The Opal Express

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

Volume #36 Issue #05
May 2003

In This Issue:

Important Dates:
Board Meeting: May 1
7:00 PM at Ball Jr. High School

General Meeting: May 8
Speaker: **Barbara McCondra**
On the many formations of Yowah and Koroit mining areas, the materials and their characteristics.

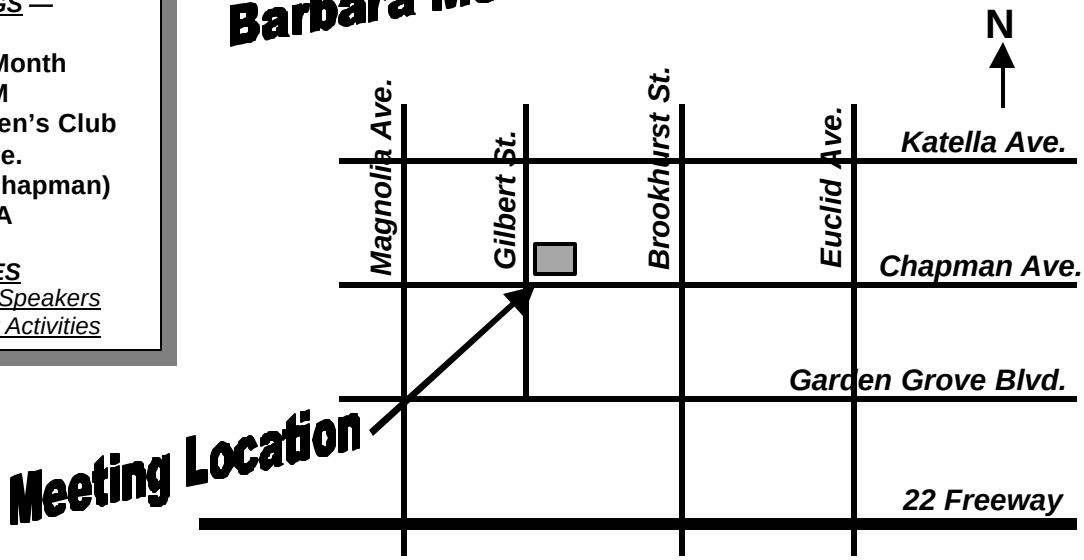
— GENERAL MEETINGS —

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*

TO:

General Meeting: May 8th
Barbara McCondra - Yowah & Koroit



The American Opal Society
http://opalsociety.org

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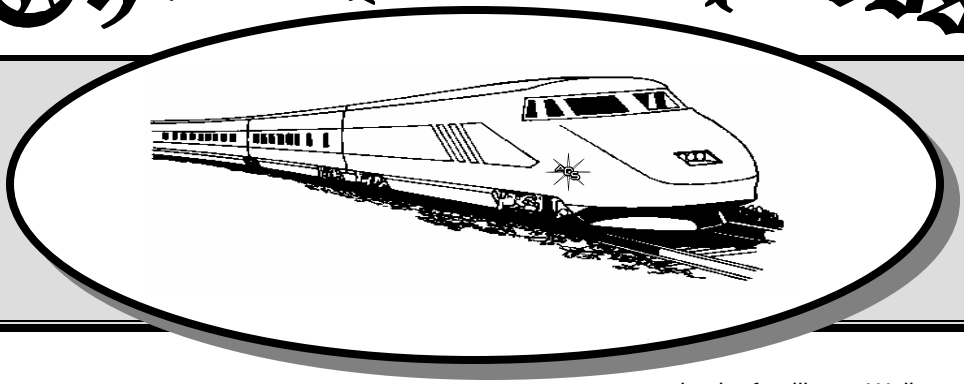
PLEASE CHECK YOUR ADDRESS LABEL. If your label shows **the** current month/year your dues are DUE NOW. If the date is older, your dues are overdue.

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 36 Issue 5

PRESIDENT'S MESSAGE

By Pete Goetz

I was glad to see a few more members at last months general meeting. The general meetings are a fun way to learn about opal. You have the opportunity to learn from our guest speakers and a lot can be learned by participating in the many informal discussions that always seem to pop-up during our social time. Those of you who attended in April, enjoyed an informative lecture / discussion of Healing crazed and cracked opal presented by Bob Halahan.

This month, we will have a visit from **Barbara McCondra**. Barbara, as many of you know, is a miner of the Yowah variety opal. Her presentation will pertain to the many formations of Yowah and Koriot mining area.

The month of May brings the Searchers Gem and Mineral Society's annual Gem and Mineral Show held at the Brookhurst Community Center. The American Opal Society will have on display a case containing specimens of North and South American Opal provided by various members.

The American Opal Society will again be represented in June of this year at the Culver City Rock and Mineral Club's Fiesta of Gems annual show. Their theme this year is, **Opals of the World**. They have asked the AOS to display a case with examples of opal found in various place around the world. The setup time for this show is June 27th, between 4 and 7pm. Could use some help. If you would like to volunteer, let Mike Kowalsky or myself know.

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May Snippets *(from Lightning Ridge)*

by Barb Whyre

Doc "Jock" Kenrick served the district around 1900, and was highly respected for his ingenuity when it came to medical techniques. He saved many a life with minimal resources, often testing his own strength to the limit.

On the Lightning Ridge opalfields, subscriptions were made by the families at Wallangulla (Old Town) and at Nettleton (3 Mile Flat) to ensure Doc Kenrick's presence, 1907 through 1910. He died of a cancer in 1911.

Recently, Jock's grandson Carl Kenrick and his wife Pat visited Lightning Ridge for the first time. They met Kenrick cousins, who disclosed knowledge of the eleven Kenrick children's parentage. Sometimes it is not what you thought it was!

Jock's widow Caroline lived into the 1930s. Apparently, Jock was born in England and seems to have come to Australia "under a cloud" which was certainly extinguished during his tenure in this part of the country as the local doctor!

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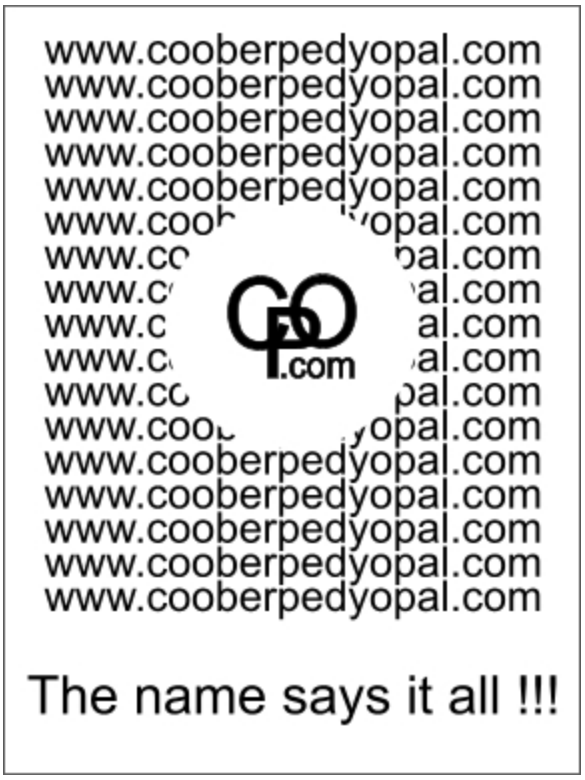
THE OPAL WORKSHOP IS COMING BACK!!!

The AOS opal workshop will be started again at **Ball Jr. High School** on 1500 W. Ball Road, Anaheim, CA. It will be available for AOS members on Wednesday nights starting the first week in June. **Stan McCall** will again be running the workshop. Contact Stan for details at **(714) 220-9282** if you plan to attend a session.



Healing Opal and other Topics

By Mike Kowalsky

I am reporting on the discussion that was held at the last general Monthly meeting. Principals in the discussion were Bob Halahan, Pamela Strong, Jay Carey, Mike Kowalsky and Jim Pisani. The entire audience participated in the discussions.

One of the subjects discussed was the indications of opal that had a tendency to craze or crack. Impurities are often an indicator of the propensity to craze however, the impurities may be removed in the cutting process. One commonly held theory is that the water content is is a strong indicator of future crazing or cracking. Bob Halahan gave us the results of some tests that he had performed by a well known laboratory. These are the results he presented:

Mining Area	Percent Water Content
Australia	5.92%
Virgin Valley	10.9%
Black Rock	25.0% (Stable for 10 years)
Nowak Cachalong	7.5%
Spencer	4.74% to 5.22%

These results tend to disprove that water is the major factor in determining if opal is stable or not. Black Rock has the hightest percentage of water and is stable and Spencer has the lowest percentage water. Some people do not consider Spencer opal stable, however the thin layers of opal are fragile, and therefore are used to making triplets. What is not verified is the possibility that trace elements may play an important part it the stability of opal. Bob Halahan stated that Len Cram mentioned that Australian opal typically contains some trace aluminum, which he thought might strengthen the silicon structure. It has been stated that Gilson synthetic opal process added zirconium to stabilize the silicon lattice structures. Bob Halahan agrees with the premise that trace elements play a part in the stability of opal.

The discussion went to the structure of opal and whether the arrays of silicon were stable or could move. Sometime during the formation of opal the silcon structures were formed and that determined whether the opal was potch or of gem quality. The point that we look at opal today may not be the final silicon structure and it perhaps can change. Many of us have experienced the migration of opal within a bottle filled with water to the side of the bottle. I have such a sample. That would indicate that opal is leaving the solid state and entering the liquid. After a period of time it must reform on the side of the glass jar. We all know that glass, which has a very similar chemical composition to opal, will flow very slowly. This has been observed in measurement of the thickness of long panes of glass. The upper portion will decrease in thickness and lowest portion will increase in thickness over a period of years. So does that give credence to the possibility that opal may be capable of changing its internal structure. It may happen slowly under normal conditions (called stable) and more rapidly under other conditions (unstable). If the conditions can be controlled then the possibility exists that crazed opal can be healed and other changes could be performed. Bob Halahan and his brother Mike had on display four opals that have been healed, as verified by the original owners. This could be a breakthrough that has been experimented with by the Halahan brothers and different people over the years. One of problems could be the time span that healing or changing of opal internal structure could be rather long. We will have to wait for the papers that the Halahan brothers with produce to learn more about these exciting promising new developments.

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Factoids: The Hope Diamond - Did you know…?

- The Hope diamond, a blue diamond, was originally 112 carats before being cut to its present weight of 45.52 carats.
- The Hope diamond is said to be cursed. Although one of its owners, Evalyn McLean believed it to be her good luck charm, her life states otherwise; after possession of the gem, she became a morphine addict, her young son died in a car accident, her husband divorced her and died insane, and her daughter committed suicide.
- The Hope Diamond, presently valued at more than $8 million, arrived at its present home at the Smithsonian in November 1958 via the mail – albeit registered first class!

Courtesy the Gemological Institute of America.

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Part-Time Miner Strikes It Rich In Australia Opalized Boulder - May Be World's Largest

ANDAMOOKA. South Australia (CNN) (May 2, 1997) A part-time Australian miner who worked 16 hours a day as a chef to support his family and fend off bankruptcy has found what may be the biggest opalized boulder in the world.

Teles Georgiou, *52,* a chef from the opal mining town of Andamooka discovered the boulder in his tiny mine two weeks ago.

The 8-foot-i 1-inch (2.7 meters) boulder weighs about 7 tons and is criss-crossed with thick seams of the milky, translucent gemstone. It was removed from the mine after being excavated, and is estimated to be worth several million dollars.

It is a dream come true for Georgiou. After each workday, he spent up to six hours in the mine hoping to strike it rich.

Georgiou said he was staggered by the size of his find, which became apparent only after he had exposed small portions of the rock.

He said he hopes the boulder will wind up in a museum rather than being broken up and turned into jewelry.

"This article was originally published in GEMS & GEMOLOGY, from Notes and New Techniques, Summer 1982 - Pages 95-99

CARVING GEM-QUALITY OPAL

By Theodore Grussing

Figure 1. One side of the Royal Peacocks. The carving weighs 504 ct and measures 86 x 34 x 57 mm. Photo by Tino Hammid.

Gem-quality opal poses special problems for the carver that are not encountered when working with low-quality material. Herein the author uses three examples to explore these differences and the implications for success or failure in the final piece.

Traditionally, opal carvings have been created from low-quality, commercial-grade opal that has little or no play of color and is relatively inexpensive. Consequently, neither orientation to maximize the play of color nor weight loss is a source of concern. In the carving of low-grade opal, the primary objective is to display the artist's skill; all other considerations are secondary. Indeed, some carvers prefer to work on low-grade opal because they feel that a substantial play of color tends to obscure the details of the carving, which is a hallmark of their skill.

Opal dealers also have generally shied away from having their gem-quality rough carved. To begin with~ gem-quality opal represents a very small percentage of all opal mined, and large pieces (generally 30 grams and up) are rare The gem stone market usually snaps these pieces up quickly because they yield large stones and matching sets of gemstones for jewelry. Few gem materials are as difficult to match stones in as opal because of the highly distinctive colors, which vary in intensity and pattern from stone to stone. The larger piece of gem rough will usually yield matching stones, and will frequently give a higher percentage of recovery than small pieces. By contrast, there is often no ready market for large pieces of low-grade opal, and carvings have been one of the best utilizations of this type of material.

In recent years, a number of collectors have begun to seek gem-quality opal carvings in their desire to have a prized work of art that is also a fine gemstone. The carving of gem-quality opal, however, has special problems that are usually not encountered with the lower-quality material. Several of these are examined below together with a description of three examples of success - and failure - in sculpting this material.

KEY CONSIDERATIONS BEFORE CARVING BEGINS

Once the decision has been reached to carve a large piece of gem-quality opal, several problems not normally associated with the carving of opal arise. First, the subject matter must be oriented in the material to maximize the play of color and yet not unduly detract from the detail of the carving. Second, the carving should be designed in such a way that it will retain the maximum amount of this valuable material. Selection of a highly skilled gem carver is also of paramount importance, particularly one with whom you can effectively communicate, given the seriousness of the project. The author has worked closely with carver Shan Gimn Wang on a number of pieces; Mr. Wang shared many of the details of carving opal described below.

THE CARVING PROCESS

In carving opal, most carvers, including Mr. Wang, employ a variety of sintered and plated diamond tools in a flex shaft or permanently mounted arbor to rough out the shape of the carving. The piece is kept cool with water, as overheating of opal at any stage can be disastrous given the risk of vaporizing the natural water content of the material, causing it to crack or pop. After the carving has been roughed out, with particular attention paid to the orientation of the color in the subject matter, the carver begins the polishing process. Some carvers prefer to use diamond paste for the entire procedure; others use a variety of Cratex wheels and water for coolant, and then finish with a slurry of cerium oxide on felt and loose cloth wheels. Fine results may be obtained with either method, but more care must be taken when diamond paste is used, again because of the risk of overheating the material Cerium oxide tends to erode detail in the carving, so not infrequently the carver must go back and redo small detail areas when cerium oxide is used as the polishing agent.

Generally speaking, the greatest amount of time spent on a gem-opal carving is in preliminary study of the material and in roughing out the carving. In the first instance, the carver must attempt to "read" the rough material to determine where the color bars go, whether the material is clean, and, if not, where faults and/or imperfections in the stone are located. After the stone has been charted, a subject must be chosen that will best fit the material, take optimum advantage of the play of color anticipated, and remove flawed areas. After an acceptable subject is sketched both on paper and on the opal rough, the diamond bits are used to begin the carving. As the stone is opened up, the carver must be prepared to alter design and orientation depending on what he actually finds inside. Once the actual carving is completed, the final step is simply a matter of polishing. In a carving like "The Royal Peacocks" (figure 1), fully 75% of the approximately 100 hours that went into this piece was spent on charting the stone and roughing out the subject.

The balance of this article will deal with three carvings: The Royal Peacocks, by Shan Gimn Wang, who carves for Lapidary International, Inc., of Anaheim, California; a black opal snuff bottle, by Hing Wa Lee of Whittier, California; and one that will be referred to here as the "Disaster," by an unnamed but hopefully wiser carver. Each example illustrates a different aspect of carving gem opal.

Figure 2. Gem-quality opal rough from which the Royal Peacocks was carved. Photo by Tino Hammid

Figure 3. Design sketched on partially carved opal rough of the Royal Peacocks. Photo by Tino Hammid.

THE ROYAL PEACOCKS

This very fine piece, shown in figure 1, weighs 504 ct and measures 86 x 34 x 57 mm. The piece of rough from which it was created weighed slightly more than 700 ct and is shown in figure 2. The opal was mined in 1978 by Paul "Gopher" Fraser and Ian "Gunna" Fraser from the Black Flag field in Coober Pedy, South Australia. The Black Flag field encompasses an area of approximately 365 m x 914 m (400 yards x 1000 yards) and is bisected by the road to Adelaide. Until about 1972, the field was little more than an auto dump. Because of its close proximity to the city (about 1 km from the saloon) and its location along the major road into town, the city fathers had the area cleaned up. The rough that was eventually transformed into the Royal Peacocks was found in a freak pocket at about the 1.25-m level on top of the Hard Band level (a layer composed of jasper and gypsum that is difficult to penetrate; the opal levels are generally below this layer).

The rough was purchased by the author in the summer of 1981 as a high-risk piece: although the opal showed numerous, potentially beautiful thick red bars, there were indications that the bars might be sandshot (i.e., granules of sand or dirt would be lodged in the silica gel of which opal is comprised). No amount of "candling" with a strong light behind the stone helped, and the only way to know for sure was to cut into the material.

Because of the doubt about the cleanliness of the red bars, the author sold the piece to a friend who was willing to take the risk Shortly there after, the decision was made to carve the material.

Shan Gimn Wang was commissioned to do the carving, through Lapidary International. After studying the opal for several weeks, Mr. Wang proposed several viable plans based on his knowledge that the central area, as previously mentioned, was comprised of numerous thick, straight red bars and the sides of the piece were potch (common opal, no play of color) with several undulating bars and swirls of intense blue and green in them. The idea that appeared most promising was to use both outer sides in a heavy relief carving, and to cautiously expose the underlying red bars; if the finished carving was to reach its maximum potential, these bars would have to be exposed substantially and they would have to be good, clean material, not sandshot. Peacocks were selected as the subject matter of the relief carving. Mr. Wang determined that peacocks would give him the greatest artistic freedom to use the undulating color bars and, too, that the colors in this area of the opal were very similar to those found in the live birds. Also of great importance was the ability to adjust the positioning of the peacocks depending on the colors and their orientation. Figure 3 shows the design on the opal shortly after the rough carving process had been started.

Soon after work began, the choice was confirmed, and it also became apparent that the red bars were clean, not sandshot. One major surprise was the uncovering of a thin, but extremely intense, lime-green color bar, which serves as the background for the peacock on the other side of this piece.

This carving illustrates the extraordinary skill required in carving gem opal, an intertwining of the sculptor's art and the very strong play of color of the stone. The weight retention was nearly 72%. This carving is currently on loan to the Los Angeles County Museum of Natural History.

Figure 6. In this opal carving, the carver has fully utilized the play of color in the stone to highlight the subject matter; 34 x 31 x 14 mm, 130 ct. Photo by Tino Hammid.

BLACK-OPAL SNUFF BOTTLE

Some time ago, a friend of the author purchased a snuff bottle of black opal that was so poorly carved and polished that almost no play of color was present on its face. There was, however, a strong, reasonably thick color bar of blue, green, and some red on the sides running under the face of the bottle. It did not appear that the bar had been exposed, but it was obvious that the original carver had at least partially hollowed it out. Two questions arose: (1) Would there be sufficient thickness left when the piece was recarved to expose the color bar? and (2) Would the bar display strong play of color? After examining the piece; skilled carver Hing Wa Lee reported that there was a reasonable possibility of salvaging it and exposing the beauty of the hidden color bar. The result of his reworking of this piece is pictured in figure 4. The color bar is now exposed and the bottle takes on new life: strong electric blues and greens roll across the surface, with some reds as well. It has been estimated that the value of the carving was increased by a factor of.. seven even with a weight loss of over 25%. This black-opal carving, weighing just over 100 ct, is currently on loan to the Los Angeles County Museum of Natural History.

THE "DISASTER"

The play of color in opal is the primary source of its value as a gem material; this factor is further refined into intensity of color, number of colors, which colors, color patterns, percentage of coverage in color, trueness of color, whether or not the color is directional, and so on, but in the end it all boils down to color.

In the previous two examples, Messrs. Wang and Lee optimized the value of the opal entrusted to them by using their highly refined skills to work *with* the opal. This last example shows how a person, though skilled in the art of gem carving, proved inept in dealing with the play of color in fine opal and caused irreparable harm to 'a collector's piece.

The anonymous carver was given a fine piece of Olympic material (Olympic field, Coober Pedy, South Australia) to work with. The rough opal weighed approximately 800 ct and was a solid chunky piece with numerous strong color bars in it. It was anticipated that a magnificent carving would emerge, displaying strong and uniform play of color. The result was, literally, a disaster: the collector who owned the piece received a very fine carving, from the point of cleanliness and detail, but the stone had virtually no play of color. Indeed, it appeared that the carver

Figure 4. Black opal snuff bottle after being recarved, 100 ct. Photo by Tino Hammid

had set out to destroy color wherever it surfaced and left it buried under potch wherever he was unable to drill it out. The weight loss of over 65% was greater than would have occurred if the stone had been cut into cabochons. The result (shown in figure 5) is a nicely carved piece of opal that shows very little play of color and is worth a fraction of what it could have been. Figure 6 illustrates the results in similar material when the carver (in this case, Mr. Wang) makes full utilization of the play of color.

Figure 5. Although the actual workmanship on this piece is good, the carver has eliminated the play of color and thus destroyed the impact of the opal. Photo by Tino Hammid.

CONCLUSION

The carving of gem-quality opal requires a highly skilled artisan who knows how to utilize the play of color in his art. In the final analysis, it is the play of color in opal that determines its value, and one who is skilled in bringing this color out and properly orienting it in his carving will greatly enhance the value of the finished piece.

ABOUT THE AUTHOR

Mr. Grussing is an attorney in Huntington Beach, California. He also is an owner of BGN Ltd., a firm specializing in gem opal.
Acknowledgments: The author wishes to express his deep gratitude to Messrs. Shan Gimn Wang and Hing Wa Lee for their efforts in educating him in the art of gem carving and to the many clients who have tutored him in their respective fields of expertise in the gem and mineral trade. Special thanks to Maj. George W. Owens, USAF, Ret., and to Mr. Cleveland C. Weil, who first introduced him to the beauty and mysteries of opal. Thanks also to Mr. Mike Waitzman and Mr. Tino Hammid of GIA Gem Media for their excellent job in photographing the figures in this article. Anyone who has ever tried to photograph opal knows what an exacting task it is.

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"But ... The Rocks Are All Wrong"

By Richard Busch (FGMS Member)

Lithosphere (September 1993); Fallbrook Gem and Mineral Society, Inc.; Fallbrook, CA

[FMGS Ed. Note: This article won second place in the adult article competition in the American Federation of Mineralogical Societies in 1993.]

The next time you go to the movies, watch the reactions of the moviegoers to what appears on the screen. You'll notice that while the cat burglar deftly twirls the dial of the hidden wall safe and quickly opens it to reveal the priceless jewels within, all of the locksmiths in the movie theater shake their heads in disbelief. As the movie doctor operates to save the life of his dying "patient," the movie going **real** doctors in the audience roll their eyes to the ceiling.

Well, locksmiths and doctors are not the only people to have their fields of expertise misrepresented by the entertainment industry. Geologists and gemologists, too, frequently grit their teeth at the silent indignities perpetrated on the movie or television screen. True, a geological inaccuracy rarely contradicts the central plot of the drama; but to those people properly attuned, a geological error of fact can undermine the basic premise of the story.

Some errors are so egregious that the situation is laughable. Remember the old *Superman* series on TV? To this day, I remember an episode in which the Man of Steel takes a lump of coal in his hand and squeezes it with such force that it changes into a diamond. That's ok if you accept the basic premise upon which *Superman* is based; but when Superman opens his hand to reveal the newly created gem, we see that it is complete with **facets** -- round brilliant, as I recall.

Some geological errors are not so obvious. Lisa Rossbacher points out several in the February 1993 issue of *Geotimes*. If you saw the relatively recent movie *The Last of the Mohicans*, you'll remember the beautiful scenery -- rugged peaks and granitic rocks. The only problem was that the movie was supposed to take place in upstate New York where the Paleozoic sediments have been thoroughly glaciated to form rolling hills. The film was actually made in the Carolinas where the rocks are all wrong.

Ms. Rossbacher cites other examples of geological errors in films. Here are some: *The Battle of the Bulge* features an exciting tank battle that is supposed to take place in the snowy Ardennes region of Belgium; halfway through the battle, we see the tanks rumbling through the Mojave Desert. *Rooster Cogburn* and *True Grit* are supposed to be set in Oklahoma and Arkansas. Unfortunately, the glaciated mountains in the background were set in Oregon and Colorado long before any movie makers set up cameras; glaciers never quite made it to either Oklahoma or Arkansas. The movie *Revolution* featured the Battle of Yorktown being fought, not on the gentle southeastern coast of Virginia, but rather on some high, white cliffs that bore a striking resemblance to the famous ones located on the southern coast of England. Continental drift? Hardly.

Geological errors are not restricted just to movies and television shows. In 1969, a novel written by Michael Avallone and based upon a screenplay written by Clifford Gould hit the bookstores. The name of the novel, chosen by someone other than Mr. Avallone, was *Krakatoa, East of Java*. The true location of Krakatoa--southeast of Sumatra and **west** of Java--was not lost upon Mr. Avallone. In fact, he contacted the publishers and informed them of inaccuracy. Unfortunately, it appears that in some publishing and entertainment circles marketing takes precedence over geographical reality and, despite Mr. Avallone's efforts, the title of the book was not changed to reflect the truth. *[Note: The original version of this article incorrectly stated that the book's title was the responsibility of Mr. Avallone. In fact, Mr. Avallone worked to correct the erroneous title that was created by another individual. I am pleased to set the record straight and apologize for previously questioning Mr. Avallone's diligence in researching his novel. -- RAB (1999)]*

This brings us to the summer's megahit, *Jurassic Park*. Yes, we all know that *Jurassic Park* is a science fiction-fantasy-adventure film. But here's the way that science fiction is supposed to work: One or two (currently non-existent) scientific developments are assumed to have been made. Given those assumptions, the remainder of the film is supposed to operate logically and consistently within the framework of current knowledge and reality.

In *Jurassic Park*, the assumption is that science has discovered a way to recreate living organisms solely from a sample of their DNA. Fine, we'll accept that as the premise of the movie. The rest of the story should conform to established scientific fact. Too bad that it doesn't.

The most obvious scientific errors in *Jurassic Park* have to do with the sizes of the various 'saurs. Apparently Steven Spielberg likes his dinosaurs big. Both the gentle, vegetarian, Brachiosauri and the nasty ol' Velociraptors are depicted at about two to three times their real size. Not only that, but in one scene Spielberg has an especially plump brachiosaurus standing on its hind legs to munch veggies from a treetop. Impressive but, given the size of the creature, it probably should have collapsed into a heap due to the relative weakness of its leg bones.

But not all of the dinosaurs in *Jurassic Park* are portrayed as larger than life. The Dilophosauri are presented at about one-third of their real size, presumably to make this insidiously dangerous dinosaur look cute. Further, neither the Dilophosauri neck frills nor their toxic spit have been documented. As depicted in the movie, the Dilophosauri look more like "gremlins" than dinosaurs.

All of the above notwithstanding, the **real** error in *Jurassic Park* is that the rocks are all wrong. In the movie, the scientists get their dinosaur DNA from the belly of an insect that was found inside of a piece of amber. Ok -- no problem so far. But the movie goes out of its way to tell us that the amber came from the Dominican Republic; and this is where the error lies. Dominican amber has been dated at 20 to 40 million years. The dinosaurs

died out 65 million years ago. Thus, the amber in the movie is at least 25 million years too young to contain remnants of dinosaur DNA.

Spielberg could have chosen Lebanese amber (115 to 135 million years old) or Siberian amber (80 to 115 million years) or New Jersey amber (90 million years) or Alaskan amber (80 million years) or Canadian amber (70 million years). But, no; he chose Dominican amber -- and got it wrong.

Well, don't let the above comments deter you from seeing *Jurassic Park*. The special effects are terrific and the action is heart pounding. Go see it if you haven't done so already. Enjoy it, if you can. Just try not to think about the fact that the rocks are all wrong.

The preceding article was originally published in the September 1993 issue of Lithosphere*, the official bulletin of the Fallbrook [California] Gem and Mineral Society, Inc; Richard Busch (Editor).*

URL: http://fgms.home.att.net/roxwrong.htm

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What is Serbian Green Opal?

This month we are excited to introduce you to a new material that is hitting the market. How many of you have heard about the green common opal that is coming from Serbia? This material has just hit the market just a couple of months ago in Tucson. We are fortunate enough to be friends of the miners and we have agreed to help distribute the material in the U.S. market. The materials popularity in Tucson was phenomenal. We were hearing about it before we even met up with our friends at the show. The miner was sold out in the first 5 days of the two week long show. The material bears a striking resemblance to gem chrysoprase in its highest grade, making it an attractive and affordable substitute. Chrysoprase is a highly desired material, but currently unattainable for a large portion of the buying market. Today's economy cannot justify those prices. Now the market has an affordable solution with the Serbian green opal. Before I get ahead of myself, read on about the opal. Since we have previously written about common opal, I have only extracted duplicate information from the previous article that best describes the material as a whole.

Is this common opal or opal with fire?

The green opal is a common opal (no fire). As a reminder, common opal is transparent to opaque, with a predominate color. Common opal often includes dendrites. Some of the green opal rough shows that it has some dendrites in it. Opal is a low-temperature mineral that develops in a wide variety of rocks as cavity fillings. Its luster is vitreous, waxy, or pearly. The chemical composition of opal is (SiO2nH2O), and it has a Mohs hardness of 5 1/2 - 6 1/2.

What is giving it the green color?

Like chrysoprase, the green opal is getting its color from the presence of nickel as was determined by the GIA upon testing of the material and reported in the Fall 1995 Gems and Gemology Quarterly Journal. Yes, the material briefly hit the market in 1995 but vanished.

Where is the material found?

The material comes from southern Serbia, which is a fairly new country that gained independence from former Yugoslavia. So you might find that the green opal will be referred to as Serbian green opal, or Yugoslavian green opal. The material is being mined near the Macedonian border, in a region referred to as the Balkans.

Does it have a previous history?

Being a new material to the market, it hasn't had a chance to have a real long history, although its first introduction to the market (in 1992) was short lived. It was during a time when history was being made in Yugoslavia. The political and ethnic unrest occurring in the country in 1995 made mining the material impossible. Unsafe conditions put all mining efforts on hold until the conflict settled in that portion of the country. In 1999 Serbia gained independence from Yugoslavia like other previous republics had. Mining resumed some time after that. This year is its introduction to the U.S. market.

What should I be aware of when buying the green opal?

The majority of the green opal will hydrophane. This means that it will become more translucent as it becomes wet. This is very common in the cutting world. A lot of other material on the market will have a tendency to hydrophane (blue opal, gem silica, chalcecedonies, etc). This doesn't make it inferior material, but you need to know what your buying when you purchase material. There is a difference between getting a stone wet to check it when purchasing rough and material that has been immersed in water for long periods of time. A lot of material will hydrate (absorb water) over time and change its appearance. Always ask the dealer if the material you are purchasing material from if the material will hydrophane. If they aren't sure, ask to see what some rough looks like dry. Except at shows to demonstrate the color, we sell the material dry. We don't think the customer should pay the extra expense for the water in the hydrated stone. Something to think about next time you go and buy rough at a show :-) This is useful information because I learned it the hard way. I bought rough that I didn't understand was hydrated; so not only was it more opaque after I cut it, but it also was about 20% lighter in weight after it dried out.

Any tricks to cutting the material?

Unless you have stabilized the material, you should let the slab dry before marking the area that you are going to cut. You can put it up to a bright light and still see some translucency. The reason I say this is because if you plan to leave the material untreated, it will be different when it is dry than wet. You want to make sure that area that you selected will have the desired effect and color when the cab is finished. Some areas of a slab may have different color or translucency when it is dry. As an example, I marked a cabochon while the slab was hydrated. I cut the cab and polished the cab, after it dried out the next day, there was the mint green variscite color I was expecting, except on the corner there was a gel area that remained translucent. The rest of the cab was more opaque. I ended up recutting the cab because it looked pretty strange.

The material resembles very good Australian chrysoprase when it is hydrated (or stabilized), or if it is the Gel grade. Some of the material seems to have more silicification and will maintain translucency when dry. When dry material ranges from a opaque light mint green color resembling variscite to a translucent gem chrysoprase.

When cutting slabs you will find areas that are brittle and will produce some pitting. Because of the way this material forms you should check each slab to make sure there are not fractures or weak growth areas that would cause it to break. This should be common practice on any material you cut.

The areas that contain the matrix will undercut because it is softer material than the opal. You should try to minimize this material that would be externally exposed when cutting.

Occasionally you will see white streaks of opals through the material. I like the contrast and it makes nice cabs to have both.

Check areas that have inclusions. These areas tend to have small pits around them that could cause a problem when cutting and polishing. If you stabilized the material, it won't matter.

The opal takes a very good polish. I am sure polishing with cerium oxide or you favorite polish will work fine. Like any opal,

try to get it hot when polishing or it will have a tendency to craze or orange peel (spider web looking fractures, wavy uneven polish).

To see examples of the material, and further explanations of the cutting information, go to:
http://www.unconventionallapidarist.com/gems/greenopal.html

Cabochons:
http://www.unconventionallapidarist.com/cabochons/greenopal/

Cabbing Rough
http://www.unconventionallapidarist.com/rough/cabbing/greenopal/

We have over 100 kg of this rough. If you are interested in bulk rough prices, send us and email and let us know.

Until next month,
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If you have any comments on our newsletter or would like to share something with us, please feel free to email us at either of our email addresses.

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May Gem & Mineral Shows

3-4--ANAHEIM, CA: 44th annual show; Searchers Gem & Mineral Society; Brookhurst Community Center, 2271 W. Crescent Ave.; Sat. 10-5, Sun. 10-4:30; free admission; hourly door prizes, jewelry making, exhibits, demonstrations, children's activities; contact Nancy Norlund, (714) 960-6957, or Karen Fox, (714) 832-3580.

3-4--BAKERSFIELD, CA: 45th annual show, "Kern - County of Minerals"; Kern County Mineral Society; Kern County Fairgrounds, Ming Ave. and S. P St.; Sat. 10-5, Sun. 10-5; free admission, $4 fairground parking; contact Will Morton, 3916 Erin Court, Bakersfield, CA 93303, (661) 843-3128.

3-4--KINGMAN, AZ: Show; Mohave County Gemstoners Club; The Senior Center, 1776 Airway Ave.; Sat. 9-5, Sun. 9-5; rocks, gems, crafts; contact Beth, P.O. Box 3992, Kingman, AZ 86402, (928) 715-2962.

9-11--AUGUSTA, ME: 14th ME Mineral Symposium; ME Mineral Symposium Association; Senator Inn & Conference Center, Western Avenue, I-95 Exit 30 eastbound; day1: Fri. 3-11, Sat. 9-11; admission $12; field trips Sun.; contact Woodrow Thompson, ME Geological Survey, 22 State House Station, Augusta, ME 04333, (207) 287-7178; e-mail: woodrow.b.thompson@ME.gov.

10-11--RENO, NV: Show, "Jackpot of Gems 2003"; Reno Gem & Mineral Society; Reno Livestock Events Center Exhibit Hall, 1350 N. Wells Ave.; Sat. 10-5, Sun. 10-4; adults $4, seniors $3, ages 6-12 $2, under 6 free with adult; contact John Peterson, (775) 356-8820.

16-18--ANDERSON (REDDING), CA: Show, "Gem & Jewelry Faire"; Superior CA Gem & Mineral Association; Shasta District Fairgrounds, near Redding, off Hwy. 273; Fri. 9-5, Sat. 9-5, Sun. 10-4; free admission; exhibits, demonstrations, fossils, minerals, gemstones, jewelry, gold- and silversmithing, new expanded tailgaters area; contact Superior CA Gem & Mineral Association, (530) 221-6542 or (530) 872-1983 or (530) 343-0060.

16-18--COSTA MESA, CA: Show, "Spring West Coast Gem & Mineral Show"; Martin Zinn Expositions; Holiday Inn-Bristol Plaza, 3131 S. Bristol, near South Coast Plaza and John Wayne Airport; Fri. 10-7, Sat. 10-7, Sun. 10-5; free admission; 85 domestic and foreign dealers; contact Martin Zinn Expositions, P.O. Box 999, Evergreen, CO 80437-0999, (303) 674-2713; e-mail:MZ0955@aol.com; Web site: www.mzexpos.com.

17-18--NEWBURY PARK, CA: 28th annual show, "Pageant of a Thousand Gems"; Conejo Gem & Mineral Club; Borchard Park, 190 Reino Rd. (at Borchard Rd.); Sat. 9-5, Sun. 10-5; free admission; youth activities, door prizes, exhibits, dealers, demonstrations, plant sale; contact Don Asher or Don Pomerenke, (805) 492-4276.

17-18--YUCAIPA, CA: 43rd annual show; Yucaipa Valley Gem & Mineral Society; Yucaipa Community Center, 34900 Oak Glen Rd.; Sat. 10-5, Sun. 10-5; free admission; in conjunction with the Yucaipa Iris Festival, silent auctions, raffle, dealers, exhibits, demonstrations; contact Henry Cobb, (909) 795-3716.

24-25--LAKESIDE, AZ: Show; White Mountain Gem & Mineral Club; Blue Ridge Jr. High School, 1200 W. White Mountain Blvd.; Sat. 9-5, Sun. 9-5; admission $1; contact Tonie MonDragon, 1421 N. 36th Dr., Show Low, AZ 85901, (928) 537-8855; e-mail: tmondragon@citlink.net.

30-1--LAS VEGAS, NV: Show; GeoExpositions, Clark County Gem Collectors; location to be announced; Fri. 10-7, Sat. 10-6, Sun. 10-5; free admission; retail and wholesale dealers, mineral and gem exhibits, wheel of fortune, silent auction, door prizes; in conjunction with seven other gem and jewelry shows; contact GeoExpositions, (303) 278-1218; e-mail: GeoExpo@mineralshow.com; Web site: www.mineralshow.com.

31-1--GLENDORA, CA: Show; Glendora Gems; Goddard Middle School, 859 E. Sierra Madre Ave.; Sat. 10-5, Sun. 10-4; contact Mark Thompson, (626) 335-3814.