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Regular monthly meeting
2nd Friday each month at 7:30 pm
(Except 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	
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Delegates to Vancouver Island Zone Meetings

Senior	Gordon Burkholder
Intermediate	Jan Boyes
Junior	

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.

Kathy Young, President

I have a geologist and private mine consultant, David Caulfield, lined up for the **March 13th** meeting. He'll do a 45 minute presentation on the geology of Vancouver Island and then have a Q and A session and discussion with members. David travels back and forth across Canada in his work and he loves to collect rock specimens.

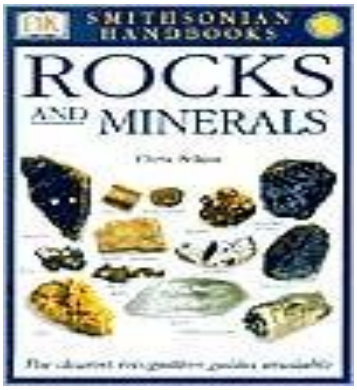
I told him we were the champion Leaverite collectors on the North Island and his comment was, "Wow! You are the first group I will be giving a presentation to, in… forever who knows what "leaverite" even is.

If there are any members, new or old, that want more information on this or any other club related item contact me at the number listed in this publication.

Linda Henderson, Vice President

From the Library "Rock and Minerals" by Chris Pellant

I have been reading over a book called "Rock and Minerals" by Chris Pellant. It's an in-depth read of how to identify rocks and minerals. There is some language that is not familiar but really worth the effort if a person wants to identify rocks that they may have but don't know what it is. It is a well-organized book and quite easy to follow. It would also make a decent field guide to identify on site.



Beba Adams

Show-case Display

The theme for this year is "Nature's Art". Bev Bowman, Linda Henderson and I worked on creating the display. In the past our displays have been well received and we have placed either second or first in the People's Choice category at the Victoria show for the past 5 years.

Thanks, Beba.
Looking at this year's display I'm sure your work will once more receive the recognition it deserves.
Gordon Burkholder

P.S. A heartfelt "Thank you" to all of the members who have loaned their rocks for this year's display.
gb

Editor's Message
Welcome again Rock Hounding Readers! I have had some feedback from a few members and appreciate the positive comments. This month I will continue to develop the idea of rock identification hoping that it will support the goal of our President, Kathy Young. I am also going to feature our newest members by asking them about their interests and providing some background about them.
I am enjoying the task of putting together a monthly newsletter and hope that you are (enjoying my efforts) as well.
Gordon Burkholder

<u>Quotable quote</u>
Adam and Eve had many advantages, but the principal one was that they escaped teething.
Mark Twain

FIELD TRIPS

Shane Mawhinney, Wagon Master

Ripple Rock Club Fossil Hunting Fun

On January 18th we had a fossil hunting trip. The day started a little grey but what can you expect in January on the wet coast, grey is better than the ground covered in snow and no rockhounding! We went to the Hamm Road location, an area known as a hot spot for fossils, evident by the fact that we were not alone out there hunting fossils in the rain. This area has become renowned since highway construction crews blasting their way through this area came across many large ammonites. Soon after highway construction, local fossil hounds started hunting and many great ammonites among other specimens have been found here.

After a quick lesson on what to look for we began scratching around, looking for concretions in the rock and digging through the loose shale to find small shells and bits of unidentifiable fossils. A concretion is a spherical rock that sometimes houses a fossil. In the creation of the fossils layers of mud and sand collect around the fossil and petrify into rock. Concretions are easily found in the solid layers of shale. Finding them is different than removing them! Often the ones you find are there because other fossil hunters couldn't remove them from the rock; it can be quite a chore. Some are a little more uncovered from our efforts but remain in place for the next people to attempt removal. It seems that the success rate for finding a good fossil in one of these is about 1 in 10 so you are not guaranteed to get a fossil when you finally do remove one from the rock.

Finding a fossil in the rock can be quite tricky to remove or reveal the specimen. Often there is more work to do at home. I have a few of these that I took home. Dennis carried one home that he was too nervous to smash and was going to use tools in his shop to help. Quite a feat, carting such a large rock home. The weather took a turn for the better, and for an hour it was sunny and warm, the sun illuminating a dark ominous rain cloud coming our way. Soon it reached us and unleashed its torrent on our heads. We collected for about 15 more minutes just enough time to get drenched! Then we decided enough was enough, packed up our treasures and headed home. Another great winter trip! The coast here may have the only rock clubs that can rock hound right through the winter (especially this winter)! Yay!

I am attaching some photos of fossils I brought home; thanks to my daughter Ocean for her photography skills in making these look so good.



FROM THE SHOP

Making a heart shaped cabochon.

The heart is a tricky thing! You make the cabochon using the same steps as any other project or shape.

1. Select a nice piece of amethyst (since it's February's gemstone)
2. Scribe the desired size of heart onto the stone.
3. Trim off unnecessary bits with the trim saw.
4. Use the grinding wheels to get the general shape.
5. Inscribe a girdle line (unless you're doing a double sided cab).
6. Begin the doming process. To get into the 'heart' of the stone the edge of the wheel must be applied. This can be tricky and requires a bit of practice to get the shape even.
7. Finish with polishing on the cloth or leather wheel using tin oxide polish.

Quote: Sometimes the heart sees what is invisible to the eye.

H. Jackson Brown, Jr

ROCK OF THE MONTH

Amethyst

The gemstone Amethyst is the birthstone for February. It is also the Zodiac stone for the constellation of Pisces. Amethyst is associated with spirituality, wisdom, sobriety, and security.

Amethyst is the purple variety of the mineral quartz and is a popular gemstone. Although it must always be purple to be amethyst, it can and does have a wide range of purple shades. Its color is unparalleled, and even other, more expensive purple gemstones are often compared to its color and beauty. If it were not for its widespread availability, amethyst would be very expensive.

The name "amethyst" comes from the Greek and means "not drunken." This was perhaps due to a belief that amethyst would ward off the effects of alcohol, but most likely the Greeks were referring to the almost wine-like color of some stones that they may have encountered.

Amethyst can occur as long prismatic crystals that have a six sided pyramid at either end or can form as druzes that are crystalline crusts that only show the pointed terminations. As a mineral specimen, amethyst is popular for its color and nice crystal shapes that produce a handsome, purple, sparkling cluster.

However, amethyst is not the same everywhere. Different localities can produce a unique amethyst to that particular region or even to that particular mine. Experts can often identify the source mine that a particular amethyst came from. The key to this is the specimen's color, shape of crystal, inclusions, associations and character of formation.

Quote: Despite everything, I believe that people are really good at heart.

Anne Frank

WHAT'S THAT ROCK?

Rocks that are formed by volcanic action are found everywhere on the planet. They are varied in colour and content and are some of the most beautiful stones we work with. It is useful to be able to identify them.

Identification of Igneous Rocks

Grain Size	Usual Color	Other	Composition	Rock Type
fine	dark	glassy appearance	lava glass	Obsidian
fine	light	many small bubbles	lava froth from sticky lava	Pumice
fine	dark	many large bubbles	lava froth from fluid lava	Scoria
fine or mixed	light	contains quartz	high-silica lava	Felsite
fine or mixed	medium	between felsite and basalt	medium-silica lava	Andesite
fine or mixed	dark	has no quartz	low-silica lava	Basalt
mixed	any color	large grains in fine-grained matrix	large grains of feldspar, quartz, pyroxene or olivine	Porphry
coarse	light	wide range of color and grain size	feldspar and quartz with minor mica, amphibole or pyroxene	Granite
coarse	light	like granite but without quartz	feldspar with minor mica, amphibole or pyroxene	Syenite
coarse	light to medium	little or no alkali feldspar	plagioclase and quartz with dark minerals	Tonalite
coarse	medium to dark	little or no quartz	low-calcium plagioclase and dark minerals	Diorite
coarse	medium to dark	no quartz; may have olivine	high-calcium plagioclase and dark minerals	Gabbro
coarse	dark	dense; always has olivine	olivine with amphibole and/or pyroxene	Peridotite
coarse	dark	dense	mostly pyroxene with olivine and amphibole	Pyroxenite
coarse	green	dense	at least 90% olivine	Dunite
very coarse	any color	usually in small intrusive bodies	typically granitic	Pegmatite

Igneous rock, being one of the main types of rock on our planet, comes from volcanic action. And since there are volcanoes almost everywhere, igneous rock can be found in most parts of the globe.

Kornography

Q: What did the boy volcano say to the girl volcano?
A: I Lava You

Rock Identification; Hornblende

I have often come across spectacular rocks which feature black needle shaped crystals. I have looked at a number of sources to identify these crystals as hornblende. Here is some research I did on hornblende.

Hornblende is actually the name given to a series of minerals that are rather difficult to distinguish by ordinary means. The iron, magnesium and aluminum ions can freely substitute for each other and form what have been distinguished as separate minerals. The minerals are given the names Magnesio-hornblende, Ferrohornblende, Alumino-ferro-hornblende and Alumino-magnesio-hornblende. These minerals are obviously named for their chemistries although there is little to distinguish them in the field. The iron rich members of the series are a darker black and less likely to be translucent.

Hornblende is not often a collection mineral because good crystals are somewhat difficult to find even though the mineral is widespread. It is almost always opaque and black and not very attractive. However a few specimens are extraordinary and make for valuable specimens. Some crystals can grow to a fairly large size of several feet long and nearly a foot across. Other specimens of hornblende can be acicular clusters or needle thin crystal aggregates. Many times a specimen of a more valuable mineral will be accented by the opaque black crystals of hornblende. Wikipedia

These are sample pictures of what hornblende may look like in rock specimens on our Island. I often think of them as needle-like crystals, although they can vary in size and basic shape.

Here are some sample pictures taken on a hike in the Baja region of Mexico. It would appear that hornblende forms in similar ways no matter the location. The consistency of nature is at work here.

Needle-like crystals in greyish white matrix

Thought for the day: “Action speaks louder than words but not nearly as often.”
Mark Twain

WELCOME “NEW” MEMBERS

Membership Renewal
There have been many renewals of memberships since our last edition and by now most people are aware that the renewal date has been moved forward to December of each calendar year to allow the club to submit its fees to the parent organization; British Columbia Lapidary Society (BCLS) who provide us with insurance for our fieldtrips as one of the membership benefits. If you haven’t renewed yet please do so at the next general meeting.

I am pleased to introduce one of our newest members, Heather Kellerhals from Quadra Island. Here is her response to my inquiry about her interest in rocks.

Bev Bowman told me about the Club some time ago, and ever since then I’ve wanted to join the group. I’ve been interested in rocks all my life, probably helped along by the fact that my early years were spent on my parent’s farm in Ontario close to the Canadian Shield. We were always finding interesting things in our huge vegetable garden – fossils, arrowheads, quartz ... and of course arranging them in collections which nobody was ever supposed to throw out. But usually did! Many years ago I took a short prospector’s course that offered a “grubstake” of $50. I never collected that huge sum because I got a more lucrative summer job. More recently my husband and I have done a lot of exploring around the North Island, partly because both of us are volunteers for two of the government Ecological Reserves. One of them is in the Nimpkish valley where we have both hiked and skied and found a number of areas with interesting crystals – mostly quite small though our son, in a late spring ski trip, almost fell over a beautiful one in a half frozen creek. I’m very much an amateur when it comes to identifying rocks and am keen to go on some field trips to learn more.

Incidentally there have been some interesting recent “digs” on our Quadra farm by a group from University of Victoria. One was in a rock overhang where they believe the sea level used to be. Apart from various artifacts they also found obsidian, which they think, was brought from the Chilcotin. They plan to come again in February with a group of students.
Cheers,
Heather

Did you know… "Geologists can be very sedimental"

FROM THE CUTTING FLOOR

Different folks have different ways of doing the same thing. Here’s an example of one way to create a sphere.

How to Make a Stone Sphere

By Faith Chandler

Stone spheres are perfectly round and smooth.

Stone spheres are used for decorative and practical purposes from water fountains to the Atlas Ball that extreme weightlifters hoist in competitions. Any type of durable stone will make a suitable sphere, but the most common are made from granite. This hard rock takes a long time to chip away, making the end result all the more valuable. While the effort involved is time-consuming, the process for carving down a stone sphere involves just hammer and chisel.

- Diamond tipped rotary saw
- Cardboard
- Ruler
- Compass or protractor
- Marker

- Scissors

- Hammer
- Chisel
- Power sander
- Silicon carbide sanding disks
- Buffer
- Polish

Instruction

1. Saw off all eight corners of a stone block with a diamond tipped rotary saw blade. Place the stone block at an angle to the saw, so only a corner edge is touching the blade. Turn on the blade and press into the blade with the block. It will slowly cut through the stone, removing the corner. Wet the stone and the blade periodically. You will only be able to remove about an inch of stone with each corner, but this cuts down on some of the chiseling you'll have to do on the stone.

- 2. Mark a half-circle the size of the sphere you want on one edge of a piece of cardboard using a protractor or compass. Cut out with a pair of scissors. Set the half-circle cutout aside and keep the negative. This negative piece will serve as a template for creating the sphere.
- 3. Hold a chisel firmly against one of the edges on the stone block at a 45 degree angle. Hit it with a hammer. A small chip of stone will break off. Place the chisel further down the edge and repeat. Continue this process until all of the edges are chipped away. Try to maintain consistent hits with the hammer so as to remove roughly the same amount of stone each time you strike.
- 4. Place the cardboard template over the top of the stone. There will be gaps between the edge of the negative and the stone. Use a marker to mark straight lines along all the edges of the stone sphere that make contact with the edge of the template. These are raised areas that need to be chipped away.
- 5. Chip away all the areas you marked with the marker. Check again with the template. Mark again, going all of the way around the stone sphere. Chisel away the marked areas. Repeat the process until the entire template edge rests against the stone on all sides. The sphere won't be smooth yet.
- 6. Sand down the stone sphere to make it smooth using a disk sander with silicon carbide disk. Check the stone with the template periodically to ensure you aren't sanding down the stone too much on one side. Use progressively finer grit disks until the stone is smooth.
- 7. Polish the stone with a buffing pad and some fine polish until it is smooth and shiny.

Final Thought: Is, “the object of education,” as Malcolm Forbes stated, “to fill an empty mind with an open one.”?