B.C. Rockhounder
Vol. 14 Spring 2010

Contents

Share your trips and knowledge by sending an article to the Rockhounder

Submit articles for the next issue by

August 1, 2010 to:

Win Robertson
6 – 2401 Ord Road
Kamloops, BC V2B 7V8
E mail: winrob@shaw.ca

"My thanks to all that have submitted articles and club news for publication. They are greatly appreciated and enjoyed by our readers."

Cover Photo:
Material from the McAbee Fossil Beds. Courtesy of Dave Langevin. **Photo By Mike Coulter**

Published Quarterly By the British Columbia Lapidary Society

20739 39th Avenue,
Langley, BC
V3A 2V7
Tel: (604) 532-0582
E-mail: bcls@cia.com
www.lapidary.bc.ca

Editor:
Win Robertson
winrob@shaw.ca
(250) 376-4878
#6 - 2401 Ord Rd.
Kamloops, BC V2B 7V8

Design & Layout:
Mike Coulter
mcoulterdesign@gmail.com
Cell - (250) 682-9134
Kamloops, BC
V2C 5C2

Printing:
Sure Kamloops
Print & Copy Centre
(250) 554-1322
552 Tranquille Rd.
Kamloops, BC

President's Message

Hi Everyone,

I want to say a special thanks to all the volunteers who help put on our exciting B.C. Gem and Mineral Show. We visited four shows this winter, in California, Arizona and New Mexico. To my mind, our show here in B.C. tops all of them. We differ from those other shows, in that we have Special Displays, Club displays, Demonstrators with excellent skills, Kids Corner with crafts and lots of variety in our dealers. We have it all!

The biggest show in Canada does not happen by itself. Cam Bacon, our showchair, has a large committee of volunteers that meet once a month, all winter long, to plan the sizable details of this show and work tirelessly to make it the special event that it has become. Well done, all of you, and Thank You Very Much :)

On another subject:

We welcome the warmer weather that brings us to thoughts of being outside to do some rockhounding.

We have a beautiful feature on the front cover of this issue of the Rockhounder, and an interesting article by Dave Langevin about the McAbee fossil beds. This is such a fun place to go. I remember my first trip up there. It was Rendezvous, and I was new to rockhounding.

My son David and I climbed all the way to the top of the hill... small mountain, really. We could see for miles, all up and down the valley: the cultivated squares of farmland, green with spring planting, and blue skies dotted with puffy, fluffy white clouds. We sat in the warmth of the sun, happy to be outside again after the cold, rainy winter.

At that time there was no road up, and it was a long climb to the top. Being new to rockhounding, I left my lunch at the bottom of the hill. I will never forget looking down at the car, way below me, and yearning for my

lunch down there with my grumbling tummy at the top of the hill! Now Dave Langevin has had an expensive road built to the top, and we no longer have that arduous climb to access those fabulous finds!

The shale beds have been worked with benches, and it's easy to pluck out a hand-sized chunk of the shale. We took our bladed hammers, and tapped the chunks open just like the pages of a book. In nearly every opening, there was another fossil surprise.

This is one of the most rewarding field trips to visit. If you have never been there, I encourage you to go. I guarantee you will not be disappointed.

Happy rockhounding, everyone!

De Morgan,

President, B.C. Lapidary Society

BCLS
General Meeting

The next general meeting of the BCLS will be held Sunday, Sept. 5th, from 1 to 3:30 p.m. Sullivan Hall, 64th Avenue and 152nd Street, in Surrey

(I realize that it's the Sunday of the labor day weekend.) but there are already 2 shows that month, and the only other date is already booked at the hall. Bob and I are going away at the end of September, so it's not possible to move the meeting into October.

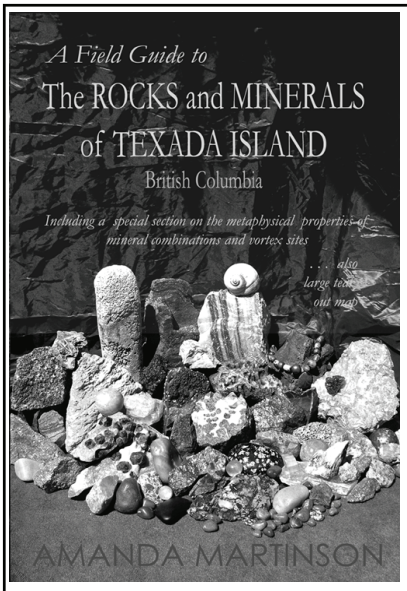
I hope the turnout will still be good or even better. As usual, we will offer refreshments, and a door prize. On the up-side, the long weekend gives an extended time for people from farther away to attend, so I hope we will see some of you out to the meeting.

I hope as many of you as possible will be available to come. It's always fun to hear a good speaker and schmooze with other rockhounds!

Cheers,

De Morgan,

President, B.C. Lapidary Society



NEW!

A Field Guide
to the
Rocks and Minerals
of
Texada Island
by Amanda Martinson

Texada Island hosts a unique geology amongst the Gulf Islands of BC, namely poly-metallic skarns special to island-arc terranes. With it's 100+ years of colourful mining history to present-day operations, Texada is world famous in the mining community but remains an enigma to most. The 193 page book includes maps, unique mineral transition charts, 100 colour photos of mineral specimens, descriptions, fossils and historical overview with sites of interest. An additional metaphysical section provides a ground-breaking analysis of the properties of skarn mineral combinations. Limited supply. $36 (tax included) + shipping Call Amanda: 604-486-7552

Attention Rockhounders

Robbery Notice

Donnamae Chionis had her RV broken into, the following Items were stolen:

Gem Setting tools, Wire Wrapping tools, Silversmithing tools or Beading tools. Gold Filled wire, beads, loose gem stones or cabs as well as about 150 prints all signed by her .

If you see any of these items for sale in a Pawn shop, Flea market, 2nd hand store or a Garage sale.

Please contact Donnamae at: 604-836-2303 or e mail: rocklady@shaw.ca

Any assistance is appreciated

Golden Rules

Tips for Purchasing Gifts of Gold

It is beautiful, it is flattering, it is precious and it never goes out of style. That is what makes gold jewelry a popular gift, year after year.

Classic designs can be found in 14K, 18K and even 24K gold. To help you get the most for your money, as well as a whole lifetime of pleasure, the World Gold Council offers some "golden rules" for purchasing.

Know you Karats

Always look for a karat mark when purchasing gold jewelry. It is usually stamped as 10K, 14K, 18K or 24K, but could also be stamped 417, 585, 750, or 9999, which are the European equivalents. The karat mark indicates the percentage of pure gold in the piece. 24K is 100 percent gold. Gold is often alloyed with other metals, like copper, silver, nickel and zinc, to give it strength and durability. The higher the karats, the more gold in the piece.

Different proportions of metals added to pure gold give gold alloys their yellow, rose, green and white coloration. Most gold jewelry contains a mixture of at least two other metals.

A Wealth of Difference

Gold Filled:
A layer of gold backed with another metal such as chrome, nickel, copper or silver.

Gold Plate:
The process of placing a base metal, such as copper, in a bath and sealing the two metals through electroplate.

Gold Leaf:
A sheet of gold varying from 4 to 5 millionths of an inch in thickness used for gilding and other purposes.

Liquid Gold:
Finely divided gold suspended in a vegetable oil and used for gilding ceramics.

Vermeil:
14 Karat gold overlaid on sterling silver.

Sterling Silver:
Silver of a purity of 925 parts per 1,000. The content is 92.5 percent silver and 7.5 percent of another metal, usually copper.

Silver Plate:
Silver that has been coated over a base metal such as copper, nickel-silver or brass in a dipping process that included sealing the two metals through electroplating.

REAL ANSWERS FROM EARTH SCIENCE EXAMS

The rear end of a trilobite is called a trilobutt.

The terrestrial planets are much larger than the gas giants.

Wegener found matching bedbugs on opposite sides of the Atlantic.

The main problem associated with limestone aquifers is Lyme disease.

Erie, Pennsylvania has no volcanoes because it's too cold there.

We know that the sun is much farther away from us than the moon is, because we can see stars between us and the sun, but not between us and the moon.

A New Fire

in Tiger's Eye

Christina Reed

For more than a century, mineralogists have accepted that the lustrous bands in the tiger's eye gemstone occur because of a process called pseudomorphism, where one mineral replaces another but retains the original shape. However, when Peter Heaney took a look at the gemstone through an optical microscope, he found that this common assumption was in dire need of an update.

When light reflects off the parallel mineral bands of tiger's eye, the gem shimmers. The German mineralogist Ferdinand Wibel in 1873 first interpreted tiger's eye as a pseudomorph. That explanation stuck. Until now, mineralogists have assumed that the mineral bands are fibrous quartz that grew in place of pre-existing crocidolite asbestos.

In the April issue of Geology, Heaney and Donald Fisher, both of Pennsylvania State University, reported a new origin for the mineral bands responsible for the shimmer, or chatoyancy, in tiger's eye gems. Intense tectonic pressures cause fractures within the gem that allow the quartz and crocidolite minerals to grow toward each other from either side of the fracture, with the quartz dominating as they both fill in the open vein. As the pressure continues, the gem breaks again, this time splitting the fracture on the side where the crocidolite had formed. "In order to make one centimeter of tiger's eye, it has to undergo twenty to a hundred of these cracking episodes," Heaney says. Each quartz-filled vein with its inclusions of crocidolite provides a tectonic history for the gem. "Since the chatoyancy is produced by the crocidolite and not the quartz crystals, the zig-zag cat's-eye pattern reflects the movement of the rock."

Rings

Photography by Erik Gould

The ring has consistently been the most popular piece of jewelry. It has been said that the ring is "the article of jewelry around which centers tradition, antiquity, utility and symbolic meaning of the greatest reverential character." The eighteenth century English writer, Samuel Johnson, described the ring as "a circular instrument placed upon the noses of hogs and fingers of women to restrain them and bring them into subjection."

Luckily, Sam Johnson was not always correct. It is obvious here that he had not studied his history of rings, for they took on many practical and ornamental purposes.

It should be mentioned here that only three cultures have been discovered that did not make use of rings in some form. From all available information, most notably the portraits and sculptures of the time, the Assyrians wore no rings.

Another society where its people wore no rings was the Celts of Ireland. In all the caches of jewelry that have been discovered on the emerald isle, no rings have ever been found which belonged to the Celts. There is another group for which rings hold no attraction, much to admiral Robert Peary's dismay. On one of his first arctic trips, Peary left well-stocked with rings to barter with the Eskimos. When he arrived, Peary discovered he could not rid himself of them.

Roman Ring, Late Roman Empire, 2nd AD gold, sardonyx; 1" d

The Eskimos have never worn, nor do they now wear, rings. Due to their severe climate even the slight pressure of a ring could impede circulation.

An atmosphere of magic and charm has always surrounded rings. There has been a strong believe that both good and bad spirits inhabited rings. One of the many charges levied against Joan d'Arc was that she owned rings of magic. Because of this feeling, it has been speculated that the greater use of rings was the outcome of convenience. The faith in the curative powers of stones and the protective powers attributed to some of them, induced their owners to carry the stones by setting them in circlets of gold, silver or bronze to be worn on their fingers. For instance, amethysts were supposed to keep one sober and turquoise would change color in the presence of poison.

Rings were extremely popular among the Romans. There were certain rules in the fashion of rings which were strictly observed. Plain signets and bronze rings were worn on either hand, but rings set with stones were considered effeminate if worn on the right hand. Gold rings could be worn on certain occasions, but they were set aside for iron signet rings when one attended a funeral. Wealthy Romans had rings that fit the seasons, with thin ones for summer and large imposing ones for winter. These large rings were most often hollow and could be easily crushed. Annulus natalitus were Roman birthday rings, only to be worn to celebrate ones birthday. It was also the custom for the matron of a roman household to wear a ring with a small key attached. This was a symbol of her authority over the house. By the middle of the first century, the fashion was to wear an extravagant amount of jewelry. Rings fit into this fashion by being worn on every finger, with different sized for each section of the finger.

Persian Ring, 13th century
gold, turquoise; 1 3/8" D

Stone rings were not uncommon in ancient times. These were not metal rings set with stones, but rings cut from solid stone. Romans were fond of amber and jasper, worn primarily as amulets.

Although the Celts were not ring wearers, prehistoric Ireland has left a history of rings of stone and jet. During the middle ages rings engraved with the figures of saints were held in high regard. Precious stones were still used to give immunity. The most popular stone to be set in a ring was the sapphire. This magical blue stone was attributed with curing eye diseases, being a poison antidote, preserving the chastity of the wearer, and preventing poverty, betrayal or wrongful conviction. If all these things were true, its popularity was warranted. Medieval rings of silver have often been found, each being hammered by hand, for the drawing of wire was not known until the fourteenth century.

The first Anglo-Saxon rings were primitive bits of wire twisted into a hoop. The third finger of the right hand was known as the "gold finger," for this is where gold rings were worn as a badge of nobility. Later Anglo-Saxon rings were quite technical.

Niello was often used extensively on gold and silver. As rings began to take on more purposes, they are more clearly defined according to what they were used for, instead of the period in which they were found. The first practical use of rings was the signet or seal ring. They developed into full use under the Romans as a method of marking official parchment documents, taking the place of a man's personal signature. A man would also seal his valuables at home, of which

historian Pliny noted that "a single ring upon the little finger was no more than an ostentatious advertisement that the owner has property nature under seal at home." The signet ring carried over in the Elizabethan times, for every merchant had his own distinctive seal with which to mark his bales of merchandise Rings were not always used for good. Hannibal and Demostenes both wore poison rings. Although uncommon, these rings were not rare. Not only could they be used on "friends," but on oneself if the circumstances warranted. Cesare Borgia was noted for his lion ring. The lion's claws contained a poison that could give a very lethal handshake.

Hopefully his acquaintances wore plenty of turquoise.

During the renaissance, quantity was again desirable asset. Rings were not only worn three on each finger, but all over on chains. There were five basic types of rings created particularly in this time. The first of these shall be referred to as ecclesiastical rings. These were badges of office in which the stones played a significant role. Again, the stones had meanings: sapphires gave purity, rubies represented glory, emeralds tranquility and crystal simplicity. Papal rings were given to the popes ambassadors as an assurance of safe conduct. For further protection the rings were made of gilded bronze with paste stones, which all knowledgeable road bandits were aware of. The fisherman's ring is still given to the new pope, the previous pope's ring is crushed at his death and a new one produced. It is made of pure gold and engraved with the symbol of a boat in which st. Peter is represented seated.

For the laity, the favorite designs were of the skull and crossbones. Momento mori became the fashion under Henry II of France, with the idea of remembering death. These are not mourning jewels, for they do not represent a specific loss, but the idea of the inevitability of death.

Two other types of ecclesiastical rings were the reliquary rings and the decade ring. Inserted in the reliquary ring was the relic of a martyr or saint. In the sixteenth century, decade rings gained popularity. These rings, very prevalent among the laity, were knobbed to represent the beads of a rosary and were used for the same purpose.

Rings were not always used for good. Hannibal and Demostenes both wore poison rings.

The second type of ring is the curative or healing ring. On the whole, every society believed that the right kind of ring would heal the ills of the body, soul, or estate according to need. Some popular ones were the cramp ring, worn as a protection against cramps; and the toadstone, a fossilized tooth of a fish that was believed to have many medicinal virtues. An iron ring could cure intestinal problems and garnets were good for bee stings. People would buy these rings in a pharmacy type setting, lending even more credence to the beliefs. Even the simple moving of a ring from the middle finger of the left hand to the middle finger of the right would stop hiccoughs and sneezing.

The third category of rings began long before the renaissance, when the ring became the form of jewelry used to support the total weight of human emotions. These rings of romance were used for an emblem of joy, woe and all the interim emotions. In classical times there were betrothal and wedding rings. By the middle ages these rings were combined into just the wedding ring and was worn only on the right hand. The first change to the left hand was noticed in the book of common prayer of Edward VI (1549). Jewish wedding rings were just ceremonial, only worn on the day of the wedding. This is perhaps a practicality, as the ring consists of heavy metal with a gabled building or Solomon's temple attached.

Debunking the "Mystery" of the Stone Balls

Balls in Courtyard of National Museum
San José, Costa Rica

The stone balls of Costa Rica have been the object of pseudoscientific speculations since the publication of Erich von Däniken's Chariots of the Gods in 1971. More recently, they have gained renewed attention as the result of books such as Atlantis in America: Navigators of the Ancient World, by Ivar Zapp and George Erikson (Adventures Unlimited Press, 1998), and The Atlantis Blueprint: Unlocking the Ancient Mysteries of a Long-Lost Civilization, by Colin Wilson and Rand Flem-Ath (Delacorte Press, 2001). These authors have been featured on television, radio, magazines, and web pages, where they do an incredible disservice to the public by misrepresenting themselves and the state of actual knowledge about these objects.

Author with Largest Known Ball

Although some of these authors are often represented as having "discovered" these objects, the fact is that they have been known to scientists since they first came to light during agricultural activities by the United Fruit Company in 1940. Archaeological investigation of the stone balls began shortly thereafter, with the first scholarly publication about them appearing in 1943. They are hardly a new discovery, nor are they especially mysterious. In fact, archaeological excavations undertaken at sites with stone balls in the 1950s found them to be associated with pottery and other materials typical of the Pre-Columbian cultures of southern Costa Rica. Whatever "mystery" exists has more to do with loss of information due to the destruction of the balls and their archaeological contexts than lost continents, ancient astronauts, or transoceanic voyages.

Stone Ball in situ Under Cacao Trees

Hundreds of stone balls have been documented in Costa Rica, ranging in size from a few centimeters to over two meters in diameter. Almost all of them are made of granodiorite, a hard, igneous stone. These objects are not natural in origin, unlike the stone balls in Jalisco, Mexico that were described in a 1965 National Geographic article. Rather, they are monolithic sculptures made by human hands. The balls have been endangered since the moment of their discovery. Many have been destroyed, dynamited by treasure hunters or cracked and broken by agricultural activities. At the time of a major study undertaken in the 1950s, fifty balls were recorded as being in situ. Today, only a handful are known to be in their original locations.

Diamond Wrongs

Dr. Bill Cordua, University of Wisconsin-River Falls

Recently a student of mine, who had been looking for a gift for his girl friend, asked me if Herkimer "diamonds" were a particularly good diamonds. After explaining to him that Herkimer "diamonds" were really quartz, I began thinking about all the things rock hounds and jewelers call diamonds that are really diamond-wrongs. Sometimes this is an innocent practice (as in Herkimer "diamonds"), but it can be meant to mislead shoppers. In all cases it creates confusion and is sloppy nomenclature.

Here are some of the diamond "wrongs" I found on-line and what they really are. Caveat emptor!

Herkimer diamonds are quartz crystals found in vugs in dolostone in central New York. They are often sharply terminated, water clear and sparkly against the grey dolostone or black bitumen matrix, but they aren't diamonds. Little Falls "diamonds" and Middleville "diamonds" are synonyms, named after several towns in the collecting area - obfuscation taken to the second level of confusion. Other clear quartz rock crystals that have been called diamonds are Alencon "diamonds", Cape May "diamonds", Hawaiian "diamonds", German "diamonds", Pecos "diamonds", Herradura "diamonds", Mexican "diamonds" and on and on.

I had heard of Cape May "diamonds" when I was a kid. They refer to rounded pebbles of clear to white quartz picked up along the beaches around Cape May, New Jersey. Their source was the crystalline rocks in the upper reaches of the Delaware River. River and wave transport have rounded and sculpted them, making them popular among east coast beachcombers.

Pecos diamonds come from outcrops along the Pecos River in southeastern New Mexico not far from Roswell. They often have a unique orange color, and are associated with cavities in gypsum-bearing limestone and dolostone. But, pretty as these are, they aren't diamonds.

Colorado "diamond" can refer to smoky quartz. Radium "diamond" is also smoky quartz. Since quartz can be made smoky artificially by exposure to radiation, some of these specimens may not only be misnamed, but also faked.

Alaskan "diamond" is similarly a type of quartz rock crystal. Unless you find Alaskan "black diamond" which is polished hematite. Yes it sparkles, but iron oxide is hardly the same as pure carbon. The Russians taught the native Aleuts how to cut and polish this material, which was highly thought of enough to serve as royal gifts. These are beautiful enough in their own right that one wonders why it as necessary to give it a gaudy name. In addition there is a Nevada "black diamond", but that is obsidian, a volcanic glass.

Of course there is a real black diamond - a bizarre form also called carbonado, which may be extraterrestrial in origin.

Matura "diamond" is refers to colorless zircon, which is found in the gem gravels of Sri Lanka. Zircon does have an adamantine luster, so clear varieties tend to resemble diamonds in their brilliance. However they do have inferior hardness, and are zirconium silicate, not carbon. Be also aware the zircon is not the same as cubic zirconium an artificial product often used as an inexpensive diamond substitute.

Mogok "diamond", Saxon "diamond", Killiecrankie "diamond", Tasmania "diamond" and Flinder's "diamond" are white topaz. Killicrankie is on Flinder's Island off of Tasmania, so the last three terms refer to the same thing. These are topaz from granite, that have worn been loose and turn up in beach gravels. Topaz is a hard lustrous mineral to be sure, but these rank only an 8 on the Mohs scale, not 10 and are not as rare. They also lack the brilliance of diamond's luster.

Probably the most ironic of these misnomers is Alpine "diamond" which turns out to be pyrite. Some one buying this thus gets no diamond, but instead a shiny specimen of fool's gold.

Here are some good on-line references about misleading mineral names:

www.gemscape.com/html/misnomer.htm and

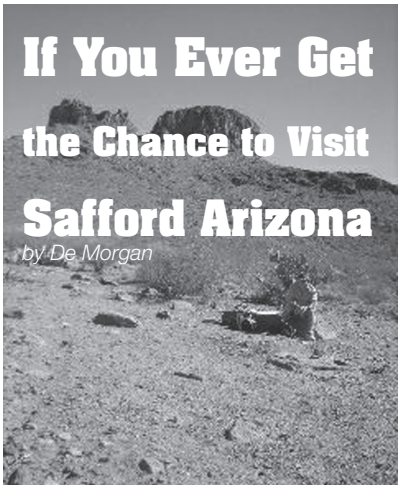
www.jewelinfo4u.com/Beware_of_Misleading_gemstone_names_. aspx

www.amfed.org/rules/AFMS_Lapidary_Material_Names_2003.pdf

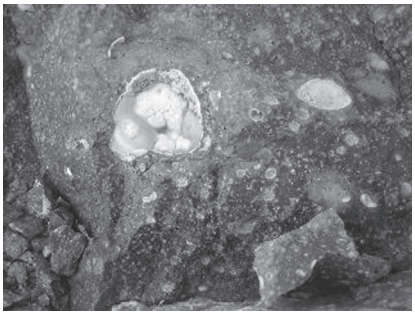
The American Federation of Mineralogical Societies has a useful list of approved names for lapidary labels:

I have a fond memory of the 1995 movie "Congo". In it, a team of adventurers finds King Solomon's diamond mines (guarded, of course, by killer apes). The floor of the "diamond" mine is shown littered with Arkansas quartz crystals

("Arkansas diamonds"), which are being gleefully gathered in by the villain as the apes attack. Was King Solomon duped by unscrupulous labeling? By the way, in the movie the villain's name was "Herkermer".



If you head along Highway 70, and then go north for about 10 miles on highway 191, you will see a sign that directs you to the Black Hills Rockhounding area in Southeastern Arizona.



Anytime there is an official sign directing me to an area, I immediately suspect that it's been very well picked over.

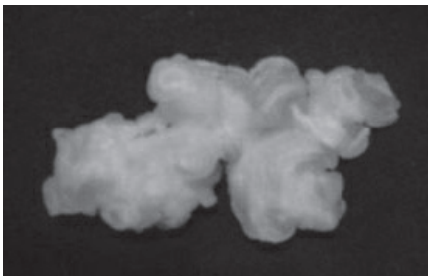
If you, too, have had this experience, then you can imagine how delighted we were to discover that the entire mountain was loaded with the most magnificent chalcedony roses we have ever seen. The site has two mountains, one is a well weathered volcanic neck, stuck up like the butte in the movie, 2001, A Space Oddessy, and next to it, is the satellite cone. It is from this satellite cone that the desert roses and fire agate originate. "When you pick up one, there is another underneath it", said another rockhound that we met up there... and it was true.

It was possible to get a sample of the desert roses in the matrix of the vesicular lava, but there were many that were just lying on the ground, and they sparkled snow-white, having been bleached for many years by the hot Arizona sun. It was possible to find many that were whole, as they lay in the soft earth, and no one had ever trod there. Some had hues of reddish iron oxide embedded in them, and that only served to make them more attractive.

The glint of a small piece of oolitic fire agate was a very exciting find. By spraying it with water, we could see the flash of colours, green, red, orange and yellow, ready to be polished into a striking piece of jewelry. There were small pieces of half inch square, but I didn't find any big ones. The other four rockhounds that we met and chatted with, had only small pieces too, but they were very attractive.

The most exciting find was a partially formed pure white, calcedony geode, about the size and shape of an ostrich egg. It's edges, forming the two-thirds complete oval, were laced with the patterns of the desert roses, giving a lacy, undulating, finished edge to the usually jagged edge of a geode. The finder was a fit young man, and a native of Arizona, just out enjoying the day and looking for rocks. After struggling to get my finds down the mountain. (okay, I had to have some help from Bob, my husband. I find this a shame-filled admission, as I believe firmly that we rockhounds should be able to carry our own rocks down the mountain!)

We all met in the parking lot, where you can camp for free, and shared stories and treasures. One of the four rockhounds, also from Tucson, said that boiling the desert roses overnight, outside, in Oxy Clean, would take off all the extra calcification and grime. Likely, I will try that method with my treasured pieces of chalcedony when I get home. It was a good day of rockhounding and an excellent site.



I was only wishing we could have some of our B.C. rockhound friends with us. If you ever get the chance to visit Safford, Arizona, you know a good spot to visit.

Happy Rockhounding All!

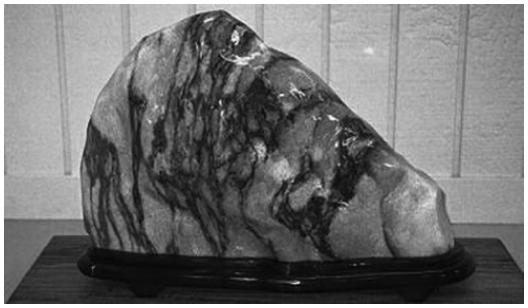
Suiseki

by Andrew Alden

Suiseki is the art of selecting and presenting natural stones. Where the geologist sees a stone as a riddle—a set of mineral and morphological clues to the history of the area—the devotee of suiseki sees a stone as a pure aesthetic experience, a mystery rather than a puzzle. Suiseki (from the Japanese words "water stone") are natural, unworked stones that suggest other natural shapes, such as mountains, waterfalls, islands, crags, and even whole landscapes. They may also be abstract. The art of suiseki appreciation has existed for centuries in Japan. Recently Westerners have taken up the art, and many American stones meet the highest standards. The California "island stone" below left is shown on a traditional sand dish and platform. The "mountain stone" suiseki below right, are presented in wooden holders.

Suiseki are commonly placed near bonsai pots, where the miniature landforms complement the miniature trees. But these "viewing stones" are also appreciated alone. The Chinese practice of collecting gong-shi, or "scholar's stones," is an interesting relative of suiseki.

The geologist beholding suiseki feels his mind twisted. The top stone, of course, owes much of its charm to schistosity, the middle one to brecciation and the bottom one (a gneiss) to foliation. But these geologic facts are irrelevant, probably a distraction, to the collector/artist. All we can do is keep our big words to ourselves and enjoy the pleasant shock of seeing the familiar—often rocks from our own field areas—in a different context.



IF SCIENTISTS WROTE NURSERY RHYMES

Original:

Jack and Jill went up the hill To fetch a pail of water. Jack fell down and broke his crown, And Jill came tumbling after.

Scientific

A research team proceeded toward the apex of a natural geologic protuberance, the purpose of their expedition being the procurement of a sample of fluid hydride of oxygen in a large vessel, the exact size of which was unspecified.
One member of the team precipitately descended, sustaining severe fractural damage to the upper cranial portion of his anatomical structure. Subsequently, the second member of the team performed a self-rotational translation oriented in the direction taken by the first member.

The McAbee Fossil Beds

Hello RockHounds,
I'm Dave Langevin, co-owner of the McAbee Fossil Beds Mineral claim.

This note is due to the fact that the General Public has been subjected to numerous one-sided info articles concerning the fossils found there. I will not give you opinions, as Mr. Hume's articles contain lots of these. I will give you some facts, and let you decide.

Mr. Archibald, (the scientist mainly involved) used to be a friendly, informative fellow with a love for fossils. He has collected many times over the years at the fossil beds. We collected together and had a good time.

Recently, he has been on a quest to stop me, and everyone else, from going to the fossil beds, in order that he would be the only person worthy of collecting there.

He did this once already with the Hat Creek Coal beds, where insects were found in the amber exposed there. B.C. Hydro, the owner of those coal claims at the time, eventually gave the claims back to the Government. The trench, where the amber was exposed, was then buried and lost for collecting amber forever. This actually back fired on Mr. Archibald, stopping him from collecting as well.

Many major Universities and Museums have large collections of McAbee material already. T.R.U. in Kamloops has the main type collection from the claim. The R.B.C. Museum in Victoria, U.B.C., Simon Fraser University, The Royal Tyrell Museum, the University of Alberta, The University of Saskatchewan, all have extensive collections from McAbee as well. These institutions have many times told me they do not want any more fossils from McAbee. They have no room and they have enough already. T.R.U. in Kamloops, does accept new specimens, but only the ones they do not already have.

Mr. Archibald has made a career out of studying the insects found at the McAbee beds. He has identified, no less than 250 new type insect species. He is now studying the paleo-environment of the time, using his insect studies to provide info. He is working out of S.F.U.

I do acknowledge that the McAbee beds are scientifically important. It is for that reason we support the scientific community in their studies.

We believe there is room for both worlds at the McAbee Fossil Beds. The two main scientific studies undertaken by the Provincial Government in the past few years, basically agree with this view.

This is not good enough for Mr. Archibald. He wants it all, his way, period.

For now, the Fossil Beds will remain available for collecting. Come and enjoy the thrill of finding something you have never seen before. (Rockhounds can relate to that!). And, if by chance you find something no-one has ever seen before, you will have the pleasure of donating it to T.R.U. wher'e your name will be forever remembered as its finder.

I hope this info help you out.

Dave Langevin

TYPES OF FOSSILE PRESERVATION

Actual Preservation: This is the rarest form of preservation, but possible when bacterial action and decay have been arrested. Animals have been preserved without any chemical or mineral alteration in bogs, tar pits or seeps, in tree sap(amber), or frozen in ice.

Permineralization:

The porous, bone matter of skeletons becomes filled in the soft tissue spaces with mineral matter that has been carried to it while dissolved in the water that percolates through the earth. This mineral material, precipitated out of solution, fills up such bone tissue without changing the original shape or substance.

Replacement:

This is the most common form of fossilization. In this method the original animal substance, that is the shell or skeleton, is dissolved and replaced by a different type of mineral matter. Silica usually replaces wood in this manner (petrified or opalized). In corals and shells the actual specimens, other than their soft parts, can be replaced in their entirety by quartz, calcium carbonate or various iron minerals. Such fossils are called pseudomorphs

Distillation or Carbonization:

Volatile elements or organic materials are distilled away, leaving only a residue of carbon to record the actual animal or plant. This is the most common preservation method for plant leaves. Molds, Casts and Imprinting: Each type is closely related, and their difference in some cases is a matter of semantics. For example, shells embedded in sandstone, or limestone can be dissolved by percolating ground water leaving a perfect cast by the original specimen. Later, percolating ground waters may deposit mineral substances in the mold creating an exact cast of the original animal.

Quartzsite

by Richard Busch
Fallbrook Gem and Mineral Society, Inc.; Fallbrook, CA

What Arizona town is named after a misspelled rock? You already know the answer, of course. It's Quartzsite!

My interest in Quartzsite was piqued many years ago while looking for interesting things on a map of Arizona. There, on the "left edge" of the state, where Interstate 10 crosses Highway 95, two annotations caught my eye. The first was the town of "Quartzsite" itself, which surely was a misspelling. The other was the historical artifact in "Quartzsite" labeled the "Hi Jolly Memorial." As a budding geologist, the misspelling irritated me; however, "Hi Jolly" intrigued me. I resolved to find out more about both.

It took me more than a decade to make it to Quartzsite for the first time. Now I go every year. "Hi Jolly" was another matter. I learned about him many years earlier - from Randy Sparks' song. But I'm getting ahead of myself. Let's start at the beginning.

The town of Quartzsite, Arizona wasn't always named "Quartzsite." Quartzsite began life in 1856 when Charles Tyson settled there and built a single, fort-like, adobe building known, appropriately enough, as Fort Tyson. After Tyson located a reliable supply of water, the "fort" was renamed the Oasis Hotel and the settlement, now called "Tyson Wells Stage Coach Station," became a stop on the Ehrenberg-to-Prescott line. Tyson's Wells, as the town came to be known, flourished until the mid-1890s when it was abandoned as the stage lines ceased operation.

The discovery of gold and silver in the areas surrounding Tyson's Wells led to a small mining boom in the late 1890s which, in turn, revitalized the town. Due to the mining activity and the widespread occurrence of quartzite rock in the area, Tyson's Wells was renamed Quartzite. Unfortunately, a clerical error by the local Post Office resulted in the name being misspelled as "Quartzsite." The error was never fixed.

The town of Quartzsite, Arizona wasn't always named "Quartzsite."

Turn-of-the-century Quartzsite was a mining supply center. The town sported a hotel, a general store, a barber shop, a Chinese restaurant, and a handful of saloons in addition to other amenities. Miners came from Ehrenberg, La Paz, and nearby mining camps to resupply. As was to be expected, Quartzsite's success was closely related to the quality and quantity of the gold and silver ore in the surrounding area. High quality ore was not plentiful and, as a result, Quartzsite's life as a boom town was short. By 1900, less than 20 people lived in the town.

One of the major factors affecting the productivity of the mining operations was the lack of water at the mines. In his article "Gold Deposits Near Quartzsite, Arizona," Edward Jones states that water packed from La Paz to the placer deposits brought $5 a gallon during the rush period and that gold was recovered entirely by dry washing. Jones describes the dry washer machines used during this time:

"The machines used in 'dry washing' are of several types, but probably the most efficient is that of the 'bellows' type. In capable hands 6 cubic yards of material can be handled by a machine of the largest type by one man in 8 hours, and the capacity of those of the smaller types, more commonly used, is 2 yards a day.

"The machine consists of a wooden framework to which is attached a coarse screen, hopper, crank and gears, riffle board, and bellows. The material is passed through a screen having a quarter-inch mesh into a hopper having a capacity of 1 cubic foot, and then passes on to the inclined riffle board, 10 by 20 inches, which also has a screen surface with wooden riffles at right angles to its length. The pulsations of the bellows keeps the material in motion. Underneath the riffle board is a muslin cloth stretched over the air chamber.

"The power for operating the bellows is a crank on geared wheels; and, as the material passes over the riffle board, the heavier particles are intercepted by the riffles and drop through the screen on to the cloth, while the waste material passes over the end of the board or is blown away by the air blast. The gold is obtained by panning the concentrates.

"It is apparent that the gold-bearing wash must run well above 50 cents per cubic yard in order that the operator may make miner's wages. Sporadic placer mining has been done with this machine by the miners at Quartzsite, but because of the variability of the gold content of the wash and the limitations of the machine, no large areas have been thoroughly or continuously worked."

By 1960, only 50 people lived in the town on a permanent basis.

Quartzsite's population fluctuated erratically from 1900 to about 1960. Election records reveal a population from as few as 14 people to a few hundred (during the depression) in the 60-year period. By 1960, only 50 people lived in the town on a permanent basis.

During the winters though, the population of Quartzsite swelled to 1,500 or more as travelers from colder areas of the nation flocked to the town to weather out the season. A number of permanent residents recognized the economic advantages of establishing Quartzsite as a winter haven and chartered the Quartzsite Improvement Association (QIA) as a means to organize themselves. The QIA decided that a managed activity was needed to capitalize on the influx of winter visitors and, after due deliberation, decided to host an annual gem and mineral show.

A local resident of Quartzsite, Sig Sigurdson, donated four acres of land upon which a civic center was built and upon which the QIA Pow-Wow (the name given to the gem and mineral show) was held. From the 1,000 people who attended the first QIA Pow-Wow in 1967, attendance grew steadily over the years: 12,000 in 1969, 200,000 in 1974, and 500,000 in 1975. In 1978, just 11 years after the first Pow-Wow, attendance topped one million!

Today, the Quartzsite experience is one that shouldn't be missed. If you've never before driven to Quartzsite during the Pow-Wow, you'll be amazed to see several thousand RVs camped across the desert as you approach the town. Once in the town, you'll notice additional thousands of dealers selling gems, minerals, jewelry, and other handcrafted merchandise. It all begins on the first Wednesday in February and lasts about a week.

Oh, yes; I almost forgot. What about "Hi Jolly" and his memorial? The memorial honors the Arabian camel driver Hadji Ali who escorted a consignment of camels in an Army experiment in 1856 to determine if the animals could be used successfully in the American southwestern desert. Hadji Ali was nicknamed "Hi Jolly" by the soldiers.

The camel experiment failed.

Horses and cattle, unaccustomed to seeing camels, became spooked in their presence and frequently stampeded. The Army eventually turned the camels loose in the desert and, after his death, Hi Jolly was memorialized with a small monument. The monument is located in Quartzsite, in the town cemetery just off Main Street. It consists of a 6-foot-high pyramid, built with chunks of ore minerals, topped with a metal silhouette of a camel. A sign nearby tells the story of Hi Jolly and his camels.

References

American Automobile Association; Arizona-New Mexico Tourbook; 1993.

Jones, Edward L., Jr.; "Gold Deposits Near Quartzsite, Arizona;" Contributions to Economic Geology, 1915, Part I; Bulletin 620; United States Geological Survey; 1916.

Sparks, Randy;

"Hi Jolly;" Ramblin'; The New Christy Minstrels; Columbia Records; CK 8855.

Walz, Robert J.; "A Brief History of Quartzsite;" South Bay Lapidary and Mineral Society Agatizer via Crystal Ball; Virginia Nolan, Editor; January 1994.

Hints 'n Such

Wipe a piece of chalk over your jeweler's files. The chalk keeps the file from clogging and you can blow the chalk out. Silversmiths draw your jeweler's saw through a hunk of old candle wax or beeswax. It will coat the blade and you can saw faster.
Source: Golden Spike News, 5/2004, via The Nugget, 11/2008

An aluminum scriber is often used with a template to outline stones. This same scriber can give you an idea as to the hardness of a particular stone. If you can see the mark but have to look carefully, the stone is about 7 Mohs. If the mark is very bold, the stone is about 5 Mohs. If the mark cannot be seen, the stone is more than 7 Mohs.
Source: by Dug Duggel, Ft Lewis Rock Club News via The Rockcollector, 4/2005

Tourmaline and garnet both chip. Grind carefully on well-dressed wheels. Both stones are fairly heat sensitive. Sand wet. Linde A on leather is a good polishing combination for these gems.
Source: Skagitt Gems, 1/2001, via Calgary Lapidary Journal, 4/2008

Mineral Oil has many uses. It is fine for preserving borax crystals from hydration changes. It makes varisite a deeper green and improves the appearance of fluorites and calcites.
Source: The Memphis Archaeological Society via Rockhound Rambling, 12/2005

Good old Elmer's Glue mixed 50/50 with warm water works wonders at maintaining that "wet look" on all types of materials, including most shells. Just brush it on and let it dry if it gets dusty or dulled simply soak it in warm water and reapply. I learned this technique from one of my mentors when I wanted to display some petrified wood that looked great when wet but looked like a plain old rock dry.
Source: Clyde Gilbert, Oct 24, 2007, at Yahoo Groups, Rock Collecting and Field Trips

Use tin oxide dry on leather to polish fire agate - polishes in a heartbeat! Heat causes the top surface of the stone to flow, making it glassy.
Source: The Pegmatite, 2/2004, via Rockhound Ramblings, 5/2007

If you have an item that has been epoxied incorrectly, it can be taken apart by soaking it in household vinegar. It works and is inexpensive.
Source: Calgary Lapidary Journal, date unknown, via Rockhound Rambling, 11&12/2008

If you have a lot of dopping to do, a good way to keep stones at an even temperature is in an electric frying pan set at 200-250 degrees.
Source: Rolling Rock Club newsletter, original date unknown via Rockhound Rambling, 11&12/2008

Moonstone will cleave. Be sure to grind it on a smooth wheel. It polishes nicely on felt with cerium oxide.
Source: Skagitt Gems, 1/2001, via Calgary Lapidary Journal, 4/2008

Need two cabs of exactly the same size? Glue two slabs together with paper between them. Cut to size. Separate by soaking in water.
Source: Rockhound Rambling, 12/04, via Quarry Quips, 2/05

Summer Camp 2010:

Overlander Stopping Place

August 2 - 7, 2010

Telephone: 250-677-4392,
Toll free: 888-893-1628,

overland@mercuryspeed.com

P.O. Box 66

Little Fort, BC V0E 2C0

Known as the Hub of the North Thompson, the small community of Little Fort is located in the North Thompson Valley region of British Columbia, Little Fort is west of the Thompson River on the Yellowhead Highway 5, at the junction with Highway 24, between Barriere and Clearwater.

OVERLANDER STOPPING PLACE

4 km south of Little Fort, 85km north of Kamloops. Grassed & treed sites; pull throughs; full & partial hookups; firepits; laundry; sani-station; rock & gift shop; washrooms, coin showers; toilets; heated pool; horseshoe pit; pay phone; playground; Cash, DC,MC, Travellers Cheques, VI;

40 Sites - per vehicle $17-28

LOST HORSE MOTEL

137 Hwy 24, PO Box 41,
Little Fort, VOE 2CO
Junction of Hwys 5 & 24
1 hr north Kamloops. Single, double & queen beds; kitchens; combination baths; satellite TV; phones; wireless internet access; Smoking Policy: non-smoking rooms available; Cash, DC, MC, Travellers Cheques, VI; Pet Policy: pets allowed, call for details; CP: 5 days.

250-677-4288,
Toll Free 866-567-4677

For more information visit:
www.littlefort.ca

5 Units - $55-75; Add'l 5; LS Rates

THE RIVERMOUNT MOTEL

& CAMPGROUND

4462 Hummingbird Rd Hwy 5 S,
PO Box 68, Little Fort, VOE 2CO
4 km north of Little Fort on Hwy 5. Sleeping units; Combination baths; satellite TV; RV parking campsites; flush toilets; showers; firepits; firewood; picnic area; sani-station; licenced restaurant; home cooking;

Smoking Policy: smoking in designated areas only; Cash, DC, MC, VI; Pet Policy: pets allowed, call for details; CP: 3 days.

250-677-4477, Toll Free 866-816-7912,
hummingbirds@mercuryspeed.com

8 Units-$60-75; Add'l $7, 13 Sites - per 2 persons $14-22

Accommodations:

For accommodations information in Clearwater or Barriere Check the BC Accommodations Guide.

The First Summer Camp

Empire Valley 50 years ago

From the Canadian Rockhound Nov. 1960
Reported by Beth Whittaker.

The first summer camp of the Lapidary Rock &, Mineral Society was held August 6th to 10th in Empire Valley with 31 people participating. The jumping-off point was the town of Clinton, From there, campers in cars carefully packed with extra gas cans and provisions for five days in the bush, set out west-ward across the rolling grass and lake country towards the Fraser River. For the most part this section of the road to the edge of the Fraser Canyon was good but dusty. There it changed from gravel to dirt and grew progressively narrower and more tortuous though still navigable by all cars in fine weather.

The scenery at the Fraser defies adequate description, for here the river has cut down through the rock leaving remnants of former flood plains stranded at various levels on the valley sides. It presented a magnificent picture. From the high plateau the road wound down to the bridge at the bottom of the canyon and we knew we had left Clinton 51 miles behind us. Crawling up the west side of the canyon another mile, the Empire Valley -Gang Ranch road junction was reached, and in another 14 miles, the Bryson ranch where we paused to greet the Bryson family before continuing a further 8 miles to the Higginbottom property and our base camp.

A small stream trickled down the western edge of the meadow and soon a series of small dams were constructed to provide cooling pools for food and drink. Better drinking water was available at a spring about two miles up the road. The advance party consisting of Jack Sankey, Brian Pinkerton and Howard Pearsons had already set up "conveniences". Aside from the fact that we couldn't light campfires because of the extreme fire hazard, we were very comfortably camped in a very pleasant setting.

It presented a magnificent picture. From the high plateau the road wound down to the bridge at the bottom of the canyon and we knew we had left Clinton 51 miles behind us.

We soon found that our fellow rockhounds came from such widely separated points as Prince Rupert, Penticton, Tappen, Campbell River, Lillooet and Maple Ridge with the greater Vancouver area strongly represented.

Our first rock hunt was held the following day. Setting out in a caravan, we followed the road westward a winding 4 miles to the thunder egg location within sight of Black Dome Mountain.

The weather being dry, the road was adequate for most cars although one switchback required a little maneuvering. The location itself was an old bulldozer cut just off the road. Digging was easy, for there was an abundance of thunder eggs and masses of opalized and agatized material a foot or so beneath the surface. Much of this was brittle and easily broken, but full packs were quickly realized by even the most selective diggers. Some of the group went down a short distance to a lower road cut we had passed on the way up and dug for red and yellow jasper and jasp-agate.

On the return trip to camp we visited a family living by the spring and were most interested to see the variety of rocks, chiefly agates and jaspers that they had found in the vicinity,

The following day a rock hunt was held on the hill immediately above the camp» called the perlite hill because it is a perlite claim. Permission to hunt there had been given us by the owner. Some common Opal and banded agate were found, Howard Pearsons happened on a pocket of thunder eggs farther up the hill, but no one else was able to emulate his success. By the next day a number of the campers decided they had enough rock and departed. The remainder revisited the perlite hill except for a small party headed by Brian Pinkerton who explored a hill to the south-west of the camp and found a few agate nodules for the most part of the small and clear variety.

The camp closed up the following day. The return trip was without incident except that Mr. Lemke stopped and picked up red-skinned agate nodules on one of Bryson's hay meadows.

The rockhound camp was a successful venture and deserves to be repeated. Socially it was more than successful as it served as an opportunity for members from widely

separated clubs to meet and exchange notes and experiences. Besides that we just plain enjoyed ourselves and each other's company. At times this became downright hilarious and a large amount of film went to record it all.

Although the rewards in terms of rocks may not have measured up to everyone's expectations, we all came away with heavy loads consisting mainly of thunder eggs. As in a lot of other places, the really good specimens are relatively few, but we did see plenty of indication that the area holds a variety of interesting material. The rugged nature of some of the terrain, the reluctance to expend our marginal gas supplies and the hot weather conspired to hold us back from truly exploratory expeditions. In this sense only, the original intentions of the camp were, perhaps, not completely fulfilled. Then again, to the majority, the whole trip was an expedition into new and interesting territory.

...the majority, the whole trip was an expedition into new and interesting territory.

Much credit is due to Jack Sankey for the development of the summer camp project and for piloting it through to its successful realization in the Empire Valley Camp,

Historical Amber

How to Make Amber

This page comes from Eugenio Ragazzi, a Professor at the University of Padua in Italy.

A 'recent' book, published in 1991 (author Bianca Silvia Tosatti, see reference at the bottom of this page) discusses an ancient manuscript, named "Manoscritto Veneziano" (Venetian Manuscript) found in the British Library, London, written around 1424-1456. It is in ancient Italian and partly in Latin.

The original frontispiece has hand-written words in *ancient* English (added more lately, probably in the 17th century): "An anchant writen Booke" and "Receitts & directions in curing diseases, dying, making glasse, sope, etc., most part in Italian".

Interestingly, a few lines present: "A fare ambro", that was translated in ancient English "To mak Amber". There is an accurate description of a method to prepare a "synthetic" material resembling amber!

Eugenio has translated the recipe (written in ancient Italian) as follows:

Take the albumen of an egg, an put it in a glass. Then take a piece of gut of an ox or of a pig; clean the gut and turn it inside out; put the albumen inside and tie the gut; boil for a little, then take out the albumen that will be solid, cut it in the shape you want, grease with linseed (flax) oil and expose to the sunlight. Grease again and expose to the sun for 6 days. The more linseed oil you add, the more the "amber" will become coloured; the more it stays under the sunlight, the more strong it will become.

It's a very strange method to make amber, isn't it? (alternative to the "amber candy" way!!)

I have read also of another very similar method reported in an article appeared in the Italian scientific Journal, La Chimica e l'Iindustria L Reti, "Le arti chimiche di Leonardo Da Vinci", XXXIV (12), pp. 721-743, 1952. This goes over a review of the chemical arts of the famous ancient scientist Leonardo Da Vinci.

The Codex in which there is Leonardo's recipe for making amber is "Codex Forster III, fol. 33v. (dated 1490-1495) Leonardo wrote his recipe (looking at the date, Leonardo's recipe might have been copied from the "Venetian manuscript"); it is shorter than the other, but again reports the use of egg albumen inserted into a piece of gut and boiled. He added a tip: "You can paint the material, then you may add other albumen and repeat the procedure". (Who knows that in this way one would have embedded also some insect inclusion!).

The exact recipe in Italian written by Leonardo: "Per fare ambra adiasparata, togli chiara d'ovo e falla mettere in un budello e la bolli; indurita che e' dipingi le macchie, poi la rivesti d'altra chiara e rimmetti in un maggior budello". My word-for-word translation: "To make amber "adiasparata(?)", take the white of an egg and put in a gut and boil; when it is hardened, paint spots, then cover with other white of egg and put again in a larger gut". The word "adiasparata" is not modern Italian and I'm not sure what it does mean; it may be "like jasper"?

I also found in the same review, a quotation of an "Amber varnish" ("Vernice d'ambra") suggested by Leonardo Da Vinci in another Codex, called Atl. 79 r.b. (written about in 1490). It Probably is the type of varnish for painting. No further details were presented in the article.

An Introduction and History of Tourmaline

by Rona Johnston, A.G. (C.I.G.), Winnipeg

All stages of imaginable colour possibilities are captured by this gemstone which, in addition to white and black, embraces every hue to be found in the spectrum, and not only in pure tones but in all fine nuances of innumerable shades, transition, and mixtures. Should a collector set himself the task of amassing all the colorings of tourmaline, he would find a lifetime insufficient to incorporate the thousands upon thousands of ever differently tinted specimens into his collection.

Tourmaline, is one the most fascinating of the gemstones species, incorporating colours from black to vivid greens, exhibiting unusual bri/tri colour features. Unlike it's more familiar gem members, corundum and diamond, little myth or romance has attached itself to this stone. Though it was named and known as "tourmaline" as early as the 1700's, it's identification as an actual species was only recently. According to R.V. Dietrich, the name "tourmaline" appears to have been derived from the Sinhalese term turmali, which was applied by the ancient Ceylonese merchants to mixed gemstones of unproved identities.

Tourmaline was first discovered on the Isle of Elba (hence the name Elbaite which is still used). This nomenclature is presently used to cover the majority of tourmaline colourings including pink, green, yellow, violet, colourless, etc. Liddicoatite is often used to describe Elbaite material. Black/brownish material is known as "Schorl", red as "Rubellite", blue as "Indicolite", green as "Verdelite". Dravite and Uvite (black/brown/dull greenish) are rarely of gem quality and generally less colourful make-up. Buergerite is a bronzy brown. Achroite is the colourless variety. Nowadays, coloured tourmaline is referred to by descriptive adjectives. The bi/tri-coloured specimens have always attracted attention, with the tri-coloured described as "watermelon", denoting the various shades of pink, white and green. It would appear that tourmaline was used early on for carvings. Dietrich3 guestimates that it's use as a decorative stone may be traced back as far as 27 BC to 395 AD. It's unusual colouration, as well as it's attractive crystal matrix configuration made it a prized collectors' item. The Dutch were aware of tourmaline as early as 1703 and utilized it's magnetic qualities to remove ash from meerschaum pipes. Dietrich relates a story dating back to 1780, where the Archduchess Marie-Anne of Austria presented a sizeable tourmaline specimen (in it's original crystallographic matrix) to the Duke Charles of Lorraine for this collection.

So, when did tourmaline become widely known as popular gemstone, with unique features? This is difficult to answer. However, one of the first proponents, George Kuntz singled out this stone early on in his career as one with interesting possibilities. Gems & Crystals: From the American Museum of Natural History4 describes George's introduction to the stone. Apparently in 1876, a young man walked into Tiffany's (where the young George Kuntz was employed) and showed Charles Tiffany a beautiful green stone with strong pleochroism. As the story goes, Kuntz was smitten by this obscure gem and fell in love. It certainly true that Mr. Kuntz did much to actively promote the use of tourmaline in jewellery and as a collector's object d'art.

However, it was during and after the Second World War, that the demand for tourmaline became significant. It was used in the production of pressure sensitive gauges for submarine instrumentation as well as other war equipment. After the Second World War, German immigration was strong and steady in the Minas Gerais State (Brazil), where some of the largest tourmaline mines were discovered. These immigrants brought with them close ties to Idar-Oberstein (a major gem fashioning centre), a familiarity with tourmaline, as well as skills in goldsmithing and jewellery fabrication. It would appear that these historical developments, i.e. the need for quartz/tourmaline crystals during the war and their subsequent discovery in the state of Minas Gerais, created a receptive environment for the introduction/production of tourmaline as a popular jewellery gemstone in North America.

General Physical Properties:

As mentioned, tourmaline's unique features make it useful as an industrial material as well as popular in jewellery. Tourmaline is a complex Aluminous Borosilicate. It is known for strong pleochroism and it's myriad of colours. Crystallizing trigonally, it has a refractive index in the 1.624-1.644 range (Uniaxial negative) and a specific averaging at 3.03. Hardness varies somewhat, but generally occupies the 7 - 7 1/2 range. Elbaite crystals are recognizable by their "prismatic form, typically elongated like pencils, with cross-sections that range between hexagonal and trigonal".6 Two-phase, elongated,

irregular inclusions can be observed in red, green and blue material. Tourmaline has also been found in minerals such as apatite, fluorite, plagioclase, rutile, zircon (to name a few) as material in inclusions.

The colour of this remarkable gem is primarily the result of substitutions of transition elements for other metals. As noted, tourmaline has the largest colour representation in the gem world.

With stones spanning the entire colour spectrum from black to pink. Few generalities relating to colour apply, though pink is usually due to the presence of manganese, blue and green to ferrous oxide and iron. Chromium or Vanadium may also be present in the colour green. the formula X Y3 z6 B3 Si6 O27 (O7, OH, F) 4 has been generally accepted as encompassing all elements found in the tourmaline group. Heating and irradiation have been used to improve/create colour change, however these methods have not always produced permanent results.

Colour zoning occurs in most multi-coloured tourmaline. At one time, it was thought that the geographic location determined the precise colouration of the material. However, this is no longer a hard and fast rule. Colour zoning may be an obvious gradation as in the "watermelon" material, where the external zone is very different than the internal zone.

Dietrich7 states that a common occurrence for Elabaite crystals is "green near and including the analogus end, pink, near and including the antilogus end and early colorless through an intervening zone."

Tourmaline, as noted are strongly pleochroic and when viewed along the prism axis the colour is deeper and may appear different from that observed through the side of the crystal. Lapidaries use this information when cutting gem material and can excercise some control over the appearance. Gems cut from crystals with great depth of colour should be cut parallel to the c (prism axis), whereas those with pale coloration, may exhibit acceptable colour if cut with the table perpendicular to c.

At one time, it was thought that the geographic location determined the precise colouration of the material.

Rare Alexandrite-like tourmaline have been found. Their daylight colouring is yellowish/brown green turning red under evening light. Chatoyancy is a feature in some tourmaline and is the result of crystals growing fluid-filled tubes to the long, prismatic axis.

Optical & Electrical Properties

Richly coloured tourmaline plane-polarizes light with an effect that is immediately visible under the microscope. Dietrich notes that a number of individuals such as Du Bois-Reymond & Schaefer (1908), Seebeck (1813), and Marx (1827) all were familiar with this quality of polarization. Marx developed tongs which had two thin slices of tourmaline cut parallel to c axis and mounted so they would polarize and reflect light. These tongs were utilized by the jewellery trade to distinguish between isotropic and anisotrophic gem material.

Tourmaline's electrical properties have been found to be "directionally dependent of dielectric constants."9 This material possesses only singular polar axis of symmetry. Tourmaline was observed to conduct effectively across it's long axis (c). When tourmaline crystals are heated, a positive charge develops at one and a negative charge at the other. These charges reverse themselves when the crystal cools. This is referred to as a pyroelectric property. A piezoelectric charge can be developed if pressure is applied to the ends of the crystal. Schorl (black tourmaline) from Sri Lanka and Zaire show no pyroelectricity and only weak piezoelectricity.

Pyroelectricity was observed as early as 1703. We know this as records existing indicating that the Dutch referred to the stone as the aschentrekker' or ash drawer. Dietrich states10 that Jacques and Pierre Curie identified tourmaline's piezoelectric ability during studies conducted in the latter part of the 1800's. True and false pyroelectricity was noted for this material during the experiments. False pyroelectricity is actually piezoelectricity as it is caused by mechanical application of stress rather than stress due to natural forces.

Tourmaline has been used as a calibration standard for the manometer (because of it's piezoelectricity). It was also used as a standard to check possible effects of water soluble boron in mixed fertilizers.

Formation:

Tourmaline is found in igneous and metamorphic rocks "as an accessory mineral but rarely of gem quality". The most common occurrence of gem material is found in granitic pegmatite dikes and is usually accompanied by topaz, kunzite, beryl, etc. The term

"pegmatite dikes" was coined by the French Mineralogist, Hauy, to "describe geometric intergrowth of feldspar, quartz, and mica that petrologists today call graphic granite."

Pegmatite is a "dikelike" body of once molten rock, which usually contains large crystals as well as rare minerals. "Gem minerals are the result of the incorporation into the pegmatite of rare elements that are unable to fit into the crystal structure of quartz, feldspar, and mica that make up the bulk of the pegmatite."

These rare elements have been identified as beryllium, lithium, boron, manganese, phosphorus and fluorine. Pegmatites can be classified into three types - simple, zoned and complex. Simple pegmatite consists of the elements already mentioned. Zoned includes these elements and also exhibits distinct zoning (tourmaline). Complex pegmatite share all these characteristics in addition to experiencing significant alteration. This situation produces extremely large minerals, sometimes several meters in size.

Granitic pegmatites occur all over the world, according to research sources. However, only a few contain, good quality, gem-bearing material. Primary sources for tourmaline are the U.S.A. (Maine & California); the Ural Mountains; Mozambique; Nigeria and the Afghanistan. The most important sources are found in South America, specifically in the state of Minas Gerais (Brazil). Authorities such as Keller and Dietrich note that this area has yielded the greatest amount of gem-bearing material. Mining the pegmatitic belt is very difficult due to erosion and weathering of the surrounding area. Most mining activity is done by gamperios, itinerant miners who use picks, shovels and other hand-held tools. Gamperios are licensed and may work on private or publically owned land, as long as permission is given. The worker is expected to pay anywhere from 10 to 50 percent royalty to the landowner.

Major Producing Mines In South & North America:

Though tourmaline has been found in parts of Africa, the Ural Mountains and other European locations, however some of the most exciting finds have been established in North and South America. The largest, gem-quality tourmaline mines have been discovered in Brazil, in the State of Minas Gerais. The most significant localities are the Cruzeiro, Golconda, Virgem da Lapa and Itatiaia (Jonas) mines. The Cruzeiro mine is famous for its consistency of quality and the proliferation of superior material. Tourmalines from this area are excellent examples of complex zoned pegmatites.

The Golconda district boasts three mines, producing bi-coloured

pink/green tourmalines. Mining in this area is heavily mechanized. Other gems found are Tantalite, Albite, Muscovite, Garnet and Beryl. The mines in this district are famous for producing millions of carats of find blue-green, green and rose-coloured material, the majority of which was exhumed from 1961-1967.

Virgem da Lapa is one of the most famous pegmatite sources in all of Brazil. During the 1970's yield was great, producing extraordinary tourmaline as well as aquamarine and blue topaz crystals.

Itatiaia (Jonas) mine is another significant occurrence. The Jonas mine is known for it's fine cranberry coloured material and has produced crystals of phenomenal size (several meters).

North America has important in recent years as a influential centre of tourmaline production. Gem quality stones were discovered early in the 1800's. George F. Kuntz14 describes the geological expedition of Elijah L. Hamllin and Ezekial Holmes, in 1820 which led them to an accidental discovery of a fine, transparent tourmaline crystal at Mount Mica near, Paris, Maine. During the latter part of that century, mining operations yielded beautiful green and blue material.

Though gem material was discovered in the 1800's, it wasn't until 195915 , that new mining activity in Oxford Country (Maine) and San Diego County (California) resulted in the production of vast quantities of commercially acceptable material. In 1972, the Dutton Mine in Newry, Maine established itself as one of the largest finds on record ever and for a brief period of time, became a world-source of superior quality red and green tourmaline.

According to John Sinkankas, (author of Gemstones of North America), the quality of the material is superb who notes that the green colour is "nearly unique". The Dutton Mine in particular is famous for it's "apple-green" material, similar to the green and blue-green crystals from Southwest Africa.16 The re-opening of the Tourmaline Queen Mines at Pala, in San Diego County has yielded some exceptional pink and blue material.

Another notable find in the 1980's was Paraiba, Brazil which yielded some new and atypical offerings. Tourmalines of a medium bluish-green to medium blue-green were found as well as dark violetish-blue and purple.

Fashioning:

The majority of fine-cut tourmaline is faceted, with the exception of chatoyant material which is cut en cabochon. Tourmaline is a Type II stone (under the North American Colour Grading System), which indicates that it is usually included.' Prevalent cuts are the table-cut, low step-cut, mixed-cut (modified

brilliant) and the trap cut as well as the free-form cut. In addition to be used in jewellery and as an industrial aide, tourmaline has been carved by artists into various shapes representing nature, etc. It is not uncommon for cracks in tumbled/carved pieces to be completely filled in with wax or plastic to improve their appearance.

Will green tourmaline perhaps become the rival to Emerald?

Jewellery Gemstones:

Coloured tourmaline has been fashioned into bracelets, pendants, rings, earrings and various other jewellery accessories. Of the entire array of colours, green has become extremely popular. Apart from the variety and beauty of tourmaine's green colourings, price and carat size have probably played a role in the demand for this particular colour. Equivalent size/quality Emerald is costlier and not as readily available.

In South America, where the majority of gem-quality material is still found, green tourmaline is referred to as the "Brazilian Emerald". Church leaders here wore this stone as a symbol of power and authority. The brighter, grass-green shade rivals Emerald for desirability of colour and has a higher clarity grade. The quantity of green stones which were mined in the early days of the Portuguese colonization and sent to Portugal mistakenly as Emerald will probably never be known.

Like the infamous Black Prince Ruby (which is actually a spine), coloured tourmaline has often been identified as green Beryl or coloured Corundum, among other available gem material. Dietrich notes that some famous and exceptional examples of this stone do exist however.

Catherine II of Russia was the proud owner of a 255 carat, red, grape-shaped tourmaline pendant. In recent times, stones such as the 50.59 carat, blue-green, heart shape from Mount Mica have made their way into the hands of various museums. The Governor of Maine in 1972, was presented with a multi-coloured tourmaline neck-piece, composed of stones from the Newry, Maine Mine, with the centre stone weighing 24 carats.

As mentioned, tourmaline crystals have long been prized by collectors and museums as precious and unusual examples of gem crystal configurations. Individuals such as George Kuntz, Richard Liddicoat and John Sinkankas have done much to popularize this stone.

Gemmologists and jewellers of the 1990's are better acquainted with the wide and rich assortment of tourmaline colors and have at their disposal a plethora of tests to use, when distinguishing tourmaline from other similar coloured minerals. Testing which is commonly done includes Refractive Index, use of Spectroscopy, Specific Gravity Testing as well as Microscopic Observation of features such as tourmaline's strong pleochroism.

Tourmaline's Future:

The most recent decades have seen a greater appreciation of this remarkable stone in North America. Green, blue, red, as well as bi/tri-colour stones can be found in quality jewellery shops alongside Diamond, Ruby, Coloured-Garnet, Tanzanite and other visually stunning gems. Will green tourmaline perhaps become the rival to Emerald? Will the other colours of it's family become serious contenders with their better known rivals, for the attention of the buying public. It's too soon to say. One thing for sure, though, tourmaline will continue to thrill jewellery and gem collectors for years to come, with it's own special fascination and mystique.

References

1. Gubelin, Dr. Edward, C.G., F.G.A., The Color Treasury of Gemstones (Thomas Y. Crowell Company: 1975), Pg 96.

2. Dietrich. R.V., The Tourmaline Group (Van Nostrand Reinhold Company: New York: 1985), Pg.1

3. Dietrich, Pg. 191

4. Sofianides, Anna M. & Harlow, George E., Gems & Crystals from the American Museum of Natural History (Simon & Shuster: 1990), Pg. 89

5. Keller, Peter C., Ph.D., Gemstones and Their Origins (Van Nostrand Reinhold: New York: 1989), Pg. 60

6. Gubelin, Pg. 60

7. Dietrich, Pg. 122

8. Dietrich, Pg. 185

9. Dietrich, Pg. 165

10. Dietrich, Pg. 166

11. Keller, Pg. 57

12. Keller, Pg. 57

13. Keller, Pg. 66-68

14. Kuntz, George F., Gems & Precious Stones of North America (Dover Publications Inc: Second Edition: 1968), Pg 71-74

15. Hurlburt, Carl Jr., & Kammerling, R.C., Gemmology (John Wiley & Sons Inc.: New York: 1991), Pg. 263

16. Sinkankas, John, Gemstones of North America in Two Volumes - Volume II, (Van Nostrand - New York: 1976), Pg. 82- 91

Scrimshaw

by Paul Milo

Scrimshaw is a traditional art form that has as its foundation the Yankee whaling fleet of 150-200 years ago. The folk art of these early scrimshanders provides the cornerstone of much of the scrimshaw created today. The traditional design and technique show nautical designs that follow the course of its sea faring origins. Marine mammals, wharf scenes, battles at sea, and whaling episodes are common motifs in this school of design.

Simply put, scrimshaw has come to mean the engraving or carving of ivory or bone. Another opinion says, "scrimshaw is the term used to describe the various implements, both decorative and functional crafted by these sailors of the American whaling fleet."

Since there is no longer an American whaling fleet in existence, does that mean there is no longer scrimshaw being made? No! Contemporary scrimshaw is most truly represented by the traditional artists following directly in the whalers footsteps in capturing the nautical scenes.

What about other artists that use the same art form to create big game animals, birds, or those specializing in fantasy themes... wizards, myths, sea serpents, etc. Are none of these talented artists creating scrimshaw? According to this narrow position, no, they are not. What they are creating might be called engravings as opposed to SCRIMSHAW, the traditional nautical artform.

There are so many scrimmers doing both types of the art that I call it all scrimshaw. If you enjoy it, or its a fine piece of art, and it is well done, who cares what category you put it under.

I'm from the west. I do western scenes, animals, birds, or anything that appeals to me. I do scrimshaw. I am a scrimshander.

How To Do Scrimshaw

Most of the natural materials, ie. elephant ivory, walrus tusks, whale ivory, mastedon ivories, are on the endangered species lists, so stay away from these. Why? Simply put, it's usually against the law to sell and buy. Although on occasion people selling may have permits. So you have to look for alternate materials: cow horn, antler, soup bone, ivory nuts, shell, plastic and stone. I use a lot of plastic cutting board - "Korion".

If you are not artistically inclined, you will need a picture. You can build up a collection by watching the newspapers, ads in newspapers, greeting cards, postcards, any picture that appeals to you.

The picture is transferred to the material being scrimmed by tracing with carbon paper or the dot method. It is then sprayed with a fixitive like Myston to prevent the picture from being wiped off as you work. It also helps fill any scratches you have missed when polishing.

You then use a sharp point to scratch the picture into the surface of the material. Shading is accomplished by a series of parallel lines, the closer the lines the darker the shading. Lines of varying depth also give you light to dark. To see how you are progressing, at varying times, black ink (India Ink) is placed in the engraved lines. More lines may be needed to darken areas for greater shading. Excess ink can be taken off with a damp cloth. Most of us "spit on a kleenex". The whole picture can then be cleaned with alcohol, although I find this lightens the picture too much. The whole picture is then polished with trewax.

Because every scratch in the surface of the material will take ink, it is important that the surface be scratch free. To smooth the surface files will be needed to take the rough outside ridges of the antler down. 400 grit abrasive papers are then used to take the file marks down. 600 grit is used to pre-polish, followed by Zam on a

cotton buff. The final high polish is done with white rouge on a cotton buff.

For a scribe I use a pin vice with a commercial steel sewing machine needle. This is kept sharp by fine honing. If your needle isn't sharp your lines will fracture or chip leaving you with fuzzy lines.

The other tools used for engraving are old steel gramaphone needles, carbon steel points, drill steel, exacto knives, anything with a sharp point. India ink or colored ink is used to fill the engraved lines.

Shading is done by two methods:

Stipple Method:

The use of dots instead of lines.

Advantage:

- Easy to control
- Unlimited texture and shading can be accomplished

Disadvantage:

- Time consuming

Line Method:

A series of parallel lines are cut to produce shading.

Advantage:

- Lines easily follow the flow of the picture
- Large pictures can be done quicker
- Less tedious, thus less fatigue you don't tire as quick

Disadvantage:

- Lines may chip when they cross
- Shading is more difficult to accomplish

Reference: The Second Scrimshaw Connection by Bob Engrath

A Yellowknife prospector has staked claim to an outcrop of rock more than 4 billion years old – the oldest on Earth – and he's got some for sale

Earth's Oldest Rocks: Get 'Em While You Can

A Canadian prospector has registered a claim to the world's oldest known rock and is selling it piece by piece. The rock is the Acasta Gneiss, a tiny area of the Canadian Shield that's been dated at more than 4 billion years old.

Mark Brown has staked a claim on the world's oldest known rocks

Naturally, there's a YouTube video documenting the process by which Mark Brown, of Yellowknife, NWT, staked his claim. The Globe and Mail broke the story Monday, quoting Precambrian expert Sam Bowring as skeptical. The super-ancient rock is so intimately mixed with younger rocks that, Bowring says, it would be "a bit dishonest to sell it without dating every single piece of rock." That would make the price rather higher than the C$149.99 Brown charges for a hand sample.

I have mixed feelings. What Brown has done is no different from what gem miners have done for centuries. As a result, for instance, the amazing zinc minerals of Franklin, New Jersey, are gone. Otherwise they'd just be sitting in the ground. But we love these things to death. Obscurity or depletion seem to be our only choices.

Geologic wonders are something like archaeological treasures, but only the geoheritage movement is doing anything to preserve them.

Although there are many "geoparks" around the world, the New World has been barren ground for this movement.

I hope this will raise some consciousness. Finally, it is very likely that the Acasta gneiss is not really the oldest rock in the world, just the oldest we've found so far. When something a little older turns up, maybe the Friends of Ancient Rocks will exist to preserve them for a few centuries longer.

Abbotsford Rock & Gem Club
Club Contact: David Williams
(604) 870-1024
abbyrockngem@hotmail.com

Alberni Valley Rock & Gem Club
Club Contacts: Dave West
(250) 723-0281
compudok@telus.net

Burnaby Laphounds Club
Club Contact: Nacy Dickson
(604) 444-4464
ncyandallan@telus.net

Courtenay Gem & Mineral Club
Club Contact: Jack Boyes
(250) 337-8461
janboyes@telus.net

Cowichan Valley Rockhounds
Club Contact: Gene Leavitt
(250) 246-4571
gleavitt@shaw.ca

Creative Jewellers Guild of B.C.
Club Contact: Maria Tomsich
(604) 224-1951
mtomsich@interchange.ubc.ca

Creston Valley Prospectors and Lapidary Club
Club Contact: Wally Remin,
(250) 428-0413
wally@msm.com

Fraser Valley Rock & Gem Club
Club Contact: Robert Brown,
(604) 794 - 7296
opal@shaw.ca

Hastings Center Rockhounds
Club Contact: Linda Foy
(604) 421-1068

Abbotsford Rock & Gem Club

Trip to Mattawa

By Terry Bacon

April 15 2010 Kelley Mears , Georgina Selinger & I, Terry Bacon headed south to meet up with the POW WOW group from Washington State at Mattawa . It was a weekend similar to our Rendezvous where a group of like minded rock hounds gather to collect and visit. As it was to the United States we all needed our passports.

We met at my place in Abbotsford, went to Chilliwack to collect Kelley's passport and some beer. We got to the border around 7 pm. And got thru after a few questions on where we planned on staying without reservations. I hadn't made any as we weren't sure where we were going to end up anyways. The day was slightly cloudy and a nice traveling temperature. The roads were good and we made great time. Ellensberg by 11:15 pm. We pulled in to Vantage around midnight hoping the only Motel there had a room.

We had a spotty amount of rain there which I have never seen as it desert country along the Columbia River. As it happened the motel was full but they rented us a 3 bedroom house just down the road.

$ 100. So not too bad. The beds were comfortable and we quickly fell asleep to wake up at sunrise 6:30 . As we still were not sure how far we had yet to go we headed out after a quick coffee.

Turns out Mattawa is not far from there 13 miles. So we had time to pick up some lunch items at the store. And yogurt for breakfast.

We met up with the group at the main boat launch Cliff & Connie. We were very pleased to see us Canadians there. All were very welcoming and we were reminded that there would be a potluck after the field trips.

We lined up into 3 groups there were only 4 vehicles in each group, we followed Cliff. The other was going to site 2 we were going to site 1 and the 3rd was doing exploration. There is some dispute about the claims so one area was out of bounds. We went up 26SW to R which splits to the left and leads into BLM land . We followed the power lines and the road was quite good . We kept left at Sl and opened and closed the gate. Just over the crest of the hill we stopped. This is desert country and the view was incredible we were well above the town and river.

There was plenty of surface collecting of petrified bog. It has many little sticks in it and has a lot of different colours ranging from oranges to browns, yellows, & occasional reds. Cliff had said if we wanted to dig there would been bigger and better stuff. He had also said we would be there until around 11 then go to another site. At some time we lost sight of Kelley and began to wonder if she had fallen ; a man had just stumbled into a big hole beside us. Georgina & I called for her and began to search . After much yelling she came waundering over to the truck and Bill said are you Kelley ? Are you one of this cars group ? Cause I think they are looking for you. She had circled around and took off her coat we

were looking for someone in blue now she had a red shirt on. All was well, we did not dig up any snakes or scorpions , but they had found ticks on one of the dogs. We proceeded to site 2 as we had high clearance, it was up the road higher and right at the radio towers. There was a couple trucks up there and they were digging out a piece about 100 Ibs. We wandered around getting many pieces under 6 inches . Again you could dig but we were happy with the tumbler size. Cliff then took us to the Red Skin site. The pieces are coated in a red skin that polishes up with blood like colour. Cliff confirmed we could find

our way back and he headed back to sort out the pot luck. There was a nice breeze that kept the temperature from getting too high.

We stayed and picked for awhile longer then headed back to find the Desert Aires motel where we got a 3 bed room for just under $100. It was only 3 miles from the camp.
We had a nice salad & soup and rested until just before 5 and went to the potluck.

Georgina had brought Cherry Strudel for our contributions and we had brought items for the door prizes. It was very organized and everyone got a prize. The food was wonderful along with the company. I found people to deliver the door prizes from our Gem show so that was great too. After the prize giving the party broke up . We did buy some items there that were being sold tail gate stile. We saw some sample s of incredible detailed intarsia and made connections for Merrysville show & sale. We had a pancake & sausage breakfast at the camp with the Powwow group that was also included in our $ 7.50 registration what a deal. ! Sunday we decided that since we had done the 3 main areas on Saddle Mt. We would take in the Yakima show and

Cliff even found us someone to follow there!

Yakima show was very good the library & museum both participate with displays .Apx. 15 dealers and they were very good priced and had a lot of different samples and items. We willingly parted with some money there. Everyone there was very friendly and welcoming. There were many displays of petrified woods andsome educational cases. They also had a children's work shop and spin & win which the prizes were rocks . The silent auction was interesting but I did not spend a lot of time there with so much to see with the dealers. They had an equipment dealer from California which we got a catalog from. We had lunch at the Fiesta

Grocery and deli which was very good. Then we headed home, we claimed the rocks & the returning Canadian beer at the border no trouble there : arriving back in Abbotsford by 7 pm what a wonderful trip.

Many of the people we met will be at Madras this summer so it'sgoing to be good to connect up with them again.

Field Trip to Vermillion Bluffs

By Georgina Selinger

April 25, 2010 Ray & Georgina Selinger picked up Jean Dyck and Terry Bacon at Terry's house, at 9:15 am, for a field trip to Vermillion Bluffs, in Princeton. We drove

Lakes District Rock & Gem Club
Club Contact: Leanne Miranda,
250-698-7337
passiflora723@hotmail.com

Maple Ridge Lapidary Club
Club Contact: Walt Pinder
(604) 826-2342

Port Moody Rock & Gem Club
Club Contact: Andrew Danneffel
(250) 942-0617

Richmond Gem & Mineral Club
Club Contact: Eric Kemp
(604) 278-5141

Ripple Rock Gem & Mineral Club
Club Contact: Emily Faak
(250) 337-5724
wiredbyemily@msn.com

Selkirk Rock & Mineral Club
Club Contact: Maureen Kromha
(250) 367-9605

Thompson Valley Rock Club
Club Contact: Derek Neumann,
(250)-578-0179
jackidowdell@telus.net

Victoria Lapidary &
Mineral Society
Club Contact: Cameron Speedie,
(250) 385-0597
cspeedie@telus.net

Vernon Lapidary & Mineral Club
Club Contact: Dale Daignault
(250) 250-6603
patandphylicia1@shaw.ca

Yellowhead Lapidary Club
Club Contact: Lita Hansen
(250) 672-5876
lita_hansen@telus.net

For More Information
about the BC Lapidary Society or
a club near you, visit us online
www.lapidary.bc.ca

together to Kelley Mear's house in Chilliwack, at which point Terry drove with Kelley and her 5 year old granddaughter, Chantae.

We arrived in Princeton around 11:00 am, and went into the A & W for lunch and a take out snack for later. By 12:00 we were parked in the shade of a couple of big trees, and headed out to the bluffs, via the Canada Trail. To where we started collecting is about 3 kms, all flat walking. By 1:00 our noses were to the ground like a pack of hounds.

The weather was warm and sunny, with enough breeze to keep us cool and not over heated.

Jean found the prize of the day a greyish loaf sized piece of agate, which looks like it is all agate, not just seams. We're anxious to cut it into slabs and make some cabs. Kelley, Terry & Georgina all found smaller pieces of agate, calcite and what looks to be common opal. Ray found a really beautiful blue piece that is the color of laramar, and not being the hound in the family, felt he found the prize of the day! It is really a beautiful piece, which hopefully can be polished by his wife, the family hound.

On the walk back, Georgina and Jean picked up a couple of small pieces of ocher for specimens. Georgina also found a nice large piece of jasper, which will hopefully also become transformed into cabs.

On the drive to Princeton, we saw vultures and eagles. Also 3 or 4 deer, and on the way home we saw 21 more deer grazing the fields. We also saw 2 black bear on the side of the road. They both looked chubby and had lovely full coats. Another successful, pleasant and fun day with great friends ended about 7:30 pm.

BCLS Wagonmasters Fieldtrips

Spring/Summer 2010

Field Trip: Whistler

Leader: Cam Bacon, Ken McMath

Date & Time:
June 13th, 9:00 A.M.

Meeting Place: Squamish A & W
Material: quartz crystals
Tools Needed: sledge, chisels, hammer, rake. Road Conditions: good gravel

Contact:
Cam Bacon 604-854-1711 or Ken McMath 604-870-0467,

Field Trip: Princeton

Leader: Cam Bacon

Date & Time:
Sunday, July 6. 2010

Meeting Place: Princeton A&W, leave the A&W at 9AM
Material: amber (fluoresces blue)

Contact:
Cam Bacon 604-854-1711

Field Trip: Hill 60, just north of Duncan on Vancouver Island

Leaders: Bob and De Morgan

Date & Time:
September 26th, 10:00 A.M.

Meeting Place: park & ride, 1 block on the road to Youbou, intersection: Hwy 18 and # 1 Highway, (If you are going north, the Esso Station is on the right side, you turn left)
Material: rhodonite. Tools Needed: hammer, chisel, sledge

Road Conditions: 4x4, AND HIGH CLEARANCE are absolutely necessary, or you will not make it up the hill! The road is trenched and the bushes are growing in.

Contact: Bob or De Morgan 604-599-6938, E mail:

As always, any US rockhounds in good standing with their clubs are invited to join our field trips! Also, please see what the Washington State Mineral Council has for trips, just in case something interests you! Washington State Mineral Council

For those of you who subscribe to Rock and Gem Magazine, the March edition had an article about collecting carnelian on Weyerhaeuser lands in Washington, at a location called "Lucas Creek". Please note that this area is closed to collecting, and Weyerhaeuser has posted the area. Newstand editions may not have this article. Please see the above Mineral Council web site for other trips to collect carnelian.

Burnaby Laphounds Club

There was a club field trip to Oakridge Mall to see the documentary on China, "Up the Yangtze", on Feb 3. The seven member group enjoyed the film and dinner at the White Spot after.

Gordon and Roberta Calderwood gave us a Show and Tell at the February meeting of some of their personal treasures. These treasures were all created by Gordon and Roberta, pendants, rings, belt buckles, enamelling, wood inlay, silver Scottish pins, cabachons, wire wrap and faceting. A number of the items made by Gordon were projects for the Creative Jewelers Guild. Thank you again, Gordon and Bobbie for sharing your beautiful creations with us.

A number of the items made by Gordon were projects for the Creative Jewelers Guild.

The March program was a video on Russian Gem Treasures, from the interiors of Russian Palaces, crowns, septars, precious stones from the Diamond fund and other museums. We saw some outstanding gems and jewelry.

Interesting Websites

www.mineralienseite.de/Anleitungen/Taking_Photographs_of_Minerals_and_Gemstones.pdf
Some really neat tips for taking pictures of : rocks, minerals, crystals gems.

www.mineraltown.com/wallpaper.php
Interesting site with free wallpapers you can download.

www.jewelryplus.net/info/gemstone_reference.html
Very good information about gemstones

www.benchtube.com
BenchTube - Jewelry Making Videos. BenchTube is Ganoksin video sharing area for jewelers and metalsmiths (and for those interested in jewelry and gemstones). Participation is absolutely free!

High Country Rockhound Club

The Logan Lake High Country Rockhound Club participated at the annual KEG (Kamloops Exploration Group) conference as part of the Junior Delegate program (a children's program) on Tuesday April 6th. The club had 70+ students, ranging from grade 4-7, stop at their station. Goups of 12 children spent a half hour with the club participating in lots of fun activities.

The first activity was creating rock boards with 12 local rocks. The students picked out their chosen rocks and Desiree, Nancy, and Jan glued the rocks onto the boards for them. There were fossils from the McAbee claims (a big thank-you to Dave Langevin) that the students were able to go through and pick out their prize fossil specimen to keep. Bruce Ritcey brought in large rock specimens for the kids to view. As well, he donated a large piece of petrified wood for a door prize for the students (won by Owen - he was estatic).

From the mineral boards, the children went to see a demonstration on cabbing. Jim and Dan took turns showing the students how to use the pixie to create a cabachon. Elaine and Pam worked with the students showing them interesting properties of rocks, such as how pumice is so light it floats on water, magnetite, a dark rock that a magnet will stick to, and ulexite or tv stone, that when placed over words, the words look like theycome to the surface of the rock.

The students enjoyed their time with the rockhounding club and the rockhounding club enjoyed showing the students all about rocks and the art of lapidary!

"The club had 70+ students, ranging from grade 4-7, stop at their station."

Port Moody Rock & Gem Club

Back in the (Rockhunting) Saddle Again: Yale Bar Field trip 2010

by Rose Kapp

I've been a member of the Port Moody Rock Club for over 13 years but never went on a hunting expedition. I went on field trips in my youth, as my father surrendered to the fever and family vacations evolved into stone excursions with the Edmonton Tumblewood Club. But as I became older, rock interest fell by the wayside as music, boys, marriage and parenthood took over. I didn't know how rusty I would be as I scrambled into Lynne Johnston's vehicle February 21, 2010 for the trip up river.

Lynne, Lisete and I had a lovely chatty time during the sunny morning drive. We were a little late when we arrived, with most of our fellow rockhounds already far up the Yale Barr. Everyone was spread out but it was a good turnout.

River mud covered the rounded stones closer to the water, but there were cleaner pickings a few steps inward. The markings on the stones were lovely and most were tempted to bring these larger rocks home just to admire them on table tops or in their gardens. Other, more serious types, were only interested in gleaning the agates, jaspers and the occasional jade.

Much to my delight, I discovered I still had the nose for rocks as I bent down and dislodged a fair-sized orange agate from under a boulder. I kept thinking how I was going to relate my story to my 86 year old dad back in Edmonton. I knew he would be laughing as I told him I took after him, finding good stones where others had just passed over.

As the sun slid behind a sugar loaf hill at noon, we made our way back to our vehicles for lunch and to warm up. Emma and sister Lucy also found nice-sized yellow agates and other interesting stones. Comments were made about my bucket with few stones.

Quality, I said, not quantity. We headed back along highway 7, making a stop to pick up some slab granite for an inukshuk and then stopping at the Wahleech Barr for a look-see. A few other people were there poking around, but little of interest was found.

A lovely outing for all in the early spring sunshine. For myself, a wonderful re-discovery on the joys of being outside rockhunting with friends.

Port Moody Gets Petrified!

Annual Rock & Gem Show article by Lisete Cerqueira

The Port Moody Rock & Gem Club membership might be a small group, but they don't seem to realize this fact. Every year they put together a show larger than what one would expect possible from such a small group of individuals. It truly is a David vs Goliath kind of experience, but they not only make it, they excel at it!

It truly is a David vs Goliath kind of experience, but they not only make it, they excel at it!

First times can be difficult, but most certainly memorable. The 2009 show was my first, not only as the chair-person, but of actually seeing a rock and gem show, and I assure you I will not forget it! It was a most rewarding experience.

We had one of the highest attendance rates for us ever, with over a thousand people and we are only counting the ones that received attendance tickets at the door. Money wise, we also saw a very good result. If some stations were not has profitable as in the past, the expenses were also not as high, for we where able to use surplus items from previous shows, and other stations doubled what they had made the year before so that balanced out the numbers. All we can say is that if we are able to keep up with these numbers in the future, we will do fine!

Our show seems to be all about the people. We are focused on how to make it a memorable experience for those that take the time to pay us a visit. We thrive on being able to come up with new ideas for kids and adults alike. We had new items, new vendors and a new menu!

I would like to take this opportunity to express my sense of pride for being one of you! A heart-felt thank you to everyone who participated either contributing with time or ideas for the show.

Let me make it clear, many people were impressed with both the show's attendance and quality, but it was because it had been the result of the work of many, whose help and hard work made it possible to successfully put the show together.

I'm not able to put down all the names of those who worked for the show because some of you I had not seen before and do not know all your names, but rest assured, my thank you note is for you too!

Richmond Gem & Mineral Club

BC Gem Show

After having the opportunity to enjoy the displaysand wander the stalls of the dealers, I would like to congratulate all the club members who participated as volunteers and who put in a display for all to see. Some of our members were proudly displaying their work in the form of bola ties and the green malachite of Eric Kemp's bola tie was outstanding, but Frank's was bigger. David's extremely large lapis lazuli pendant looks spectacular on him.

Good work, my friend! My other friend was also thrilled with her purchase of a huge Australian opal pendant for a very reasonable price. Chris Laurin, our President, says "Many thanks to those volunteers who contributed their time and efforts to make the Big Show an enjoyable experience for so many. And also thanks to those who put up display cases. We had a nice showing and I hope everyone enjoyed themselves!". I also heard that Chris spent a lot of her time trying to find the perfect rocks for her next set of cabochons, and that she was very successful.

Ripple Rock Gem & Mineral Club

Oyster River Field Trip, Feb. 6, 2010

by Dorothy Young

With a light rain falling off and on eleven of us; Kathy, Gordon, Gordon, Beba, Aden, Margaret,

Charlotte, Harlow, Alvin, Anne, and myself (hope I haven't left

anyone out), met at the church

parking lot on the old Island Hwy just south of the Oyster River bridge. We walked down a short steep path to the rivers gravel bars and began our search for treasure. Gordon set to work picking small pebbles to tumble for grab bags and the rest of us spread out to see what we could gather. There were flower stones, dalisite, pudding stone, some banded chert and an assortment of other rocks. After everyone had their quota we headed for lunch at the Oyster Bay rest stop with its picnic tables and washrooms (a big plus for some of us!!). I heated up a big pot of homemade beef stew while everyone headed out to check the beach for more rocks.

During lunch Anne gave me her membership fee... Welcome to the club Anne! Also two former members bumped into us and rejoined... Welcome back Lynne and Ron Sale! After a coffee and dessert of apple pie everyone headed home with their finds. We were all a little wet around the edges but had a good time. I dropped of the remaining stew and pies to Charlies where it was gobbled up on Sunday at the soapstone carving class.

Telus & Science World Community Science Fair

Barb Akelaitis

It was raining buckets on Saturday, Feb. 13, but that didn't stop crowds of people from attending the community science fair. Timberline School was electric with experiments, exhibitions, and excitement. The Ripple Rock Gem and Mineral Club exhibit was very well attended and our visitors were interested and inquisitive. Charlie said that he had never talked so much in his life.

Charlie's Moh Hardness Scale exhibit and Gordon Billings Faceted Gemstones created a lot of

excitement. To Gordon's dismay, the children all wanted to touch his beautiful gems. Liz Wilson and daughter Megan demonstrated soapstone carving while Rob Johnson and Joyce Pelletier were kept busy answering questions from the crowds. The visitors to our exhibit were enthusiastic and most went away with our club and show information. Thank-you to the club members who came to demonstrate and talk to the public about our club and its activities.

Rock Club Community Outreach

Barb Akelaitis

February has been community outreach month for the Ripple Rock Gem and Mineral Club. On Darlene started the class by presenting a power point show on "Identifying and Classifying Vancouver Island Rocks into Igneous, Sedimentary and Metamorphic Groups". Joey made his debut as our student ambassador with a great presentation on lapidary art and hand faceting.

Then, he moved on the help the students with Dennis Cambrey's "Vancouver Island Map Rock Recognition Game". The students learned about rock hounding and rock hounding equipment from Beba. Barb helped them to identify properties of local rocks that they might find on the beach. Every student made an Inukshuk to take home. This was the most popular activity as the Olympics were only a few weeks away.

The students were curious and attentive and we enjoyed working with them. If any club members would like to be part of the club's education program, please call Barb or Beba.

Norma Wolfe

Surrey Rockhound Club

In Memory of Norma Wolfe

Norma and her husband Don joined the Surrey Club in 1984 and recently became a member of the "Silver Anniversary Club" having been a member for a quarter of a century. They became active in the BC Society, where Norma was Publicity Chair for a number of years and Don looked after the PA system, at meetings and the BC Show.

Norma learned Wire Wrapping some years ago and has demonstrated that at her own Show and the BC Show. And also to the many school classes that have visited the Surrey workshop.

Norma and Don were avid Snowbirds and spent much of every winter down South in the Quartzite area with a large number of the Surrey Club and others. They also attended a number of other events across the line with the "Group".

Norma passed away on April 6th, 2010 in her 91st year, after a lengthy illness. She will be greatly missed by all her friends in the Surrey Club and indeed in the BC Society.

Thompson Valley Rock Club

by Royanna

Just a quick note as not much to report. The Abbotsford Gem show was great.

I have never seen so many Crystals in one place in all my life. The trip to Scottie Creek was good too. I think everybody went home with some kind of rock, or should I say treasure.

The hotdogs were good, the campfire was fun and the icing on the cake was the Happy Birthday cake and song for Marvin. 75 years old and you only look and at 60. How do you do it? Happy birthday again Marvin.

Rumour has it we have found a replacement for Pam as Secretary, so I hope you can come to the next meeting to find out who it is. I'm sure you'll be as happy as I am.

Everything else is running along smoothly. The rock shop is jumping with lots turning out on Saturdays.

Rock trip chatter…

Scotty Creek, April 18th "The field trip yesterday was excellent! We had about 10 kids show up, ranging from age 4 to 12. Everyone had so much fun, especially the kids (so much enthusiasm!). We found quartz crystals, mainly drusy, a little bit of jasper and some selenite crystals. The hot dogs and all the food was wonderful. We (Jack, Helen, Justine and I) had planted a TVRC geocache at the site last Monday, so the kids had a great time learning about geocaching with Justine. Wish you could have been there!

Club Shows Spring and Summer *2010*

CREATIVE JEWELLERS GUILD of BC

Open House

June 5, Saturday, 10 am - 4 pm

Richmond Cultural Centre 7700 Minoru Gate, Richmond, BC, In the Atrium on the Main Floor
Featuring demonstrations including: Setting Small Stones, Silversmithing, Plannishing & Chasing, Lampworking & much more
Admission: Free

Contact persons: Ken McIntosh 604-599-6789 or Guenther Otto 604-687-6071

THE GEM AND MINERAL FEDERATION OF CANADA

RIPPLE ROCK GEM and MINERAL CLUB 21st ANNUAL SHOW

Saturday June 12th 2010 - 10am.-5pm
Sunday June 13th 2010-10am-4pm

Timberline School Gymnasium,
1681 South Dogwood Street, Campbell River, B.C.
Adults $2.00, Children under 12 free
(accompanied by an adult.)

Contact: Gordon Billings, 250-286-6600
Or e mail: rockytwo@telus.net

RAFT RIVER ROCKHOUNDS

1st Annual Club Show

July 1, 2010

Thurs. July 1, 11AM - 3PM
Watauga Villiage, 734 Clearwater Village Road, Clearwater, BC
Gold Panning, Rock Painting, Pik your Gemstone, BBQ, Silent Auction, Guess the Stones, Information Booth and More Small Fee to participate in Events
FUN FOR THE WHOLE FAMILY

For more information contact: Louise or Fay at 250-674-0085

SHUSWAP ROCK CLUB

Show & Sale/Open House

July 10, 2010, 9am - 4pm

Toad Hall, Trans Canada Hwy, Sorrento, BC
Admission is Free

Contact Pat Boden at 250-675-2849

THE 1120 ROCK CLUB of KELOWNA and THE VERNON LAPIDARY & MINERAL CLUB

4th Annual Okanagon Gem Show featuring "Fossils, Footprints of the Ages"

July 17 & 18, 2010
Winfield Memorial Hall,
3270 Berry Road, Winfield, BC
Sat. - 9am - 5pm, Sun. 10am - 4pm
Adults - $4.00 Children 12 & under - $2.00

For more information contact: Dave Barclay: 250-766-4353, E mail: davebarclay@telus.net
Ken Dewerson: 250-707-0618,
E mail: kdewerson@shaw.ca

INTERIOR ZONE TAILGATE SALE

Tailgate Sale

September 18, 2010, 9am - 4pm

Swan Lake Nurseryland, Hwy 97, Vernon, BC
Jewellery, Beads, Crystals, Rocks & Used Equipment

For more information contact: Fran Brooks, 250-546-0177, or Gloria Bordass 250-493-1097

Spring and Summer ***2010*** **Club Shows**

FRASER VALLEY ROCK & GEM CLUB

50th Annual Rock & Gem Show

September 25 & 26, 2010

Featuring "Keep on Rockin!"
Saturday & Sunday 10am – 5pm,
Old Age Pensioners Hall 3015 273 Street,
Aldergrove, BC
Demonstrations, Displays, Dealers, Help us celebrate our 50th Anniversary. Admission by donation

For more information contact:
Karen Archibald, 604-532-8734

SURREY ROCKHOUND CLUB

Annual Rock & Gem Show

October 16 & 17, 2010

Saturday & Sunday 10am – 5pm,
Sullivan Hall, 6302 152 Street, Surrey, BC
Demonstrations, Displays, Dealers,
Hourly Door Prize, Kids Creative Corner Snack Bar open during the Show. Admission by donation

For more information contact:
Alice Clarke, 604-584,5592

PENTICTON LAPIDARY & GEOLOGY CLUB

Mall Show & Sale

October 22 & 23, 2010

Friday 10am - 8pm, Saturday 10am - 6pm
Main Street, Penticton, BC

For more information contact:
Gloria Bordass at 250-493-1027

PORT MOODY ROCK & GEM CLUB

Saturday October 23 & Sunday October 24, 10am-5pm both days

2010 Annual Gem Show Presents "The Secret Life of Stones"

Kyle Centre, 125 Kyle Street, Port Moody, BC
Featuring: Over 12 dealers, Sales / Marketplace, Displays, Demonstrations, Prize Draws Lapidary Workshop Tour, Cabochon Tournament, Holistic Healing Kids' Creative Workshop, Rock Smash Silent Auction, Spin 'n Win, Grab Bags, Food & Beverages
Admission by Donation

Contact Lisete Cerqueira
604-7885101

VERNON LAPIDARY & MINERAL CLUB

Mall Show & Sale

November 5 & 6, 2010

Village Green Mall, 27 Street & 48 Avenue, Vernon, BC

For more information contact:
Dale at 250-260-6603

VERNON LAPIDARY & MINERAL CLUB

Mall Show & Sale

November 10 & 11, 2010

Villiage Green Mall, 27 Street & 48 Avenue, Vernon, BC

For more information contact:
Dale at 250-260-6603