

THE GEODE

Volume 33, Issue 4

April 2007

Lakeside Gem and Mineral Club Meeting

April 4th at 7 pm

Program: Lost wax

Bragging Table: Fool's gold

Refreshments: Heather Moon, Pat Richardson, and Marcia Monthey

Juniors Meeting: April 11th

Show committee meeting:
at 630 pm

Board of Directors meeting:
730 pm
on
April 16th

Program: Roy Bunnell will be presenting information related to classes he teaches through the Kennewick community education program on lost wax and glass bead making.



Carol Cimolino showing an intarsia piece. Picture taken by Larry Hulstrom.

Intarsia Class: The club will be hosting Carol Cimolino for intarsia classes for beginners. Members in good standing will be able to sign up for a one day class (6-8 hrs) on July 21st or 22nd at Banner Bank. The cost will be \$45 per person. One should be familiar with making cabs for this class. Tentatively, classes will start at 8:30 am. Contact Jerry Sorensen for more information (392-1363).

Wanted Donations for Silent Auction

As you are doing your spring cleaning, please set aside pieces for the silent auction for the club show. This year, members will be allowed to sell with a 30% of the sales going to the club. Contact Jerry Sorensen (chairman) for more information.

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LAKESIDE JUNIOR CLUB

NEXT MEETING

April 10th

Banner Bank, 203 W. First Ave

Kennewick, WA

Officers:

President : Jeffrey Spinner

V. President : Michaela Coleman

Secretary : Ashley Engleman

Advisors:

Steve Shoemaker

Leona George

Amy Coleman

Maria Weis

Lakeside Junior Rock Club Minutes

On March 13, the junior rock club met. We talked a lot about the upcoming rock show. If you want to put a case (it's 4 feet x 2 feet) in the show, please tell Mrs. George as soon as possible. The show is April 21-22; the set up day will be the 20th.

Family of junior members, and the members themselves, have free entry to the show in April.

If you were not at this month's meeting and want to help out at the junior table please tell Mrs. George at the next meeting. Mrs. George talked about the *Mini Mineral Magazine*. If you would like to subscribe (it costs about \$10 a year), please mention it at the next meeting.

If you went on the field trip, feel free to bring any samples you collected to the meeting.

If you haven't paid your dues yet, please pay at the the next meeting. They are just three dollars.

FIELD TRIPS 2007

This collecting season, we have a series of trips planned that will be led by club members.

Specific dates, meeting places, times, etc. will be determined prior to the trip and published in the *Geode*.

FIELD TRIP RULE: IF YOU ARE PLANNING ON GOING ON THE TRIP, YOU MUST CALL THE LEADER PRIOR TO TWO DAYS BEFORE THE TRIP. TELL THE LEADER THAT YOU ARE GOING AND WILL EITHER MEET THE LEADER AT THE CARAVAN SPOT OR ON-SITE AT THE DIGGING AREA.

IF THE LEADER HAS NOT RECEIVED ANY CALLS TO GO ON THE TRIP, THEN THE LEADER HAS THE RIGHT TO CANCEL THE TRIP.

Date Trip Leader Location Material

May 5 George & Hulstrom Bickleton Agate

June 11-17 Cataldo Nevada & Oregon Black Opal & Pet. Wood

July Newcomb Washington Varied

Aug. 11-12 Snyder Idaho Spencer Opal

September Cannon Idaho Lolo Pass Crystals

October Cataldo Oregon Rice Museum

NOTES: April: We did not plan a trip in April due to highway cleanup one weekend and the Club Show another weekend.

June: The opal area at Virgin Valley is a fee dig. Plans are to dig at Bonanza on Wednesday with wall fees of \$125 or tailings fee of \$50. On Thursday, dig at Rainbow Ridge, virgin soil load of \$400 (1 or 2 people per pile) or \$50 tailings fee.

We have to know by (call Dom) April 13th that you want a load of dirt at Rainbow Ridge in order to make the reservations. From Virgin

Valley we will go to the Bruneau Woodpile in Idaho. We will collect there on June 16th. If you are not able to go for opal, then join us for Bruneau on the 16th.

July: Kevin is going to try to plan a trip to either Darrington or Teanway. Chat with him, he is looking for guidance as to what location members would like to explore. More coming later as to dates and location.

August: This is a fee dig area. Members will need to make their way to Spencer; directions will be in the July Geode. Don will be at the mine to help you learn how to dig the opal and what to look for.

September: This is a tentative trip. Randy Cannon will be traveling close to this area in July and will check out the availability of digging for crystals. Randy has not been to this area in several years and wants to be certain it is still open for collecting.

October: We are planning to arrange a club bus trip to the Rice Museum in Hillsboro, Oregon. This would be a one day trip. The club would pay for the bus; you would be responsible for your lunch and the entry fee into the museum.

Lakeside Gem and Mineral Club Minutes Wednesday, March 7, 2007

Vice President, Steve Shoemaker presided over the meeting. Guests for the evening included Marvin Barger, and Mike and Elaine Korenko who became members tonight.

April Show: Sign up sheets were passed around for: silent auction, pot luck, show displays, set up and tear down, ticket sales, geode cracking and "I'll do anything". If you did not have an opportunity to sign up; never fear volunteers are always welcome, even if they didn't sign up.

Silent auction specimens are needed. Please bring items of good quality, and see page one for information on new policies.

Fair: A sheet listing those who stated they would help with the fair was circulated.

Field Trips: The Mineral council lists a number of trips as noted in the last issue of the Geode.

May-Bickleton led by the Georges

Virgin Valley & Bruneau Wood Pile June 11-17 led by Cataldos (please confirm by April 13 see page 4)

Other Business: Highway cleanup will be done in May. The junior club received a bit of notoriety with a newspaper article last week and has added to membership. Please volunteer to help the juniors.

Steve has saw oil for sale to members in five-gallon lots.

Information: Al Krogh asked members if they had seen Cash and Treasures You Can Find on the Travel Channel.

Art Rediske talked about the BMCC classes in silver work. They are inexpensive and many seem to really enjoy and gain from them.

Program: Members viewed a video entitled "Russian Gem Treasures"

Show meeting minutes March 19, 2007

Present: Linda Spinner, Leona George, Floyd George Evelyn Cataldo, Steve Shoemaker, Mary Lou Olmstead, Larry Hulstrom, Chris and Jerry Sorensen, Heather Moon, Jane Moore, Ron Passage, Don Snyder, and Judi Allison

Fliers: More are printed and available.

Street Signs: Will be brought to the April Meeting-Steve will get them.

Dealers and Members: Leona will make badges.

Sound System: At the bank someone will get it the day of set up.

Education presented-Gentleman from John Day fossil Beds will be at show on Saturday from 11:00-3:00.

Advertising: The budget has been increased so we can reach more people by using more desired pages and TV. Jane will work to get an article in the Herald with information about John Day Fossil Beds. Leona will try to get John Trumbo to do an article on the show.

Hospitality Room: Evelyn and Loretta will purchase supplies.

Friday Lunch and Potluck: Lunch will be hot dogs and burgers, with everything provided. Chicken most likely be the evening meat, with members providing side dishes and desserts.

Black light: will use one from Juniors for geode cracking area.

Tailgating: Sunday 9-12- Linda is in charge. One must be a member to sell. Those interested can obtain membership through Leona on that day, if need be.

Skirting: Pat Richardson is in charge. People will need to go through her to receive and put back the skirting. That way we can keep things straight.

Silent Auction: Jerry Sorensen (chair) See page 1. If an item doesn't sell after 2-3 times, it will be set aside.

BBQ Grills for Friday: Floyd will supply one. We'll ask Kevin Newcomb if he will also supply his and deliver both.

White Board at entrance: we need one to display the activities going on.

Lakeside Gem and Mineral Club Board Minutes Monday, March 19, 2007

Present: Linda Spinner, Leona George, Floyd George Evelyn Cataldo, Steve Shoemaker, Mary Lou Olmstead, Larry Hulstrom, Chris and Jerry Sorensen, Heather Moon, Ron Passage, Don Snyder, and Judi Allison

Old Business: Leona read a letter from the fair board stating that beginning in 2008, all entrants displaying at the fair will be charged. Our contract is covered for this year.

Items to be paid: mailbox, web site, storage unit. The storage unit is up for sale. Ron will take care of getting the contract renewed.

The club now has a subscription to the Lapidary Journal. The magazines will be part of the checkout library.

Membership: Leona will be filling in for Jerry Johnson until he can resume his position. He has some issues with his eyes and sight at this time.

Juniors: Steve stated the Junior club has had a good turnout and some adult members showed up to help. He suggested a possible sign up sheet for helping with the juniors on a specific evening.

New Business: Intarsia-See page 1 for details.

Annual picnic: will be held at Steve's on September 22. There will not be a meeting in July, but there will be a meeting on the regular date in September.

Minutes continued from page 3

The board voted to purchase four 8 inch lapidary capping units to have on hand for demos at shows and to offer classes. Steve is in charge of purchasing.

Don presented the list of items purchased in Tucson for the silent auction and door prizes. We voted to accept the items and pay the cost.

Larry presented information about Federation Swap Boxes. Perhaps this is something the club would like to do.
Secretary, Judi Allison

VIRGIN VALLEY OPALS

Hidden in the high desert region of the northwest corner of Nevada, lies the famous Virgin Valley precious opal mines. The area is famous for black opal, known to occur in only two places on Earth: Virgin Valley, Nevada and New South Wales, Australia.

It is believed that this area was once a large lake surrounded by a forest filled with a variety of tree species. Over time the forest was devastated by a series of volcanic eruptions. Twigs, limbs and rotting wood collected in the coves of the lake. The forests, the lake and the driftwood were buried under layer after layer of ash. The buried wood decayed and left cavities. Over millions of years, heat and pressure filled the cavities with silica that percolated through the ash; gradually hardening into opal. Under the right conditions, precious opal was formed. Over time, the entire area has been uplifted and eroded, exposing the opal deposits. It is said that it took Mother Nature twenty million years to make a Virgin Valley black opal.

The Virgin Valley area has been inhabited by man for more than 10,000 years. In the southwestern portion of the valley lies the "Last Supper Cave". Its bones and artifacts have been carbon dated to 10,000 to 12,000 years.

There is evidence that the Chinese sent an expedition to mine the precious black opal approximately 4,500 years ago. During the late 1800's and early 1900's a few specimens were collected by cowboys and sheepherders.

These specimens were reported to the press and soon prospectors found their way to Virgin Valley. Opals were first mined commercially in the area in 1905 with the discovery of the Bonanza Mine. Other early mining operations included the Rainbow Mine. Both are still in production today.

Most of the opal found in Virgin Valley is in the form of replaced wood and limb casts. Opalized bones of vertebrate animals have also been found, as well as opalized bark, roots, pine cones and seeds. The opals are found in layers of clay. The precious opal bearing layers may be as much as 10-30 feet below the surface and range in thickness from 2-12 feet. Common opal is abundant throughout the layers of clay and ash, but only specific conditions produced the precious opal.

Anything that resembles petrified wood should be carefully examined and kept. Look for specimens that are glassy looking. The background color does not matter. **Some of the most beautiful opal specimens do not show color immediately.** Collect everything glassy looking --- black, clear, milky, brown, etc. Sometimes, good pieces of opal are covered with a white, chalky coating. A small percentage of the opal found in Virgin Valley is valued at more per carat than diamonds. Keep your eyes open for other fossils and artifacts.

Virgin Valley is high desert. Expect warm days and cool nights. Be prepared with a variety of clothing, plenty of liquids, sun screen, hat, and chap stick. Food, fuel and lodging can be found at Denio, Nevada (35 miles away).

Dry camping is available at the CCC campground with is about five miles from the mines. The campground is free. There are no hookups but outhouses are available, a shower room and swimming in the hot spring. There are fire pits for the cool evenings, but you need to bring your own wood.

Other items you will find useful are a small pick, small garden rake, small shovel, spray bottle with water, a bucket for sitting on, gloves and some ziplock bags to store your specimens.

The opal mines at Virgin Valley are fee dig areas. Some mines allow digging through the tailings, some allow digging in the clay wall and Rainbow Ridge offers loads of virgin material. Prices range from \$50 per day for going through tailings to \$400 for a load of virgin material.

By Evelyn Cataldo

Resources: michelle@goldnuggetwebs.com, nevadaopal.com, royalpeacock.com

IF YOU PLAN TO GO WITH THE CLUB (please contact Dom Cataldo by April 13)

Making Diamonds at Home

A fascinating event happened while I was attending the Tucson Show last year. I was in the room of Brazilian mineral dealer Joaquin Stick, and noticed a number of very nice, rather large diamond crystals for sale. When I inquired about them, I was introduced to an elderly gentleman sitting in the corner. This fascinating man was professor Ilmeno Rutille, originally a professor of chemistry at the University of Bologna in Italy, but who had spent most of his professional career working for General Electric in their Diamond Synthesis Lab. Professor Rutille had synthesized all the diamond specimens I had seen in a laboratory in his home!

I spent a very pleasant hour talking to this amazing man, and when I returned home, I began an e-mail correspondence with him. I'm afraid I pestered him for several months with questions about how these diamond crystals were grown, and finally he relented, saying he would show me the process if I would travel to his home laboratory in the mountains near Oakley, Kansas.

It was late May when I arrived at Professor Rutille's home, and after introducing me to his wife, he took me to his laboratory located behind his garage. I was immediately struck by the lack of large, sophisticated equipment one would expect to find in a lab capable of synthesizing diamonds.

I asked Prof. Rutille where he made his diamonds, as there was not a single piece of technical equipment in the place. "That is exactly why I asked you here," he replied, "Please sit down," and he pointed to two chairs against the wall. We sat down, and he handed me some papers. "It's all explained here," he said. While I looked at the papers, Prof. Rutille told a fascinating story.

The early attempts to synthesize diamonds at the GE labs were a trial and error effort that did not succeed until it was discovered that with existing equipment, a catalyst was necessary to lower the temperature and pressure at which diamonds form. An amino acid present in animal muscle and fat tissue turned out to be the key. This was discovered when a technician was preparing samples to go into the furnace while eating a ham sandwich. A bit of ham contaminated the sample, but the technician went ahead with the test. The result was a diamond (small and very poor quality) but a diamond. This amino acid catalyst has been kept a secret ever since.

The story continues in the 1980s when Prof. Rutille began work on a project in the GE Synthetic Stones Lab to synthesize elbaite tourmaline. The scientists added various metals to the chemical structure to change the color of the crystals. The results were disappointing, except in the case of copper. Adding copper produced a cuprian elbaite of a beautiful, but rather unbelievable, teal blue color. Further research was discontinued because his superiors felt that gems cut from this material looked fake. Prof. Rutille kept about half of the few hundred crystals produced, sending the rest to a mineral dealer friend in Paraiba, Brazil.

Prof. Rutille wondered if copper might also produce a blue color in diamonds and began a series of tests. The attempt to produce blue diamonds failed, but he found that the copper even more drastically reduced the temperature and pressure necessary to produce a diamond. In fact, a pressure of 650 pounds per square inch and a temperature of 112 degrees Fahrenheit were all that was necessary. This could be produced in a home laboratory! Prof. Rutille began to produce his own diamonds in his home lab, and those were the crystals I saw in Tucson.

Prof. Rutille assured me that he would have grown rich selling diamond and never would have told me the details of how these diamonds were made if he had not been threatened by agents from GE and the De Beers Corporation a few weeks before my visit. He was so angry with his former employer that he asked me to publish his findings so that people everywhere could reproduce his results. I agreed, and below are instructions for synthesizing diamonds in your home or garage!

Preparing the Sample: copper pipe (the pipe and end caps are available at any home improvement center). Into the open end of the pipe, place 1.75 grams of the lunchmeat. This will provide the amino acid catalyst. Using a hammer or other tool, crumble the charcoal briquette into pieces small enough to fit into the copper pipe. Add exactly 4.2 grams of charcoal briquette, packing lightly with your finger. Note: DO NOT use briquettes with lighter fluid in them as this will contaminate the sample and cause a risk of fire or explosion! Add another 1.75 grams of lunchmeat on top of the packed charcoal briquette. Place the other end cap on the open end of the copper pipe, creating an enclosed container. Cut two round pieces of masking tape to fit the ends of the end caps, and place one piece of tape on each end cap (this will insulate the copper container from the jaws of the vice).

Creating the Diamond continued

Note: Gloves and safety glasses should be worn during this step of the procedure! Place the copper container in the jaws of a large, heavy duty vice, one end cap against each jaw of the vice, and tighten enough to hold the container in place. Lay an accurate ruler across the top of the vice. It is necessary to close the vice one eighth of an inch to produce the necessary pressure. First, the container must be heated. Using the blow dryer on "high" setting, heat the container for a minimum of two minutes. Now, while continuing to heat the container, begin to close the vice, slowly. Some effort will be required, but continue closing the vice until you have collapsed the container one eighth of an inch. Continue to heat the container with the blow dryer for a minimum of four more minutes. Don't be surprised if you feel yourself getting hungry; it does smell like barbeque! After four minutes, the blow dryer may be turned off. Allow the container to cool for 30 minutes. Using a hacksaw, cut the container in half and remove your diamond!

I know this leaves one question: What type of lunchmeat to use? I have experimented with several types, and I achieved my best results using pure baloney.

Source: Unknown

Club cases: Do you have a club case at home? Please return the case at the April meeting or contact Evelyn Cataldo.

Wanted Show Pictures

Please take digital pictures at the show. I would like to have an issue with all of the pictures from the show in May. Please include captions to go with the pictures. Please email these to me at lakesidegemandmineral@yahoo.com by April 25th.

May refreshments reminder:

Tina Murphy, Steve Shoemaker, and Elaine Korenko

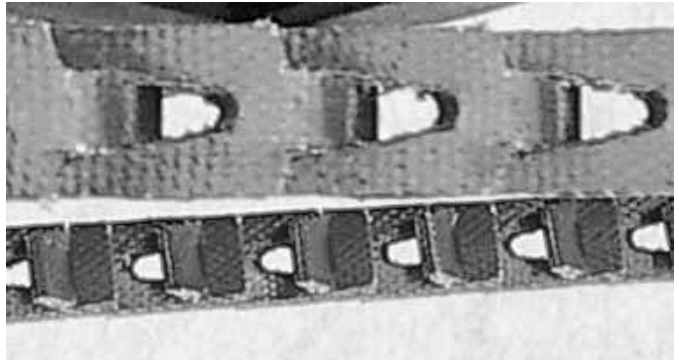
Rock Saw Tips

It's always fun to work on the rock saw. It's frustrating when you have to dismantle the saw in order to replace a part. I needed to replace the inside belt on an older Highland Park saw. For this saw, one has to dismantle the pillow blocks and drive shaft assembly. Looking for an easier solution, I found a new product on the market called Power Twist, an adjustable V-belt. This belt uses interlocking links. I was able to install a new belt in a couple minutes with out any tools.

The manufacturer claims the adjustable links do not develop a memory that a standard belt will get and the links dampen vibration giving a cleaner cut for wood working saws. I think this will also be true for rock saws. The manufacturer also rates the belt as a high resistance to water, oil, solvents, and other chemicals.

I bought 7 feet of 1/2 inch wide belt at Empire Rubber & Supply in Pasco for just under \$39. I found their price better than I could order from the Internet.

Happy Cutting!
by Jerry Sorensen



A view of the adjustable links (above) and the belt on the saw (below). Pictures by Jerry Sorensen.



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Many intarsia pieces made by Carol Cimolino. Picture taken by Larry Hulstrom.