

The Opal Express

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



**Volume #37 Issue #4
April 2004**

TO:

Some Topics In This Issue:

- Walker Jr. High Rock Pile Fieldtrip
- Lets Talk Gemstones - Opal
- Inherent Hazards In Setting Opal
- Murphy's Law and Rockhounding
- Arizona Blue Opal
- Gemstone Care

Important Info:

Board Meeting

April 5th

General Meeting

April 8th

Meeting Speaker:

**Bill Burns on
Virgin Valley Opal**

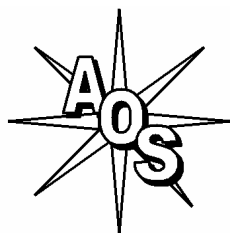
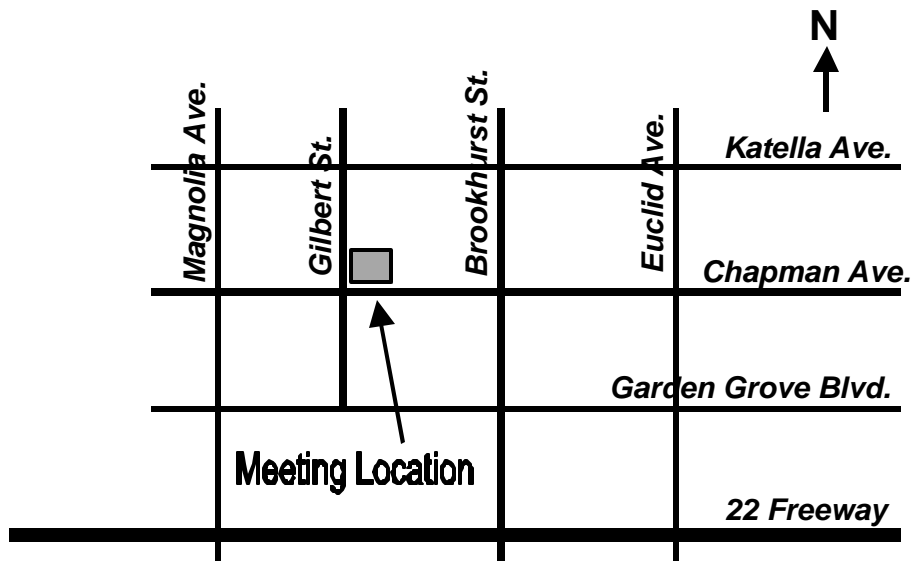
— GENERAL MEETINGS —

2nd Thursday of the Month
7:00 pm - 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

April 8th - General Meeting



The American Opal Society

<http://opalsociety.org>

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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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Editor-Jim Pisani

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

Are Your Dues Due Now?

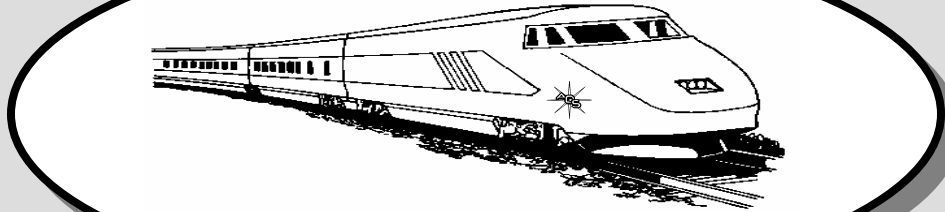
PLEASE CHECK YOUR ADDRESS LABEL. If your label shows the current month/year your dues are DUE NOW. If the date is older, your dues are overdue.

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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Volume 37 Issue 4

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President's Message

By Pete Goetz

Hi Folks - there are some of you who like to cut stones other than OPAL. (I didn't know you could do that?!?) Some of you may be concerned that your stash of cutting material you have stored in the back yard, or in buckets in the garage, or in the trunk of your vehicle... where ever!.. is dwindling. You may have dreamed of going to a dig were every stone is a keeper (nightmare). So dazzling and plentiful are these stones that you will not have to worry about going dry for a long time. Sound too good to be true? The BIG DIG part that is. Well, if you had been at Walker Jr High School May 23rd, his part of the above scenario would have been true. We found all kinds of colors in all sorts of patterns. Two lucky folks found RUBIES - HEY-HEY!!! I would like to thank Walt Johnson for helping facilitate the BIG DIG. Walt, his bride of a few years, Donna, and his side-kick Rich, hung out and helped identify the goodies.

On to more mundane stuff, but very important. Fran Todd has agreed to start working with Jay Carey on the show committee, perhaps in the next couple years she will replace Jay. Russ Madsen has agreed to take on the mantle of

Treasurer, did I say that already? If I did, it "bears" saying again. Thanks guys for your interest in helping out. This letter is later than usual, so I better sent it to Jim. More later, Pete Goetz

April Speaker

Bill Burns, of the Whittier Gen & Mineral Society, will speak on April 8th on Virgin Valley, Nevada and its precious opal.

Opal Workshop

The AOS opal workshop is at **Ball Jr. High School** on 1500 W. Ball Rd., Anaheim, CA. It can be open for members on Monday. Contact **Stan McCall** at (714) 220-9282 if you plan to attend.

Members Only Website Password

The password has changed this month for the website's members only area at:

http://opalsociety.org/aos_members_only_area.htm

To login into the protected area, type the following when prompted: **Name:** "member" and **Password:** "lambina"

Stoddard Wells Trip

Four members made an impromptu trip to the Victor Valley Gem & Mineral Club's tailgate at Stoddard Wells on Mar. 13 in Victorville CA. Pete Goetz, Jim Pisani, Diane Robinson, and Bob Dixon made the 2 hour trip from Orange County on a beautiful Saturday morning, passing the snow-capped peaks of the San Gabriel Mountains, into the Mohave Desert East of Victorville.

The temperature was in the 80's, making a comfortable day. The show seemed bigger this year, with more vendors than last, with a good crowd. Member Stan McCall was selling good LR opal, along with members Eva Coan and Claire Gagnon. Faye McDowell was seen, completely recovered and enjoying herself. All in all, it was a great day!

great opal... great prices

Black
White
Boulder
Rough

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Walker Jr. High Rock Pile Field Trip Report

Jim Pisani, AOS Editor



Photo 1 - Here we are at the very beginning of the field trip.

The American Opal Society's March 20th field trip to the Walker Junior High's rock pile was a great success! We had a great turnout - about 20-25 members (see photo #1). Some of the members that attended were Jim Pisani, Pete Goetz, Mike Kolawasky, Diane Robinson, Eugenia Dickson, .Milt & Myrna Roth & their son, Eugene LeVan & son & granddaughters, Walt & Donna Johnson, Fran Todd & her husband, Corey & Leona Kuepper, Eva Coan, Russ Madsen, Bob Dickson, Jim Lambert, and Peter Drew.

The target of the field trip was a huge pile of rocks along side the old lapidary workshop. The pile measured approximately 25 feet long, by 4 feet wide by 3 feet deep. It is 30 years of accumulation by Donna & Walt Johnson from their many rockhound trips over the entire western United States. He used it as a source of raw material for the lapidary classes he taught at the school. The school had discontinued the lapidary classes and the rock pile will eventually be discarded. The AOS was given the privilege to high grade the pile.

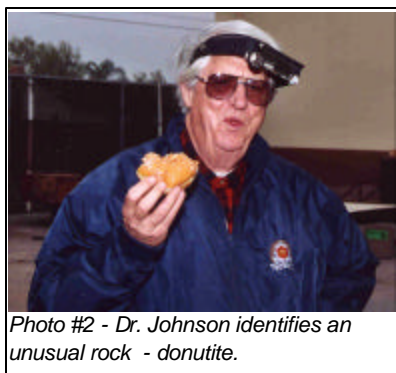


Photo #2 - Dr. Johnson identifies an unusual rock - donutite.

Walt Johnson (Photo #2) helped identify the different types of gem & minerals in the pile. Great finds were found - lapis lazuli, labradorite, lace agate, moss agate, blue chalcedony, orbicular jasper, tiger eye, fire agate, mahogany obsidian, rainbow



Photo #3 - Eugene LeVan was the winner of the best find - a real ruby!

obsidian, mariposite, jasper, petrified wood, howlite, marble, quartz, rose quartz, aventurine, chrysocolla, bloodstone, thundereggs, dumortierite, pyrite, zoisite, variscite, dendritic agate, picture jasper, wonder stone, jade, calcite, picture stone, etc., etc. The best find was an excellent six-sided ruby crystal by Eugene LeVan (see Photo #3).

We reduced the pile by around 5-10 percent. Some estimates of the size is several tons of material. You can see from the photo #4, the amount of reduction from the paint marks on the side of the building. Obviously, we need to visit the pile again since there is quite a bit left that is untouched. Announcements will be made at the next meeting on April 8th. Members, thanks again for a great field trip!



Photo #4 - Here is the rock pile after 4 hours of digging - notice the paint on the walls - that's how much it decreased it!

Lets Talk Gemstones - Opal

*By Edna B. Anthony, Gemologist
P.O.# 62653; Colorado Springs, CO. 80962*



Opal is a fascinating gemstone with an ancient history. Pliny the Elder gives an eloquent description of opal, comparing its many colors to that of the finest of ruby, emerald, sapphire, topaz, and amethyst. Romans prized opal so highly that one citizen of the highest rank suffered permanent exile for refusing to relinquish ownership of a magnificent hen-egg sized opal to the emperor.

Any discussion of opal involves an extensive vocabulary not usually associated with other gemstones. Few reference works on opal make use of the terms group, species, variety, and other words common to gems with crystal structures. For this reason, the format for this article includes a glossary of terms associated with opal. I added comments where I thought appropriate. Some of these terms describing opal are seldom used today, but reference works abound with them.

Opal - an amorphous composition of microspheres of cristobalite, SiO₂nH₂O, precipitated from silica gel into layers or nodules in veins and cavities of volcanic and sedimentary rocks in numerous areas of the earth. Water is always present in opal, but the amount varies considerably. This accounts for the frequent practice of storing opal in water or oil. The diaphaneity of opal varies from transparent to opaque.

True Opal - refers to the characteristic of an uninterrupted display of fine colors when viewed from any surface angle. It does not refer in any way to the chemical composition or other properties of opal. All precious opal has this quality.

Play of Color - the result of the regular arrangement of remarkably uniform sized microspheres of silica with its corresponding regular array of the tiny three dimensional "holes" that form a diffraction grating for visible light. At various angles, the different wave-lengths of diffracted incident white light, when split into its spectral colors, are reinforced by each other, and we observe the play of color. With the exception of the Contra Luz variety of opal found in the volcanic areas of Australia's east coast and in Mexico, the display of colors is absent when opal is viewed in transmitted light.

Precious Opal - top grade solid opal which displays one or more surface colors in a variety of patterns in reflected light. With the exception of some Queensland boulder opal, where an especially thick layer of precious opal has been deposited on ironstone, precious opal includes neither matrix nor rock. It is semi-transparent, at best, but is usually translucent or opaque. A cloudy milk-white or a slight blue or pearly grey body color is typical. A pronounced red, yellow, green, black, or blue body color is rare. In volume 2 of his book, PRECIOUS STONES, Max Bauer speaks of a "magnificent example" of very rare rose-red opal in the "Green Vaults" in Dresden, Germany.

Harlequin Opal - "True precious opal showing a regular mosaic-like pattern in rounded, angular, or roughly square patches of about equal size, presenting a spangled appearance--". This definition is found in A Field Guide To Australian Opals by Barrie O'Leary. He also states that "Harlequin opal is precious opal in which the colors shine as patches and spangles." The harlequin pattern occurs in other types of opal and should not be confused with solid true precious harlequin opal.

Black Opal - natural opal with a black, very dark grey, or dark brown body color. It absorbs most of the light striking its surface, thus, creating a dramatic contrast to the colors caused by the diffraction of reflected light. Another black opal is that formed by the natural deposition of transparent precious crystal opal onto black potch, allowing the body color to be clearly visible. O'Leary makes a point that the term, "black opal", does not include matrix opal nor boulder opal.

Neither should the term apply to doublets or triplets created by the use of a veneer from black opal. Noble opal is the correct term to use in such cases if the quality warrants it.

Crystal Opal - that in which the play of color emanates from a transparent colorless body, frequently associated with black opal

Celestial Opal - precious opal.

Oriental Opal - Hungary was the source of nearly all of the best opal supplied to Europe in early times. It was usually sent from the mines near Czerwenitz to Constantinople and forwarded to various European cities.

This term came to be known as oriental opal. The Imperial Natural History Museum in Vienna has the largest known specimen from the source mentioned above. The stunning, nearly 600 gram wedge-shaped uncut opal may be the larger portion of a stone that yielded the remarkable hen-egg sized gem in the Imperial Treasury there.

Sedimentary Opal - opal deposited in the voids and crevices of sandstone formations. Until opal was discovered in Queensland, Australia in 1872, all opal was recovered from rocks of volcanic origin.

Opaline - a term formerly used by jewelers to denote Australian opal when it came on the market to distinguish it from the Hungarian opal.

Noble Opal - all brilliantly colored opal, other than solid precious opal. According to O'Leary, this includes top quality doublets and triplets.

Boulder Opal - opal found in ironstone concretions within sandstone formations. This opal often is so thin that the finished gem must include the natural matrix backing. Yowah nuts and

pipe opal are types that yield solid opal. Small hollow ironstone concretions that resemble nuts were first found near Yowah, hence, the name. Sometimes these contain a solid core of precious opal. Long finger-like concretions, called pipes, yield precious opal of consistent quality. These can be cut into matching high-domed cabochons that are especially valuable.

Potch Opal - transparent material where the voids between the regular array of the microspheres have been filled with silica cement that prevents the diffraction of light and the play of color. Good grades of potch, both black and white, are used as backs in the manufacture of doublets and triplets. When partial cementation distorts and reduces the size of the voids and the power of diffraction, various types of opal can be the result.

Hydrophane - a porous potch exhibiting a weak play of color only when wet. Its porosity causes it to adhere to a moist surface.

Hyalite - a colorless transparent glassy potch.

Fire Opal - transparent amber to orange to red potch. It is often faceted and is very sensitive to heat and stress. Mexico is an important source. Glass imitations are marketed.

Cherry Opal - a rich red fire opal.

Girasol - a term, at times, applied to other gemstones, but here, it denotes a semi-transparent opal with a billowy blue sheen. The effect resembles moonstone and can also exhibit a red play of color.

Sun Opal - very transparent, bright yellow fire opal.

Mexican Water Opal - a colorless or pale brown opal exhibiting a single colored schiller.

Common Opal - mostly opaque without any play of color.

Agate Opal - interspersed layers of agate and common opal.

Milk Opal - white translucent opal with a pearly luster.

Porcelain Opal - opaque whitish opal.

Moss Opal - porcelain opal including dendrites.

Cacholong - white or yellowish, translucent to opaque, common opal with a mother of pearl luster. It is often dull. Because it is very porous, it adheres to a moist surface.

Honey opal - translucent yellow opal.

Prase Opal - apple green, semi-translucent to opaque, common opal. Once known as chrysopal because of its resemblance to chrysoprase. Nickel gives it its color.

Wax Opal - also called resin opal; a waxy, lustered, opaque yellow- brown opal.

Menilite - liver opal; grayish brown, concretionary opal. It yields a brilliant luster when polished. An excellent picture of it is published in Walter Schumann's Gemstones Of The World, page 152.

Catseye Opal - material where the play of color forms an "eye" or a band. Tabasheer refers to opaline silica deposited in the joints of bamboo.

Opal Pseudomorphs - the deposition of opal in casts (molds) of fossil bone, teeth, shell, belemnites (ancient relatives of the cuttlefish), crinoids (sea lillies), wood, fir cones, and even skeletons of large prehistoric animals. Many of these fossilized forms contain exceptional quality of noble opal. An especially interesting example is the opal "pineapple" found at White Cliffs in Australia. A pre-existing crystal of the mineral glauconite dissolved, resulting in a cast filled with opal.

From the preceding definitions, one can begin to comprehend the vastness and the complexity involved in the study of opal. The sources are numerous, and the judgment of its quality and value is very subjective. An excellent source of concise information is Joel Arem's Color Encyclopedia Of Gemstones. Lack of space precludes a discussion of its synthesis (many are on the market) and its imitations. Much of the gemological information has already been well covered, so only the following data need be given.

Another opal reference book recommended is the book "Opals" by Fred Ward, G.G.

Gemstone Properties	
SPECIE	Opal
Composition:	SiO ₂ .nH ₂ O
Varieties:	See above list
Colors:	all
Phenomena:	play of color and girasol effect
Streak:	
Crystal System	amorphous
Habit:	layers, veins, nodules, and pseudomorphs
Cleavage:	none
Fracture:	conchoidal and brittle
Fracture Lustre:	
Lustre:	vitreous, waxy, and pearly
Specific Gravity	Variable 1.98 to 2.25
Hardness	5.5 to 6.5
Toughness:	poor
Refractive Index	Variable 1.44 to 1.47 Mexican opal as low as 1.37 Usually 1.42 to 1.43
Birefringence:	
Optic Character	isotropic
Dispersion:	Very low
Pleochroism	pale brown, yellow green-brown, green-brown, blue
Ultraviolet Fluorescence	Variable. Strong white, medium blue, dull white, bright blue, pale yellow, brownish, bright green (indicates U minerals), brownish. Fire opal often greenish brown. Black opal usually inert. Common opal often green. Phosphorescence sometimes strong.
Spectra	none
Color Filter	no information
Solubility	Etched by HCL
Thermal Traits	VERY SENSITIVE TO HEAT and sudden temperature changes
Treatments	Dyes, sugar cooking, and smoking
Inclusions	

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The purpose of the New Mexico Faceters Guild (NMFG) is to bring together persons who are interested in faceting or faceted stones. We promote the art and science of faceting and provide a means of education and improvement in faceting skills. Finally, we provide a means of communication between those persons involved or interested in faceting as a hobby.

Meeting Dates: Second Thursday of odd numbered months

Time: 7:00 PM

Place: New Mexico Museum of Natural History
1801 Mountain Road NW, Albuquerque, NM USA

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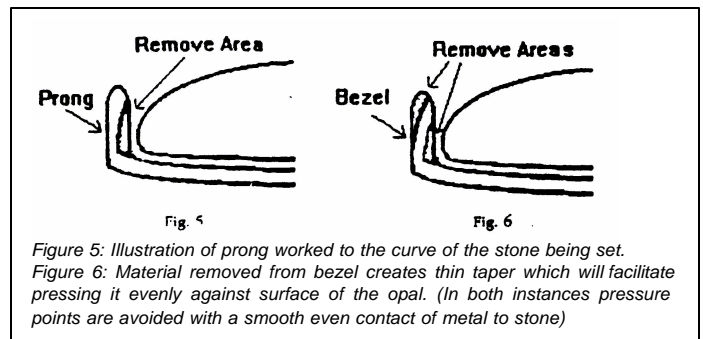
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Inherent Hazards In Setting Opal

By Dr. Walt Johnson

The properties of opal are very similar to those of glass. Opal has no crystal structure and will break conchoidally. The hardness of opal is close to that of both glass and obsidian and can be scratched just about as readily. Australian opal is usually about a 5.0 hardness on the Mohs scale although some Brazilian and other examples have been found to be as high as 7.0. There are certain considerations when working with opal for jewelry, which arise from these properties.

It is a must to avoid setting an opal with pressure applied by the setting at any spot or point on the gemstone. If an opal is cut too thin, it has what is known as a "killer edge" which is likely to chip or flake in the same way as obsidian being chipped into an arrowhead. It will not take pressure and such an edge requires either very special care or should be passed by in favor of stones cut with an even bezel line and a smooth round bevel along the bottom. Because the base of a setting should be shaped to match the cut of the opal, it is almost never possible to use ready made or commercial castings, at least not without modification to them. If the base is uneven or doesn't match the stone, it will apply pressure when the stone is set. Opal will "tear" along any



scratch if pressure is applied from beneath. Thus it is as critical to avoid uneven mountain surfaces under an opal, as it is to avoid applying points of pressure with prongs or through the use of prong setting pliers.

Another major source of pressure that must be avoided in setting opal is prongs. Using a bezel to fully surround a stone is much preferred. This will support and protect all of the edge and apply gentle evenly distributed pressure all around a stone. In the case where prongs are chosen in spite of the above, each must be individually worked to the shape of the stone. Also, a bezel should be shaped and thinned down so that its upper portion rounds smoothly and molds evenly over the surface of the stone.

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Doublets and triplets should be set in a beveled mounting cut to the same angle as the finished stone. This will cover the glue seam where the cap is attached. It will also prevent impact that might dislodge the cap from the base. The edge of doublets and triplets present extra problems in creating settings. As figure 7 shows, a heavy base and large raised area protect the opal, the glue area, and the edge. It is best to have the base closed. If open, be sure to have a fairly wide supporting surface of at least 3-4 mm. Be mindful that honest dealing requires a seller make a clear disclosure if a stone set with a closed back is a doublet or triplet.

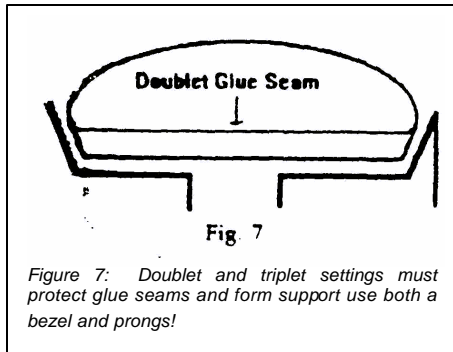


Figure 7: Doublet and triplet settings must protect glue seams and form support use both a bezel and prongs!

In setting a stone with a completely flat base, it must be bezel set and the bezel should be worked to the exact shape of the stone before it is brought down to the opal's surface. Yowah opal has natural lines of weakness and must be set with a solid back for support. Use #330 epoxy glue behind an opal to provide cushion and protection. Baroque opals should be set so that any unusually shaped edge areas are not exposed to impacts.

It is easiest to avoid setting problems by either buying stones that are correctly cut and have no cracks or flaws or cutting stones that have no flaws or cracks and are properly shaped.

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The Contributions of Edsel Murphy to the Understanding of the Behaviour of Minerals and Mineral Collecting

By Larry Rush, Guilford, CT

It has long been my consideration that the contributions of Edsel Murphy, specifically his general laws delineating the behavior of inanimate objects, have not been fully understood or appreciated. It is probable that this is, in part, due to the inherent simplicity of the laws themselves. The following corollaries to his well-known "Murphy's Laws" have been derived by me based on years of experience and hundreds of test occurrences. I have taken the liberty of appending friend's names to these phenomena, with an absolute conviction that the experiences are universal in nature, and that every collector has found each of them to be true.

Murphy's First Law: If anything can go wrong, it will.

Laws of Weather

Lannie's Law: Any week of five consecutive clear and sunny week-days will have rain, sleet or snow on Saturday AND Sunday.

Pete's Principle: Cloudless days will overcast at the point when you reach the mine access road.

Edward's Extension: The precipitation will begin when you reach the half-way point of the access road.

Ervin's Further Extension: The intensity of precipitation will increase in direct proportion to the distance walked on the access road.

Ellie's observation: All precipitation will cease the instant you return to your car.

Laws of Equipment

Charlie's Principle: While visiting the one quarry of the year where hard-hats are required, a quick glance in the trunk will prove that yours is home in the garage.

Ray's Corollary: That garage will prove to be greater than 200 miles from the quarry.

Dick's Law: A dropped tool will land in a vug where it will do the maximum possible damage to the specimen. (Also known as the law of selective gravitation).

Stewart's Enigma: The laws of chemistry prevent a man-made chisel from being stronger than basalt.

Ronnie's Rule: Upon returning to the car after a six-mile hike from the dumps with a 150 pound sack of rocks, it will be discovered that you left your new pry-bar at the site.

Cook's Conundrum: It is impossible to lose both hands of a set of gloves at the same time. It is also impossible not to lose one hand of a set of gloves.

Andy's Auxiliary: The glove lost from your second set of gloves will be the same hand as the one lost from the first set. (Can be extended to an infinite series of glove sets- known as the Law of Arithmetic Glove Loss Progression).

Allen's Axiom: The only tool left at home will be the one needed most on a field trip.

Carl's Extension: Most of the other tools which you did bring on a field trip will not be needed.

Laws of Field Collecting

Sandy's Law: The need to go to the bathroom increases with the distance away from the facilities.

Doug's Theory: Black flies do not live in the woods until you start to dig, at which time and place they instantaneously appear to hold their annual convention.

Ollie's Observation: The distance to crystal groups in narrow vugs always equals your arms length, plus six inches.

John's Theory: In apparent defiance of Moh, when trimming matrix, beryl will break before feldspar.

Sally's Observation: The best crystal of the trip will be found lying on the surface by a ten year old who will be heard to exclaim, "Is this rock any good?"

Jack's Law No. 1: The mine owner will always point out a hole to dig in where "someone pulled out a fantastic bunch of azurite last week!"

Jack's Law No. 2: No azurite will be found in said hole.

Jack's Law No. 3: It will take you all day to discover the truth of Jack's Law No. 2.

Rick's Rule: The attractiveness and desirability of a crystal pocket is in inverse proportion to its accessibility in the wall.

Pattie's Premise: The enthusiasm of any one under the age of 18 on a field trip with their parents expires at the beginning of the sixth minute at the site.

Morry's Misery: The level of enthusiasm maintained while digging in old dumps is inversely proportional to the number of snakes encountered.

Danny's Dilemma No. 1: All paths to collecting sites have more uphill sections than they have downhill sections.

Danny's Dilemma No. 2: All paths from collecting sites have more uphill sections than they have downhill sections.

Danny's Dilemma No. 3: The same paths double in length during your collecting period.

Alfred's Awful Discovery: The vulnerability of fingers to hammer blows will be demonstrated at least once per field trip.

Irv's Irritation: The person in the hole two feet to your left (substitute right, back, or front) will find a museum piece, while your hole will be barren.

Seda Opals

Opals Direct From the Field

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By Visiting www.SedaOpals.com

3 Agate St. Lightning Ridge, NSW Australia 2834

Larry's Law: The best crystal pockets are devilishly designed to be in vertical walls placed a minimum of five feet above your head.

Fred's Frustration: The safety factor of overhanging rock in a quarry wall is highest when there is no mineralization there.

Laws of Cleaning, Storing, and Saving Minerals

Ron's Rule of Rock Wrecking: The last intended blow of the hammer will always smash the crystal.

Ron's Rule of Rock Wrecking II: The only crystal smashed will have been the best one collected that day.

Cash's Criticism: An agate will orient itself to be sawn so that the ugliest portion of its interior is exposed.

Ralph's Rule: Acid baths will destroy the specimen while cleaning the matrix.

Pat's Principle: Those specimens which have been wrapped with the greatest amount of tissue will fall from your hands while unwrapping.

Laws of Shopping, Swapping, and Shows

The Swappers First Rule of Trading: Any specimen received in any swap is less valuable than the one you traded.

The Swappers Second Rule of Trading: The value of specimens received in a mail swap is always exceeded by the cost of your postage.

The Swappers Third rule of Trading: The frequency of specimen damage in the mail is directly proportional to the frequency of "FRAGILE" markings on the package.

Smitty's Sorrow: Your worst enemy's first place prize crystal on exhibit in your clubs centennial show will be inferior to the one you decided not to show.

Willy's Woe: The specimen you have always wanted will be spotted (cheaply priced) on the dealer's table NEXT to the one where you just spent your last dollar.

Kevin's Rule: The other trader never needs what you have the most of to swap.

Laurie's Law: The impact of a dropped flat of specimens will do the worst damage to the best piece, and no damage to the worst piece.

Ben's Premise: The size and quality of verbally described crystals increases by a factor of two each time the collecting tale is told. (Also known as the Fisherman's Law).

Robert's Response: The listeners mind will compensate for Ben's Premise by decreasing by a factor of two for each collecting tale.

Fisher's Frustration: No one who is present ever wins a mineral show door prize.

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Miner Unearths A Real Gemstone

Tucson Blue opal a hit with jewelry lovers

By Gillian Drummond

Photos by A.E. Araiza / Staff

SPECIAL TO THE ARIZONA DAILY STAR

When John Greene was in first grade, a teacher wrote five words that foreshadowed his career: "Doesn't work well with others."

Now 64, Greene spends his days driving to remote spots in the Arizona desert, hiking into the hills, getting out a hammer and chisel, and prospecting for precious opal.

"I blame all of this on that teacher," said Greene, laughing.

It's solitary labor, and dangerous too. He has killed a few snakes, and once broke six ribs in a fall.

The places where he works are so isolated that cell phones can't get signals there. So he has a self-imposed curfew - he has to be home before dark.

Greene is half of the husband-and-wife team that makes up Blackstar Mines in Amado. He brings home the opal and his wife, Cheryl Taylor, turns it into extraordinary and eye-catching jewelry.

Extraordinary, they say, because you won't find anything like it anywhere else.

Eye-catching, they say, because with hues of sky- to dark blue and flashes of red, yellow, blue and green, it is far from people's idea of opal.

To most of us, an opal is either a white or blue-black stone mined in Australia or a reddish-orange stone found in Mexico.

Plain blue opals occur in Oregon, and greenish-blue in Peru, said Taylor.

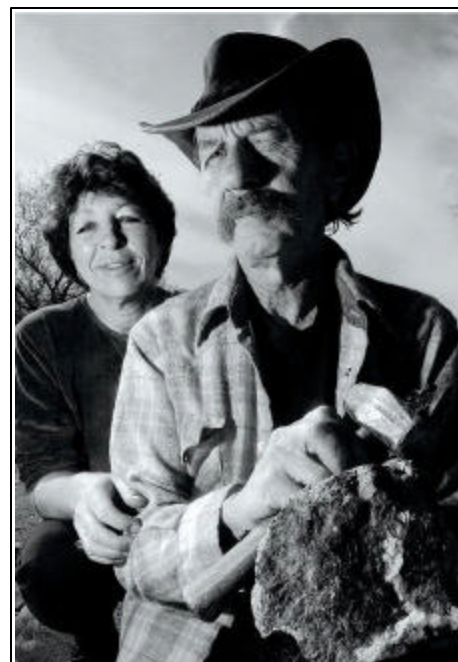
"What makes ours different is the play of color, the sparkles. People either love it or don't like it because it doesn't look like other opal."

They call their gem simply Tucson Blue.

The couple, from Washington state, bought their first mining rights in 1996. That allowed them to mine on public land southwest of Amado. At the time, Greene was a struggling fur trapper and Taylor, 58, worked in human resources in Arivaca.

Taylor, who had always had a creative flair, decided to quit her job. She asked a local silversmith to teach her his trade.

"I'm a metalsmith," said the usually soft-spoken Taylor forcefully, "a metalsmith, not a jeweler. I don't repair watches."



Metalsmith Cheryl Taylor fashions what she calls extraordinary and arresting jewelry out of the precious Tucson Blue opals her husband John Greene chisels out of isolated spots in the Arizona desert.

Greene began by mining chrysocolla, a green-and-black stone. He knew there was precious opal in them thar hills - it was just a case of finding it.

Opal mining has been a fact of life in this area for many years, but in recent times most prospectors ignored it.

"Most of them didn't know anything about gemstones - they were just after the gold," said Taylor.

After selling their jewelry for a time from their home, the couple leased a building at the Amado Territory Ranch, a cluster of restaurants, galleries and a bed-and-breakfast business just off Interstate 19.

Taylor's jewelry is priced from \$35 to \$3,000. Customers come from all over, a blend of locals and tourists, many of them repeat visitors wanting to add to their collection.

Taylor takes heart from the fact that years later, the rings they bought are still on their fingers and their pendants around their necks.

"It's testament to the quality of what I make."

The couple now own mining rights to an estimated 80 acres, and hope their forthcoming Web site will attract interest from companies wanting to buy the raw material. The site is due to come online next month at www.blackstarmines.com

"Long-term, we've got to promote the mines, promote the stone, find a market or investors.

"We can make a comfortable living doing what we're doing," he said. "But the opal deserves better than that."

If you go:

- *What: Blackstar Mines.*
- *Where: Amado Territory Ranch, East Frontage Road, Amado. Take Interstate 19 south from Interstate 10 to Exit 48.*
- *For more information: Call 398-0451.*

* Gillian Drummond is a free-lance writer from Tucson. From the Arizona Daily Star; Tucson, Arizona. Story published: 1/19/2004, Section: Neighbors/Green Valley.

(<http://www.dailystar.com/dailystar/neighbors/6395.php>).

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Gemstone Care

By Sandra I. Smith, Writer

Many gemstone owners enjoy wearing their treasures. Few things can ruin that enjoyment faster than the discovery of damage such as scratches, chips, or discoloration. Unfortunately, some damage is permanent. The good news is that proper cleaning and care prevents most gemstone damage.

The biggest favor you can do for your gemstone jewelry is to keep it clean. Dust, body oils, and chemicals are villains waiting for an opportunity to destroy the beauty of your gems. You can eliminate most problems by simply wiping all your jewelry with a soft cloth after wearing it. Be careful with dust, however, as it

contains little particles that can scratch most jewelry. Dust must be gently whisked off using a soft-bristled brush. Small camel's-hair brushes, like those used by artists are good dust removers.

There is no one safe way in which to clean all gems. You must consider both what the jewelry is made from and how it is made. While a gentle soap and water solution is safe for many pieces, it can harm other jewelry.

Soft, porous gems, such as pearls, turquoise, and opals will absorb water--and anything that is in it. The water will evaporate, but the chemicals and minerals it contained will remain in the gem, often ruining it. Opals need moisture, and an occasional overnight soak in pure water will revive them. If the opals are rarely worn, periodically dip them in water to which a few drops of glycerin or mineral oil have been added. Wiping with a soft cloth after each wearing is usually all that the other soft stones need.

Most of the hard and nonporous gemstones, such as rubies, sapphires, and diamonds, may be dipped in alcohol to dissolve fingerprints and body oils. They can also be washed in a weak solution of ammonia.

Strung gems should never be immersed in water. Moisture often will not evaporate from the stringing material, which causes it to swell or deteriorate. That often leads to breakage and potential loss of the beads. If the stringing material doesn't break, the trapped moisture can damage the inside of the bead. Ivory beads, especially, are quickly ruined by dampness on their inside surfaces.

You can find a variety of commercial jewelry cleaners on the market. Use these with caution. Follow the manufacturer's directions very carefully and never use them on any stone or metal not specifically listed as safe on the label. The same advice applies also for ultrasonic cleaners. If you are sure your metal jewelry is gold or silver, it can be safely soaked in a water and detergent solution to which a few drops of ammonia have been added. If the metal is brass or gold-filled, the ammonia will ruin it. Ammonia also corrodes copper. There are many commercial cleaners that are safe for sterling, silver-filled, and silver plate jewelry. Those cleaners, however, are generally not safe for any gemstones mounted in silver jewelry. In that case, apply the cleaner with a cotton swab, taking care to avoid getting it on any part of the piece that is not silver.

The guidelines for silver cleaners apply also to copper cleaners--never use them on non-metal surfaces and follow the manufacturer's instructions carefully.

One easy way to keep your jewelry clean is to put it on after you've applied makeup, perfume, or hair spray. Hair spray in particular is destructive to many kinds of gems. For example, it permanently dulls amber. Take rings off before using hand



The eye-catching Tucson Blue opal has flashes of red, yellow, blue and green.

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creams or lotions, to prevent a buildup of oil and the dirt it attracts. Removing jewelry before cooking, housework, gardening, and similar tasks is also highly recommended. Dishwashing detergents and most cleaners will remove the finish on even good electroplated jewelry. The acids found in many types of cleaners will discolor, if not destroy, most jewelry.

Many gemstones are sensitive to sudden temperature changes or extreme temperatures. For example, wearing an opal ring while handling frozen foods can cause the opal to crack. Prolonged periods of heat or cold can destroy other gems. Leaving a piece of jewelry on the dashboard of a car on a hot, sunny day can ruin the color in many stones. Topaz is especially sensitive to both heat and light and fades quickly when overexposed to either. Amber melts when it gets hot.

Many of us store our gemstone jewelry in a tangled mass in a jewelry box. That's a sure way to ruin most of it. Any time a gemstone comes into contact with another, the softer piece suffers damage. If you can't keep each piece in a separate compartment or box, then wrap them before storing. Plastic bags are convenient, but materials like flannel or chamois offer better protection for your treasures.

All the organic gems, such as amber, pearls, ivory, and coral, need to breathe. They should never be stored in plastic. Pearls love satin-lined boxes. The porous stones, like turquoise and opals, also need exposure to fresh air and humidity. They will deteriorate if stored in dark, dry places. Wrapping the "breathing" gems in a soft cloth is recommended.

Sterling silver may be wrapped in cloth impregnated with an anti-tarnish agent only if it isn't set with gems. The anti-tarnish agent can be destructive to many gems. Treated cloths should not be used on gold electroplate.

Rescue your treasures now from the bottom of your jewelry box and treat them to a gentle cleaning, then wrap and store them individually. Your gems will reward your TLC with many years of beauty and pleasure in return.

From the Orchid Digest Favorite Tips at <http://www.ganoksin.com>, published Nov 04. 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

April Gem & Mineral Shows

2-4 — RENO, NV: Show; Gem Faire; Reno Hilton, 2500 E. 2nd St.; Fri. 12-7, Sat. 10-7, Sun. 10-5; weekend pass \$5; contact Gem Faire, (503) 252-8300; e-mail: info@gemfaire.com; Web site: www.gemfaire.com.

3-4 — GRESHAM, OR: Show; Mount Hood Rock Club; Multnomah Greyhound Park; Fri. 10-6, Sat. 10-5; thunder egg hunt Sat.; contact Michael Santino, (503) 981-8902; mnmsantino@yahoo.com.

3-4 — MEDFORD, OR: 49th annual show; Roxy Ann Gem & Mineral Society; Medford Armory, 1701 S. Pacific Hwy.; Sat. 9-5, Sun. 10-4:30; exhibits, dealers, demonstrations, silent auction, children's activities, door prizes; contact Tricia Caulkins, 926 Hopkins Rd., Central Point, OR 97502, (541) 821-0883.

3-4 — POCATELLO, ID: 48th annual show; Southeast ID Gem & Mineral Society; Commercial Bldg., Bannock County Fairgrounds; Sat. 10-6, Sun. 10-5; contact Kathy or Marty Rakatansky, 80 Cedar Hills, Pocatello, ID 83204, (208) 233-2538; e-mail: rak80@aol.com.

3-4 — SAN JOSE, CA: 49th annual show; Santa Clara Valley Gem & Mineral Society; Santa Clara County Fairgrounds, 344 Tully Rd.; Sat. 10-6, Sun. 10-5; jewelry, gems, minerals, rocks, children's activities, demonstrations, displays; contact Patricia Speece, (408) 266-4327; e-mail: pspeece@earthlink.net.

3-4 — TORRANCE, CA: 55th annual show, "Nature's Treasures"; South Bay Lapidary & Mineral Society; Torrance Recreational Center, 3341 Torrance Blvd.; Sat. 10-5, Sun. 10-5; free admission; Petrified Forest and fluorescent mineral exhibits, no dealers; contact Omer Goeden, (818) 353-9279, or Roger L. Mills, 3603 Vigilance Dr., Rancho Palos Verdes, CA 90275, (310) 377-6226; e-mail: roger_mills@acm.org.

3-4 — WALNUT CREEK, CA: Show, "Great Contra Costa Crystal Fair"; Pacific Crystal Guild; Civic Park Community Center, 1375 Civic Dr. (at Broadway); Sat. 10-6, Sun. 10-6; Jerry Tomlinson, (415) 383-7837; e-mail: sfxtl@earthlink.net; Web site: www.crystalfair.com.

10-11 — PARADISE, CA: 50th annual show; Paradise Gem & Mineral Club; Paradise Veterans Memorial Hall, corner of Skyway and Elliott St.; Sat. 10-5, Sun. 10-4; free admission; dealers, demonstrations, grab bags, silent auctions; contact Anita Carter, (530) 872-1983.

16-18 — ALPINE, TX: 14th annual show; Chihuahuan Desert Gem & Mineral Club; Recreation Center; contact Susie Trammel, Box 561, Ft. Davis, TX 79734, (432) 426-2924 or (432) 426-9027.

16-18 — EUGENE, OR: Show; Gem Faire; Lane County Fairgrounds, 796 W. 13th Ave.; Fri. 12-7, Sat. 10-7, Sun. 10-5; weekend pass \$5; contact Gem Faire, (503) 252-8300; e-mail: info@gemfaire.com; Web site: www.gemfaire.com.

16-18 — RICKREAL, OR: 49th annual show, "River of Gems"; Willamette Agate & Mineral Society; Polk County Fairgrounds, Hwy. 99; Fri. 9-6, Sat. 10-6, Sun. 10-4:30; contact Susan Appleby, P.O. Box 3053, Salem, OR 97302, (503) 391-4221; e-mail: susanw@comcast.net.

17-18 — HELENA, MT: 56th Show; Helena Mineral Society; Helena Civic Center, corner of Neill Ave. and Park Ave.; Sat. 9-6, Sun. 10-5; adults \$1, children 12 and under free with adult; two fluorescent mineral displays, displays, children's activities, silent auction, more than 20 dealers, jewelry, beads, equipment, mineral specimens, faceted gemstones, door prizes, raffle, MT agate, demonstrations, opal; contact Gary Parisi, Helena Mineral Society, P O Box 736, Helena, MT 59624, (406)442-1226; e-mail: gjparisi72@yahoo.com.

17-18 — ID FALLS, ID: 37th annual show; ID Falls Gem & Mineral Society; ID Falls Recreation Center, 520 Memorial Dr.; Sat. 10-6, Sun. 10-5; contact Terry R. Hayes, P.O. Box 423, Ririe, ID 83443, (208) 538-5644.

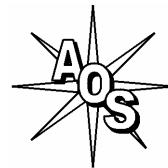
23-25 — SAN DIEGO, CA: Show; Gem Faire; Scottish Rite Center, 1895 Camino del Rio S; Fri. 12-7, Sat. 10-7, Sun. 10-5; weekend pass \$5; contact Gem Faire, (503) 252-8300; e-mail: info@gemfaire.com; Web site: www.gemfaire.com.

24-25 — HACIENDA HEIGHTS, CA: Annual show; Puente Hills Gem & Mineral Club; Steinmetz County Park, 1545 S. Stimson Ave.; Sat. 10-5, Sun. 10-5; free admission; dealers, demonstrators, displays, kids' activities, you-pick-we-cut geodes; contact Paula Hess, (562) 696-2270; e-mail: rphess@adelphia.net; Web site: www.puentehillsgemandmineralclub.com.

24-25 — LANCASTER, CA: Show; Antelope Valley Gem & Mineral Club; Antelope Valley Fairgrounds, 2551 W. Ave. H; Sat. 9-5, Sun. 9-5; contact Armin Nimmer, (661) 945-5769; e-mail: av_Gem@yahoo.com; Web site: www.geocities.com/av_gem.

24-25 — SANTA CRUZ, CA: 52nd annual show; Santa Cruz Gem & Mineral Society; Santa Cruz Civic Auditorium, corner of Center St. and Church St.; Sat. 10-5, Sun. 10-5; adults \$3, children under 12 free; contact Sallee Brumbaugh, (831) 336-5662.

30-2 — SANTA ROSA, CA: Show; Gem Faire; Sonoma County Fairgrounds, 1350 Bennett Valley Rd.; Fri. 12-7, Sat. 10-7, Sun. 10-5; weekend pass \$5; contact Gem Faire, (503) 252-8300; e-mail: info@gemfaire.com; Web site: www.gemfaire.com



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