

The Opal Express

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



Volume #35 Issue #12
December 2002

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TO:



Important Dates: Board Meeting: Dec. 9

DEC. 12 - 7:00 PM
CHRISTMAS HOLIDAY
DINNER!
POTLUCK AT CLUBHOUSE

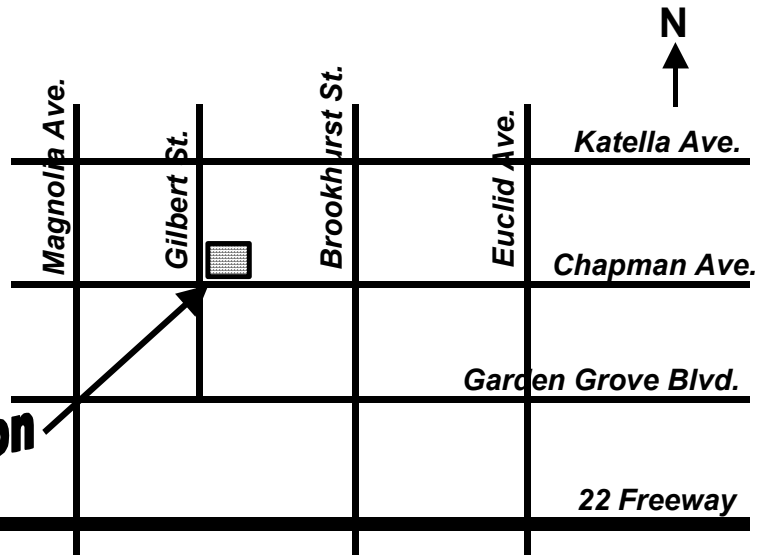
— GENERAL MEETINGS —

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



The American Opal Society
<http://opalsociety.org>



Mike Kowalsky	President	(714) 761-4876	email: mykowalsky@aol.com
Bob Dixon	Vice President	(714) 534-5063	
Bob Olinskas	Treasurer	(949) 786-7291	
Jay Carey	Opal Show Chairman	(714) 525-7635	email: jaycarey@gte.net
Jim Pisani	Editor & Webmaster	(562) 797-5239	email: webmaster@opalsociety.org

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NAME BADGE ORDER FORM:
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MEMBERSHIP ROSTER & DEALERS LIST: The AOS publishes a membership directory once per year in its Newsletter, the *Opal Express*. Your name will be included. Please check what additional personal information that you want listed for other members. If it is different from the information above, please note that on the application.

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 Include my name & address on a list provided to the Dealers selling at our Annual Opal & Gem Show.

If you checked any box above, please sign here: _____ Date _____

Without your signature here you will not be included in the member info list or included in the dealer roster.

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Editor-Jim Pisani

Please address all inquiries and exchange newsletters to:

**The Opal Express C/O
Jim Pisani
P.O. Box 4875
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Email: webmaster@opalsociety.org

Article Deadline is the 20th of the month prior to each issue

Are Your Dues Due Now?

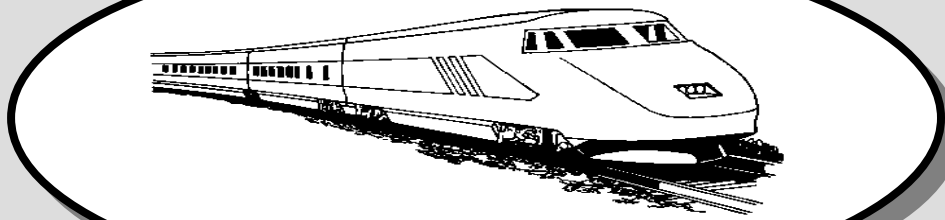
PLEASE CHECK YOUR ADDRESS LABEL. If your label shows the current month/year your dues are DUE NOW. If the date is older, your dues are overdue.

A 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.

Thank you,
The Editor

The Opal Express

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The
American
Opal
Society



December 2002

Volume 35 Issue 12

PRESIDENT'S MESSAGE

Mike Kowalsky

It is my pleasure to report that the Annual AOS Show in November 2002 was a success for the AOS. It was a success from many viewpoints. The attendance was very good. At Saturday show there were sufficient attendees to call it very crowded. In fact, one complaint that I heard was that the Demonstrators did not have time to take a break, as there were so many people there to see them. It was not a real complaint as they were very happy to show attendees their skills. Claire Gagnon did a superb job in arranging for and inviting the Demonstrators for the AOS Show. The seminars were full both days and people had come from afar to hear some of the seminar presentations. I am a strong supporter of the seminars and remembered the original ones from the past. The seminars were both days and took most of the time so that attendees couldn't see much of the Opal exhibits and the dealers. The charge was \$75 for both days. But they were full each day.

I must thank the members that came from out of town and helped with the show. Lyle and Lucy Backus came from the Chicago area and helped both days. It was interesting to talk to Lyle and find out that he is teaching a class on opal and topics related to opal. I hope to be able to transfer some of the seminars and presentations to CD's and provide them to Lyle for his classes. That's one of my projects for next year.

We also had Dr. John and Mary Hiller from Kingsport Tennessee come to our show for the first time. Thank you for the help in the front desk and all those prize tickets you purchased. We will look forward to seeing you at Quartzsite in January. We also met Richard Eddy from Cheshire, Oregon who helped in many ways where we needed a hand.

I also talked to opalholics who specially came to our show to see some of the collectables, learn about opal and listen to seminars.

Our local AOS members did an outstanding job in helping with all the things that it takes to put on major show. Dr. Jay Carey and Bob Dixon negotiated with the Quality Hotel Maingate and made all the contractual arrangements with the dealers. Almost everything went smoothly. It was nice to see Faye McDowell holding down the main desk for a good part of the time. Faye has overcome health problems, bounced back and made it to the show this year to help out as she has in the past. Bob Dixon ran both of the raffles and the prizes were so interesting that many people bought extra tickets. The AOS thanks the dealers for their contributions to the door prizes. I think the AOS members were some of the most prolific buyers. We had only minor disruptions of electrical power in one of the side rooms.

I would like to thank Eva Coan for her diligence in obtaining local advertising for the AOS show. I am sure that the increased efforts in advertising were responsible for a lot of the increased attendance.

As usual we had the AOS display of opal from the Americas, which had an addition of dendritic opal donated by Wes Roth and some opalized wood from Nevada. One of the most interesting displays was in Barbara McCondra's case. It was the Mehi opal that had been featured in the December Rock & Gem article on Healing of Crazy Opal. I have seen the opal each of the past years at the Culver City Show in July. I did not know all the history of the stone until this article appeared in Rock & Gem. It is a beautiful stone and I did not see any visual crazing or cracks within the stone. There are plans to have a round table discussion about the theory of healing of opal with Bob Halahan in a future monthly meeting.

We have started to move some of the AOS assets to the Ball Jr. High School workshop we share with the woodworking facility. We have discussed the transfer of equipment from the Walker Jr. High School in the near term.

Final arrangements are being worked on. We still have storage in a public storage area.

Our latest crisis has come to light when we were asked by the Garden Grove Women's Club to vacate the storage area next to our meeting room. This will cause a problem for moving a TV to our meetings to view some of the items we have on video tape. It is our latest challenge.

Jay Carey reported a problem with booking our 2003 AOS Gem and Mineral Show at the Quality Inn Maingate. The Board had discussed the show dates and had decided on Saturday, Nov. 1st 2003 and Sunday, Nov. 2nd 2003. However, Saturday, Nov. 1st 2003 has already been booked and is not available. We have booked the next weekend, November 9th and November 10th for our next show. We would like to ask everyone involved in our 2003 show if there are any conflicts that are known at this date. This would include other Gem and Mineral Shows that are planned for that date that could be a conflict to our show. Or perhaps any dealers that may know about shows outside of our immediate area that may be a conflict for them. Please let us know if you identify any such potential problems.

For our last meeting of the year, we have planned a pot luck dinner at the Garden Grove Women's Club. The Board of Directors will provide the main dishes. Look for the announcement, which tells you where to call to make reservations. If you have any special diet or food preferences, please make them known when you make your reservation. I'm sure everyone will enjoy the evening of camaraderie.

Warmly wishing everyone a happy, safe holiday season. Thanks for the great year by all the hard work to make AOS a successful special group.

THANK YOU TO THE DEALERS AT THE OPAL & GEM SHOW!
AMERICAN OPAL SOCIETY'S 2002 OPAL & GEM SHOW DEALER CONTACT INFORMATION

Name	Company Name	Mailing Address	Telephone	E mail Address	Web Page
Al Ramirez	Al's Opal Imports	3684 Fairmount Ave. San Diego, CA 92105	(619) 282-1700	iopalgem@yahoo.com	http://opalgem.com
Eric Scott	Land of Wonder	P.O. Box 261142 Encino, CA 91426	(818) 785-7394	eric@land-of-wonder.com	http://www.land-of-wonder.com
Gregory Howell	Greg Howell's Quality Gems	P.O. Box 221 San Clemente, CA 92674	(949) 366-0864	ghowellqg@earthlink.net	
David Burton	Lapidary International	1228 S. Beach Blvd. Anaheim, CA 92804	(714) 827-5680	gemsandopals@earthlink.net	
Larry Hoskinson & Leslie Neff	Australian Opal		(310) 318-2170		
Donna Schultze	Lasco Diamond Products	P.O. Box 4657 Chatsworth, CA 91311	(818) 882-2423	lasco@lascodiamond.com	http://www.lascodiamond.com
Geoffrey Genzmer	Australian Opal Imports	468 San Marcos Pass Rd. Santa Barbara, CA 93105	(805) 689-9050	ejjd@charter.net	http://australianopalimports.com
Salvador Chavez	Casa De Lumbre		(408) 926-7261		
Walter Johnson			(714) 533-		
Wesley Roth	Opalcutter		(714) 897-2843	wesroth@earthlink.net	http://www.opalcutter.com
Terrell Carter	Carter's Creation	973 Crandall Ave. Salt Lake City, UT 84106	(801) 484-6415	cartercreations@hotmail.com	http://www.ebaystores.com/carterscreations
Tim & Barbara Thomas	The House of Tibara	P.O. Box 1717-BC Clovis, CA 93613-1717	(559) 299-5123	opalinfo@opal-tibara.com	http://www.opal-tibara.com
Barbara McCondra	Outback Gems		(602) 846-0407	mccondra@aol.com	http://parchedearthhopals.com
Shinko Kuramochi Lin	S.K. International		(626) 810-2482	DA10KAZ115@aol.com	
Tony & Caroline Thurber	In A Flash	P.O. Box 651551 Salt Lake City, UT 84165	(801) 974-536	tthurber@xmission.com	
Matti Tikka	Tikka Opals	77 Quarry Road Dural, NSW 2158, Australia	61-2-9651 4705	mattitikka@one.net.au	
Dale Davey & Charlene Everly	Academy Enterprises	P.O. Box 208 Sun City, CA 92586	(909) 679-5600		
Joyce Sessions	J & J Gemstones	10617 McLaren St. Norwalk, CA 90650	(562) 868-1503		
Bonita Chamberlin	Inside Afghanistan	8176 Center Street, Ste C La Mesa, CA 91942	(619) 445-3777	Lapis27@aol.com	
Dida Kutz	Candida Opals	P.O. Box 170432 San Francisco, CA 94117	(415) 221-7446	dida@candidaopals.com	http://www.candidaOpals.com
Bob Yorke-Hardy	Okanagan Opal, Inc.	Box 298 Vernon, B.C. V1T 6M2, Can.	(250) 542-1103	okopal@junction.net	http://www.opalscanada.com/
Edward Newman	Oro Valley Gems	9755 N. Calle Buena Vista Oro Valley, AZ 85737	(520) 544-0295	ovgems@aol.com	http://www.orovalleygems.com
Anson To	Arts Kingdom Jewelry Co. Ltd.	607 S. Hill St. Suite 505 Los Angeles, CA 90014	(213) 623-8822	akjewelry@usa.net	http://www.arts-kingdom.com
Michal Mael	Rock Our World	11478 Hart Street N. Hollywood, CA 91605	(818) 765-3755	info@rockourworld.net	http://www.rockourworld.net
Jeff Hao	AmeriAsian Business Corporation		(626) 569-0561	ameri_asian@yahoo.com	

THANK YOU TO THE VOLUNTEERS WHO HELPED RUN THE OPAL & GEM SHOW!

Lyle & Lucy Backus, Annette Bryant, Jay Carey, Eva Coan, Bob Dixon, Pete Goetz, Lora Heidrich, John & Ruth Hiller, Mike Kowalsky, Louis Kripple, Carlos Lugo, Stan McCall, Faye McDowell, Bob Olinskas, Jim Pisani, Wes & Fran Roth, Hisako Schlatter, Fran Todd, Chuck Williams

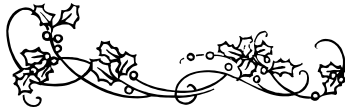
ANOTHER BIG THANKS TO THE AMERICAN OPAL SOCIETY OPAL SHOW DEMONSTRATORS!

Thanks to the following for sharing their talent by demonstrating at the 2002 Opal show. They were very generous in the display of their expert ability, and proved to be a popular adjunct to the show:

Conrad and Skip Cone	--- Silversmithing	Everett and Gloria Hunt	--- Gemstone Carving
Cathy Ocampo	--- Children Silversmithing	Vince and Ruth Jarrel	--- Gemstone Carving
Arvid R. Melvin	--- Silversmithing	Adele (Sammy) Florida	--- Gemstone Carving
Jeri and Dale Parkerson	--- Wire Wrap Jewelry	Virginia Pace	--- Gemstone Carving
C. C. (Charlie) Paxton	--- Wire Wrap Jewelry	Robert (Bob) Haines	--- Faceting
Chris Christopher	--- Chain Weaving	Clare Gagnon	--- Faceting

The number of visitors to the demonstrators tables was substantially greater this year as compared to that of previous years. Credit for this can be given to the increased show publicity and to the quality of our demonstrators, many of who have demonstrated in previous Opal shows. - C. J. Gagnon, Demonstration Coordinator

DECEMBER 12
AOS HOLIDAY DINNER
PARTY ANNOUNCEMENT



We will be having our Christmas Party as a Potluck Dinner on Dec. 12 starting at 7PM at the Garden Grove Civic Women's Club. Please contact Pete Goetz at (714) 666-2084 for coordination of what to bring.

Utah Opalite

From the *LapDigest News*, Issue No. 205-209 -- 4/1999
Web Site: <http://www.lapidarydigest.com>

Subject: What is Utah Opalite?

Hi Hale, Recently at a trade show I bought a purple stone called Utah opalite. It looks and feels like Variscite only purple. Does anyone know what it really is and has had experience in polishing? Thanks,
Sally in Houston. sahintz@eudoramail.com

<Recently at a trade show I bought a purple stone called Utah opalite.>

It probably is some of the opal from the Delta, Utah area containing beryllium. There is (or was, I don't know the current state) a beryllium mine just north on Delta and opal from that area has a distinctive purple color. I don't know how concentrated the ore is so to be on the safe side, or until someone who does know, says different, I would wear a respirator while cutting it.
Dick Friesen friesenr@ix.netcom.com

As far as I know, it is from a beryllium mine near Delta, and it supposedly is fluorite. It does not polish well at all, being very soft.
Tim Fisher tim@orerockon.com

I think both Dick and Tim are correct in their answers to the question. It certainly sounds like the stuff that comes from the Brush-Wellman mine northwest of Delta (in the Topaz Mountain area).

I've been there several times, the first with a geology class on a field trip. We were told by our (PhD) professor that the purple material was fluorspar. But there is also white material that comes with it that can have a very opalescent look to it. I found one piece with a brownish section in the white that he said (rather dubiously) MIGHT be beryllium.

Last time I was there I brought home a 5-gallon bucket full of the nodules. And they are nodules -- the purple (fluorspar) is in the center, surrounded by the white Opalite. It is my impression that the nodules occur in the overburden that is removed to get down to the beryllium layer, but I could be wrong. So it probably doesn't have beryllium in it. But it is always wise to be on the safe side!!!!

The beryllium mineral there is Bertrandite. And it is in microfine form; they use a "berylometer" (think that's what they called it) to find it - it's some sort of a probe-type instrument. The concentration is VERY low. They import (non-gem) beryl from an emerald mine in South America to mix in with their ore when refining the mineral, in order to make it pay. (I have a section of a crystal -- they let us go thru their pile -- that is 3-4 inches in diameter!)

This material is pretty soft; I tried cabbing a piece of the fluorspar a few years ago when I was looking for something to practice on. Ran into some internal pits after I got part way through so never did finish it. But I doubt it would polish very well.

Ah, well, think positive! If you can't cab it, maybe we can make a mineral collector out of you!
Margaret Malm margaret@southernutah.com

Hi Hale and Sally in Houston,

I asked around and a friend of mine in Canada, Brian Isfeld, sent me this answer about the 'Utahlite': If Variscite is heated it turns purple. I think you can see where the stone has come from. Someone has heat treated some Variscite and sells it as "Utahlite"

I hope this is an answer to the question.
Robert M. B. de Jager (from the northern flat part of the Netherlands) rmbdejager@freemail.nl

It has been several years since I cut any of this but the material I cut took a good polish, just like any other piece of opal. I have seen cabs for sale and they all had good polishes but I am sure that, like with most cutting material, there are differences in quality and I may have just been lucky.

Dick Friesen friesenr@ix.netcom.com

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JEWELRY POLISHING COMPOUNDS

Red rouge: Imparts the highest possible luster to your precious metal work when used at high speed with a muslin buff.

Yellow rouge: A dry compound for metals such as stainless steel, nickel and platinum. Good all-around polish, in regular or extra-fine.

White platinum rouge: A superior gold and platinum rouge that gives silver a good polish, too, but slightly softer than red rouge. Use with a muslin buff at high speed.

Green rouge: Another hard metal polish for stainless steel, platinum, and chrome.

ZAM: An exceptionally fine crocus-based white compound for a high finish on silver, nickel silver, and stainless.

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Brown Tripoli: A mild abrasive to use with a felt or muslin buff to remove scratches. Use with a bristle wheel for satin finishes. Final finish is scratch-free, but dull.

(Ref: *Lapidary Journal*, Oct. 99) Via the *Pegmatite*, Oct, 02

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LAPIDARY POLISHING COMPOUNDS

Cerium oxide: The best gemstone polishing compound for most uses, a mixture of rare earth oxides rich in cerium oxide. Best with opal, agate, quartz, or obsidian, but not as effective with very soft material or stones that tend to undercut. For lap or tumbler. Mix with water and apply the paste to your buff.

Micron alumina: A 5 micron polishing powder developed for computer disks. It is the best polish for sea shells, pretty good for soft stones such as malachite and onyx, and excellent as a pre-polish in vibrator tumblers and laps, but not for rotary tumblers.

Aluminum oxide, MAP: Preferred by many to Linde A, this is a slightly faster and more economical rare earth polish that we call *Miracle Atomic Polish*.

Zirconium oxide: A rare earth polish that is especially good for tumblers and laps. The most economical effective polish media. White and will not discolor gemstones.

Linde A: A tremendous favorite with gemcutters, whether faceting or polishing cabs. Relatively inexpensive. Consider polishing the stone then giving it a quick hit with Linde A to attain a superior polish. Available as a powder to mix with water, or an emulsified cream with the consistency of hand lotion that does not separate in solution.

Oxalic acid: Used for polishing carbonate type onyx when mixed with another polish such as tin oxide.

(by *Hale Sweeney* from his *on-Line Lapidary Digest*, via *Breccia* 9/02) Via the *Pegmatite*, 10/02

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THE STORY OF CAMEO CARVING

By *Russell H. Hensen*

Humans carved stone at least 50,000 years ago to produce recognizable forms of the human figure and animals. In the Aurignacian periods of Stone Age culture, 40,000 to 15,000 BC, many pieces of remarkable credible carvings in stone were produced. The most famous of these is the Venus of Willendorf, a fertility statue from Willendorf, Austria.

The peak of stone carvings we recognize it today as lapidary art, occurred in Mesopotamia, where the Sumerian and Hittite carvers did work of consummate skill. Their main product was incised cylindrical seals, made of available gemstones: lapis, carnelian, aventurine, malachite and others.

Apart from their ornamental and eye appeal, these seal-stones, or signets, were objects of real value. They were carved in intaglio, so that the impression made from it was in bas-relief. The clay impressions made by this seal insured documents and


property against tampering or intrusion, as any breakage was clearly visible. Thousands of seals were made and the carving business continued until at least 400BC.

EGYPTIAN CARVING AND SCARABS: Influenced no doubt by the Mesopotamians, the Egyptian stone carvers became highly skilled, and their most common product was the scarab, its religious significance connecting it with the dead. In distribution, the scarab carvings spread this lapidary art to Greece and Italy. By the fourth century BC, the style and design of gem carving had become entirely Greek-influenced and the emphasis changed from incises or intaglio, to bas-relief, or cameo. This cameo cutting returned to Egypt, and the city of Alexandria became the center of this art form for many years.

WHAT IS CAMEO CUTTING? Cameo cutting is the lapidary art of relief carving an material that has two or more straight, parallel layers of contrasting colour. Those materials with a darker lower layer that could be used as a background were preferred, the lighter, upper layers became the image.

This art eventually settled in Italy and in Rome. There it flourished during the first century BC and AD. With the decline of the Roman Empire, cameo cutting deteriorated in most of Europe yet it was kept alive in Spain by the Moors who brought their craftsmen from the East.

Eventually, political and religious pressures led the practitioners of the lapidary art to emigrate to France and the Netherlands, where their product received much acclaim. In Paris at the end of the thirteenth Century, a guild of lapidaries was formed and this was followed by a similar guild in Nurnburg.



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NEXT OPAL SHOW NOTICE

The Quality Inn Maingate has notified the AOS that the hotel will not be available for the first week of **November 1 & 2, 2003** for our Opal & Gem Show, being already booked. Instead, it is available for the following weekend, **November 8 & 9, 2003**. We are probably going to book it that weekend but we want to hear from our dealers if this date presents any issues or conflicts. Please contact Mike Kowalsky or e-mail Jim Pisani at webmaster@opalsociety.org.

Johann Gutenberg of this town famed for his movable type and Bible, was a highly skilled gem and cameo cutter.

MATERIALS USED. The cameos were also carved in transparent and semi-transparent gemstones such as crystal, citrine, topaz, amber, chalcedony, agate and carnelian, and in opaque materials like mother of pearl, Ivory, lapis, opal, or turquoise. However, because of the difficulty in obtaining suitable pieces of the hard gemstone to carve, the abundant, available, and easy to carve shell material became the item most carvers used. For every hundred cut in gemstone, thousands were cut in shell.

The helmet shells used in cameo cutting belong to the molluscan family *Cassidae*, with a worldwide tropical and temperate seas distribution. For the later pieces, *Cassis madagascarienses* (once called *Cassis cameo* for its use in this art from was used). *Cassis tuberosa*, with its darker inner layer, was preferred for the smaller carvings. Both of the above shells were obtained from the trade in the Florida West Indies area. *Cassis rufa* from East Africa furnished material with a dark sardonyx background and lighter orange-red image. Broken pieces of the helmet shells were utilized in the making of pendants, broaches, clasps and rings.

The chambered nautilus shell was used extensively by the cameo carvers in making elaborately carved and mounted drinking vessels. Other sea shells were tried, such as the pearl oyster, tiger cowry, turban shell, pink conch and many more but none reached the popularity of the helmet shells in this the lapidary art.

Via Mountain Gem & Pegmatite and Laphound News, Via B.C. Rockhounds, 6-2002

OPAL - SLOVAK NATIONAL STONE

By Dr. Rudolf Duda, East Slovak Museum, Kosice, Slovakia
And Dr. Jozef Molnar, Firm- Opal, Kosice, Slovakia

Mankind knows opal as a precious stone from very far time. Originally it was used as a working tool, only later as a jeweler stone. Opal belongs to the most common minerals in the territory of Slovakia. It is present in sedimentary rocks of Mesozoic and Tertiary; it is present also in volcanic rocks of Neogene, more rare is it in weathering crusts of ultrabasic and basic rocks, and unique is it in zones of oxidation of ore deposits. There are known about 100 occurrences of opal in Slovakia at the present time. This number includes all sorts of opal: common opal, wood opal, chloropal, glass opal or hyalite, milky opal, and precious opal. The most frequent are common and wood opal varieties, however, the best-known variety is precious opal from historical locality Dubnik.

PRECIOUS OPAL occurs in the northern part of the Slanske vrchy Mts., near the village Cervenica (formerly Vörösvágas) in the settlement Dubnik. First written notice about prospecting of precious opal in this area comes from the 12-th century, but it is supposed, that precious opal was known in this territory in the Roman times, i.e. about 2000 years ago. Precious opal was mined in the localities Libanka, Simonka and Tancoska. Mining works in the locality Dubnik – Libanka have an especially great extent: their length reaches about 16 kilometers, in the vertical extent 225 m. Opals are present in andesites of Neogene, belonging to the Zlata Bana stratovolcano. Mining of precious opal in this locality was stopped in the 1922.

MILKY OPAL is almost constant companion of precious opal in the locality Dubnik. It is present in nests and veinlets, often in intergrowth with precious and glass opal.

FIRE OPAL in its classical form in the Slovakia almost is not present. However, very similar are common and wood opals from the area near Povraznik in the massif of Polana and from Jastraba in the Kremnicke vrchy Mts.

GLASS OPAL (or hyalite) in Slovakia is occur in more localities. Locality of hyalite in the settlement Dubnik in the Slanske vrchy Mts. is a classical locality. Glass opal accompanies precious and milky opals in this locality, locally it forms also greater nests (up to 30 cm) or it is present in finely changing layers of milky and precious opal, forming so called agate-opal. Glass opal (or hyalite) forms in the cavities of volcanic rocks very rounded or grape-shaped aggregates, which are sheer with a glassy luster. Such hyalites were found in the surrounding of Kecerovsky Lipovec in the Slanske vrchy Mts., near Detva in the massif of Polana and elsewhere.

COMMON OPAL is the most widespread variety of opal in the Slovakia. It is present in volcanic rocks, in crusts of weathering and also in oxidation zones of ore deposits. There are known about 70 occurrences of common opals in the territory of Slovakia. These occurrences are concentrated into two areas: in the central Slovak neovolcanites and in the east Slovak neovolcanites.

Occurrences of common opal are known in the area of central Slovak neovolcanites in the surrounding of Badin, Kosorin, Jastraba, Nevolne, Kozelnik, Cigel, in the surrounding of Lubietova in the locality Jamesna (where is present so called opal breccia), in the Hutna dolina valley, Tri Vody and elsewhere.

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Common opals are concentrated in the east Slovak neovolcanites in the Slanske vrchy Mts. (in the localities Slanec, Lesicek, Dargov, Vysna Kamenica and elsewhere). Common opals form sills and fracture fillings, or eventually nests reaching up to 1 m³ of space. Common opals are in the Vihorlatske vrchy Mts. present only in the localities Petrovce and Vinne.

Common opals have a yellow-brown and green-brown color. A curiosity is so called "meat" opal from the locality Herlany and moss-opal from the locality Hodkovce (Slovak Ore Mts.). To the common opals are referred also so called chloropals occurring in Badin near Banska Bystrica and at Kosorin.

WOOD OPALS are also concentrated mainly into volcanic areas; they are bound on the redeposited volcanoclastic rocks. As a consequence of volcanic processes in the water environment came during Neogene to the so-called opalization of buried trunks, roots and branches of a trees. Wood opals are concentrated mainly to the area of central Slovak neovolcanites. These opals have gray-black, white-black, brown, yellow-brown and orange-red coloring with a preserved structure of the wood. Unique trunks of opalized trees reach up to 5 m in length and 1 m in diameter. Such big pieces of wooden opals occur in the surrounding of Horna Ves, Velky Dur (in the Pohronsky Inovec Mts.), Antol (Stiavnicke vrchy Mts.); however, the greatest pieces are present in the massif of Polana (localities Povraznik, Strelniky and Ponicka Huta). Smaller discoveries of wooden opals come also from Vysny Skalnik, Lupoc and elsewhere.

Wood opals occur in the area of east Slovak neovolcanites in the Slanske vrchy Mts. (in localities Cakanovce, Zemplinska Teplica, Slancik, Zamutov, Cabov and elsewhere) and in the Vihorlatske vrchy Mts. (locality Suche).

Due to the plenty of opal sorts, according to the almost 2000 years old history of precious opal mining (first known deposit of precious opal in the world, many centuries before Mexican and Australian localities) and due to enormous amount of opal occurrences in the territory of Slovakia it is possible to regard these mineral art as a national stone of Slovakia. Majority of these opal sorts could be utilized for jewelry purposes, mostly in individual jewel, but some of them also in industrial scale. This brief overview is only first and short information about Slovak opals.

Dr. Molnar, who is a member of the AOS, is a geologist and mineralogist but mainly a gemologist, with about 30 years experience in cutting, collecting, buying and selling opal. He has a business selling gemstones and minerals in Slovakia and is the biggest dealer in opal there. He sells all kinds of opal, mainly precious, wood and common opal. He visits Tucson and Denver Gem and Mineral Show every year since 1995.

His country is small but very rich for various opals with interesting localities to visit. Dr. Molnar invites all members of AOS and all people who like opals to come to Slovakia. He can arrange excursions. - Editor

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TIPS & HINTS

From THE NUGGET, MAY, 2002

NOTE: The Nugget does not vouch for any of these hints and advises caution when trying new procedures. Original credit and date is given when possible. The Nugget thanks all contributors and welcomes contribution!

Sawing Montana Agate: People not familiar with cutting Montana agate have perhaps wondered how to saw the first nodules they acquire. Most are found in two shapes - flat and slightly curving like the hand or round and elongated. As this material has rolled hundreds of miles down turbulent streams, nearly all of it is cracked to some degree.

First, look into the rocks as far as possible with a strong light to determine which way the moss or banding layers lie. Light cuts

taken off an end and a side, at right angles to the layers, will then reveal whether the best scene or effect can be obtained by slabbing from end-to-end or from side-to-side.

Many people who are used to sawing thunderegg-type agates saw through the center to expose the pattern, moss or plume. While this method works well with those nodules, it cannot be used to the best advantage with Montana material. It will probably ruin the best sprays of color, as the larger and better ones usually lie toward the center. Sawing across them will render them valueless.

Original source unknown via Rocky Review 12/01.

Keep a disposable camera in the trunk of your car where it is cooler than inside. If you get hit by another car, get your camera, take a photo of the person who hit you, their car, your car, and the street sign nearby. Don't forget their driver's license number and insurance card. Contributed by Toy Sato in *The Agatizer* 12/01.

If your hands are weak, when you want to open a jar and it's difficult even with a jar opener, open one of the kitchen drawers, put a towel in the corner and place the jar on it. Push the jar into the corner and then open the jar. The corner works like a vise. Contributed by Toy Sato in *The Agatizer* 12/01.

If you have a used jar that still smells of what was in it and you want to use it for something else, put in a good heaping teaspoon of dry mustard (it comes in the yellow tin), add hot water and shake well. Leave it set for a couple of hours and the smell will be gone. Contributed by Toy Sato in *The Agatizer* 12/01.

Forget the Moh's scale? Remember this: The Girl Could Flirt And Flirt Quickly Though Connie Didn't. (Talc Gypsum Calcite Fluorite Apatite Feldspar Quartz Topaz Corundum Diamond.)
Original source unknown via MOROKS 8/0 1.

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Changes in Opal Colors over Time

From the LAPIDARY DIGEST - LapDigest News for Issues No 261 to 264, form 7-6-97 to 7-11-97

Edited and Published by Hale Sweeny hale2@mindspring.com

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Subject: Change in Opals Colors over Time

From: ron@osglink.orionlink.net

Sometime ago, I bought some finished Australian opal pieces, which had a brown colored area on them, but good fire. I brought them home, put them in water for about 20 minutes, after which they were removed and let air dry at room temperature. Then they were put into 'gem jars' with a glass top and cotton in the bottom. They have been in these now for about 5-6 months.

Recently I looked at them and found that the brown areas are almost gone from some of them. And they also seem to have lost some fire!

I have heard some people say that opals have to be stored in water; others say it is not necessary. SIGH!

My questions are these: Why did they lose the brown colors? What is the best way to store opal rough or finished opals? More importantly, how do you NOT store them?

Thanks, Ron

From: cstone@ozemail.com.au

You may find that the opal was treated with a sugar solution and burnt.

By setting the opal in water and letting it sit, it has lost the carbon blackness of the sugar treatment over time. This would also account for the loss of sparkle.

The brown patches are an indication that the opal was not totally impregnated with treatment and the surface was only just treated.

Sometimes this opal depends upon a certain water content being present to maintain color. So a suggestion would be to place the opal in water for several days and see if the color improves. If it does then use Opticon to treat the opal and this should ensure the color will hold a lot longer for you.

Regards

Cranestone Gems

Web Site: <http://www.ozemail.com.au/~cstone/>

Email: cstone@ozemail.com.au

From: bobfoster@centuryinter.net

I have seen hydrophane opals, which were brown and which turned transparent after being soaked, but they returned to their brown opacity after thoroughly drying out. Ron's opals must have been pretty much dried out after 5 months even though the original moisture contained in the surface-dried opal was still in the jar. Also Ron's opals have fire, which the hydrophanes I have seen did not. All of which suggests two questions: Does hydrophanous opal ever have fire, and is it ever mixed with regular opal in the same stone?

Bob

From: daves@sunline.net

In LapDigest #22, Bob Foster asks:

<<Does hydrophanous opal ever have fire, and is it ever mixed with regular opal in the same stone?>>

Yes, at least to the first part. I've had hydrophanous (neat word) opal that was clear and had color when wet and was plain colorless white when dry. I've also had it where the color only appears when dry. (some of the Louisiana Swamp Opal colors when dry).

To test for hydrophanous properties, touch the stone to your tongue. If it feels sticky....it's hydrophane.

Has anyone tried to stabilize hydrophanous with Opticon? Wonder if it would work?

Dave

I think I'll name a daughter Hydrophanous.

(Not knowing the term 'hydrophane', I looked it up in MINERALOGY by Sinkankas 1964, p447. Here is what I found: Hydrophane (opals) are white, opaque, or barely translucent

porous kinds which absorb considerable water; if the material becomes translucent after soaking, it is called hydrophane; the latter may or may not also show play of color - Hale.)

From: bova@bovagems.com

Hi All,

Just got several ounces of Mexican fire opal on and off matrix, and some hydrophane from a sale at the Opal Society last night. It's from a lifetime collection that was donated to the Society, and includes some pretty wild stuff! I have some that looks like hydrophane and fire opal, with and without play of color, in the same stone.

Some look like they formed almost like concretions, with one thick layer wrapping around another, in almost round pieces. And I have a couple of pieces where the center is opaque and grades into an outer layer, which is red fire opal. Have to wait and see if it turns out to be all hydrophane, but doesn't look it so far. We've been told it can take up to a year for all the excess water to dry out, and they've only been drying 3 months. So I don't know how much is stable and how much will craze. But it's fascinating material.

It looks like in drying, the red layer frequently breaks off from the inner, opaque, pale peachy color, but that might just be the way it was mined. Will know more in a few months. In the meantime, any advice on free form carving Mexican opal?

Carol J. Bova - bova@bovagems.com

The Eclectic Lapidary - <http://www.bovagems.com/eclectic/>

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TRILLIONS OF DIAMONDS FROM ASTEROID COLLISIONS

A new place to hunt for diamonds may be in the rocks of ancient craters blasted out by powerful asteroid collisions, according to William J. Broad (*New York Times*, 5/11/96). Although the connection between diamonds and impact craters has been known for over a hundred years, the quantity and size of recently discovered diamonds vastly exceeded earlier finds. In the 1960s, Edward Anders' group from the University of Chicago had detected microscopic features in the Canyon Diablo iron meteorite from Meteor Crater, Arizona, that could have formed only under the extremely high pressures and rapid heating and cooling caused by a shockwave through the meteorite during impact.

In the 1970's and 1980's, Russian scientists investigated mining impact craters for diamonds. One site in northern Siberia, the 60-mile wide Popigai crater, which formed 35 million years ago, has yielded peanut-sized diamonds. Although the Popigai diamonds look promising because of their relatively large size, most impact diamonds are too small and too highly shocked to exhibit gem potential. This has not deterred one unnamed company from prospecting for gemstones in an undisclosed North American crater, according to Dr. R.A.C. Grieve of the Geological Survey of Canada.

Millions of tiny diamonds have also been recovered from the shock-melted rock (suevite) associated with the 15 mile wide Ries Crater in southern Germany. (This crater is also the source of the attractive yellowish-green moldavite tektites—believed to be impact ejecta.) Minute diamonds have also been found in numerous locations worldwide, mixed together with iridium at the geological boundary between the Cretaceous and Tertiary periods, 65 million years ago. It is widely believed that this iridium (and diamond) rich layer represents fallout from a major asteroid collision that blasted out the 105-mile wide Chicxulub crater in the Yucatan Peninsula, Mexico.

IMPACTITE is a term used to describe any rock that formed as a result of melting during impact; their presence is important for one reason—they define the most intense melting or shocked zone of an impact. Impactites are commonly quite brecciated.

(by Vivien Gornitz in NY Mineralogical Society News, via The Glacial Drifter 4/00) via The Pegmatite, November 2001

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Some Notes on Optical Effects in Gemstones

By Charles Lewton-Brain

This list introduces some of the terms used in discussing optical effects in gemstones.

Lustres. Lustre (or the American spelling Luster) refers to the amount and quality of light reflecting from a gem's surface to the eye. It is partially a subjective measurement but can be helped by comparison with a standard set of gems with known lustres. The hardness of a material, its refractive index and the degree to which it has been polished will have a bearing on the lustre. In general the harder a material is the higher the lustre, the softer it is the lower the lustre. The Americans and the British use slightly different nomenclature for lustres.

The American Liddicoat terms the categories: "metallic, submetallic, adamantine, subadamantine, vitreous, subvitreous, waxy, greasy, silky, dull." He goes on to say: "The first three reflect the presence of refractive indices over the refractometer scale. Subadamantine suggests an index high on the scale; vitreous, midscale; and subvitreous, low. Waxy and greasy lustres are usually associated with poorly polished surfaces, while silky refers to stones with many needle like inclusions." (Liddicoat, 'Handbook of Gem Identification', pp 216, 1993 ed.)

Britain's Webster says that many gems have a glassy or vitreous lustre. He gives examples and lists the lustre types as: "Metallic: silver, Adamantine: diamond, Subadamantine: demantoid garnet, Resinous adamantine: certain zircons, Vitreous: quartz, Resinous: amber, Silky: fibrous materials such as satin-spar, Pearly: usually seen only on cleavage faces, Waxy: turquoise". (Webster, "Gems: Their Sources, Descriptions and Identification" .pp 670)

John Sinkakas makes a correlation between refractive index and luster (he's American). Refractive index is given first, then the corresponding comment on luster.

1.3-1.4 Poor reflections, inclined to be greasy or oily in appearance

1.5-1.8 Brightly reflective, like glass

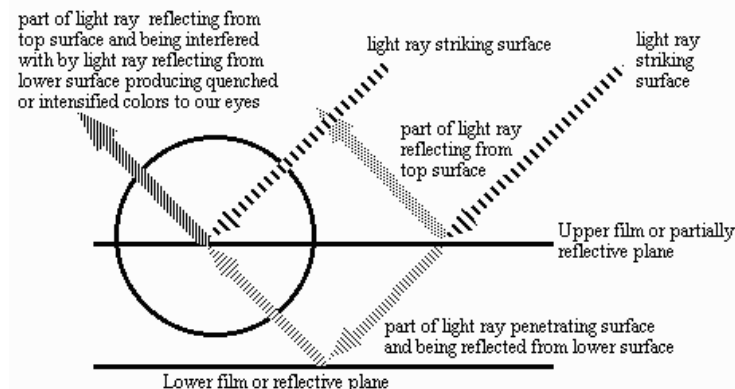
1.6-1.9 Resinous in appearance

1.9-2.5 Very brightly reflective, adamantine, sometimes appearing as if the mineral is lightly coated with a metal film.

2.5 + Submetallic, bright luster, definitely metallic in appearance

(Sinkakas, John, "Gemstone and Mineral Data Book", pp 336)

Sheen. Sheen is due to the reflection of light from material below the surface of a gem. Moonstone, spectrolite and other feldspars are examples. Sheen in moonstone is also called schiller or adularescence. Pearls too have sheen as light reflects from below the surface of the pearl.



Interference of Light. When a light ray strikes a surface composed of thin films part is reflected and part refracted into the films. The ray then reflects from film levels below the top surface and reenters the air. As it does so it interferes with; either intensifying or quenching certain wavelengths (colors) in other light rays reflecting from the top of the film. This produces color and light effects like that of oil on water, soap bubbles, Titanium and Niobium coloring, labradorite, tempering colors on steel and so on. In the diagram below a single ray is shown but in reality an infinite number of rays are doing the same thing simultaneously at all points on the surface of the partially reflective top layer or film.

Iridescence. A general term for color effects produced by interference or by diffraction. Color play in opals, mother of pearl etc. are examples.

Play of Color. A term used to describe the colors seen in opal. This is caused by light diffraction from a regular structure of silica spheres in opals.

Diffraction. When light passes over many tiny sharp edges or between many repeated points of differently refracting media an interference like phenomenon occurs; light is spread out into specific colors. You can see this on music CDs and sometimes on mesh between you and a light source. This principle is used in the diffraction grating spectroscope. This is what causes the play of color in opals, light being bent and diffracted as it passes innumerable regular stacked layers of minuscule silica gel spheres.

Opalescence. The milkiness of opals. Sometimes it is used to describe play of color.

Chatoyancy. When a gem material contains many minute fibrous inclusions oriented in one direction and it is cut en cabachon a streak of light or 'eye' can be seen at right angles to the direction of the inclusions. An example used to explain this is the light streak visible on a spool of silk thread or on an old 35 RPM record. Examples include chrysoberyl (cymophane),

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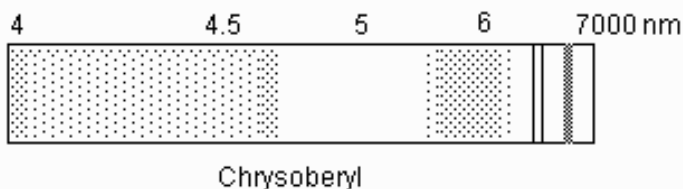
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crocidolite (tigers eye) and quartz. Many gems can exhibit an 'eye' including tourmaline, beryl, nephrite, jadeite etc.

Asterism. Star stones, these are most commonly sapphire and ruby but may include garnet, spinel, diopside and other gems. It is a special type of chatoyancy as the cause is due to many small fibrous inclusions oriented at set angles to each other. Examples are ruby (60o), garnet (70o). These inclusions in the case of corundum are all parallel to the lateral axes of the crystal and at right angles to the vertical crystal axis. When the stone is cut with the top of the cabachon dome oriented with the main crystal axis passing vertically through it and the silk inclusions parallel to the girdle of the stone asterism results. Each set of silk has a streak of light at right angles to it and a star is seen.

Spectroscope. Along with the microscope and refractometer this is a major identification tool in gemology. As light passes through a gem the presence of certain chemicals will cause specific wavelengths of light to be absorbed. Instances also occur where wavelengths are intensified or the stone actually emits light (fluorescence wavelengths - rubies, spinel). When light is spread out by a prism or diffraction grating spectroscope into a wide band these absorbed wavelengths show up as lines or areas of darkness in the spectrum. While the actual wavelength numbers can be used in identification usually only a pattern of lines is used to identify the stone. It can be the fastest way of checking out large numbers of stones, even small ones, especially red gems, as spinel, ruby and tourmaline have distinctive spectra. It can be used to identify synthetic verneuil sapphire, blue synthetic spinel, almandine garnet to name a few. Note that British gemologists have the red on the left and Americans have it on the right when looking at spectra.

Here is an example of what the absorption spectrum pattern of a gemstone might look like through a spectroscope. We are however dealing with an ideal here because in real life the spectrum lines you see are really faint, fuzzy, hard to see things. The most realistic drawings available can be found in Liddicoats 'Handbook of Gem Identification'. Red is on the right in the diagram below - because I like the American drawings the best.



Suggested Reading:

- 'Gem Testing' by Anderson and Webster, 'Handbook of Gem Identification' by Richard Liddicoat.
Anderson, B.W. Gem Testing. London: Butterworths, 1980.
Liddicoat, Richard T., Jr. "Handbook of Gem Identification". 12th ed. Santa Monica: Gemological Institute of America, 1993.
Sinkakas, John., "Gemstone and Mineral Data Book: A Compilation of Data, Recipes, Formulas and Instructions for the Mineralogist, Gemologist, Lapidary, Jeweler, Craftsman and Collector". Prescott, AZ: Geosciences Press, 1988.
Webster, Robert. "Gems: Their Sources, Descriptions and Identification". Fourth ed. Rev. B.W. Anderson. London: Butterworths, 1983.

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A Dopping Tip For All Y'all

Hi folks! Not too long ago, I started having problems keeping my stones on the dop sticks. It seemed that, no matter what I did, the dop wax just had no gripping ability any more :(

Well, I've figured out why, and a way to fix it. Dop wax is basically a mixture of beeswax and shellac, and after prolonged use, the volatile elements in the beeswax evaporated :(The dop wax became brittle, and lost all its holding power. So, I added a small chunk of beeswax to my dop pot (small, like about the size of a pea to maybe a kidney bean), and presto! My stones all stay nicely on the dop sticks again. They still release when put in the freezer, too, so all is well again.

You can buy beeswax in many fabric stores - it's used in sewing, too (I got mine at the art supply store, where they sell it for candle making).

Hope this helps some of you.

Jeannette, happy now that her stones stay on the sticks again.

mwillow@oz.net

From LapidaryList egroup,

<http://groups.yahoo.com/group/LapidaryList/> Dated Nov 15, 2002

Brazilian Opal

In the beginning of the month we attended the 12th Annual Brazil Free Gem Fair in Teofilo Otoni, Minas Gerais, Brazil (5th - 9th July).

We spent way too much and bought parcels of Boulder opals, Crystal Opals, a few pieces of Boulder Opal Rough, besides the other Brazilian faceted colored stones and Emeralds.

Several of the principal opal dealers from the state of Piaui were present with booths and some fine material as well as the normal grade of Brazilian opals. (I scanned two pictures from their posters if any one wants to see what kind of material is available.)

We had occasion to have some long conversations with these opal dealers and got filled in a little more on the opal producing situation in Brazil.

Apparently the Australians initiated the opal mining about 30 years ago in the state of Piaui and one person reported that the Australians had taken about 50 tons of material back to Australia. (the number seems slightly excessive - though it was probably taken on matrix).

After that, it seems the material dried up and the majority of the Australians left. They reported that there is one company still here and it is initiating mining again.

The actual mining of opal in the state of Piaui is done on the old prospector system. There are a reported 2000 independent prospectors ('garimpeiros') in the area, but due to a drop off in production it was estimated that maybe 300 of them are active at the moment. Of these 300, it was estimated that maybe ten have actual legalized claims registered with the government. The others are mining areas without legalized claims and defend them in the old west cowboy style (flying lead).

It was mentioned that if one of these illegal claims was to hit a good pay load, someone with more resources could run and register it and be the legal owner of the claim. The registration process is very bureaucratic and rather expensive for the level of resources available to the average 'garimpeiro'. It is also slow.

The opal producing companies usually finance some or all of the prospectors and get first look at the production. They mentioned buying and supplying basic mining equipment (picks, shovels, screens etc.) The 'garimpeiros' which are producing probably get advances for food and living expenses.

One of the opal producers informed us that they were involved in organizing a cooperative for the 'garimpeiros' so as to help them get better working and living conditions.

Due to the way the material is mined, the rough produced dribbles into the market irregularly and is usually bought up

immediately by the local opal producers who have their own lapidaries, either as employees or free lancers. Thus it is very difficult for the rough to even make it down to the south of Brazil, much less out of the country. The local lapidaries, so far, have been able to process the material that is being produced.

They mentioned that there are on the order of 40 lapidaries in the opal producing area. The lapidaries use tripoli powder on felt to polish the opals. Here in Brazil the lapidaries and faceters use basically only three things to polish almost everything. Tripoli powder, White Powder (which is Aluminum Oxide), and Green powder (which is Chrome oxide). Various combinations of all three are used on almost everything except Corundum, Chrysoberyl and Alexandrite, where they will mix in some diamond powder also.

The Opal dealer told me they use Tripoli powder, green powder and some white powder for polishing opals on hard felt wheels.

Another recent happening was the find of orange fire opal in the state of Rondonia, in a jungle area, on the site of an old gold mine. This material is being mined by a foreign company and hasn't been appearing on the Brazilian Market. A good picture of a piece of the Brazilian Fire Opal rough is shown on page 37 of the March/April 2000 issue of Colored Stone Magazine (by the same publisher as Lapidary Journal) and a brief write up on page 29. I have not seen much of the Mexican color Cherry Red Fire Opal in Brazil - mostly more orange colors. The piece of rough in the picture has a spot of red but the majority of the piece is orange.

The January/February 2000 issue of Colored Stone Magazine (Tucson Show Guide) has an article on page 518 about Brazilian Opal, starting in the middle of the second column.

Best regards,

Robert Lowe Lowe Associates,
Brazil Gemstones, Rough, Specimens
e-mail: robertplowejr@mogi.com.br

Some good, but late info dated Aug, 2000 from the Orchid Digest from <http://www.ganoksin.com>. The Ganoksin Project provides an information forum on the Internet free of charge for all things connected with jewelry and jewelry making. Visit it and see! Printed with permission of Ganoksin. The Editor

DECEMBER Gem & Mineral Shows

29-1--COLUMBIA, SOUTH CAROLINA: 25th annual show; Columbia Gem & Mineral Society; South Carolina State Fairgrounds, Moore Building, Rosewood Dr.; Fri. 10-7, Sat. 10-6, Sun. 12-5; admission \$3.50, children under 13 free, free parking; exhibits, salted mine, demonstrations, rough and cut gems, mineral specimens, jewelry, beads, fossils, supplies, geode booth, door prizes; contact Susan Shrader, 7719 Wessex Ln., Columbia, SC 29223, (803) 736-9317; e-mail: sshrader@mindspring.com.

29-1--SPRING HILL, FLORIDA: 28th annual show; Withlacoochee Rockhounds; Slovene American Club (SNJP), 13383 County Line Rd.; Fri. 1-5, Sat. 9-5, Sun. 9-5; admission \$2.50; gems, minerals, jewelry; nonprofit organization show funds school scholarships; contact Jerry Johnson, (352) 688-7810.

29-1--ST. PETERSBURG, FLORIDA: Show; Frank Cox Productions; Coliseum Ballroom, 535 4th Ave. N.; Fri. 10-5, Sat. 10-5, Sun. 10-5; gems, jewelry, crystals, minerals, beads; contact Frank Cox Productions, 755 S. Palm Ave. #203, Sarasota, FL 34236, (941) 954-0202.

30-1--BARSTOW, CALIFORNIA: Show; Mojave Desert Gem & Mineral Society; Barstow Community Center, 841 S. Barstow Rd.; Sat. 10-5, Sun. 10-5; free admission; contact Bob Depue, (760) 255-1030.

30-1--MOBILE, ALABAMA: 7th annual show; Mobile Rock & Gem Society; Abba Shrine Auditorium, Schillinger at Hitt Road; Sat. 9-6, Sun. 9-5; adults \$3, \$2 if you mention this listing, children under 12 free with adult; contact Ed Harris, (251) 865-9157; e-mail: ed_harris_jr@hotmail.com; Web site: www.geocities.com/mobilerockandgem/.

30-1--ORANGEVALE, CALIFORNIA: Show, "Winter Wonderland of Gems"; American Gem & Mineral Society; Orangevale Grange Hall, 5807 Walnut Avenue; Sat. 10-5, Sun. 10-5; \$1 donation, children free

with adult; hourly drawing, grand prize drawing; contact Hugh Brady, (916) 961-6868.

30-1--SAN FRANCISCO, CALIFORNIA: Show, "The Great San Francisco Crystal Fair"; Pacific Crystal Guild; Fort Mason Center, Laguna and Marina Blvd.; Sat. 10-6, Sun. 10-4; admission \$4, children under 12 free; up to 45 vendors of crystals, minerals, gems, jewelry, mystical and healing arts; contact Jerry Tomlinson, PCG, P.O. Box 1371, Sausalito, CA 94966, (415) 383-7837; e-mail: sfxlt@earthlink.net; Web site: www.crystalfair.com.

30-1--ST. ANTHONY, MINNESOTA: Show; Anoka County Gem & Mineral Club; Apache Plaza Shopping Center, 38 Ave. NE and Silver Lake Rd.; Sat. 10-5, Sun. 12-5; contact Catherine Cummings, 1192 California Dr. #201, St. Paul, MN 55108-2251, (651) 487-2609.

6-8--ALAMOGORDO, NEW MEXICO: 3rd annual show; Tularosa Basin Gem and Mineral Society; White Sands Mall, 3199 N. White Sands Blvd.; Fri. 10-9, Sat. 10-9, Sun. 12-5; free admission; contact Larry Perry or John Perry, (615) 969-0673; e-mail: wm_owl@hotmail.com.

6-8--AUSTIN, TEXAS: Annual show, "Gem Capers 2002"; Austin Gem & Mineral Society; The Crockett Center, 6301 Hwy. 290E; Fri. 9-5, Sat. 10-7, Sun. 10-6; adults \$4, seniors \$3, children 6-12 50 cents, children 5 and under free, three-day passes available; member mineral collection displays, lapidary demonstrations, fluorescent tunnel, rock food table, kids' Wheel of Fortune and gem mine, door prizes; contact Laura Dow, (512) 930-1733.

6-8--EL PASO, TEXAS: 3rd annual show; El Paso Mineral & Gem Society; El Maida Auditorium, 6331 Alabama; Fri. 12-6, Sat. 9-6, Sun. 9-4; field trip on Saturday; call (877) 533-7153; e-mail: gemcenter@aol.com.

6-8--GREENSBORO, NORTH CAROLINA: Show; Greensboro Gem and Mineral Club; Greensboro Coliseum, Lee St.; Fri. 10-6, Sat. 10-6, Sun. 10-5; adults \$3, seniors \$2; contact Joe Maguire, 1615 Wilton Dr., Greensboro, NC 27408, (336) 288-7452; e-mail: joe_maguire@prodigy.net.

6-8--MONTGOMERY, ALABAMA: 32nd annual show; Montgomery Gem & Mineral Society; Garrett Coliseum; Fri. 9-7, Sat. 10-6, Sun. 11-5; free admission; contact Jane Barkley, 740 N. Georgetown Dr., Montgomery, AL 36109, (334) 277-2722, or Iris McGehee, 2433 Upper Wetumpka Rd., Montgomery, AL 36107, (334) 262-7275.

6-8--SANTA BARBARA, CALIFORNIA: Show; Gem Faire; Earl Warren Showgrounds, Las Positas and Hwy. 101; Fri. 12-7, Sat. 10-7, Sun. 10-5; weekend pass \$5; contact Allen Van Volkinburgh, (760) 747-9215; Web site: www.gemfaire.com.

6-8--SACRAMENTO, CALIFORNIA: 60th annual show, "Golden Harvest of Gems"; Sacramento Mineral Society; Scottish Rite Temple, 6151 H St.; Fri. 9-5, Sat. 10-5, Sun. 10-5; adults \$3, children 6-12 \$1, children under 6 free; kids' day Fri., school groups welcome; rocks, minerals, rock rough, gemstones, exhibits, prize drawings; contact Stan Henneman, (916) 363-5011.

7-8--LOS ANGELES, CALIFORNIA: Show, "Southern California Gem & Mineral Show 2002"; Mineralogical Society of Southern California, Natural History Museum of Los Angeles County Gem & Mineral Council; Natural History Museum of Los Angeles County, 900 Exposition Blvd., Exposition Park; Sat. 10-5, Sun. 10-5; adults \$8, seniors (62+) and students \$5.50, children 5-12 \$2, children under 5 free; more than 60 dealers selling mineral specimens, gemstones and earth science books, more than 60 exhibits from private and museum mineral and lapidary collections, free minerals and educational materials for children; contact MSSC, P.O. Box 41027, Pasadena, CA 91114-8027; Web site: www.mineralsocal.org.

7-8--SAN BERNARDINO, CALIFORNIA: 56th annual show, "World of Rocks 2002"; Orange Belt Mineralogical Society; San Bernardino Women's Club, 503 W. 31st St.; Sat. 10-6, Sun. 10-5; free admission; contact Emma Couveau, (909) 381-0089.

13-15--RALEIGH, NORTH CAROLINA: Show; Ray Vernon; North Carolina State Fairgrounds, Kerr Scott Bldg., 1025 Blue Ridge Blvd.; Fri. 1-7, Sat. 10-6, Sun. 10-5; admission \$2; displays, demonstrations; more than 30 dealers in gold, silver, gemstones, minerals, beads, pearls and cabochons; contact Ray Vernon, (919) 280-7063.

13-15--SAN DIEGO, CALIFORNIA: Show; Gem Faire; Scottish Rite Center, 1895 Camino Del Rio S; Fri. 12-7, Sat. 10-7, Sun. 10-5; weekend pass \$5; contact Allen Van Volkinburgh, (760) 747-9215; Web site: www.gemfaire.com.

