



The OPAL EXPRESS

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American Opal Society...



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NOVEMBER 1988

President's notes Included in this newsletter is a list of nominees for Officers and Directors to be elected next month. The names listed are the recommendations of the nominating committee. Nominations are open from the membership. If you wish to nominate anyone else for any position, mail your nominations to the P.O. Box by November 20th in order to be included on the ballot. Address your letter to American Opal Society, Inc., P.O. Box 92257, Long Beach, CA 90809-2257, Attention: Nominating Committee.

A friend of mine, Lyn Sanny, who I have done some opal finishing for in the San Diego area, sent the article from the PEGMATITE. I thought you might enjoy reading how our show was written up by another Gem and Mineral club publication. Please note the author is our very own "Rocky" Rockefeller who moved to the San Diego area last year.

ORANGE COUNTY CHAPTER NEWS Pres. Brian Franks, 714—857—2743

This column was inadvertently left out last month, in our haste to get the newsletter out. Needless to say the meeting was not, to put it mildly, well attended. Those of us there discussed locations for the 1989 show and Brian Franks was going to look into the possibilities.

In September we were treated to a demonstration by Noel Lamkin on wax modeling for casting. She gave us many new tips on how to achieve a certain design using methods which are a carry-over from her ceramics days. Thanks Noel.

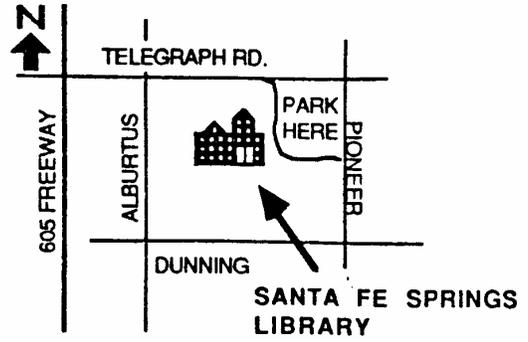
This month the Orange County Chapter will join with the Founding Chapter in a combined meeting, November 10th, 7:30 pm at the Santa Fe Springs Library. There is a map on the back cover.

We hope everyone will plan to attend. Cliff Coan always gives a good presentation and we have some awards to present. See you there!!!!!!!!!!!!!!

HAPPY THANKSGIVING TO EVERYONE!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

!!!! NEWS FROM THE FOUNDING CHAPTER !!!!!

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General Meetings held on the 2nd Thursday at 7:30 PM in the Santa Fe Springs Library, 11700 Telegraph Rd., Santa Fe Springs.
See Map.

PRESIDENT'S MESSAGE

OUR OCTOBER MEETING TURNED OUT TO BE REALLY FESTIVE. THERE WAS AN EXTRA LARGE ATTENDANCE, AND A LOT OF PEOPLE GOT INTO THE SPIRIT OF HALLOWEEN BY COSTUMING THEMSELVES. EVEN SUE UMBERSON'S MOM, EDNA, WAS DRESSED AS A WITCH, WHILE SUE WAS A PLAYBOY BUNNY AND HAROLD CAME AS A COWBOY. NANCY MEANS CLEVERLY UTILIZED A LAMP SHADE TO SET OFF HER ORIENTAL DRESS, WHILE BILL WAS A REAL DOWN TO EARTH FARMER WITH A CORN COB PIPE TO PROVE IT. HAL BREESES CAME AS A PROFESSIONAL BALL PLAYER, AND BIG SON MIKE WAS A MILITARY COMMANDO. BOBBI GLEDHILL CAME AS A BLACK CAT COMPLETE WITH SWISHING TAIL, AND BIRTHDAY--GIRL EDITH OSTRANDER PRESIDED OVER HER SURPRISE CAKE AND GIFTS DRESSED AS A GLITTERING WITCH.

CATHERINE DOTEN AND BOBBI GLEDHILL DID A GREAT JOB OF REFRESHMENTS AND DECORATING THE TABLE.

DICK KOCH, THERE WITH FRIEND CARMA, SPOKE TO THE GROUP AND THANKED EVERYONE FOR ALL THEIR HELP AT THE BIG SHOW LAST MONTH.

ALSO, MANY THANKS TO BOBBI GLEDHILL, NANCY MEANS, AND EDITH OSTRANDER FOR SETTING UP THE INFORMATIVE OPAL DISPLAY IN THE PUBLIC LIBRARY.

WE GOT TO WELCOME NEW MEMBERS, LUANN HOWELL AND LINDA & LARRY RAU, AND GREET MR. & MRS. CLARE GAGNON WHO REPRESENTED THE FACETERS' GUILD.

BE THINKING ABOUT OUR NEED FOR NEW BOARD MEMBERS. JOE HUDDLE AND MIKE BREESES HAVE BEEN GOOD SUGGESTIONS. LET'S HAVE SOME MORE.

CLIFFORD COAN WILL BE WITH US IN NOVEMBER, AND TELL US ALL ABOUT THE COLOR SPECTRUM AND COORDINATION OF OPAL YA ALL COME!

LINDA RAU SHARED WITH US NOT ONLY HER TIME, BUT HER EXPERT TIPS ON THE ART OF WIRE WRAPPING. SHE EXPLAINED THAT SUCCESS IN THIS DEPENDS NOT ONLY IN CAREFUL ADVANCE PLANNING, BUT ALSO ON THE ABILITY TO HAVE A CERTAIN ARTISTIC FLEXIBILITY AS THE WORK PROGRESSES, AND THAT WIRE WRAPPING IS PARTICULARLY SUITED TO UNUSUAL STONE SHAPES. SHE "WRAPPED" A DIMENSIONAL CARVED OPAL FISH IN FRONT OF OUR VERY EYES, AND GAVE WE FASCINATED WATCHERS TIPS ON WIRE SOURCES, ETC.

THANKS A MILLION, LINDA!!

Gilson Synthetic OPAL

***It's the Best Synthetic Opal Ever Made,
and the Most Expensive***

by Earl Spendlove

Here's some Gilson opal." Mark Rasmussen said when I asked if he had anything new, and he brought out a shallow plastic platter containing what looked like 15 or 20 Spencer opal starts.

I was at a rock show in Panguitch, Utah, making the rounds to see what the dealers had, and when I stopped at the booth of Mark and Reva Rasmussen of Orem, Utah, he produced the opal starts. (A "start" by the way, is a thin sheet of opal, such as the material found at Spencer, Idaho, epoxied onto the backing of some kind. It is converted into a triplet cabochon by epoxying a quartz cap or slab onto the top of the opal.) The starts on the platter were covered with water and, when he moved them under the light, they fairly came alive with red, green, yellow and blue flashes of fire.

Although I had read a little about Gilson opal, I had never seen any, and I must confess that I was very much impressed with its beauty. Mark said he bought the material, which is man-made, from Charlie Smith of Teton Gems in Boise, Idaho. And, when he said he had no idea how the opal was made, I knew I had to find out and write an article about this very unusual material. Before I left that day, I talked Mark into letting me take the Gilson opal starts out into the sunshine, where I took a few pictures of this material that was sending multicolored flashes of light up through the water that covered them.

For almost as long as man has been using gemstones for jewelry, he has been trying to make imitations that look like the real thing, but cost considerably less. He has produced colored glass, and he has painted beads and cabochons made of wood and clay in an effort

to make people think they were getting genuine gemstones. And, as early as 1656, Joquin, a French rosary-bead maker, learned to coat the insides of glass spheres with pearl essence." a lustrous substance obtained by concentrating water in which a certain species of fish had been washed. And his beads were passed off as pearls.

Before I saw the Gilson material, the best imitation opal I had seen was mounted in a beautiful silver ring. The woman who owned it decided it deserved a better setting, so she took it to a jeweler and asked him to put it in a gold ring. When the jeweler tried to remove the opal, he found it had been glued into the ring. By the time he got it out, he found the "stone" consisted of some opalescent material glued onto the bottom of a quartz cap! To make matters worse, part of the material remained in the ring, while part was stuck to the cap.

Then, a few years ago, after one of my opal articles had been published in R&G. I received a letter from a firm in Hong Kong. It was a little difficult to tell exactly what they wanted, because the letter appeared to have been originally composed in another language and then translated into English. And, while the translator probably knew a lot more about grammar and punctuation than I do, he had a little trouble putting the words together so that I could understand them.

Enclosed with the letter were several artificial opal starts and triplets glued onto a piece of cardboard. Although the starts were rather pretty, they didn't look quite real, and I suspected that the backing and caps were plastic. When I offered to write an article about their product if they would tell me how it was made, they became as evasive as a Georgia moonshiner when a revenue collector asks about his still!

The process, they said, was very complicated and, although they could tell from my article that I was a scholar, it would be very difficult for me to understand. Now, I've lived a long time I've been through 12 years of school, and I've studied at a couple of universities, besides, but that was the first time I had ever been called a "scholar." Although I didn't know exactly how they meant it, I decided to take it as a compliment. I guess, though, that I am a rather slow scholar, for I had to read their letter a few more times before I realized that they were trying to get me to sell their product!

After having had these experiences with man-made opal, I was surprised to see a product that looked as good as the Gilson opal. I was, however, unable to find much information on the material until I went to a rock show in Tooele, Utah. Just inside the door, I discovered the Teton Gems booth and behind the counter was Charlie's wife, Helen, wearing a beautiful Gilson opal pendant. And I looked down through the glass top of a display case to see a tray of Gilson opal cabochons of incredible brightness.

While I was waiting for Charlie to come back, I sweet-talked Helen into letting me take the tray out into the sunlight to take those pictures I mentioned. Seldom have I ever seen anything that matched the brilliance and variety of colors that the sunlight brought out. I moved the tray around so the light would strike the cabochons at different angles. When the pictures had been developed, I realized that the colors of some of the pieces had changed from red to green to gold with the changes in the light.

When Charlie returned to the booth, he
Continued on next page

Gilson Synthetic Opal *from page 37*

was able to answer many of the questions I had on Gilson opal. The starts, he said, came from a company in France, but he didn't know exactly how they were made. He had, however, made quite a number of cabochons from this material and he had some very helpful suggestions on how to finish the triplets. The surface of the opal, he said, was covered with epoxy which had to be ground off before the quartz cap was glued on. He also said that some of the backing was not strong enough so he put a better backing on the triplets he made.

I still had a lot of questions when I left Charlie, but I couldn't help but marvel at the wealth of information I get from rock shop owners and rock show dealers. So I was not too surprised at the help I got and the things I learned at the very next booth. Gene Hardgrove, owner of the Rock Art shop in Yermo, California, didn't know who I was but, when I asked about Gilson opal, he took time to talk to me. When I left I had the information I needed to write this article.

Until I stopped at Hardgrove's booth, all the Gilson opal I had seen had been on starts or in triplet cabochons, and I had assumed the material had been manufactured or grown somehow on the thin black backing. So I was surprised when I looked into a Rock Art case and saw pieces of this material as much as a half inch thick. When Gene took a couple of pieces out of the case and let me hold them under the light, they appeared to be made up of tiny red, blue, green and yellow columns of material that shimmered and changed colors as I moved the Gilson opal about.

The fact that the material is made up of different-colored columns somewhat limits the finished, products to either a pinfire or modified broadflash pattern. And the broadflash pattern, which is obtained by cutting parallel to the columns, can only be achieved with the thicker material. The thickness of the piece, of course, limits the width of the triplet or solid cabochon to about a half inch. When the material is cut at right angles to the columns to produce the pinfire pattern, much larger triplets and cabochons can be made.

Gene had some beautiful triplets and solid cabochons in his case as well as very unusual beads made from solid pieces. The pattern of each bead varied with the way the bead had been cut or with the direction in which the hole had been drilled through it. The ones I liked best were those with holes parallel to the colored columns. These beads looked like tiny, round, striped watermelons.

When I asked if he had any details concerning how Gilson opal is made, Hardgrove gave me a copy of his catalog, which contains a brief explanation of the process, and he brought out a loose-leaf notebook containing a few articles he had clipped out of newspapers and magazines. I

borrowed his information just long enough to read it and make notes for this article.

The process for making Gilson opal was invented or discovered some years ago by French scientist Pierre Gilson, who also produces synthetic turquoise, coral, emeralds and lapis lazuli. His first opals were white with flashes of green and orange. Later, he was able to produce an opal with a dark, almost black background and a matrix that gives off brilliant flashes of red, orange, blue, green and yellow.

The exact method for producing Gilson opal is, of course, a well-kept secret, but from the material that Gene let me read I gathered that it is a sedimentation process. Large beakers of a hydrated silica solution containing certain other ingredients (unnamed in the literature) are set in a quiet place and left undisturbed for at least a year. During this time, molecules in the solution, which are constantly moving about, bombard microscopic particles of colloidal silica held in suspension in the solution. (For those of you who remember your chemistry, this phenomenon is called Brownian movement. It was discovered in 1827 by Robert Brown, a Scottish botanist who observed pollen grains darting about in a zigzag fashion and concluded that they were being hit by moving molecules in the solution.)

The theory at work in the development of Gilson opal is that molecules in the solution, striking particles of colloidal silica, cause the formation of billions of spherical particles of amorphous silica, which settle to the bottom of the beaker and arrange themselves in regular patterns, much like the silica spheres in natural opal. The play of colors is caused by the diffraction of light and the variation in the refractive index of the tiny spheres. The angle through which the light is diffracted varies continuously with the wavelength, so different colors appear at different angles, thus producing a colorful display.

According to the information I read, the Gilson opal slabs are taken out of the beakers when they are four to seven millimeters thick and are stabilized with a silica gel or possibly epoxy. The parts of the slab that touched the glass of the beakers are generally an orange or green, but soon give way to the tiny multicolored columns. When I think about these little columns, I can't help but wonder if they could have been formed in about the same manner as stalactites and stalagmites.

The Rock Art catalog contained a table that compared a number of the characteristics of Gilson and natural opal, and I was amazed at how similar the two are. Both have the same chemical formula, both are amorphous, both break with a conchoidal fracture, and both have a refractive index of 1.45. Gilson opal, with a hardness of 6 to 6.5 on the Mohs scale, can be just a bit harder than natural opal, with a hardness of 5 to 6.5.

Now, don't get the idea that because

Gilson opal is man-made, it is less expensive than natural opal. Generally, it is not. The price varies with the play of colors, the size of the pattern and the attractiveness of the piece. The Rock Art catalog lists black Gilson opal rough at \$44 per gram. White opal rough sells for \$18 per gram. Black opal cabochons go for \$37 to \$84 per carat while white opal cabochons sell for \$15 to \$40 per carat. Prices of opal starts, which I was most interested in, vary with the dealer and the size and quality of the pieces, ranging from \$15 to \$50.

If you are interested in Gilson opal, your local rock shop doesn't carry it, and you can't find it at a rock show, you might want to contact Gene Hardgrove. His catalog not only lists Gilson opal, but it offers a good selection of natural and manmade stones and other interesting items. The address is Rock Art, P.O. Box 278, Yermo, CA 92398-0289. The phone number is (619) 254-2056.

A year or so ago I purchased a Spencer opal start for about \$30, covered it with a piece of quartz, and made it into a free-form cabochon. Then, I made a silver pendant to fit the cabochon and gave it to my wife. As I looked through the Gilson opal starts that the different dealers had, I spotted one that looked similar to the one I had made up. It cost about the same, so I bought it. I knew the start was covered with epoxy that would have to be ground off before the cap could be glued on. But, when it comes to grinding a paper-thin layer of epoxy off a paper-thin layer of opal, I get a little nervous. So I took it to my friend, Jim Davis—a self-confessed opalcoholic—and got him to do it.

Then, using the same procedures followed in make triplets from Spencer opal starts, I glued on a quartz slab. Then I ground and shaped the cabochon to utilize as much of the opal as possible, and it turned out pretty well. It looked like the Spencer opal cabochon, had a pinfire pattern, and the flashes of red, green and gold were unbelievably brilliant.

When I had mounted the Gilson opal cabochon in a silver pendant and placed it beside the pendant that contained the Spencer opal, it was hard to decide which one I like best. The Spencer opal colors were soft and subdued, while the Gilson opal looked like a fireworks display in a dark summer sky. Finally, after studying them from all angles and giving the matter much thought, I decided I liked the Spencer opal best.

When I showed them to my wife and told her my choice, she agreed with me! I was so surprised that I almost fell out of my tree! For, no matter what I say, she always takes the opposite stand. I'll have to admit that there have been a couple of times that she was right. I guess she thinks it's only natural for me to be wrong since I'm a scholar. And what do scholars know about anything? R&G

A ROOM FULL OF OPALS!

Opals, Opals and more Opals. The American Opal Society's 1988 annual Opal Show held at the Anaheim Convention center September 10th and 11th was a great success. Last year's attendance of approximately 14,000 was well surpassed by a huge crowd this year and the club did well by it. I am sure that those of you who were there will agree with me that it was an outstanding show displaying some of the most beautiful pieces of the "Queen of Gems" ever to be seen. There were Opals from all over the world. Of course there were many varieties from Australia including a couple of booths displaying the rare Black Opal from Lightning Ridge.. Also there were rough, cut, and set pieces from places like Brazil; Mexico; Virgin Valley, Nevada; Spencer, Idaho; the Mojave Desert; and the fairly new-found and unusual Honduras Black, to mention a few.

There were over 30 dealers from all over the world set up to show their wares. Some were old friends of ours Al's Opal Imports from San Diego had a very large and tempting selection for you to hunt for that particular "treasure" that you may have been looking for. Also "The Clam Shell" of San Diego had some of the most spectacular specimens of opalized fossils that live ever seen. I wish that I was capable of describing their beauty, but you'll just have to see them for yourselves.

Along with the largest gathering of Opal of all kinds in one place, at one time, there was a huge display of other gems, jewelry, beads, and carvings to admire and choose from. The club had many attractions of their own to thrill you. Club members had strategically set up their display cases throughout the hall with their own works for viewing. A design contest for Opal jewelry has held with trophies for the first,

Opal, meanwhile, "has gone bananas," reported Manning. The finest white opal, "top, top goods," in 4- to 6-carat sizes, is now commanding over \$1,000 a carat, Manning said. Black opals have also risen in price, ranging from \$300 a carat up to \$6,000 for top goods. "People are going to have to get used to the idea that opal is a precious gemstone," said Manning.

NATIONAL JEWELER October 1, 1988

second and third place winner's. I particularly enjoyed the silent auction that they held -throughout the show. To help introduce the world of gems and minerals to the public, demonstrations of cabbing and faceting were performed all through the two-day show. There were a few videos going on continuously which seemed to be a big hit with the visitors. A fellow that I have the privilege of knowing, and have worked with, by the name of Vince Jarrell gave demonstrations on carving that held the attention of everyone. Vince's carvings have been featured in some of our trade magazines and I can tell you, having seen them firsthand, that they are magnificent both in detail and creative imagination, If ever you get a chance to see his work, do yourself a favor.

An interesting and relatively new medium of art is beginning to appear more and more at the shows. It is wire art. Brian PUNCHES and his very lovely wife Jolen were there creating some of the most intriguing wire art jewelry that you can imagine. They will be at the Harvest Festival here in San Diego on the 14th, 15th, and 16th of October. You might want to stop by and see them there.

All in all, it was a great show well worth visiting. Next year's show promises to be even bigger and better. I will surely be there to pick up more rough Opal at very attractive prices. I hope to see you there too.

Ed. "Rocky" Rockafellor

Ed. Note: "Rocky" is a brand new member. He has just moved here from the Los Angeles area where he was/is a member of Rock Wranglers and American Opal Society. He has promised to give us the date for the show early enough for us to tell you about it so you won't miss it. THANKS, Rocky, a great report.



HAVE YOU HEARD - - About the mine worker who made a "once in a lifetime find" when he discovered the remains of a frog that was incased in amber 40 million years ago?

"It is the most beautiful thing we've seen in amber," said George Poiner, Jr., an entomologist.

The frog, with its skin and tissues largely intact, was found in the Dominican Republic last year by a worker in a mine in the mountains above the capital of Santiago. He sold it to James Work, a gem broker from Ashland, Ore.

- - via Slab & Gab via The Roadrunner

Mexican fire opal

The very few dealers we know who stock fire opal report a pickup in sales in recent months, which they attribute to nothing other than growing familiarity with this gem. Demand is concentrated almost solely in finer facetable goods. Since these goods are rare, to jeweler prices have been pushed from around \$50 to \$60 per carat late last year to \$80 to \$90 per carat at present.

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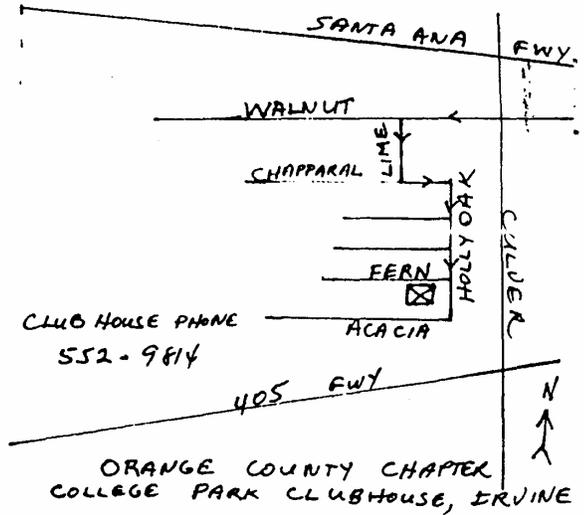
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