



BUGLE



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RIPPLE ROCK GEM & MINERAL CLUB
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Editor: Gordon Burkholder
Assistant: Janet Burkholder

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October 2015

Regular monthly meeting
2nd Friday each month at 7:30 pm
(Except June, July & August)
Craft Room, Campbell River Community Hall
401-11th Ave
Campbell River, BC



RIPPLE ROCK GEM & MINERAL CLUB

RIPPLE ROCK EXECUTIVE 2015

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Coffee Break	Melissa Ticknor	
Basic Lapidary Instructor	Steve Cooley / Gordon Burkholder	250-287-4388 923-1740

Delegates to Vancouver Island Zone Meetings

Senior	Gordon Burkholder
Intermediate	Jan Boyes
Junior	Ulla Williams

WORKSHOP

Shop located at 246 Dahl Rd.
 For general shop info contact
Beba Adams 250-926-0044
**The workshop hours are posted on the
 club website.**
www.ripplerockgemandmineralclub.com

MEMBERSHIPS

A single membership is \$15.00 and a family is \$25.00. Memberships may be paid at the *General meetings* or by mail to Box 6 Campbell River, BC, V9W 4Z9.

President

Hello again! Our club has many new members that are just beginning to explore the wonderfully interesting and enjoyable world of lapidary. I hope all you long-time members make them feel welcomed. Our monthly meeting will feature a 'name tag' draw for all in attendance and new members will be issued a temporary name tag at that time. Please remember to wear your tag to the meetings and become eligible for the draw. Name tags can be ordered from Dennis Cambrey. They are priced at (cost) \$9.

Kathy Young

Zone Report

I'd like to thank all of the clubs and their membership for supporting the Zone in its Gemboree which was held Saturday, September 19th at the Cedar Grove RV Park in Qualicum Beach. Our hosts, Will and Sharon made our stay very pleasant and even came by on Sunday to sing a few songs for us.

In total we had 32 members in attendance and the auction which featured 80 lots. All of the proceeds went to the Zone's coffers to help pay for meetings and functions.

Ulla has sent out 'Thank You' cards to special helpers and to the Clubs for participating in this event. Next year's Gemboree is already planned and is being hosted by the Cowichan club. Specific details and the registration form are to be found at http://www.ripplerockgemandmineralclub.com/sales_events/default.html. Thanks to the group at Cowichan for getting this event organized and out there so early. It makes planning for trips and other club event much easier.

As chair of the Zone, I will be attending the BCLS meeting held in Abbotsford in October 4th to deliver a report and to meet with the BCLS executive as well as other delegates from around the province.

The next Vancouver Island Zone meeting will be in November in Parksville at the home of Marion Barclay.

Gordon Burkholder, Senior Zone Delegate

Web Site Data from the Web Master

There is always plenty of information and many articles on our web page. If you want to advertise your own work or get a link placed to our website just let me know and we can make this happen.

Of special note the information on next year's Gemboree which will be hosted by the Cowichan Valley Rock Club is posted. The registration form is there and it should be noted that there is a pre-registration bonus for those who sign on early. Check it out!

Copy the web page address and paste it into your browser and then bookmark this page for easy access. www.ripplerockgemandmineralclub.com

Janet Burkholder

Editor's Message

I have been busy this month doing what rockhounds do as well as keeping this edition of the Bugle in mind. My loving wife, Janet bought us a metal detector last month and we used it several times at the various sites we found ourselves camped at. We got ourselves a relatively inexpensive model so that I don't have to make too much money each month to make the thing pay for itself. I have included an article on the history of the metal detector as well as a DIY article for making a metal detector with your kids.

At the Gemboree, held in September, I purchased a fluorescent light and instruction booklet from the auction. It is ostensibly for my granddaughter's birthday but I had to do some research on this fascinating subject. Our own Derek Harris' display of fluorescents is quite popular at our show and his knowledge on the subject is vast and worth tapping.

The opal is the birthstone for October so I have included a bit of information on doublets and triplets as well as some information on ammolite which is an opal-like gem. I hope to be on the road next month and for the rest of the fall / winter but I will be able to continue publishing the Bugle with the help of modern technology. I can still be emailed at gdburk1953@gmail.com so if you want to submit something please feel free to do so.

Gordon Burkholder

Quotable quote: The secret of getting ahead is getting started. *Mark Twain*

FROM THE SHOP

Metal Detector History

In 1881, Alexander Graham Bell invented the first metal detector. As President James Garfield lay dying of an assassin's bullet, Alexander Graham Bell hurriedly invented a crude metal detector in an unsuccessful attempt to locate the fatal slug. Bell's metal detector was an electromagnetic device he called the induction balance. Gerhard Fischar - Portable Metal Detector

In 1925, Gerhard Fischar invented a portable metal detector. Fischar's model was first sold commercially in 1931 and Gerhard Fischar was behind the first large-scale production of metal detectors.

According to the experts at A&S Company: "In the late 1920's, Dr. Gerhard Fisher, the founder of Fisher Research Laboratory was commissioned as a research engineer with the Federal Telegraph Co. and Western Air Express to develop airborne direction finding equipment. He was awarded some of the first patents issued in the field of airborne direction finding by means of radio. In the course of his work, he encountered

some strange errors and once he solved these problems, he had the foresight to apply the solution to a completely unrelated field, that of metal and mineral detection.

Rock hounds know what metals are and we often look for them while out enjoying our hobby. There are many metals from iron to titanium (I don't have an A to Z example.) Of course some of these metals are found in rocks and that's what makes a metal detector so much fun. Okay, you can use them for gold hunting, too, but finding a metal may put you in contact with some great rocks. Here is an article which helps to understand how these simple machines work. Ed. Note [I have not tried to make one according to the instructions but the opportunity is there.]

Make Your Own Metal Detector with Kids

Any child who has seen a metal detector in action knows how exciting it is when you find some buried treasure, whether it's real treasure or just a coin that fell out of someone's pocket. It's an excitement that can be harnessed for learning, but professional grade metal detectors and even metal detector kits can be expensive.

The neat thing is that your child can make his own amateur metal detector with just a few, easy to find items and then he's not only learning while he's out metal detecting, but also when he's making the metal detector, too.

What your child will learn:

1. A simple understanding of how radio signals work and how the amplification of sounds waves can work with the radio signal to make a basic metal detector.

Materials Needed:

- small battery-powered portable radio (with AM and FM bands)
- small, non-solar, battery-operated calculator
- working batteries for both devices
- duct tape

How to Make Your Own Metal Detector

Switch the radio to AM and turn it on. It's likely your child hasn't seen a portable radio before, so let him examine it, play with the dials and see how it works. Once he's ready explain to him that a radio has two frequencies: AM and FM.

Explain that AM is the abbreviation for the "amplitude modulation" signal, a signal that combines audio and radio frequencies to create a sound signal. Since it uses both audio and radio, it's very prone interference, something that's not optimal when it comes to music, but makes a great combination for a metal detector.

Turn the dial as far to the right as possible, making sure to find only static and not music. Next, turn up the volume as high as you can stand it.

Place the side of the calculator with the battery on the side of the radio with the battery. They should essentially be back-to-back. Turn on the calculator.

Next, with you and your child holding the calculator and radio together, find a metal object. If the calculator and radio are aligned correctly, you will hear a change in the static that sounds sort of like a beeping sound.

If you don't hear this sound, move the calculator around on the back of the radio until you do. Then, move away and see if it reverts to static. If so, duct tape to tape the two objects together in that position.

At this point, you've made a basic metal detector, but your child may still have some questions. You can start by asking him some questions, such as:

- Why wouldn't this work if the radio was playing music instead of static?
- What type of things does the metal detector react strongly to?
- Which things don't cause a reaction?

Once you have those questions out there, you can explain to your child that the circuit board of the calculator makes a barely detectable radio frequency. Those radio waves bounce off metal objects and the AM band of the radio picks up and amplifies them. That's the sound you're hearing when you get close to metal.

Quote: If you don't know where you are going, you might wind up someplace else.

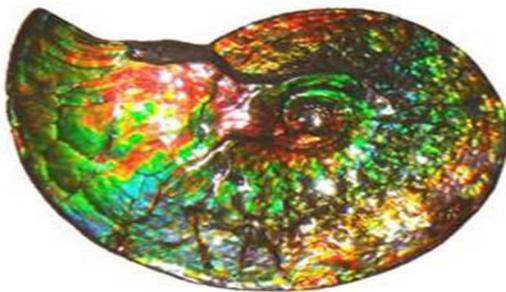
Yogi Berra

GEM OF THE MONTH

Ammolite

Ammolite is an opal-like organic gemstone found primarily along the eastern slopes of the Rocky Mountains of North America. It is made of the fossilized shells of ammonites, which in turn are composed primarily of aragonite, the same mineral contained in nacre, with a microstructure inherited from the shell. It is one of few biogenic gemstones; others include amber and pearl. In 1981 ammolite was given official gemstone status by the World Jewellery Confederation (CIBJO), the same year commercial mining of ammolite began. It was designated the official gemstone of the City of Lethbridge in 2007.

Ammolite is also known as aapoak (Kainah for "small, crawling stone"), gem ammonite, calentine, and korite. The latter is a trade name given to the gemstone by the Alberta-based mining company Korite International, the first and largest commercial producer of ammolite.



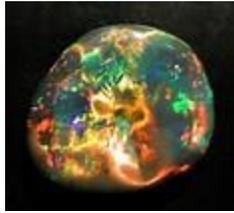
Ammonite fossil covered with ammolite and a chunk of ammolite.

Quote: Always remember that you are absolutely unique. Just like everyone else.

Margaret Mead

WHAT'S THAT ROCK?

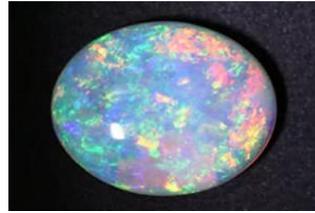
Opals



Raw opal



Opal doublet



Australian opal

Opals have always been a mysterious and beautiful gemstone. It is one of the softest gemstones used in jewelry, so extra precautions must be taken to keep opal jewelry in pristine condition. Generally, an opal is not a stone that would be worn every day, but kept for special occasions. Read on to learn how to care for opals.

Instructions

Take care not to hit the opal or rub the opal against a solid surface. Opals can easily scratch, chip or crack.

Monitor the temperature to which the opal is exposed. Do not expose the opal to drastic temperature changes. The opal will crack or shatter before it can adjust to the temperature fluctuation.

Know your opal. Doublets contain thin slices of opal, glued to a black backing. Triplets are doublets with a layer of quartz or glass placed over the thin slice of opal. Doublets and triplets cannot be soaked in water. Water immersion can break down the glue bond holding the layers together.

Putting opals in safe deposit boxes are one of the worst places to keep an opal. Bank vaults have low humidity, so the room would draw the moisture out of the opal, resulting in cracks.

Storing opals for an extending period takes a little extra care. Put the opal in a padded cloth and store it in a safe place. As a safety precaution, place the opal in a Ziploc plastic bag, wrapped in a pillow of cotton wool. Place a few drops of water on the cotton to keep the humidity at a safe level.

Thought for the day: There are only two mistakes one can make along the road to truth; not going all the way, and not starting. **Buddha**

WELCOME "NEW" MEMBERS

Membership

Five new members took their shop orientation and lapidary introduction course taught by Gordon Burkholder this past month and are now eager to visit the shop to continue developing their skills and apply what they have learned. Congratulations to Bob and Karen Peel, Meredith and Nayland McGill, and Janice Williams.

Opal Doublets and Triplets

Doublets consist of two layers adhered together with glue:

- A black backing which is made of either black industrial glass, black potch (colourless opal), hard plastic, brown ironstone or sometimes vitrolite.
- A thin slice of opal (normally crystal opal or white opal).

The thickness of the opal in a doublet can vary, however it is generally thicker than the opal found in a triplet. The edges of the slice of opal are generally rounded off (if there is enough opal) to give the stone a cabochon (domed top).

Doublets can usually be identified by looking at the side of the opal - if the stone has been adhered together you will notice that the line where the coloured opal and the black backing meet is perfectly straight. This is necessary for the two layers to be adhered together. If a doublet is set into jewellery with the sides covered, it is extremely difficult, even for an expert, to tell whether it is a doublet or a solid opal. Since the top of the stone consists of pure opal, it therefore appears exactly like a black opal, and doublets thus have a much more natural appearance than triplets.

Triplets consist of three layers:

- A black backing as above
- A paper-thin slice of opal in the middle
- A clear glass, quartz, or plastic capping in the shape of a dome.

The slice of opal in a triplet is usually extremely thin (paper-thin) so the clear capping serves to give the stone a nice cabochon on top. The clear capping may also magnify the colour of the opal slightly, and also serve to protect the opal.

Because triplet opals have a clear non-opal capping on top, it is easy for an experienced person to identify a triplet immediately by the appearance of the stone. Triplets usually have a 'glassy' appearance and the light reflects differently from the top of the stone. You can look at the side of the stone to identify a straight line where all the layers meet, and also look at the back of the stone. If the back of the stone appears to be black plastic then you are not looking at a solid stone. Be aware however that it is also very common for a backing to be made of black potch (exactly the same stone which forms the backing of a natural black opal) or brown ironstone (which is also the natural backing for Queensland boulder opals).

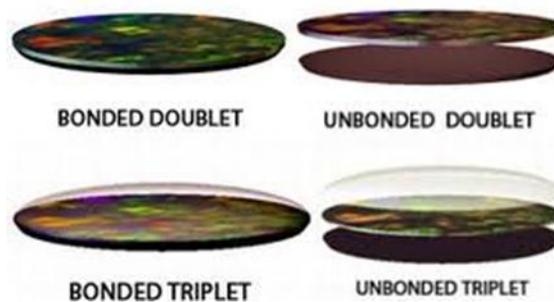
Triplets are normally cheaper than doublets because they contain less real opal. Because the top of the stone can be made from synthetic material, triplets can be a lot more resistant to impact than solid or doublet opal stones. (Opal by its nature is a fragile gemstone).

Because opal doublets and triplets consist of layers which are glued together, prolonged exposure to water may cause lifting between the layers and infiltration of water. (This does not mean your opal will be ruined if you wear it in the shower once, or are caught in the rain.) If water penetration occurs, a doublet or triplet will take on a 'foggy' or grey appearance. You may even notice the appearance of condensation inside the stone. You should avoid getting a triplet or doublet opal wet to avoid water penetration.

Please note: There is a lot of confusion regarding the care of opals because of the different caring instructions for solid opals as opposed to doublets / triplets. Solid opals are fine in water - it's only doublets and triplets which need to be kept out of water to avoid water penetration. Getting a solid opal wet will do no damage whatsoever.

Cleaning - Doublets & triplets may be wiped with a damp soft cloth and mild detergent, but should never be soaked or immersed. Avoid bleach, chemicals, cleaners, and ultrasonic cleaners.

Opal doublets and triplets can be a fantastic alternative to solid stones as they are much cheaper than solid black opals. Solid opals with the same appearance as an opal triplet can be ten times the price as they are rare and valuable; therefore they serve a useful purpose in making beautiful dark opals affordable. However, you need to be aware of what you are buying, and know how to correctly care for doublets and triplets to avoid water damage.



Final Thought: Satisfaction lies in the effort, not in the attainment, full effort is full victory. **Mahatma Gandhi**