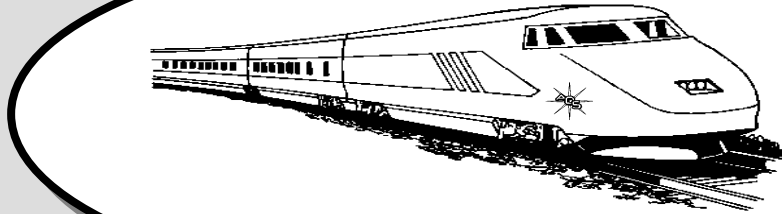


The Opal Express

Published monthly by
The
American
Opal
Society



September 2015

Volume 48 Issue 9

Table of Contents

Members Only Website Password	1
American Opal Society Calendar	1
Great Presentation from Lothar Vallot	1
Eye of the Jeweler's Bench - A Day in the Life	1
Treasure Hunter Unearths Opals	2
Chapter 49 – "What a Disappointment"	3
Home for Dinosaur Fossils with Extra Opal at Lightning Ridge	5
Gemstone found in Utah Rarer than Diamond	6
Obsidian: A Biography	6
September 2015 Gem & Mineral Shows	7

+++++

Members Only Website Password

Name: "member"; Password: "opallife".

+++++

Great Presentation from Lothar Vallot

We had a great talk from Lothar Vallot on the lore of precious gems. Lothar talked about the various gemstones and why people liked them and why some had superstitions.

He talked about Anne of Geierstein, a book by Sir Walter Scott, one of the great authors of the 19th century. In this highly popular book, the main character, Anna's fate was connected with opal. When the opal lost its radiance, she died. Because of this book, opal's have been considered unlucky by a number of people. However, some of superstition may be because of the fragile nature of opal. Thanks Lothar, for a great presentation, as usual!

American Opal Society Calendar

Date	General Meeting Topic / Speaker
09/10/15	To be announced
10/08/15	Opal & Gem Show Work Session
11/07/15	48th Annual Opal, Gem, & Jewelry Show
11/08/15	48th Annual Opal, Gem, & Jewelry Show
11/12/15	Opal Show Recap
12/12/15	AOS Christmas Party Potluck

+++++

September Speaker – Stan McCall:

Eye of the Jeweler's Bench - A Day in the Life

Our September speaker is Stan McCall sharing a bit of his life and career as a bench jeweler and beyond.

The "eye" of the bench in Stan's shop reports the following. "Hey, hammer - watch out, the punches and sheers are holding a meeting in the second drawer down. You know those tools; they think they're all that and a bag of chips around here." From over on the lower shelf comes a muffled voice that sounds like it's in a jar - opal rough wants someone to notice. The bench eye calls out, "You are a bright



Lothar Vallot

one all right and your time to shine is not far off. Patience . . . patience is a virtue." The eye of the jeweler's bench peeks in the bottom drawer. Ring and bracelet mandrels all lined up and ready for the dance. They like the hammer just fine.

Design sketches catch the bench's eye. Some of those sketches are really fetching. A few will find their way from wax to metal. In a special pouch, known only to a few, are the finished works from a "Day In The Life" of our September speaker.

Come on out and enjoy another gathering of opalholics and friends.

Treasure Hunter Unearths Opals

By [Carmen Weld](#)

Sep 27, 2014



Opal Dig!! The finished product

Photo: Contributed - Opal Resources Canada Inc.

A tourist visiting the Okanagan on her annual vacation took a dig to remember at the local opal mine.

Donna Nelson was visiting from Saskatchewan and decided to go on a weekend opal dig, figuring it would be a fun afternoon adventure. Little did she know the adventure was going to cash out.

"We took a nice tour on those four-by-four roads and I had been up there maybe an hour and half when I sat down to take a picture of the whole field and when I went to put my camera away, there it was!" explains Nelson. "It was that simple!"

At first she thought there was maybe \$100 worth of stones on the rock, but then the owner came over and he was excited too.

"He was pretty flabbergasted and that's when it started dawning on me that this thing was worth a lot more than I thought it was," laughed Nelson.

The rock that caught her eye had one big opal on the outside, but when they broke it open they discovered a pocket full of several other opals on the inside.

As it turns out, Nelson had discovered an amazing rock containing over 19 opals, and worth nearly \$3,000.

"We puttered around for the day and got lucky. It was just as easy as sitting down to take a picture and seeing 'ooh sparkly!'" she laughs.

Nelson and her husband discovered the opal when they chose to go on the tourist digging adventure with [Okanagan Opal](#).



Photo: Contributed - Opal Resources Canada Inc.

"She hit the jackpot," shared a smiling manager, Mike Yorke-Hardy. "People can dig their own holes and keep what they find. We can turn it into jewellery if you find something that is of quality, which she did for sure."

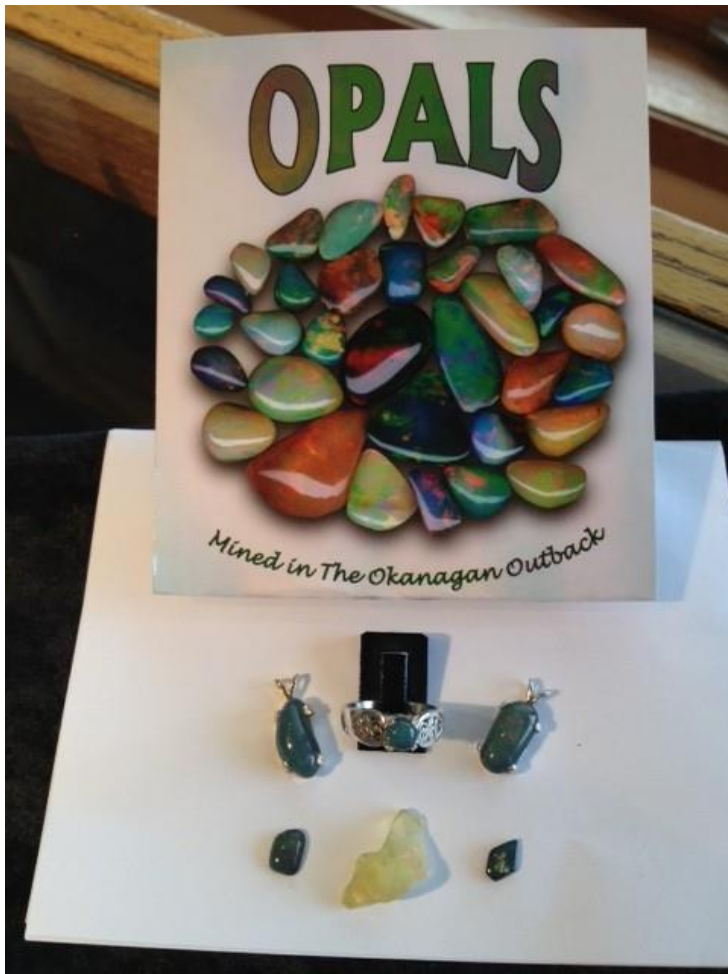
The opal mine, which you may not have even known existed in the Okanagan, was found by Robert Yorke-Hardy in 1991. The mine is located about a quarter of the way down Westside Road from Vernon, and then up into the mountains.

The mine is now a family operation with son Mike Yorke-Hardy manning the office, retails and operations, while brother Chris Yorke-Hardy cuts the stones and creates the jewellery.

"My dad found the mine in 1991 and it is the only one in Canada that has ever been found. It is pretty unique," explains Mike. "The mine is in quite a remote location. You are up to 5,000 feet which is the same height roughly as Big White and Silver Star, just on the other side of the lake."

This year over 60 tonnes of rock was mined by the company. BCIT mining students were brought up for the summer and employed at the mine to help with the work. Now the team will go through all the rock, see what they can find, cut the stones and make the jewellery.

Yorke-Hardy says the business is optimistic about their future and is only now really finding their marketplace. This summer they were able to mine more, create more and had more digging tour trips than ever before.



He adds that the digs are not for everyone, but the nature enthusiasts and those who love the outdoors would enjoy the experience.

It's a full day trip up to the mine and those interested are guided by the company. They must bring their own vehicle, their own tools, food and water and for \$50 they can spend the day digging in the mine and keep what they find (up to five pounds).

"Some people don't find anything but some people find really great stuff, like Donna who found the best that has been found in a few years," says Yorke-Hardy.



Nelson is getting all the stones made into jewellery and says she can't wait to try the experience again.

"I am looking forward to trying it again. I doubt I will get that lucky again because that sort of stuff doesn't happen to me, but I guess I am going to have to stop saying that though, eh?" she giggled.

Nelson says she and her husband come to BC every year and love it so much they are going to make their visits permanent.

"Our farm is up for sale and we are moving there," says Nelson. "We are moving to the Okanagan Valley, where else? It is beautiful out there and we are going to retire there."

Opal Digs for this year have wrapped up but will start again next Spring. They typically run twice a week from approximately June 15 – Sept 15. [Click here for all the dig details.](#)

Fun Fact: The opal is also the birthstone for the month of October!



+++++
The following are the final chapters of the book From Rags to Riches, by Peter Greisl. The first forty chapters were published in the Opal Express from May 2011 through Nov. 2013. The Editor

From Rags to Riches

Chapter 49 – "What a Disappointment"

Johnny and I we kept working our claim for last couple of days slaving away in the heat and dust under these back breaking conditions, without any reward what so ever, Johnny felt depressed and keeps saying 'Something is not right the traces normally fade away by becoming colour less and then totally disappear.

But there is such a strong level, but just sand and rocks of this brownish colour which normally houses the Opal, I replied.' Well mate we just have to have a break from here and try somewhere else, why don't we go back to Boundary Rider and talk to Trevor and Rob on Saturday,' in the meantime let's see if we get back on traces when we break through from the shaft side' I told Johnny.

He nodded and we started back working on this drive, I shoveled and Johnny Jack hammered, then we pulled the dirt. And that was a very repetitious task.

The perspiration was like as we having a shower, the temperature must be in the high 30's of Celsius, still no breeze, we look up the shaft and the sun was blazing and no movement of air.' Johnny said let's have a quick break up the top so I can also top up the compressor with fuel.' I nodded and we went to the top. When we got out the shaft it was not much better actually I would have to say it was cooler down below.

Johnny got Gasoline can switch off the engine and topped up the tank.

He noticed as soon as the engine stopped the temperature gauge claimed rapidly in to the danger zone, which is understandable as there was no cooling fan working, we decided to go back down as it is definitely cooler there, there is no shade at the top. We pulled the few Buckets of dirt and after starting up the compressor we went back down.

I told Johnny I am going to gouge for a while, He nodded, I grabbed the Jack hammer and it felt like a ton of hot metal, obviously there is

no other way to try to remove the dirt and expose the level, I started to gouge and of course the dirt just kept dropping and the hammer got heavier and heavier, Johnny shoveled the dirt in to the buckets, and the heap is getting bigger and bigger. I was so determined to give us a large area of level to work, in the hope that we pick up traces again and finally to the pocket we are looking for.

We winched the load up the top about 9 buckets and I started Jack hammering again, the temperature is dropping a little as it is already afternoon and the sun moved away from the shaft. Another nine buckets finally the jack hammer pushed through the wall and as I had put pressure behind it I stumbled and dropped the Jack Hammer and I fell forward through the partially opening I created, the famous words when something unexpected happens are of course, 'Oh Shit' I stammered and crawled back out of the hole. Johnny asked 'Are You Ok,' yes I said 'the only thing got hurt is my pride for being such a fool and not maintaining my balance.' He laughed and said it looked rather funny your body disappeared and the only thing showing was your bum sticking in the air.' I laughed with him and replied, well let me just tidy up the opening and then we can clean up the mess as there is a lot of dirt in the tunnel we just broke through from yesterday when I was working in there and back filled.

I just chiseled the on the sides in trying to match what this opening with the tunnel but we were a bit of center about a foot, so by making the openings even we have a wider part from the shaft end, but no drama, we did not enter into any architectural competition, the main thing is we got the stuff out and we can work on the level, all in all we have about 18feet of level to contend with and hope fully the traces are going to return, we have been putting in long hours of back breaking and blistering work, for three days now without any seeing any chip of colour etc. So of course we keep thinking, what are the odds for traces to reappear, by the law of averages we should hit traces again as this claim has produced opal and potch and good traces, I cannot believe that suddenly everything is over and we are finished here, we have the claim next to us where we already broke through and we can continue our hunt there. If we have to do this then we have to move the winch also we need to make another car space to bring the Ute closer for our cables and hoses. This does involve a lot of changes and rearrangement of our equipment. But if this is the case so be it. This Hill has produced according to lot of reports from old miners which have been on the fields for several years, major finds of pure crystal opal in the hundreds and thousands of dollars. So of course we are hoping there is still some left for us to mine the conventional way, like underground. Unfortunately a lot of great Opal had been destroyed and lost through open cut mining, particular if the dozer driver did not know what he was doing, and then of course the spotter, people which are walking behind the dozer and watching was the rippers turn up when they slice through the Opal Level, a good dozer operator should be able to leave no more than two to three inches of dirt on top of the Opal level, the spotter can walk behind the scraping dozer and probe with his pick to see how much dirt is on top of the level, that is of course if the spotter does know what the level looks like. So as you can see a cut is something which you do not fool around with you could spend a fortune and have a guy who has no idea and destroy your claim and could lose you fortune in the process.

Anyhow this is not our problem at the moment, since we are still a couple moles working under ground. Having reminisced on that scenario we got everything spic and span down below ready to work on the level and hope fully we are lucky this time, I said to Johnny right mate this is your baby, you better start tickling it so she produces. Johnny got his small pick and armed with it and his screw driver he went forward and started picking gentle away, I had the light right in focus behind him and I lit up the whole face of the 6inch thick level.

One piece after another dropped off and no sign of any colour or even potch.

We kept at it and just dropped the level on the ground without any cover or sheet to catch anything, since there was nothing there were no reason to use a drop sheet.

So far nothing we managed to work through about 4 feet without any result.

But we kept going. I said to Johnny to try to put a little humor in to this situation, 'I know why we cannot produce anything, Johnny asked 'Why?' you not holding your mouth right, I replied smilingly. He grinned back and said Bloody Clown, for a moment I thought you going to make a sensible comment.' I laughed and said, well I did get your attention,.' Ok mate, let's have a quick drink I am dehydrated, I passed him the water bag and he had a big swig and handed it back to me and I did the same. We continued and of course nothing again. We worked about 8 feet and nothing to show for; we have approximately another six feet left. I said to Johnny 'let me at it maybe I have the magic touch, 'Go for it he replied, I grabbed the Pick and started gently working away, I moved about two feet and nothing, I was perspiring like a pig, and so does Johnny, I suddenly said to Johnny mate I ran out of level. There is nothing just the gypsum band and bloody sand stone residue. Johnny looked at the sides and pointed out hey mate there is a slip let's find it, we got quite excited and I said to Johnny get the Jack hammer and let's take out the rest of the level but as I started jack hammering away after a couple feet the level reappeared, and there was suddenly traces of potch, to the left as I gouged further in I suddenly noticed where the level dropped just about eight to ten inches, and there was a nice pocket, I worked the jack hammer and was on my knees and took out the dirt, Johnny was back shoveling towards the shaft. I the level now is at waist height and I took everything out below I did this along for about 18 feet and we had now a drive which was about 6 feet wide but three feet were only waist level, After the 18 feet the level disappeared and everything was normal again as we worked this area before. But now we have to make a decision to work in the left side and start a drive and work on our knees again as we could not take out head height as the level is two feet lower. So the only thing we can do is work this area, if there are any traces then we have to reassess the situation in reference of any possible collapse. First things first, we have to find the slip, it has to be there along this wall, this is driving me nuts I said to Johnny the bloody Level is up and down like a honeymoon nighty. I started to gouge and I real pushed it as I am determined to find this stinking slip. Johnny kept shoveling and he could not keep up the way I pushed the dirt out. I just done my last gouge, before we have to pull the dirt up. I am covered in perspiration and my joints and back ached, but I am not giving in.

And not too soon, as suddenly the crunching sound came from the place where I put the spike of the hammer. I pulled out and the tip was covered with white dust, and it was glistening strongly I thought for a moment I hit some Gypsum, but this would have been a great mystery as the gypsum band was three feet above me.

Johnny shone some light on the spot where the spike came out all dusty and said, You hit a lump of potch, He grabbed his small pick and started gently breaking up the dirt around the area where I was gouging, you would not believe it he produced a few humongous pieces of potch, it just kept coming and coming, we finally found where the slip dropped to and there was this pocket.

I watched closely with the light but no sign of colour, just grey and brown pieces the size of my fist some of them, we pulled out at least one of these plastic buckets full. When Johnny got the last piece finally, we found the continuation of the dark brown opal level, but we cannot follow it as it would be a cross tunnel or drive and there would be definitely the danger of a collapse as we would be destroying the supporting wall. We were sitting on our haunches and could not believe such bad luck. The quantity was right, the size of the pieces were right, but the colour was not right as there was none.

I told Johnny lets go home and work out a plan; I think we have to move.

We shut down everything and grabbed all the potch and left for home.

When we got home Chris was waiting outside for Beatrix to come as she was across at Lorraine's place.

I kissed Chris hello, and said to her 'I need a stiff drink to drown my sorrows.' Johnny said 'hat goes for me too,' what's going on Chris replied, I asked can you please get us a beer and I will tell and show you. Chris brought us a beer and we sat on our bench outside and I had a long swig and put in front of Chris the bucket with all the potch in it. Chris had a look and just stammered, 'wow what sizes, and so much, she looked and said but no colour, 'that's the reason for the beers darling, I was so excited and then as if someone pulled the rug from under me, I sat on my ass, and was ready for a big cry, I am stuffed, 'I am aching and I am fed up, how much more torture is there in store for me. 'We live like gypsies, and we live well. Not like the polish family which built them self a little shanty in an alcove of a dozer cut. Some of the miners, all they have is a 'Gunyah' made out of a few pieces of old corrugated iron and they are going through the same shit. Yes it is a hard life, I am sure they deserve every ounce of opal these people find by working hard 8 hours and more every day in blistering sun and freezing winter month, and the wife's are right beside them, leaving their families and friends behind to follow an elusive dream, In hope to find their peace of Mother Nature's Rainbow Rock.

Now I had my say, and tomorrow Johnny we move everything over to the next claim. I go and ask Trevor and Rob if they can give us a hand, I am sure they will, I do not wish to have another week like this one ever.

Chris looked at Johnny and they both just shrugged their shoulders as in saying what's wrong with him. Both laughed and said "Yes Massa' you two are just a bunch of totally insensitive creatures, I am going to have my shower.'

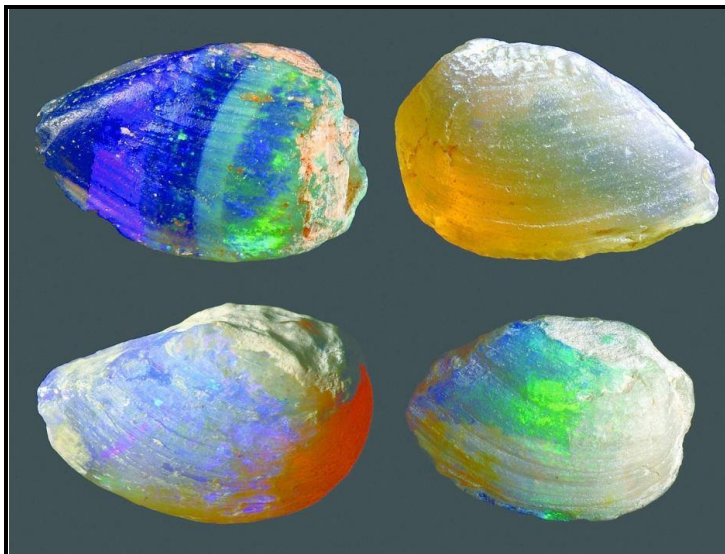
+++++

Building a Home for Dinosaur Fossils with Extra Opal Bling at Lightning Ridge

NSW Country Hour

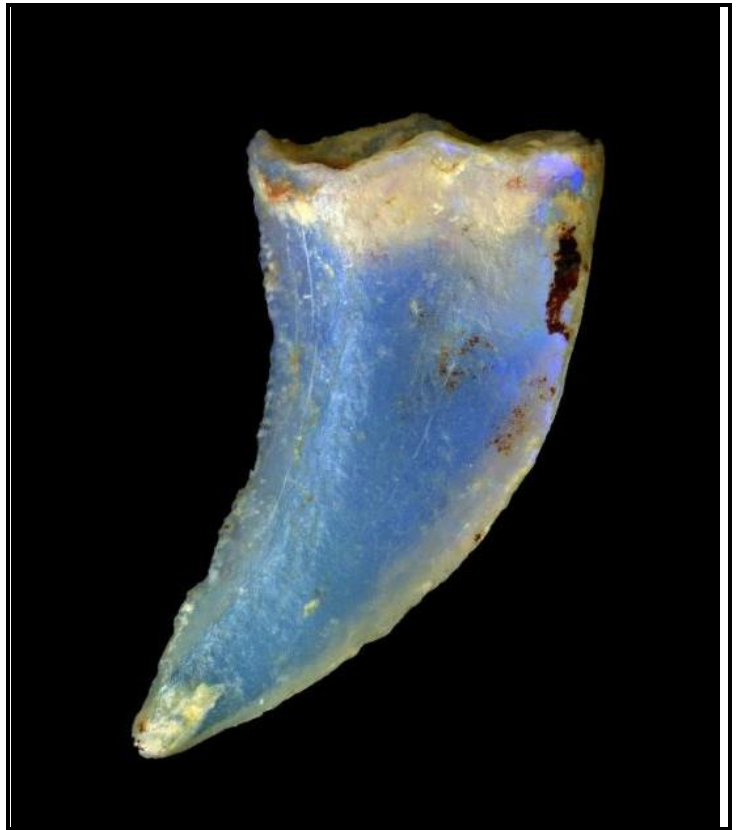
By Sally Bryant

3 Feb 2015



All the colours of the rainbow are in these opalised freshwater mussel shells, unearthed at Lightning Ridge in north-western NSW. Photo supplied on February 4, 2015.

Everyone loves a dinosaur story, but if they weren't sexy enough by themselves, what about with extra bling? In the north-west of New South Wales, opal miners have been digging up opalised dinosaur



Opalised theropod dinosaur tooth. Lightning Ridge, New South Wales.

fossils for years, it seems that it's one of the best-kept secrets in the country.

And in one community, they're putting down the underground foundations for a building which will give a permanent home to a multi-million-dollar collection of fossils. Lightning Ridge is well known for the black opal, for its multicultural community, for its can-do approach which built an Olympic-sized pool from community donations, but it's not so well known as the home of many Australian dinosaurs.

They're between 105 to 110 million years old; the only dinosaur fossils in NSW, and then you have the fact that they are preserved as opal, which is just astounding. Jenni Brammall, palaeontologist



Steropodon galmani Archer. One of Australia's oldest mammal fossils, from the Early Cretaceous rocks at the opal fields of Lightning Ridge, New South Wales.

Australian Opal Centre.

That is something manager of the Australian Opal Centre, palaeontologist Jenni Brammall, would like to see change.

"They're between 105 to 110 million years old; the only dinosaur fossils in NSW," she said.

"And then you have the fact that they are preserved as opal, which is just astounding."

Ms Brammall said the Australian Opal Centre had a remarkable array of around 5,000 fossils in their collection, and that was one of the drivers behind the push to establish a bigger centre.

"We want to house this collection and we also want to create a visitor destination that showcases our national gemstone," she said.

"The building design is quite remarkable, it features display, storage, study and training facilities and we'll also host a space where some of the higher quality opals can be sold.

Media player: "Space" to play, "M" to mute, "left" and "right" to seek. The building is designed by Glenn Murcutt and Wendy Lewin and it will create its own power and gather its own water."

Ms Brammall says the most extraordinary part of the planned new building will be an underground dinosaur garden which will feature the type of plant life which would have existed in the region during the time of the dinosaurs.

From <http://www.abc.net.au/news/2015-02-03/dinosaur-fossils-with-opal-bling-at-lightning-ridge/6065346>

What Gemstone is found in Utah that is Rarer than Diamond and more Valuable than Gold?

The gemstone has several different names: red beryl, red emerald, or bixbite. Originally, the mineral was named bixbite, but now red beryl is the most accepted designation. Red beryl is estimated to be worth 1,000 times more than gold and is so rare that one red beryl crystal is found for every 150,000 diamonds.

In 1904, Maynard Bixby discovered red beryl in the Thomas Range located in Juab County, Utah. Bixby thought it might be a new variety of beryl, but the raspberry- red color did not correlate with any beryl known to exist at that time (green, blue, pink, yellow, and clear/white). W.F. Hillebrand, a geochemist from the National College in Washington, D.C., identified the mineral as a new type of beryl in 1905.

In 1912, Dr. A. Eppler named it bixbite in honor of its discoverer. Laboratory analysis showed that manganese and small amounts of iron, chromium, and calcium create the raspberry-red color of red beryl. Like other beryl, red beryl has a hardness of 7.5 to 8.0 and its chemical composition is $\text{Be}_3\text{Al}_2\text{Si}_6\text{O}_{18}$.

Red beryl formation began with the eruption of a topaz rhyolite lava from volcanic vents. As the lava began to cool, shrinkage cracks formed, creating pathways for high temperature gases rich in beryllium to escape. Oxidized surface water also began seeping into these cracks and mixed with the rising beryllium gases. The gases reacted with the surface water, silica, alkali feldspar, and iron manganese oxides from the lava to form red beryl crystals.

Red beryl probably grew at temperatures between 300 to 650 degrees Celsius. Red beryl is presently found at only three locations in the world: the Thomas Range and the Wah Wah Mountains in west-central Utah, and the Black Range in New Mexico.

In the Thomas Range, red beryl occurs primarily as short, flat, hexagonal crystals or more rarely as elongated, barrel shaped crystals. The crystals are generally up to 2 –10 mm long and 4 – 6 mm thick. Many of these crystals are too small to be faceted. They are found in cavities and fractures within the Topaz Mountain rhyolite that erupted approximately 6 to 7 million years ago from volcanic vents in the area.

Small crystals can be found in an area called "the Cove," where they may be attached to other minerals such as topaz, bixbite, garnet,

pseudobrookite, or hematite. Larger crystals that have been faceted into gemstones have been found in the northwest part of the Thomas Range near Wildhorse Springs. The only known deposit of large, gem-quality red beryl in the world is from the Ruby- Violet claims in the Wah Wah Mountains of Beaver County, Utah. These are private claims and no collecting is allowed without permission from the present claim owners.

The crystals occur primarily as elongated hexagonal crystals that are up to 15 mm in length, and the largest crystal discovered to date is 14 mm wide and 34 mm long. Red beryl is generally found along large, near-vertical, northwesttrending fractures and clayfilled seams within the rhyolite member of the Blawn Formation. The rhyolite erupted approximately 18 to 20 million years ago from volcanic vents in the area.

The property has periodically been worked and continues to produce nice mineral specimens and stones suitable for faceting. Red beryl crystals from this location that have been faceted sell for an average of \$2,000 per carat. For comparison, gold is currently worth \$300 to \$320 per ounce (one ounce is equal to 155 carats). [2002 prices]

For more information regarding red beryl, contact the Natural Resources Map & Bookstore – (801) 537-3320, or toll free at 1 (888) UTAHMAP. The bookstore has several rock and mineral publications available for purchase that describe areas where to collect red beryl.

Via *THE ROCKCOLLECTOR* May, 2015, Via The Quarry, 9/2015

The following article was originally published in *The Rollin' Rock*, July 1994.

Obsidian: A Biography

By Terry Yoschak

If we were to tell the life story of a piece of obsidian, one of the millions of pieces native to California, it might go something like this: born in a volcanic eruption, quarried and carved into a scraper for tree bark, traded for ocean shells, chipped into an arrowhead, lost during a deer hunt, buried by debris and sediments, dug up by an archeologist, mailed to a laboratory for testing, and finally laid to rest in a museum collection.

That sounds like a useful, well-traveled life. But a short one, since its lifespan as described above could be a mere 20,000 years or so quite a youngster compared to most rock and mineral specimens. Yet few other minerals have had as much cultural, historic, and scientific importance as obsidian. The key to obsidian's impact lies in two factors: its homogeneity (uniformity or sameness) and its ability to hydrate (to absorb water from the surrounding air or soil).

When obsidian is born in a rhyolitic lava flow, where the lava cools so fast that no crystals form, the resulting chemical composition is homogeneous across the flow.1 Every flow will contain slightly different amounts of trace elements than every other flow, so each flow has a chemical "fingerprint" of its own. Two pieces of obsidian from the same flow will have identical fingerprints, no matter how far apart they were discovered. Obsidian "sourcing" (determining exactly where a piece of obsidian originated) is accomplished by the



use of Neutron Activation Analysis (NAA), which bombards the specimen with a field of neutrons. The trace elements within the sample become radioactive and the radioactive emissions are used to identify dozens of different elements and the amounts of each element. Since no two flows anywhere in the world have exactly the same trace elements in exactly the same amounts, comparing the specimen to a database of previous specimens solves the mystery. According to the Worcester Polytechnic Institute, "fingerprinting of obsidian artifacts by NAA is a nearly 100 percent successful method." 2 Obsidian sourcing has been a primary means of determining patterns of migration and trading among prehistoric peoples in California. If the same obsidian fingerprints exist on samples formed at Lassen Peak and excavated near Alameda, trading surely occurred during that 250- mile trip. People near the coast who had no local source of obsidian often traded their coastal treasures, such as shells, for the prized spear point- and arrowhead-making material.

Just as homogeneity has enabled us to determine the "where" in the life of a piece of obsidian, hydration has given us clues about the "when." As soon as obsidian is formed, its exposed surface begins to absorb water from the atmosphere. The absorption continues steadily over time, dependent on variables such as local temperature and humidity. By microscopically measuring the depth of the absorbed water layer, called the "hydration rim," we can determine the date of an obsidian artifact, either relative to another artifact, or—sometimes—with an absolute date.

When obsidian is quarried or flaked in the process of becoming an artifact, new surfaces are suddenly exposed to the atmosphere beginning new hydration processes. In our biography above, the tree bark scraper would have been hydrating longer than the arrowhead but how would we know the true age of the artifact when different hydration depths and layers exist on the same specimen? In addition, without knowing how the climatic variables may have changed over thousands of years, the process of the hydration dating method has "major limiting problems."

Some of these pitfalls have given rise to wildly conflicting and controversial theories about the age of the first human settlements on our continent.

A new technique called Secondary Ionization Mass Spectrometry (SIMS) involves slowly penetrating into the obsidian sample with an ion beam and measuring more precisely the distribution of hydrogen (in the absorbed water), and the depth of the hydration rim.³ As science develops even more sophisticated laboratory techniques and computer models to analyze hydration variables, we will gradually be able to refine and revise the "when" of obsidian specimens, and then perhaps every piece of obsidian can have its own true biography.

References:

1. Glascock, Michael. Archaeology, Geology, and Geochemistry of Obsidian for Provenance Research. Oct 2002. www.peak.org/obsidian/abstracts_g.html
2. "Neutron Activation Analysis." Worcester Polytechnic Institute. www.wpi.edu/Academics/Depts/ME/Nuclear/Reactor/Labs/R-naa.html
3. "The Obsidian Clock." Oak Ridge National Laboratory, www.ornl.gov/info/reporter/no7/clock.htm
From 9/2015 Rock Trails

September 2015 Gem & Mineral Shows

more shows can be found at <http://www.rockngem.com/show-dates-display/?ShowState=ALL>

11-13—RENO, NV: Wholesale and retail show; Gem Faire Inc, Reno Sparks Livestock Events Center; 1350 N Wells Ave; Fri. Noon-6 pm, Sat. 10 am-6 pm, Sun. 10 am-5 pm; Students, Adults + Seniors \$7, Children ages 0 - 11 Free!; Fine jewelry, precious & semi-precious gemstones, millions of beads, crystals, gold & silver, minerals & much more at manufacturer's prices. Exhibitors from around the world. Jewelry repair & cleaning while you shop.

Free hourly door prizes. ; contact Yooy Nelson, (503) 252-8300; e-mail: info@gemfaire.com; Web site: <http://www.gemfaire.com>

12-13—HANFORD, CA: Annual show; Diggins'productions , Hanford Civic Center; 400 N. Douty St; Sat. 10:00 am-6:00 pm, Sun. 10:00 am-6:00 pm; Adults \$2.00, Children are Free!; Rock, minerals, slabs, fossils. Demonstrations, Jewelry; contact Kathy Corbett, 341 cedar st., Hanford, CA 93230, (559) 904-4795; e-mail: Corbett1@sbcglobal.net; Web site: Digginsproductions.com

12-13—PORT ANGELES, WA: Annual show; Clallam County Gem and Mineral Association, Vern Burton Community Center; 308 East 4th Street; Sat. 9 am-6 pm, Sun. 10 am-4 pm; Admission is Free!; contact Jennie Bourassa, PO Box 98, Sequim, WA 98382, (360) 681-0372

12-13—WALLA WALLA, WA: Annual show; Marcus Whitman Gem and Mineral Society, Walla Walla County Fairgrounds; 363 Orchard St; Sat. 10 am-5 pm, Sun. 10 am-5 pm; Adults \$2, Children are Free; contact Jack Edwards, (509) 529-3673; e-mail: jcedwards1475@yahoo.com

18-20—SAN RAFAEL, CA: Wholesale and retail show; Gem Faire Inc, Marin Center; 10 Avenue of the Flags; Fri. Noon-6 pm, Sat. 10 am-6 pm, Sun. 10 am-5 pm; Admission is Free!; Fine jewelry, precious & semi-precious gemstones, millions of beads, crystals, gold & silver, minerals & much more at manufacturer's prices. Exhibitors from around the world. Jewelry repair & cleaning while you shop. Free hourly door prizes. ; contact Yooy Nelson, (503) 252-8300; e-mail: info@gemfaire.com; Web site: <http://www.gemfaire.com>

119-20—CHICO, CA: Annual show; Feather River Lapidary & Mineral Society Inc, Silver Dollar Fair Grounds; 2357 Fair st.; Sat. 9:30 am-5 pm, Sun. 9:30 am-5 pm; Students, Adults + Seniors \$3, Children under 16 Free!; Annual Show: Feather River Lapidary & Mineral Society: Chico's Silver Dollar Fair Grounds: 2357 Fair St: Sat. + Sun. 9:30-5: Adults \$3 children (16 & under) free: HOME OF THE WORLDWIDE ROCK TUMBLING COMPETITION! Free shark tooth necklace, first 200 Kids. Dealers Opals, Rough Rock, Crystals, Fossils, Jewelry, Minerals, Wire Wrapping, Flint, Knapping, jewelry making, silent auction, door prizes, raffle, Boy & Girl Scout Badge area, Kids wheel of fortune, grab bags FUN FOR THE WHOLE FAMILY! Contact John Scott 1288 Glenwood ave. Chico ,CA 95926. (530-343-3491); e-mail jweazel@sbcglobal.net Web site: www.featherriverrocks.org ; contact John Scott, 1288 Glenwood ave., Chico, CA 95926, (530) 343-3491; e-mail: jweazel@sbcglobal.net ; Web site: www.featherriverrocks.org

19-20—REDWOOD CITY, CA: Annual show; Sequoia Gem and Mineral Society, Red Morton Community Activities Building ; 1400 Roosevelt Ave ; Sat. 10 am-5 pm, Sun. 10 am-5 pm; Admission is \$3.00, Children 12 and under free with adult; Sequoia Gem and Mineral Society annual Harvest of Gems Join us for a weekend of Jewelry, stones, specimens, crystals and gems...and More! Saturday and Sunday, September 19 & 20, 2015 from 10 am to 5 pm. Browse the goodies and find reasonable prices on all sorts of materials. Perhaps you'll find a unique and lovely piece of jewelry to call your own or give as a special gift. If you are looking for beautiful rock specimens to display in your home, this is the place to find it! Also a great place to see what members of the SGMS club have been doing in the lapidary classes by polishing stones and creating unique pieces you'll see on display. Visit the Earth Science room and see stones under a microscope. Start a rock collection for your child and let them polish their own stone of jewelry quality! This is a fun event as well as a learning event for the whole family! Admission is \$3 and children 12 and under are free when accompanied by an adult. Free Parking available. Food is great here too! Red Morton Community Activities Building located on 1400 Roosevelt Ave in Redwood City. www.SequoiaGemandMineralsociety.org ; contact Cath Fraser, 443 Lakeview Way, EH, CA 94062, (650) 954-6020; e-mail: catherinef@fraseradv.com; Web site: www.SequoiaGemandMineralsociety.org

25-27—SANDY, UT: Wholesale and retail show; Gem Faire Inc, South Towne Expo Center; 9575 S State St; Fri. 10 am-6 pm, Sat. 10 am-6 pm, Sun. 10 am-5 pm; Students, Adults + Seniors \$7, Children ages 0-11 are free!; Fine jewelry, precious & semi-precious gemstones, millions of beads, crystals, gold & silver, minerals & much more at manufacturer's prices. Exhibitors from around the world. Jewelry repair & cleaning while you shop. Free hourly door prizes. ; contact Yooy Nelson, (503) 252-8300; e-mail: info@gemfaire.com; Web site: <http://www.gemfaire.com>

26-27—SANTA ROSA, CA: Annual show; Santa Rosa Mineral & Gem Society, Wells Fargo Center; 50 Mark West Springs Road; Sat. 10:00 am-6:00 pm, Sun. 10:00 am-5:00 pm; Adults \$6, Children under 12 Free; Lots of Vendors, Bake Sale, Raffle, Rough Rock Sale, Wire Classes, Fun Kid Stuff; contact Jolene Coon, (707) 849-9551; e-mail: jolene4srmgs@gmail.com; Web site: SRMGS.ORG

26-27—DOWNEY, CA: Annual show; Delves Gem & Mineral Society, Elks Lodge; 11233 Woodruff Ave.; Sat. 9 am-5 pm, Sun. 9 am-4 pm; Admission is

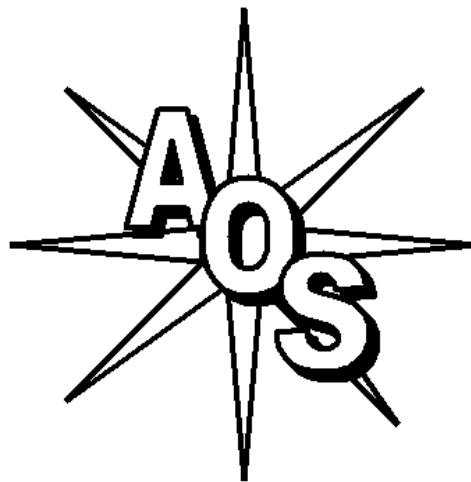
Free!; 20+ vendors, displays, raffle, demonstrations, and wonderful grab bags.; contact Dale Harwood, 1914 El Segundo Apt. 2, Gardena, CA 90249-1871, (310) 217-0551; e-mail: nancyjbird@verizon.net; Web site: <https://groups.yahoo.com/neo/groups/delvers/info>

26-27—MONTEREY, CA: Annual show; Carmel Valley Gem & Mineral Society, Monterey Fairgrounds; 2004 Fairgrounds Road; Sat. 10 am-6 pm, Sun. 10 am-5 pm; Adults \$4.00, Children under 12 are FREE!; We have approx 15 dealers at the show featuring jewelry, cut and uncut gemstones, beads, crystals, rough and polished rocks, mineral specimens, and fossils. This annual event also has over 50 displays featuring the gem, mineral, and fossil collections of guest and member exhibitors. In addition, there will also be demonstrations of jewelry making, sphere making, rock grinding and polishing. A silent auction will run continuously for people to bid on. This is a family event with plenty of great activities for the kids. A full snack bar is always open with drinks, hot dogs, chili, homemade sandwiches, and desserts. This event supports the Carmel Valley Gem & Mineral Society's educational outreach for Monterey schools. ; contact Janis Rovetti, 1047 Roosevelt Street, Monterey, CA 93940, (831) 372-1311; e-mail: janis12@sbcglobal.net; Web site: www.cvgms.com

26-27—LODI, CA: Annual show; Stockton Lapidary & Mineral Club's , Lodi Grape Festival Grounds; 413 E. Lockeford St.; Sat. 10:00 am-5:00 pm, Sun. 10:00 am-5:00 pm; Adults \$6.00, Children 12 and under free with adult;

Discount coupons available at: www.stocktonlapidary.com. See Exhibits, Demonstrations, Dealers, Gems, Minerals, Fossils, Beads, Crystals, Fluorescent Displays, Finished Jewelry, Jewelry Making Supplies and Tools, Gold Panning, Children's Activities, Educational Displays, Rock Identification, Super Raffle, Snack Bar, Gold Panning with Delta Goldiggers, and more! Show contact is Jerold Kyle, (209) 368-9411, mail c/o SLMC Clubhouse, 3136 E. Anita St., Stockton, CA, 95205 - or e-mail directly to: JeroldKyle@Yahoo.com. Contact Kyle via USPS: 327 Del Mont St., Lodi, CA 95242. ; contact Jerold Kyle

30-4—JOSHUA TREE, CA: Annual show; Hi-Desert Rockhounds, Sportsman's Club of Joshua Tree; 6225 Sunburst Street; Daily 9 am-6 pm; Admission if Free!; Sportsman's Club of Joshua Tree Gem, Mineral and Craft Show. Over 60 Dealers Featuring Rocks, Minerals, Fossils, Gemstones, Jewelry, Beads, Lapidary supplies & items, Mining equipment, Gemstone rough, Findings, Geodes, Slabs, Meteorites, Dazzling crystals, Carvings, Jewelry boxes, New Age items, Gifts, Collectibles, Books, Tools And so much more!; contact Judy & Roger Thompson, 6225 Sunburst Street, Joshua Tree, CA 92252, (760) 902-5340; e-mail: rogerthompson@mac.com; Web site: www.jtsportsmansclub.com/gem.html



Visit Rockaway Opals

Select Cup Opals

Australian...Ethiopian...Black...Crystal...Boulder

Fine Opal Jewelry

Custom Designed by Artists

www.rockawayopals.com

TIKKA OPALS

E-mail: mattitikka@bigpond.com.au

www.tikkaopalsaustralia.com

phone: +61-7-55469324

mobile: +61-417-421205

Custom Creative Gem Cutting

Stan M. McCall

Lapidary and Jewelry Artist

Custom Jewelry Designs & Repairs

Gemstone Cutting & Repolishing

Diamonds, Opals, Colored Stones

(714) 220-9282

6029 Orange Ave. Cypress, CA 90630

<http://home.earthlink.net/~custom-creative/>

custom-creative@earthlink.net

Tuesday-Saturday 10am-3pm. Appointments Also Available

Advertise in this Space!

Business Card Size: \$ 5 per month

Quarter Page Size: \$10 per month

Half Page Size: \$20 per month

Full Page Size: \$40 per month

Contact:

The Opal Express C/O

Jim Pisani

P.O. Box 4875

Garden Grove, CA 92842-4875

E-mail: editor@opalsociety.org

American Opal Society Membership Application

FILL IN APPLICABLE INFORMATION		DUES / FEES)	AMOUNT PAID
DUES: SELECT ONE	RENEWING MEMBERS	\$30	
	NEW MEMBERS	\$40	
INTERNATIONAL MEMBERSHIP FEE (All addresses <u>outside</u> of USA)		\$10	
PRINTED NEWSLETTER FEE (Paper copy postal mailed instead of PDF file by e-mail)		\$5	
ADDITIONAL BADGES (Your First Badge is <u>free</u> when joining)		\$10	
TOTAL PAID DUES plus International, Print or Badge Fees if Applicable:			

Please make check or money order payable to "American Opal Society". Mail payment and application to:
American Opal Society; PO BOX 4875; Garden Grove, CA 92842-4875
 An optional, quicker method of payment is via the Internet. To pay, just visit the membership page on our website at http://opalsociety.org/aos_application_by_web.htm and complete the form. You may pay with a Credit Card or via PayPal account. The transaction is completely secure and the AOS never sees your credit card number. The AOS PayPal account is membership@opalsociety.org.

NAME		
BUSINESS NAME		
ADDRESS		APT # or PO BOX
CITY		STATE
ZIP or POSTAL CODE		COUNTRY (IF OUTSIDE USA)
PHONE - Home ()	PHONE - Business ()	FAX ()
E-MAIL		
WEBSITE		
OCCUPATION		HOBBIES AND INTERESTS

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

MEMBERSHIP ROSTER: 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.

- Address
 Phone
 E-mail
 Website

Please sign here: _____ Date _____

The Opal Express is published monthly by
 The American Opal Society.
 Copyright 2015. All rights reserved.
Non-Commercial Reprint Permission Granted Unless Otherwise Reserved.
 Editor-Jim Pisani
 Please address all inquiries and exchange newsletters to:
 The Opal Express C/O
 Jim Pisani
 P.O. Box 4875
 Garden Grove, CA 92842-4875
 E-mail: editor@opalsociety.org

Are Your Dues Due Now?
PLEASE CHECK YOUR ADDRESS LABEL or NEWSLETTER E-MAIL. There should be a date that shows the current month/year of your membership. If the date is older than the current date, your dues are overdue. A warning will be stated if you are overdue.
 A Renewal Grace Period of two months will be provided. 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

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

**Volume #48 Issue #9
September 2015**

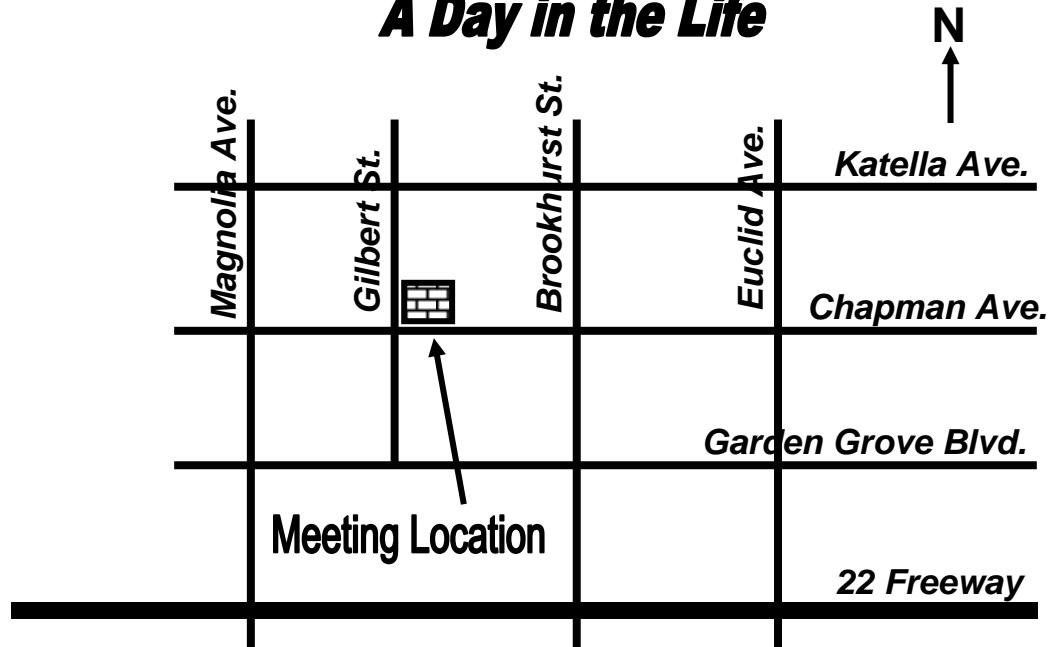
Some Topics In This Issue:

- Treasure Hunter Unearths Opals
- From Rags to Riches: Ch 49 – “What a Disappointment”
- Home for Fossils with Opal at Lightning Ridge
- Gemstone in Utah Rarer than Diamond?
- Obsidian: A Biography

**September 10th
General Meeting:
Stan McCall:
Eye of the Jeweler –
A Day in the Life**

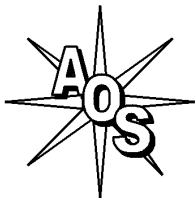
TO:

September 10th Stan McCall in Eye of the Jeweler's Bench - A Day in the Life



— GENERAL MEETINGS —
2nd Thurs. of the Month
7:00 pm - 9:30 PM
Garden Grove Civic Women's Club
9501 Chapman Ave.
Garden Grove, CA 92841
(NE corner of Gilbert & Chapman)

MEETING ACTIVITIES
Opal Cutting, Advice, Guest Speakers,
Slide Shows, Videos, Other Activities



The American Opal Society

<http://OpalSociety.org>

Pete Goetz	President	(714) 530-3530	email: mpg1022@aol.com
Russ Madsen	Treasurer	(562) 884-2254	email: chairman2rgm@verizon.net
Jim Pisani	Editor & Webmaster	(714) 815-4638	email: editor@opalsociety.org
Veronica Purpura	Show Chairman	(714) 974-3982	email: angeldragonoflight@yahoo.com