

The Opal Express

Published
monthly by
The
American
Opal
Society



Happy New Year

January 2020

Volume 53 Issue 1

Table of Contents

President's Message	1
Dues Notice to All Members	1
Members Only Website Password	1
Mark Your Calendar!	1
Thank You!	2
How History is Changed	3
Bench Tips	4
Lost Gold of Ada Hancock	5
A Lost Opal Mine	6
Famous Opal: The Butterfly Stone (The Red Admiral)	6
Safety Article: Dust in Opal Mining and Polishing	7
Meet A Future Jewel of Technology	7
CFMS Gem Show Dates	8

President's Message

Happy New Year Opalholics!

I hope everyone had an enjoyable Christmas holiday! We had a good turnout for the Christmas Holiday Potluck and everyone had a great time.

This year will bring new changes. We are restarting the membership dues clock this month. Be sure to read the paragraph in the upper right corner of this page for details. We are also adding a new page to our newsletter - Bench Tips. If you have a bench tip or technique you'd like to share, let our editor know.

As always, our focus is on our annual opal show. In the coming months, think of ways you could help the club with this important event. If you'd like to help, or if you know of a dealer who is a good fit for our show, let us know!

In closing, I want to wish everyone a very happy, healthy and prosperous New Year!

Stan McCall
AOS President
Custom Creative Gem Cutting

DUES NOTICE TO ALL MEMBERS

The AOS membership and dues clock are being restarted effective January 1, 2020.

With the January newsletter, each member will be provided their revised dues renewal date which will take into account the interim period, suspension of dues since October 1, 2018.

Members who have paid dues during the interim period will be credited with a full year effective January 1, plus any months from the prior period.

The Opal Society appreciates the patience and cooperation of everyone during this time.

Stan McCall
AOS President

Members Only Website Password

USER NAME: opalsociety
PASSWORD: colorplay

MARK YOUR CALENDAR!

The Opal Society will be at the Anaheim Art Crawl on **Saturday, February 8th**. Stop by our booth in front of the Good Food restaurant and show your support for our club! Members will have opals and jewelry for sale. Russ Madsen will be manning his famous ponking table looking for opal in basalt rock. Come and see if he finds a keeper! This free event starts at 6 p.m. and ends at 10 p.m., and is located at 201 W. Center Promenade in Anaheim. Hope to see you there!

Thank You!



The American Opal Society would like to thank the following dealers for their participation in the 52nd Annual Opal Show. We look forward to another successful show in 2020 and hope that you will be a part of it!

Adam Sawicki	A&S Opals
Linda Queally	Art by Linda Queally
Larry Hoskinson / Leslie Neff	Australian Opal
Sammy Yah	Beachwood Opals
Bob Sanger / Kathy Williams	BKW Opals
Robert Gartula	Buddha Gems and Minerals
sal Chavez	Casa De Lumbre
Luis De los Santos	Condor Agate Mines
Stan McCall	Custom Creative Gem Cutting
Fan Chong	Diamond Bird Jewelry
Ed Quo	Ed Quo Co.
Mulugeta Kebede	Ethiopia Gemstone Intl. LLC
Gabriel Mosesson	Gabriel Mosesson Jewelry
Gerard Pope	Gerard Pope
Kathleen James	Kathleen James Studios
Ken Gard	Ken Gard
Ray Schultze	Lasco Diamond Products
Cathy Plume-Jones	Le Plume Studios
Pedro Banuelos	Los Laureles Opals Mex
Mayer Morchy	M. Morchy & Associates
Armando Pedroza	North OC Gem & Min Society
Jim & Barbara Runkle	Poor Boy Opals
Robert Shapiro	Robert Shapiro
Mark Collins	Route 66 Gold Miners
Vicki Stewart	Stewart Jewelry & Gifts
Matti Tikka	Tikka Opals
Fran Todd	Toddle Gifts
Yuqing Yang	WY Trading
Noer Mohamed	Yes Hajae Gems
Zarina Baig	Zarina's Exotic Gems

How History Is Changed

By Stephen & Mary Aracic

Are we just as guilty of standing aside and letting others reshape history for us by changing original names of mines, putting opal fields in wrong locations or wrongly classifying opal?

For instance, if you turn to p11 of a recent book, *Opal: The Phenomenal Gemstone* a picture of a specimen of Queensland boulder opal is incorrectly classed as Lightning Ridge opal. The caption states, "Layers of precious and common dark opal formed in this 12 cm long section of opal seam from Lightning Ridge, New South Wales, Australia. New research indicates that the type of opal seen in each layer reflects changes in the viscosity of the opal gel. The specimen is courtesy of the California State Mining and Mineral Museum; Photo by Jeff Scovil."

How could such a specimen with ironstone backing be described as Lightning Ridge opal when it's obviously not?

And do we laugh when we read in a nice colourful little book *Opals - from the Fred Ward Gem Series* (First printed 1997) which says "Quilpie is normally a hard three day dirt road drive from Sydney" a journey that becomes halved in a Revised edition printed in 2000 which says: "Quilpie is normally a one-and-a-half day drive from Sydney." But no mention is made of dirt roads in that edition.

The books are beautifully presented and are a credit to him, so perhaps the author ought to be forgiven for thinking, when researching for his books, that he'd brought the dirt road with him from Sydney, as he'd stepped off a chartered plane on "a private dirt strip in the middle of a large sheep station 50 miles from nowhere."

Of course we all know that Australia has some of the best sealed roads in the world. But it is thanks to miners like John & Gem Kelly in Queensland, who way back in the 1970's discovered the original Hammond's Mine. And this is how it happened.

They found evidence of an old campsite and a few shafts and trenches dug into the hillside by the old timers. It caused some confusion back then when the Kelly's sought to register their lease in the mining office. You see a miner had randomly named all the mines on Yeppara out of the early mines report. As a result he didn't get many of them right. Consequently some miners who had registered a mine as Hammond's had to be convinced otherwise by checking into the old records at the local Mining Warden's Office using the directions given.

Finally it was agreed that the mine discovered by the Kelly's was in fact the real Hammond's Mine. John pegged claims over the area and in 1974 he secured a Lease there. This puts John Kelly as being the second real owner since Ned Hammond leased it before the turn of the century (1880's). Thus a lovely bit of history is rightfully restored. (See p 305 *Rediscover Opals In Australia*, 1990)

But how do we put The Pride of the Hills Mine back into its rightful location, on Glen Valley property when, according to a beautifully illustrated book *A Journey with Colour - A History of Queensland Opal - 1869-1978*, published in 1998 by Len Cram and as evidenced by a picture on p31, he puts The Pride Of The Hills conveniently, albeit incorrectly, beside the road to Duck Creek.

The same picture features again on p4 of *Beautiful Boulder Opal: the Exquisite Gem* released in 2003 also by Len Cram under the heading "The Pride of the Hills. Australia's oldest opal mine, first registered in 1871." It goes on to say on p7 "For those who appreciate historical sites, this original lease is well worth a visit, as it's perfectly situated long side the Quilpie to Duck Creek road. The ideal plan would be to make a day's outing to Duck Creek opal field and back, and as a bonus, stop over at Pride of the Hills. You can't miss it! It's the only big mine on the road. Remember it's a mine, so use a lot of common sense, otherwise, don't stop."

Such good advise, but wrong mine. Coparella is the first field encountered on the Duck Creek road. Then comes Lushington's a short distance around the bend on the left and Brodie's Hill is on the right side of the road, just before Lushington's Mine.

Now according to the Jackson Report (featured in my book *Rediscover Opals in Australia* page 365) The Pride of the Hills is

located 12 miles NW of Duck Creek or 13 miles E of Toompine. And Lushington's Mine is 6 mile N of Pride of the Hills. Surely a government geologist like C.F.V Jackson wouldn't get locations wrong when he visited the fields back in 1901.

Anyone that has been to The Pride of the Hills will tell you that the going is rough & requires a 4WD vehicle to get there.

Mary & I made the journey from Duck Creek via the bore drain in Sandy Kent's 4WD with Mike Pasalic in the back with me. After a mud map got us to a fence, Sandy got us to the historical mine using his GPS directions.

We also went to The Pride of the Hills on another occasion with friends from Lightning Ridge, access being gained this time from Toompine via Glen Valley property having first asked permission from the manager to visit the mine and take a few pictures for our book *Determined*, (2003). We got as far as the first deep creek when we balked at our chances of negotiating it. So returning to the Homestead, we humbly asked the manager to take us there in his sturdy land cruiser. Having loaded us aboard, Mary and Marcia in the front, Don & I in the back, we took off on what was to be an exciting journey.

Bear in mind it was Sunday and his day off so our driver had had a couple of beers while listening to the footie on radio so little did we realise that he, being a commercial pilot and a good natured fellow, was out to have some fun. When we'd nose dived into the bed of the first creek, our intrepid driver stopped the vehicle butt end up, swung the door open and, much to the ladies surprise, shouted to Don and I, 'Hey mate, if you think this is deep wait until you see the others.' With that promise in mind he got us out of there and then duly got us bogged in the deepest one, telling us we'll never get out of this. But we did. By the time we'd rounded a cluster of trees in the middle of nowhere and continued by a bit of dilapidated fence the track was non existent. Our driver stopped again and screwing his face into a confused look shouted back at us, 'I'm lost mate. I can't find The Pride of the Hills!'

By this time Mary and Marcia, with tears streaming down their faces from laughing, yelled at him to get moving, that the cattle nibbling the branches were wondering what was going on. So, within minutes we were seated at the foot of the hill affectionately known as 'Pridie' having a good laugh and enjoying coffee and biscuits. We specked some pieces of colourful opal floaters eroded from the hill where an open cut was made. No mining was in progress at the time.

Our journey back was just as hilarious because our valiant driver stopped in the deepest creek again, back of the 4WD sticking perpendicular in the air leaving the ladies staring at the sandy bed. He then swung the door open and disappeared down the creek to check missing stock!

What could we do but laugh at our predicament. It was something to tell the family back home.

Perhaps readers of *Metal, Stone & Glass* could help put "Pridie" back where it belongs in the not too distant hills. But do take this bit of advice from Len Cram's beautiful books; because those historical mines are well worth a visit on a days outing to Duck Creek.

Just remember that the mines you will see beside the road are Coparella on the left and a short distance further on the right is Brodie's Hill and just around the bend on the left is Lushington's. But to get to Pride of the Hills, south of Lushington's Mine, you will need a 4WD and a GPS to get there. The going is rough, but well worth it and do bring water with you. Opal specking is good but records of rich opal finds are sketchy.

See p276 in *Rediscover Opals in Australia* for an actual picture of The Pride of the Hills Mine. The view is fantastic.

The AOS would like to thank Stephen for writing this article for our newsletter. Stephen Aracic is a well known author who lives in Lightning Ridge, Australia. He has written a number of books on opal and the outback, including [Rediscover Opals in Australia](#), [Fortunes from Australian Opals](#), [Discover opals: Before & beyond 2000 with surface indication](#).

~ Bench Tips ~

This page will be dedicated to bench tips and techniques from our readers. If you have bench tips you'd like to share, let us know! Bench tips can be anything - metal work, lapidary, wirework - anything creative that you would like to share. Send your tips to: aos.editor.02@gmail.com

SANDING DISCS by Brad Smith

One of my favorite flexshaft tools that saves a lot of time is the snap-on sanding disc. I mainly use the medium and fine grits but sometimes like the very fine ones sold for working with platinum.



Ordinarily, you'd think of placing the disc on the mandrel with the grit side facing away from your hand, but notice that you end up with your elbow up in the air. Instead, try flipping the disc so that the grit side is towards your hand. It's a much more comfortable position because the elbow is down near your side, and it lets me hold the work up close where I have a better view of what I'm sanding.



I use these snap-on discs so frequently that I keep multiple mandrels with different grits already mounted in the bur stand. Some mandrels have the grit facing out and some facing in.



Solve Problems & Be More Productive
with Brad's "How To" Books
[Amazon.com/author/bradfordsmith](https://www.amazon.com/author/bradfordsmith)

CREATING TEXTURE ON METAL by Kathleen James

One way to make your jewelry or metal work creations really pop is to texture the metal.

There are many methods to create texture in your work. Commercial texture hammers, such as those sold by many jewelry websites, can greatly enhance the appearance of your piece.



Texture plates that can be used in a rolling mill or jewelry hydraulic press, can add dimension to your work. If you don't have a rolling mill or press, metal can be hammered onto these plates with a urethane hammer. The impressions made by these plates look like embossed metal.



One of my favorite texturing techniques is using an old, beat up hammer where the flat end has been roughed up from years of use. You can find these wonderful old hammers at flea markets, garage sales and sometimes on ebay.

Another way to get really beautiful texture is to hammer your metal on an old cinder block or sidewalk. Old steel that's been pock marked and scratched is also great for texture.

ALWAYS anneal your metal before texturing! As you hammer, you will notice that your metal is getting stiff and harder to hammer. That's because it has become work-hardened. When this happens, anneal your metal and then continue working on it. Anneal your metal each time it gets work-hardened, otherwise you risk cracking your metal.

There are so many ways to texture metal – experiment and have fun!

Lost Gold of the Ada Hancock

By the Land Sea Discovery Group Staff

In the 1860's Los Angeles Harbor had but two docks and neither the docks nor the harbor entrance were large enough to accommodate the deep draft of coastal steamers. A man named Timms located in the town of San Pedro owned one of the docks and the other located in the town of Wilmington owned by General Phineas Banning. The latter was called Banning Dock. Banning had come to California from Delaware in 1851 and had set himself up in the freight and passenger business between his dock and Los Angeles. His dream was to develop San Pedro Harbor into the finest harbor on the west coast. The wreck of Ada Hancock almost cut his dream short.



Phineas Banning.

For years the steamers had to anchor a mile offshore and row their cargo and passengers ashore. Banning put together a small fleet of ships to alleviate this problem. One of these ships was the trim 65' Ada Hancock. This 85-ton double prop ship was once called the Milton Willis but a new coat of paint and its brass bright and shiny made it a proud member of the Banning Fleet. Ada Hancock's duties were to

transport cargo and passengers out to the anchored steamers.

On April 27, 1863 a coastal steamer named the Senator was anchored off Dead Man's Island in Wilmington Bay. The steamer was set to leave early that evening for San Francisco and was awaiting the arrival of its own Captain Seely who was on shore taking care of last minute details. Captain Seely had bumped into General Banning on shore and in the course of their conversation Seely agreed to assist in the transporting of a group of Banning's friends along with the other passengers to the deck of the Senator for a gala bon voyage party. Finally all were on board. Included on this last voyage were Captain Seely, General Banning and his family, many well-wishers for the party, and a Wells Fargo messenger named William Ritchie.

The ships papers, passengers' valuables, and the Wells Fargo messenger's gold were safely stored on the Ada Hancock's bridge for the short run out to the anchored Senator. Clouds hung over the harbor and it is said there was a chill in the air. The vessels lines were cast off and the ship had started to swing away from the pier when a late border ran up and demanded to be put on the ship. Some of the crew tossed out a line and by hand pulled the ship into the pier so the man could be boarded. Later a Mexican deck hand reported that the man was Louis Scheslinger, a man he knew well on the docks. The dockhand said that Scheslinger was very angry. It turns out that Louis Scheslinger was also a Wells Fargo messenger but not working at the time.

The Ada Hancock then turned away again and chugged its way out towards Dead Man's Island and the anchored Senator. About a thousand yards out, roughly half way to its destination the Ada Hancock suddenly blew up to the horror of all those who awaited her on the decks of the Senator. One of the passengers who saw the affair said that the ferry had cast off and then gone back in to pick up a passenger. When finally boarded the ship backed away from the dock and proceeded towards him. He watched for a short period of

time and then he says he stepped back to let a crewmember pass and while his eyes were diverted he heard gunshots. When he looked again to the ship it exploded. Bodies and debris rose into the air as if in slow motion. One of the boilers had exploded, or was it the barrels of gunpowder that had been loaded on earlier that day and had not yet been off loaded. In either case the explosion blasted the deck house, wheel house, and valuables into the air and whatever didn't go straight up went forward through the crowd on the deck killing many of them including Captain Seely. General Banning and his family were thrown off the stern and injured but he lived long enough to realize a great portion of his dream for San Pedro Harbor.

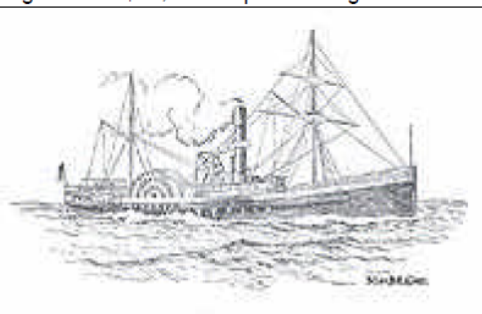
After the explosion the ship sank right away. Bodies and flotsam were everywhere. A great wave rocked the Senator moments after the ship exploded.

When the Ada Hancock finally released its last gasp of air a huge bubble came up from its grave on the bottom of the bay. Twenty-six of the over fifty passengers were killed and all but two of the survivors were injured. It is also very unfortunate that around four in the afternoon, an hour before the explosion, the only communication between the waterfront towns and Los Angeles was a telegraph wire that was mysteriously cut at midway. Thus it was more than five hours before news reached Los Angeles. Luckily upon hearing the explosion, soldiers from nearby Camp Drum and others from the dock at San Pedro raced out in rowboats to pick up survivors. When they got there not much but debris remained. They gathered up the remaining survivors that had not been snatched up by the Senator and headed back to shore. They were then taken by wagon to Camp Drum where the camp's medical officer attended them. When questioned most of the survivors agreed that there had been gunfire before the explosion but they could not agree whether it came from topside or below the decks. Many people also said the smell of gunpowder was heavy in the air after the explosion. Some said that the boiler had blown up. Much later a Banning employee said that the boiler was defective. Although it was a great tragedy, the Senator sailed for San Francisco that night.

The next day the news reached the Los Angeles office of Wells Fargo where they were very concerned due to Mr. Ritchie's disappearance along with a \$25,000 shipment of gold that was

destined for the mint in San Francisco. An investigation was launched and it was found out that Ritchie was indeed on that fateful last voyage across the bay. In fact three days later his badly mangled body washed up on shore. An audit at the bank showed that Ritchie had indeed picked up the \$25,000 shipment but unexpectedly there was an additional \$100,000 worth of gold bullion missing. Wells Fargo's gold reserves in Los Angeles had been wiped out! Investigators discovered Ritchie had met at least twice that day with Louis Scheslinger local loan shark and messenger for Wells Fargo. Scheslinger had in the days just prior to the 27th started selling off all his properties and loans discounting some as much as 50%.

On the morning of the 27th he withdrew his account with Wells Fargo in cash. Later in the day he was seen with Ritchie at a hotel and near the Wells Fargo office's, but then was not seen again until the deck hand saw him board the Ada Hancock. His body was never found. It was also noted that Ritchie had left on his assignment that afternoon from the Wells Fargo office by stage. The driver recalled there being three metal boxes all bearing the Wells Fargo seal.



Steamer Senator would take the transferred shipment of gold to San Francisco. Drawing by Jerry MacMullen.

Officials say that one box was enough to hold the \$25,000 shipment. In conclusion the folks at Wells Fargo deduced that Ritchie may have been trying to double-cross his partner Scheslinger in the bank theft and at the last minute he had been found out. The ensuing gun shots may have been caused by them battling it out on the decks of the Ada Hancock and in some way set off the explosion, causing the death of twenty six. \$125,000 in gold went down to the bottom of the bay that day and was not recovered.

On old maps of the harbor area you can find the old Banning dock and Dead Man's Island. A mile off shore on a direct line between the two the wreck sits and waits. Both the dock and the island are gone now. Dead Man's Island which at one time was a beacon for ships was dredged away in 1928 in order to widen the channel. The debris of the island was deposited along the jetty to Terminal Island. It was dredged to a depth of thirty-five feet. A good ocean chart or an old salt should put you in the right direction.

From <http://www.LAFIRE.COM>

A Lost Opal Mine

By H. H. Batchelor

In North Eastern Australia there is a belt of desolate sandstone country extending for some twelve hundred miles in a south-westerly direction varying in width from fifty to three hundred miles. This is the great opal belt of Australia. Outing my wanderings as a hunter and prospector through this country in 1903, I was shown a remarkable specimen of crimson opal - an opal that is considered even more valuable than black opal. Having done a good deal of prospecting for opals I was keen to find out something about it for I had seen nothing like it before. And this is what I gathered: In far Northwestern Queensland there is a desolate range of rugged spinifex covered hills, intersected by broken sandstone gullies with gaunt blood-wood trees growing about 100 yards apart, and here and there a thick belt of lancewood scrub. These ranges are an offshoot of the Kirby range, and are the head waters of the Diamantina River. All kinds of game are to be found there, from the great red and blue kangaroos and the rare emu to the little rock wallaby, the size of a hare. In the vicinity of the rock wells pigeons are numerous and on the plains beneath the hill emus and bustards are to be found: The only water to be had is from the rock wells, but they are few and far between and nearly always in most inaccessible places. The numerous creeks that go to form the Diamantina River below hold water only for a few weeks after rain, and for about nine months out of the year they are dry. More than one adventurous spirit has never returned from those hills, for if prospectors fail to find water they die a lingering death from thirst.

Early in 1897 two stockmen were searching for wandering cattle which had made up into the hills after the first rains. One morning whilst they were driving a small mob along a rough hillside, a beast wilder than the rest made a break for freedom. Sam Elton, one of the stockmen, immediately followed it. Whilst he was galloping along, something bright on the ground caught his eye. Quickly dismounting, he saw a piece of sandstone sticking out of the ground, and the top of a large pipe of opal glittering in the sun. It was the work of a moment to break off a piece. Putting it in his pocket, he mounted his horse and continued after the beast. As it was opal country it was not unusual to pick up specimens. After about a month later he happened to be in the town of Winton, and, remembering the opal, took it to the local lapidary to get it cut. As the stone had been exposed to the weather for ages the surface had become dulled, but the cutting told a different story, for the chance find turned out to be a crimson opal, more valuable than a diamond.

There was great excitement in the township. Sam Elton lost no time in providing himself with an outfit of mining tools and provisions with which he started back to his find. After a three days' journey he arrived in the vicinity of the mine, and having pitched his camp, he sallied forth with a pick to open his find up. Since he was a good bushman he hadn't troubled to mark the place, never doubting he could go to the exact spot. But that was just what he couldn't do, the country being a mass of stones and spinifex in every direction and exactly alike for miles around. He searched there for nine months, and then gave it up as hopeless.

Many other prospectors tried to locate that mine, but with no better result. Whether the rain had washed the soil over the sandstone, or whether the exact spot was never found is hard to say. There is no doubt, however, that the mine exists and that there is a fortune awaiting the lucky prospector who finds it, for the opal pipe may be eight or nine feet long. My partner and I spent six months in those lonely hills searching for it. Although we obtained a good deal of ordinary opal, nothing like that specimen rewarded our long search. Two other prospectors had even worse luck, for they never returned. Months after they had gone out, a man's skeleton was found by a hunter at a dry rock well and through a ring, was identified as that of one of the prospectors. In his withered hand was clasped a tin pannikin.

From *The Otago Witness*, Issue 2872, 31 March 1909, from <http://paperspast.natlib.govt.nz>.

Famous Opal: The Butterfly Stone (The Red Admiral)

The 'Red Admiral' or 'Butterfly Stone' was discovered during World War I on the 'Phone Line' field. Reported to be 51 carats, the stone is of extraordinary beauty, with a predominant red pattern equally visible from all angles. It wasn't until 1920 that the stone was given the name "Butterfly" because of its resemblance to the British butterfly, the Red Admiral.

Len Cram says of this stone, "If you turn this magnificent gem on its side it changes from a butterfly to a full-length picture of a Spanish dancer in traditional broad ruffled dress, perfect in pose and movement, aflame with fiery lights."

It passed through a number of hands, including Percy Marks and a Queensland grazier, before being purchased by the late Mrs Drysdale of Sydney. As of 2004, it was back in the care of Percy Marks & Co.

From <http://www.opalsdownunder.com.au>



Safety Article:

Dust in Opal Mining and Cutting

Introduction. All mining creates dust. Dust can cause skin irritation, allergies and damage to the respiratory system. Most dust particles breathed in are large enough to be caught within the nose, throat, trachea and bronchial tubes where they are ejected by sneezing or coughing. However, a small number are the right size and shape to get far enough into the breathing system to cause damage.

Silica. Silica is very hazardous to health. It is found in pockets of the sandstone host rock in the opal fields and in particularly high quantities in Mintabie. Exposure to silica is the cause of a debilitating and sometime fatal lung disease called silicosis. Dust needs to be tested to find out if it contains silica and to do this effectively right across the opal fields would be a major task. Consequently the most practical solution is for all miners to restrict their exposure to all dust as much as possible. Silica dust can only harm the body if particles are small enough to be breathed into the lungs and retained there (known as inspirable dust).



Cutting machine

Dust Controls. There are several ways to control dust. Try to keep as little dust as possible from becoming airborne and prevent the spread of airborne dust. (e.g. extraction/collection systems on drills). In an underground mine ensure air flow (ventilation) is as good as possible. Try not to stand in dust clouds. For example try to stay up-wind of the blower outlet. If possible dust-generating machinery should have a local dust collection system.



Dust Extractor

Wear a dust mask or respirator. Remember, paper dust masks and some cartridge respirators are not suitable for diesel fumes so, if protection from them is also needed, it is important to ensure that the right cartridges are being used. It will be necessary to contact the supplier for information on the correct type of respirator and cartridge.

Cutting and polishing. Cutting and polishing opal also creates a certain amount of silica-bearing dust. As most cutting and polishing is done wet, the dust is usually held within the water and does not become a problem. However some processes are carried out dry and this allows the dust to become airborne. For this reason it is advisable to have the cutting/polishing equipment fitted with an extraction system that sucks the dust away from the breathing zone of the cutter/polisher. Care must then be taken when emptying the collection system of the extractor.

Checklist - Dust

1. Have adequate ventilation to keep the mine clear of dust.
2. Where possible, use dust extraction or collection systems.
3. Ensure that the operator is on the down wind side of the machinery.
4. Appropriate breathing protection should be worn.

From the *Opal Miner's Guide - Safety in Opal Mining*. Published by the Mining and Quarrying Occupational Safety Committee of South Australia.

Meet A Future Jewel Of Technology: Gem Of A Beetle Which Thinks It's An Opal

By Deborah Smith, Science Reporter

December 18, 2003



Pachyrhynchus argus . . . layers of transparent spheres packed in a precise hexagonal pattern in this beetle emulate that of the opal.

This Australian beetle really is a gem: the greenish scales on its back are identical to opal.

Andrew Parker, a former researcher at the Australian Museum, was amazed when he examined the internal structure of the scales under a powerful microscope and realised it was the same as that of the precious stone.

"This is the first time opal has been found in animals," said Dr Parker, who is now at Oxford University in Britain.

The find could lead to a new method for synthesising opals, not only for use in jewellery, but as components, known as photonic crystals, for the computers of the future, which will rely on the movement of light.

The beetle, *Pachyrhynchus argus*, is commonly found in the rainforests of north-eastern Queensland. Its particular pattern of patches of metallic gleam had probably evolved to make it recognisable to other members of its species in the dim light under the forest canopy, Dr Parker said. "The optical effect created by this weevil makes it appear strongly coloured, whatever angle you look at it."

The discovery is published today in the journal *Nature*.

The colour of most opals, and the beetle's scales, is the result of light being reflected from layers of transparent spheres, packed in a precise hexagonal pattern.

The beetle reflects only one colour because all of its nano-spheres are exactly the same size - about 250 nanometres across (a nanometre is a billionth of a metre) - whereas multi-coloured opals have a range of different sized nano-spheres.

Dr Parker said that although liquid opals were easy to make, synthesising solid ones was notoriously difficult. His team has begun to try to fathom how the beetle creates an opal-like structure using the chemical "factories" inside its cells.

"If we can emulate the weevil's means of opal production this would represent a technological breakthrough, particularly since opal, as a photonic crystal, has numerous industrial applications," he said.

Scientists have already had some success copying nature, recently creating artificial mother of pearl by mimicking the way abalones build up nanolayers of different materials to make their shells.

But the beetle's method for making perfect opals posed a bigger challenge than this, because it probably used clever pieces of tiny machinery, such as molecular motors, and templates to extrude the nano-spheres, Dr Parker said.

From the *Sydney Morning Herald*, <http://www.smh.com.au>.

CFMS SHOW DATES

Shows and Events

*Sponsored by
CFMS Clubs & Societies!*

*Please submit your
Show or Event as soon as possible
to receive maximum advertising value!*

*Email to:
SHOW DATES*

*Use the Online Show Form
at www.cfmsinc.org
(click on Shows)*

*You should receive a confirmation
within 5 days after submitting your
Show Date information!*

December 7-8; Barstow, CA
Mojave Gem and Mineral Society
Cora Harper Community Center
841 Barstow Rd
Hours: 10-5 Daily
Contact: Danny Watts; 760-373-1309
Email: vivlea22@yahoo.com
Website: www.mdgms.net

2020

January 18-19; Exeter, CA
Tule Gem and Mineral Society
Exeter Veteran's Memorial Building
324 N Kaweah Ave.
Hours: Sat 10-5 and Sun 10-4
Contact: Gayle Bingaman; 559-802-6029
Email: bandgbing@aol.com
Website: www.tulegem.com

February 14-23; Indio, CA
San Geronio Gem & Mineral Society
Riverside County Fair & National Date Festival
82-503 Hwy 111
Hours: 10-10 Daily
Contact: Bert Grisham; 951-849-1674
Email: bert67@verizon.net

February 15 - 16; ANTIOCH, CA
Antioch Lapidary Club
Contra Costa County Fairgrounds
1201 West 10th Street
Hours: 10 - 5 daily
Contact: Brenda Miguel
Email: brenda.miguel@yahoo.com
Website: antiochlapidaryclub.com

February 22-23; Vallejo, CA
Vallejo Gem & Mineral Society
Solano Co Fairgrounds, McCormack Hall
900 Fairgrounds Drive
Hours: 10-5 Daily
Contact: Debra Duhon; 415-254-1506
Email: dduhonvvgms@gmail.com
Website: www.vjgms.org

March 6-8; Newark, CA
Mineral & Gem Society of Castro Valley
Newark Pavilion
6430 Thornton Ave
Hours: Fr 10-4, Sat 10-6, Sun 10-5
Contact: Cathy Miller, 510-305-4196
Email: cdmiller59@gmail.com
Website: www.mgscv.org

March 7-8; Ventura, CA
Ventura Gem & Mineral Society
Ventura County Fairgrounds
10 W Harbor Blvd
Hours: Sat 10-5, Sun 10-4
Contact: Richard Slyker; 805-312-8467
Email: info@vgms.org
Website: www.vgms.org

March 13-15; Victorville, CA
Victor Valley Gem and Mineral Club
44th Annual Rockhound Tailgate
Stoddard Wells Rd/Dale Evans Pkwy
Hours: 9-5 Daily
Contact: Ruben Martinez; 760-490-8263
Email: rmstonewalk54@gmail.com
Website: www.vvgmc.org

March 21-22; SAN JOSE, CA
Santa Clara Valley Gem & Mineral Society
Santa Clara County Fairgrounds
344 Tully Road
Hours: 10 - 5 daily
Contact: (408) 265-1422
Email: info@scvgms.org
Website: www.scvgms.org

March 28-29; Angels Camp, CA
Calaveras Gem and Mineral Society
Calaveras County Fairgrounds
101 Frogtown Rd
Hours: Sat 10-5; Sun 10-4
Contact: Robin Williams; 209-728-8277
Email: robinski@yahoo.com
Website: www.calaverasgemandmineral.org

March 28-29; Roseville, CA
Roseville Rock Rollers
@the Grounds
800 All America City Blvd
Hours: Sat 10-5; Sun 10-4
Contact: James Hutchins; 916-995-7380
Email: jhutchings22@hotmail.com
Website: www.rockrollers.com

April 4-5; Chico, CA
Paradise Gem & Mineral Club
Silver Dollar Fair Grounds
2357 Fair Street
Hours: Sat 9-5; Sun 9-4
Contact: Trish Haggerty, 530-966-5112
Email: hagboyz5@gmail.com
Website: www.paradisegem.org

April 4-5; Reno, NV
The Reno Gem & Mineral Society, Inc
Reno Convention Center
4390 S Virginia St.
Hours: Sat 10-5; Sun 10-4
Contact: Daniel Ellis; 775-229-2442
Email: greybeard65@hotmail.com
Website: www.renorockhounds.com

April 11 - 12; MARIPOSA, CA
Mariposa Gem & Mineral Club
Mariposa County Fairgrounds
5007 Fairgrounds Road
Hours: Sat 10 - 5; Sun 10 - 4
Contact: Meredith Meehan, 559-868-3535
Email: mgmcs@sti.net
Web Site: <http://mariposagemclub.org>

April 25-26; Lancaster
Antelope Valley Gem & Mineral Club
Antelope Valley Fairgrounds
2551 West Avenue H
Hours: Sat 9-5; Sun 9-4
Contact: Susan Chaisson-Walblom
661-406-0143
Email: slchaisson@yahoo.com
Website: www.avgem@weebly.com

June 1-2; CAMBRIA, CA
San Luis Obispo Gem & Mineral Club
Cambria Veterans Hall
1000 Main Street
Hours: 10 - 5 daily
Contact: Kim Noyes, (805) 610-0603
Email: kim@gmail.com

June 23-28; Lodi, CA
81st CFMS Show & Convention
Grape Festival Fairgrounds
413 E Lockeford Street
Hours: Fri, Sat 10-5, Sun 10-4
Contact: Margaret Kolaczky
Pat LaRue

September 26-27; Lancaster, CA
Palmdale Gem & Mineral Club
Antelope Valley Fairgrounds
2551 West Ave H
Hours: 10-5 Daily
Contact: Allison McClung; 661-839-7403
Email: ali_cares@aol.com
Website: palmdalegemandmineral.org

American Opal Society Membership Application

FILL IN APPLICABLE INFORMATION		DUES / FEES	AMOUNT PAID
DUES:	RENEWING MEMBERS	\$35.00	
SELECT ONE	NEW MEMBERS	\$45.00	
INTERNATIONAL MEMBERSHIP FEE (All addresses <u>outside</u> of USA)		\$15.00	
PRINTED NEWSLETTER FEE (Paper copy postal mailed instead of PDF file by e-mail)		\$10.00	
ADDITIONAL BADGES (Your first badge is <u>free</u> when joining)		\$15.00	
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 via PayPal, please visit the membership page on our website at http://opalsociety.org/aos_application_by_web.htm to complete the form and make your PayPal payment. 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 ()
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 roster once per year in its newsletter, The Opal Express. Your name will be included. Please check what additional personal information you listed for other members. If it is different from the information above, please note that on the application.

☐ Address ☐ Phone-landline ☐ Phone-cell ☐ E-mail ☐ Website

Please sign here: _____

The Opal Express is published monthly by
The American Opal Society, Inc.
Copyright 2019. All rights reserved. Non-Commercial
Reprint Permission Granted Unless Otherwise Reserved.
-Editor
Please address all inquiries and exchange newsletters to:
Editor - Kathleen James
The Opal Express
PO Box 4875
Garden Grove, CA 92842-4875
E-mail: aos.editor.02@gmail.com

Are Your Dues Due Now?

PLEASE CHECK YOUR ADDRESS LABEL OR NEWSLETTER E-MAIL.

There will 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 Renewal Grace Period of two months will be provided. Please note, that as the system is 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

(revised 11/27/19)

The Opal Express

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

Volume 53, Issue 1

— GENERAL MEETINGS —

4th Wednesday of the Month
7:00 p.m. - 9:00 p.m.

Anaheim Community Center
250 E. Center Street
Anaheim, CA 92805

MEETING ACTIVITIES

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

TO:



General Meeting Location at:

Anaheim Downtown Community Center

250 E. Center Street
Anaheim, CA 92805

The next **Board Meeting** will be on **Monday, January 6th at 7:00 p.m.** at Pam's house in Huntington Beach.

Please join us at the next **General Meeting, Wednesday, January 22nd** at the Anaheim Community Center at **7:00 p.m.** Our President, Stan McCall, will give a talk on his trip to Quartzsite. Refreshments will be served - hope to see you there!

American Opal Society

Website: <http://OpalSociety.org>
Instagram: <https://www.instagram.com/opalsociety>
Facebook: <https://www.facebook.com/AmericanOpalSociety>
Pinterest: <https://www.pinterest.com/opalsociety>
YouTube: https://www.youtube.com/channel/UCegTIH1IEyO7y8wdqvRfyUA?view_as=subscriber

Stan McCall	President	(714) 220-9282	email: aos.president.01@gmail.com
Russ Madsen	Treasurer	(562) 884-2254	email: aos.treasurer.01@gmail.com
Kathleen James	Editor	(714) 828-1251	email: aos.editor02@gmail.com
Bart Gampe	Webmaster	(310) 736-5528	email: aos.webmaster.01@gmail.com
Veronica Purpura	Show Chairman	(714) 501-9959	email: aos.showchair@gmail.com