renewing promptly. Thanks!*

*watching your expiration date and*



## 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 382  
Anaheim, CA 92815-0382

**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	

**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

**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

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_ APT #: or PO BOX: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

COUNTRY (IF OUTSIDE U.S.) \_\_\_\_\_

TELEPHONE: Home ( \_\_\_\_\_ ) \_\_\_\_\_ : Business ( \_\_\_\_\_ ) \_\_\_\_\_

FAX ( \_\_\_\_\_ ) \_\_\_\_\_

Please indicate any name or mailing address changes

**NAME BADGE ORDER FORM: (OPTIONAL)**

Number of badges ordered \_\_\_\_\_

(\$5.00 EACH - includes engraving)

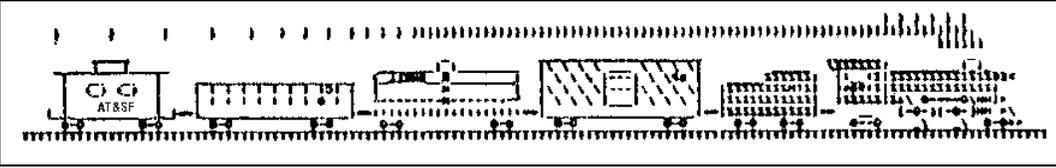
**PLEASE PRINT NAME AS YOU WISH IT TO APPEAR ON YOUR BADGE using up to two (2) lines of text for your name, nickname or name of your opal related business.**

# The OPAL EXPRESS

JUNE 2002

Published  
monthly  
by the  
American  
Opal  
Society

Issue 6



## President's Message

from Wes Roth

Greetings,

Just back off vacation from a most pleasant time at the Hallelujah Mines on Petersen Peak, north of Reno, Nevada. This mine produces scepter crystals and amethyst as well as smokey quartz. The mine is only open to the public Memorial Day Weekend and visits are arranged through the Mineralogical Society of Southern California. My thanks to Jim Schegle of the MSSC for inviting me along. While I did not find that perfect scepter, I did find some nice pieces of amethyst and smokey quartz and will bring some specimens with me to our next meeting.

Russ Madsen will discuss last month's trip to Barnett's mine, as I was unable to attend.

My thanks again to Corliss Rose of 2 Roses Studio for her lecture on Intarsia Jewelry and the information provided to the members in attendance.

Also thanks to Dennis Carey of Capo Beach for bringing to the meeting and making available to the members some very nice Honduras Opal rough.

**THIS MONTH'S MEETING WILL FEATURE STAN McCALL WITH A LECTURE/ DEMONSTRATION ON WIRE WRAPPING.**

See you at the meeting  
Wes Roth  
President

You may be a rockhound if...you can't remember the last time you could get your car in the garage.

## Opal Canyon Field Trip Report

Only Jim Pisani joined us. Guess the notice was too short for others. However, we can now report the road is in good shape and our weather could not have been better. The temperature was pleasantly warm but not hot, and the desert alongside the road was TEAMING with wildflowers. Also the Barnett claim is regularly open on weekends. The signs for the other claim (Nowak) have been removed altogether.

The big news on this trip is that Richard Barnett brought out and offered for sale examples from his collection. I will bring the ones I picked to the June meeting.



AOS VOICE MAIL HAS BEEN CANCELED

### Work Shop Information...

The Opal Society workshop is located in a light industrial complex in Fullerton. The address is Unit #9, 651 N. State College Blvd.

Directions: exit the 91 Fwy onto State College Blvd. and go north. Proceed through the intersection of Orangethorpe continuing a short distance further on State College. Go over the railroad tracks and turn left into the complex on the west side of the street. If you go over the second RR crossing turn around. Proceed behind the front row of businesses and make your first right. Then follow the road around to the left. The workshop has a large "9" over the door.

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

Director's Mtg  
Monday June 8

General Mtg  
Thursday June 11

Opal & Gem Show  
Nov 7 & 8

### INSIDE THIS ISSUE

Dues Renewal	1	Welcome New Members!	4	Opal Pricing	5	McCondra Report	6
Opal Canyon Field Trip	2	Cutting Challenges (part 5)	4	Remember When?	5	Upcoming Shows	8
Opal Identification (part 4)	3	Public Land Use Issues	4	Workshop Schedule	5	Optical Phenomena in Gems	8

# OPAL IDENTIFICATION...

## how to tell where it came from (part 4)

by Russ Madsen

(A 1997 Opal Symposium Presentation  
by Joan Skinner of Opal Traders International)

### Queensland opal:

**Yowah:** When one hears Queensland, boulder opal immediately comes to mind. Yowah opal nuts are also found in the state of Queensland. Yowah opal is formed of ironstone concretions which are rounded and generally range in diameter from the size of golf balls to footballs (AOS show guests may recall the cutting of a Yowah nut about the size of a cantaloupe at a recent past Opal Show). They are most commonly dark brown to reddish brown.

It is believed Yowah nuts formed by geothermal processes. It is known that the Yowah region is above a large aquifer called the Great Artesian Basin. The town of Yowah gets its water from a bore hole drilled many hundreds of feet down to this aquifer and the supply of water reaching the surface is too hot to bathe in without first letting it cool.

On the surface are mud springs through which the artesian basin periodically releases water. These look something like geysers but do not erupt regularly. As these mud flows dry, air bubble pockets are trapped and cracks are formed into which opal gel penetrates. Yowah nuts are like geodes or nodules. The most prized are formed with solid crystal opal centers.

Several feet below the surface is a hard, dark ironstone band then a clay layer which ranges to several feet thick. It is in this clay layer that the ironstone bands containing the nuts are found.

Nuts are frequently coated on the outside with a light tan material which comes off quickly and gets everywhere during cutting. Thus it is recommended that one wear a tan shirt while cutting. The stains do not wash out either.

**Queensland Boulder Opal:** Joan Skinner stated Queensland boulder opal is contrasted with Yowah by the fact that it is found in straight seams, a seminar attendee offered candidly, "straight if you're lucky!" Ah, yes — Opal — the Queen of Gems — can be a fickle lady!

Boulder opal occurs as fills in seams running through a very hard, very difficult to remove ironstone cap rock. Opal gel seeped into the ironstone crevices and the material thus formed will sometimes be thick enough to split yielding a pair

of matched opals. The ironstone ranges in shades from medium to very dark brown or black and can produce finished stones known as "boulder blacks". On occasion a seam will be thick enough to cut finished stones but most commonly, the opal is left attached to the ironstone backing.

Another form of boulder was described by Joan as honeycomb material suitable for making beads because it will show color play from all angles. It forms when opal fills interconnected passages in the ironstone.

### Volcanic Opal and Opal from the Americas:

Australian opal is almost always of sedimentary origin with perhaps some geothermal activity. By contrast, opal in the Americas is all volcanic.

### Honduran Opal:

This opal formed in black basalt. Joan noted that if you wet Honduran rough, the area that dries out slowest will cut best because it has the highest silica content. Seams do occur and can be faced off in the same manner as boulder opal.

It is important to distinguish Honduran from black opal. Honduran is opalized black basalt and typically sells for less than \$1 a gram. [At last month's AOS meeting attendees had the chance to purchase quite nice Honduran material for 20 cents per gram. -rgm]

### Mexican:

Mexican opal occurs as fills in reddish to tan rhyolite vugs. Because the rhyolite is very tough this material is frequently obtained with blasting.

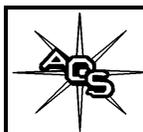
Some opal nodules form loose inside vugs, these have a frosted exterior. When such a vug is broken open the opal nodule inside literally falls out.

Opal base colors range from water clear to yellows and oranges to a deep blood red. The material is occasionally opaque but is most often clear.

### Opal Butte (Oregon):

This opal also forms in rhyolite vugs but by contrast to Mexican the rhyolite is a yellowish beige. The opal fills are frequently larger than Mexican and characteristically very glassy. Something less than 5% of this material has color play. However, Oregon material does have color

(Continued on page 6)



**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.



### Name Badges...

**Price per badge is \$5** which includes the badge itself and engraving of up to two lines of text: one line for your first and last name and, if you wish, a second line for nickname or if applicable, your opal related business name. These engraving options give members flexibility to include many types of identification.

Please allow 3 to 4 weeks for completion of engraving. ✪

The Opal Express is published monthly by  
The American Opal Society.

Copyright 1998. All rights reserved.

NON-COMMERCIAL REPRINT PERMISSION GRANTED  
UNLESS OTHERWISE RESERVED

Editor---Russ Madsen

Please address all inquiries to:

The Opal Express, P.O. Box 382, Anaheim, CA 92815-0382

E-mail 76550.1366@compuserve.com

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

# WELCOME NEW MEMBERS

#1169/1170 Rich & Annie Leong

## Membership Roster Changes/Additions

New Listing - Rich & Annie Leong

3902 Olive Irvine, CA 92606

Member # 1169/1170 Dues Expire 99-05

### Cutting Challenges (part 5)...

by Russ Madsen

(A 1997 Opal Symposium Presentation  
by Tim Thomas of House of Tibara)

(Part 4 concluded with K.I.S.S. opal cutting suggestions)

#### Cutting techniques:

For accuracy using a trim saw, Tim suggested drawing a line on the cutting table. Use a straight edge and extend this line directly out from and parallel to the blade. Then draw lines all the way around on the rough to be cut. Use the lines on the rough and the table as guides to obtain a nice straight cut. For practice, cut worthless rough of the same shape before cutting the gem material. If you don't have anything the right shape, make it from another piece. Or...use a geologist's saw (Expensive!) which supports the rough and moves the table into the saw blade. For lubricant during cutting Tim offered that he uses water with a little Crystal Cut.

Another question which one frequently faces is how to predict the density of the fire pattern of a finished stone. When there are rods of color visible on the edge of the color bar, count them. The density of the finished fire pattern will be very nearly equal. If the rods are VERY closely packed the fire pattern will be dense. This approach works best with pin fire. When there are no rods present the pattern will trend toward flash layers.

The cutting decision frequently begins with sawing or grinding to expose an angular view of the color bar. Furthermore, the decision may change after cutting begins. If a color bar of pin fire is supported by a flash layer underneath, it may turn out that the flash layer is more desirable as the cutting unfolds.

Generally however, NEVER chase color. When a stone looks good, stop unless you can tell a deeper layer is

(Continued on page 7)

## ITEMIZATION

### ITEM: Public Land Use Issues

*There are a couple of public land issues in the offing that all of us need to be aware of. Per Chuck Ucker in Drywasher's Gazette:*

The American Land Sovereignty Protection Act (HR901) sponsored by Rep. Don Young (R-Alaska) passed the House by a vote of 236 to 191. HR901 would cancel the UN Biosphere Reserve, World Heritage Sites and similar international designations by the year 2001. This bill has been sent to the Senate committee on Energy and National Resources. Senator Murkowski (R-Alaska) chairs this committee. The Senate will consider the bill this year. If passed, control of US public lands would again be placed in the hands of Congress.

*Secondly, as reported in the CFMS newsletter, George Loud, Chair of the AFMS Conservation and Legislation Committee, alerts us to impending government action as follows:*

According to the Blue Ribbon Coalition communication of January 14, 1998, we are faced with the prospect of another change in land management policy by Presidential Decree, circumventing the due process of the administrative rule-making procedures, as well as Congress. The directive or decree, again according to the Blue Ribbon Coalition, would:

- change the definition of a roadless area to include parcels as small as 1000 acres (from a low limit of 5000);
- place a moratorium on planned activities in roadless areas;
- broaden the definition of "roadless";
- impose new restrictions for these "roadless" areas;
- direct that a new inventory be taken of "roadless" areas with a call to designate them as wilderness.

*Make sure your Congressional representatives know your views concerning public land issues:*

Senator \_\_\_\_\_ Representative \_\_\_\_\_  
U.S. Senate U.S. House of Representatives  
Washington, D.C. 20510 Washington, D.C. 20515

From The Nugget 5/98

## Opal Pricing

A few weeks ago the subject of opal pricing arose in Lapidary Digest # 136. The discussion was initiated by a person asking about going into selling her cut opals. Reference was made to using Paul Downing's book, "Opal Identification and Value". The writer further referred to "The Guide" which is mentioned in Paul's book. *The Guide* is a gemstone pricing reference sometimes used by dealers. It was also asked whether opal pricing is published on the internet. A subsequent note brought up the concept of relating cost of rough with price of finished stones (price per gram of rough vis a vis value per carat of finished opals). Several messages followed this inquiry.

In Lap Digest #137 AOS Vice President Carol Bova offered several comments and suggestions. With regard to *The Guide* she pointed out that Paul Downing is a contributor of their opal pricing. Therefore *The Guide* is more a reflection of Paul Downing's system than an alternate pricing source.

While Carol also suggested attendance at the AOS Opal & Gem Show as one of the better ways to learn first hand about opal pricing, she noted surfing the web for opal sites can be helpful as well. Most importantly Carol emphasized the subjective nature of opal pricing. Appeal factor cannot

*(Continued on page 9)*

## Remember When?

### A Look Into Past Newsletter Items

(excerpted from January 1978 issue)

The speaker for the evening was jewelry designer and AOS member Jimmy Sgro, who presented an interesting talk on jewelry design as oriented toward the enhancement and protection of our favorite stone.

According to Jim there are three basic requirements for good opal jewelry design:

1) It must protect the stone.

This may be done by techniques such as projections of metal above the surface of the opal so that the force of any sharp contact with a hard surface will be absorbed by the metal rather than the opal.

2) The design must look well.

It must be esthetic in design, balance, and appearance. Balance is very important, and very hard for some people to grasp – somewhat like a horse-rabbit stew. Some would maintain that a good balance would call for 50/50 horse and rabbit, while others call for one horse and one rabbit. And there is a difference, isn't there?

3) It must be durable.

It must wear well even though it presents a delicate and fragile appearance typical of opal jewelry design.

## WORKSHOP SCHEDULE

**NOTE: new weekend dates – we now have use of the shop on first and third weekends.**

**Be sure to check here** for workshop schedule updates. The dates highlighted below are those available to the AOS in our time share agreement with the Searchers. The shop is presently being opened to members on Wednesday nights but...**Please continue to contact Stan McCall by calling him at Lapidary Intl. (714) 827-5680 if you plan to attend a shop session.**

### June 1998 AOS Workshop Dates

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				

## WORK SHOP RULES

These rules are effective October 1, 1997. Please see newsletter 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 will be in sessions on scheduled days as noted below:
  - Session #1 10AM - 2PM
  - Session #2 2PM - 6PM
  - Session #3 6PM - 9PM
- 5) Shop usage fees: effective immediately...  
**SHOP USAGE FEE IS \$3 PER SESSION.**
- 6) 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.

## OPAL IDENTIFICATION...part 4 (cont.)

play. It forms in water clear, blue, red, and yellow base colors. The majority is clear. Oregon opal typically exhibits a "glow" and can be very nice contra luz, especially the water clear. Several fine works in the opal by notable carver Kevin Lane Smith were featured a few years ago in Lapidary Journal.

This material occurs in massive sizes up to 3 feet across.

### Ethiopian Opal:

Opal similar to Oregon rhyolite except it is gray in color. It is notable for its unusual interior patterns. The typical size seems to be that of a golf ball.

To date many Ethiopian opals are cracked by the impatient miners.

Characteristic of this opal is that it occurs in a very rare opaque chocolate brown form which evidences color play ranging from red to green.

Time constraints prohibited discussion of many other opal localities.

### In Conclusion:

In her closing remarks Joan shared her theory concerning crazing of opal. She noted that two factors are prevalent in most, if not all, locations at which cracky opal is found. Observing that studies have shown that there is little correlation between opal drying out and crazing problems Joan pointed out:

(1) that due to geological conditions where cracky opal is typically found (hard rock mining) or "impatience" of uninformed miners, harsh techniques are employed such as blasting and using heavy equipment to retrieve the opal – unfortunately it is thus often cracked coming out of the ground or shocked which may set in motion future cracking or crazing;

(2) these same areas are also subject to extreme climatic conditions. All endure hard winter freezes and the opal from these sites goes through cycles of dramatic heating and cooling.

Joan's suggestion is that these factors may prove to contribute more significantly than dehydration to opal crazing.

Once again we say **thank you Joan Skinner** for an information packed discussion of many of the places opal is found and how one might recognize the place of origin when looking at a dealer's rough. And congratulations again on the new baby too! ❁

*(For those who may not be aware, Walter and Joan Skinner are the proprietors of Opal Traders International in San Francisco and in addition to being opal dealers, AOS members and regular AOS Opal Show participants they present opal cutting lessons at their local gem & mineral club.)*

## The McCondra Report

By Barbara McCondra

### OPALPHOBIA

This McCondra Report is addressed to those opal wusses of the world that stand stoop-shouldered at the opal dealers booths at rock and gem club shows. They look and whine as they shift their weight from one foot to the other and tell me of their "fear" of opal. I understand, for about two seconds, then launch into my tirade that tells of legitimate fears: drive by shootings, car wrecks, earthquakes, and the IRS. Then I scoff at fearing to touch opal to the wheel. I share my favorite story. I learned to polish Yowah Nut opal specimens with no instructions other than what I give you here. I turned on my little Pixie lapidary cutting machine and held the stone, in order from left to right, against each wheel for approximately 15 seconds each, turning the stone 90 degrees for each wheel, and rinsing with clear water each time I changed wheels. Wonder of wonders, at the end of my 6 wheel row and even before I attempted 50,000 dia. grit on the polishing wheel, I had a reasonably polished matrix opal nut specimen. Where is the mystery? Where is the challenge that so many would be customers express to the dealers about the fear of cutting opal? Where is the basis for the terror my customers have been known to confess to me?

"...studies have shown that there is little correlation between opal drying out and crazing problems..."

It was a piece of boulder opal but the same holds true for all opal. The basics are exactly that, basic. Is the fear really concern that you will blow the money you spent? If this is the case, choose inexpensive opal. Some pieces cost only 1 to 3 dollars. If you can't afford this you need to take your pleasure in long walks in the park or cutting found rock not bought rock. Look at the experience as the goal. Lapidary work is growing, experiencing, and learning. The final finished product is a bonus. I can only suggest that you play with what you can afford. Go for it. Put the rough to the wheel after you have looked at it and thought about it. Just give it a try. However, rub a little, look a lot is the basic directive here. Do some reading, there are quite a few articles and books out there these days. Then again put the rough opal to the wheel.

The key here is your expectations. If you fear that your three dollar to twenty dollar purchase will not get you a thousand dollar opal, then your fears are not ungrounded. I know you think, "That's easy for her to say, she can go dig one up out of her mine if she messes up the cutting." Excuse me but I have messed up many. It took thousands of dollars, time, blood, sweat and tears to acquire the opal rough. The terror I felt often in the deep underground mining experience had to be walked (in this case climbed) ag-

*(Continued on page 7)*

## Cutting Challenges (part 5)...

(Continued from page 4)

better. How do you tell? Grind windows or faces at an angle to the color bars, then make a **plan**.

If possible, particularly with Mintabie, do not remove the gray backing layer, it supports color play.

Queensland cutters are employing a technique where they grind a series of steps or ridges into the potch surrounding an area of good color play. These steps are often cut along the shape of the color area and serve to highlight or accent it in an artistic manner which adds value to the finished opal.

### Other Cutting Strategies:

Cut potch or boulder matrix to expose artistic shapes in the combination of opal and background (matrix) stone.

Sculpt to produce unusual shapes while removing imperfections and exposing best color.

Drill or bead blast to remove sand pits.

### Polishing:

Tim emphasized again his preference for **cerium oxide, Optical Grade #2**. He uses it on a wet (soaked for 10-12 hours) leather buff. The cerium is applied as a slurry.

Hint: At this juncture a symposium attendee suggested substituting glycerin for the water. It lubricates the polishing surface and it's viscosity helps keep it from flinging off the buff.

What you do should be what YOU like! He presented a slide of a carving with the comment that it shows some "junk" on the back but they left it because they liked it the way it is. Who cares!? "If you own the stone, do what YOU want to do with it."

Inlay and intarsia can employ small pieces of nice material that would otherwise be waste.

In material with wavy color bars it often helps to grind an angular window on an edge first. This aids in assessing the quality of each color layer. It may be possible to slice such a piece horizontally and get two stones rather than entirely grinding away the less desirable layer.

At this juncture Tim held up a carousel showing that fully 1/3 of the slides remained to be viewed. He assured the audience he will return and continue this interesting and informative presentation at the next AOS Opal Show.

Thank you Tim for putting together a fine collection of slides and presentation on the techniques of cutting difficult opal rough.

**Readers:** you have a homework assignment. Please share or send in any questions you may have about opal cutting difficulties you've encountered and we will pass them along to Tim for inclusion next time. ✨

*(Tim Thomas of the House of Tibara and Opals by Tibara is a longtime AOS member and Opal Show dealer)*

## OPALPHOBIA...

(Continued from page 6)

gressively past and the dirt had to be moved. The opal eventually came. So it is with cutting opal. A stone will come of your efforts, it is your expectations that get in the way. I reckon you too can get past that by always buying rough you can afford that can be expected to get you a stone, and then just get down to bringing out the color. I didn't dig in my Arizona backyard to find opal. I dug in the middle of an opal field in Australia. You can't get a finished gemstone of opal if you can't see a color bar. Cutting the opal to find the colorbar is like shoveling through the earth to find the opal.

Repeatedly the meek lapidary tells me it is so easy to rub past the color bar. Yes, if the color bar is microscopically thin and the wheel is incredibly rough grit or your pressure is extreme. Rub a little, look a lot. Cut your opal as though you were shaving the face of a friend but remember the cutting the opal is not life and death. With instruction, demonstration, and encouragement Clark Kent opal cutters can become Superman. Patience, follow the basics, enjoy the moment, the birthing of a stone, the learning experience. Enjoy the feel of opal on the wheel from the rough matrix grinding away to the smooth whine of the final polish stages. Free form shapes are much easier to achieve than trying to force a flawless cabochon onto a clay filled, unevenly barred stone. Cutting an opal is not crossing a freeway blindfolded. The stone reveals itself as you cut, or grind, and commonsense decisions can then be made. The first grind or the first cut has to be made not with trepidation, but with curiosity.

"Very young grandchildren of lapidaries show remarkable results because they haven't had years to build up all these fears and objections on how they can fail to cut an opal..."

I believe the popular comparison today is that it is not rocket science. The challenge comes later with more experience when your expectations can grow and you attempt to achieve superb polishes as opposed to acceptable ones. Secrets and tips both researched out or accidentally stumbled upon become part of your expertise. Learning to listen to the stone as it tells you how it should be cut and possibly malleably stretching it to achieve a little more with your skills on the wheel born of past experience. This experience, I might add was won of experimenting without fear but with respect for the characteristics of opal. Let the fun of learning be your goal and raise your expectations and quality of rough level a bit at a time. Come on guys, maybe you never cut that piece of rough in the jar of water because it is so gorgeous to look at in the rough form. Get yourself enough pieces to hang onto the meditative jar specimen, several practice pieces, and then the "cutter". Very young grandchildren of lapidaries show remarkable results because they haven't had years to build up all these fears and objections on how they can fail to cut an opal. Toss that procrastination aside, put the rough to the wheel and enjoy.

# What's Happening?

## Calendar of Upcoming Events

### Dates and Locations of Shows

**June 6 10AM-6PM June 7 10AM-5PM** San Diego Lapidary Society, Al Bahr Shrine Ctr, 5440 Kearny Mesa Rd, **SAN DIEGO, CA**

**June 16 thru July 5th**, Del Mar Fairgrounds, 2260 Jimmy Durante Blvd., **DEL MAR, CA**

**June 20 – 21** Cayucos Gem, Jewelry & Mineral Show, Cayucos Vets Hall, at the Pier, **CAYUCOS, CA**

**July 3 – 4 10AM-6PM July 5 10AM-5PM CFMS Show**, Monterey Fairgrounds, **MONTEREY, CA**

**July 11 10AM-6PM July 12 10AM-5PM** Culver City Rock & Mineral Club, Culver City Veterans Memorial Auditorium, corner of Overland and Culver Blvd., **CULVER CITY, CA**

**Nov 7 10AM-7PM Nov 8 10AM-4PM American Opal Society OPAL & GEM SHOW**, 616 Convention Way, corner of Katella Ave. and Harbor Blvd., **ANAHEIM, CA**

**Jan 22 through Jan 31, 1999 Blythe Rock & Gem Show** Colorado River Fairgrounds **BLYTHE, CA**

## California Federation of Mineralogical Societies

Presents the 59th Annual

### MINERAL AND GEM SHOW

At the Monterey Fairgrounds  
in beautiful Monterey, California

**July 3, 4, and 5, 1998**

Hosted by

### CENTRAL COAST CLUBS

Carmel Valley G&M Society      Santa Cruz M&G Society  
Monterey Bay Mineral Society      Santa Lucia Rockhounds

Chairperson: **Kay Carter (408) 422-0530**

Admission **\$4.50**      \$ .50 off with flyer

Children **12 & under free with adult**

## Optical Phenomena in Gems

by George E. Smith

Oklahoma Mineral & Gem Society

The qualities that make a gem valuable are generally said to be color, durability and rarity, but there are certain qualities that can't quite be placed under these headings that make a gem valuable or increase its value manifold. Among these qualities are a number that appeal to the eye, lending beauty or unusual effects to the stones possessing them.

Perhaps the characteristic that is seen in most stones in its various manifestations is "play" or "change" of color. Transparent stones of high refractive index, notably diamond and zircon, show a play of color due to the wide dispersion of the white light rays refracted through the cut stone. Less well-known stones that exhibit this quality in high degree include sphene, gem sphalerite, demantoid garnet and rutile.

Another type play of color is that seen in opal, where colors change sharply and brilliantly as the stone is turned in the light. The color in this case is caused by interference of light rays as they pass through very tiny imperfections or inclusions in the material, produced as it solidified from a jelly. Closely related is the change of color seen in labradorite. However, in this gem, the color changes more evenly and slowly over much larger areas. The cause is light interference from microscopic inclusions arranged along natural cleavage planes of this feldspar gem. Another type play of color caused by light interference is that seen in iris agate which shows beautiful rainbows when light passes through a thin, polished slab, due to minute flaws or inclusions.

Two closely related phenomena are asterism and chatoyance. Asterism is the quality occasionally seen that produces a four, six or sometimes a twelve-rayed star. If the stone is highly translucent, it can be cut as a sphere and will show the effect when a point of light is placed behind it. The same translucent stone will show a star by reflected light if cut in a high cabochon and a mirror surface placed under the base. If the stone is more nearly opaque, the star will appear on the high cut cabochon without the mirror backing. The effect is due to tiny crystals or inclusions enclosed in the gem material in planes parallel to natural crystal faces of basic material. Garnets, which are isometric in crystal structure, show a four-rayed star, while such hexagonal crystals as corundum (ruby and sapphire), quartz and mica show six or rarely twelve rays.

Chatoyance is the effect of a line of light moving across a cabochon cut stone such as cat's eye (chrysoberyl), tiger eye or satin spar. In cat's eye, the effect is due to microscopic inclusions similar to those in star stones, but all lying in the same direction, while in tiger eye it is due to the original fibrous crystal, easily visible, replaced by quartz (it is a pseudomorph), and in satin spar the fibrous crystals of gypsum lying parallel to each other.

(Continued on page 9)

## Optical Phenomena (cont.)

(Continued from page 8)

Opalescence, although sometimes seen in opal, is not the color of the stone, but is a milky appearance inside the stone, appearing most prominently in moonstone, although occasionally found in quartz and other minerals.

Iridescence is a play of color on the surface of a mineral due to very thin layers of a foreign substance. Sometimes small specimens are used unpolished in jewelry, for polishing destroys the iridescence.

A quality of some gems is schiller. It is caused by flakes of a mineral included or by negative crystals arranged parallel to each other, such as flakes of hematite in feldspar (sunstone) or flakes of any of several minerals in quartz (aventurine). The green aventurine so often seen is quartz with inclusions of mica.

Rarity, durability and color are the most important characteristics of a gem, but there are many other qualities that have a direct relation to its value, and it is well to keep these in mind when appraising a stone.

From Sooner Rockologist (no date avail)  
via Rockhound Notes 5/98



### Advertisement

OPAL by TIBARA OPAL by TIBARA OPAL by TIBARA OPAL by TIBARA

**YOUR PERSONAL RAINBOW®**  
**THE HOUSE OF TIBARA**  
**Tim & Barbara Thomas**  
P.O. Box 1717 Dept. BC, Clovis, CA 93613-1717  
(209) 299-5123 • FAX (209) 299-9456  
internet [www.opal-tibara.com](http://www.opal-tibara.com)  
e-mail [opalinfo@opal-tibara.com](mailto:opalinfo@opal-tibara.com)

**GEM for the NEW MILLENNIUM®**

OPAL by TIBARA OPAL by TIBARA OPAL by TIBARA OPAL by TIBARA

### Advertisement

**GREAT DEALS ON ROUGH AUSTRALIAN OPAL AND CUT STONES.** Great value rough opal, very stable, all price ranges. White base to multicolor crystal. Rough stones have not been picked over. Stable cut stones from all fields, all price ranges, all grades. Dealers, jewelers, hobbyists all welcome. (818) 989-1686 or write to LAND OF WONDER, Eric Scott, P.O. Box 261142, Encino, CA 91426-1142

(Continued from page 5)

be too strongly recognized. Note this may include appeal to the seller as well as to the buyer. Particularly in the case of high end opal, the price of a stone may reflect the amount necessary to "bride" the owner into parting with it.

**Don Campbell of Campbell Gemstones shared the following in Lap Digest #137**

Subject: RE: Opal Price Guide

I have been in the Opal business for a few years now and can tell you that the Guide (Downing) prices are way off. Stones that would wholesale for \$1000.00 per carat if the Downing grading system is used and applied to the guide pricing matrix, will actually sell for closer to \$100.00 per carat. Your best bet to establish prices is to do a lot of visiting at shows. Wear some Opal jewelry of varying quality stones to use as comparison stones. The light is always different at the shows and your memory will not be able to differ between a \$100.00 a carat stone and a \$50.00 a carat stone a week later so a comparison to a known set is the only way I know to fix the lighting and memory problem.

By the way, Opal prices are some what soft now that the Asian economy is in the tank, so you are going to be having a "LOT" of competition from the Aussie's. I know that I am.

Good luck though and you will find that there is a market for top, well cut stones.

Don at Campbell Gemstones

<Campgems@aol.com>

(from Lapidary Digest #137 4/27/98

– reprinted with permission of the author)

In Lap Digest #138 it was asked what to do instead if Paul Downing's prices and *The Guide* are too far afield from the real world of opal prices. Here reference was made to the rule of thumb which Paul Downing presented in "*Opal Cutting Made Easy*" to wit, "Generally the price per gram is equal to the cost of the cut stone per carat." Don Campbell responded with an illustration of the math which supports this principle (opal cutting averages 20% yield) but Don was quick to indicate that this ONLY accounts for the cost of the rough, and ignores the costs of equipment, advertising, travel, etc (and let us not forget a profit for the cutter/seller). Thus the real cost of finished stones will always exceed the initial outlay of cash the cutter pays for the rough.

In addition to the fixed costs of doing business such as bookkeeping, storage, shop rental etc, it bears noting that the bargaining skills of the cutter may serve to alter the gram/carat result because the asking price of a parcel of rough may well include some padding by the selling dealer. I have personally received discounts ranging from zero to 10% to as much as 30% and more off the "asking" price of rough parcels. Further discounts have been offered for buying quantity.

Don Campbell notes in Lap Digest #139, "You need to add all of these things together and come up with your "Price". You will not sell all of your parcel of opal right away so you need to be able to cover your expected return with just a few stones. Those are the Killer ones in the group. The Dogs will be around forever." Finally, after practice and experience ask, "What does your gut tell you?"