



The Telephone City Crystal



The Brantford Lapidary and Mineral Society, Inc.

BLMS INC

NEWSLETTER

JANUARY 2009

2008 Executive

President :
Bill Boone
519-442-7543

Vice President:
John Moons
519-752-9756

Treasurer:
Karen Ward
905-525-0779

Secretary:
Kathy Campbell
519-442-6542

Show Chair – 2008:
Jenny Jones
519-750-0953
2009 – Bev Anderson

Newsletter Editor:
Roger Campbell
519-442-6542
roger.camp@sympatico.ca

Social: Susan Wakeley
519-752-7690

Program:
Phyllis Czarnowski
519-752-8276

Field Trips
Gary Bechtel
519-756-8298

CCFMS Rep.:
Blair Batty
519-426-8409

Librarian:
Russ McCrory
905-389-6525

Workshop:
Brad McClelland
519-751-3141

JANUARY MEETING

Program: New Year's Dinner and Silent Auction

We will have our yearly Christmas potluck dinner originally planned for December. We will hope the weather will cooperate this month.

Date: Friday January 16 2009

Time: 6:30 PM (note time change)

Place: Woodman Drive Community Centre
491 Grey St. Brantford, Ont.



Please bring a salad, cold plate, hot plate, buns, casserole, relish tray or dessert. Please bring plates and cutlery. The club will supply coffee and beverages

Our silent auction will consist of items entered by members. Bring in a rock related or jewellery items to be sold at our auction. Be prepared to fill in the bid sheets with reserve bid and master sheets prior to the auction. Owners of the items receive full price (0 % to the club).



Our nominations are a priority. A new slate of officers is imperative. Our present executive is working overtime. Please attend and support the club. Your participation in club activities is very much appreciated by your executive.

I am initiating a new part of the newsletter to assist newer members in the identification of minerals. Each month I will feature a mineral and ask that other members bring a sample to display at the meeting. This month's mineral -VANADANITE -is described on page 6 of the newsletter. Check your collections and remember to bring a sample. Thank you

Brantford Lapidary and Mineral Society, Inc
1 Sherwood Drive, Brantford, ON N3T 1N3 (mailing address)

1

- -

DIAMONDS OFFER COOL COMPUTER SOLUTION

Friday, 20 June 2008 Anna Salleh

ABC

Diamonds really are a gem when it comes to quantum computing, say researchers (*Source: iStockphoto*)

Quantum computers made using diamonds are a practical way to achieve a massive boost in computing power without generating more heat, says one Australian physicist.

The comments come as Australian authorities this week announced funding for a A\$100 million supercomputing program for the life sciences.

Dr Steven Prawer, of the University of Melbourne says the current generation of computers are very power hungry and inefficient.

"If everybody in the world today had access to the internet that you and I enjoy, we would use up all the available electrical power that we have on the planet," he says.

Prawer says this inefficiency means today's computers produce a lot of waste heat - something users of laptops are well aware of.

"The new supercomputer will require millions of dollars in electricity to run and a large proportion of that will be for air-conditioning to keep it cool," he says.

Cooler computing

Prawer says quantum computers provide a new paradigm for computing that utilises exponential processing power, in a highly efficient process that doesn't dissipate heat.

He says classical computing uses millions of transistors that flip on and off according to whether currents flow through them or not.

Quantum computers will rely instead on 'qubits' that can be not only on or off - depending on the spin of electrons in them - but both states at the same time.

This provides very high processing power because messages based on these different states can be processed in parallel.

Diamond qubits

Prawer says many quantum computer designs rely on very low temperatures and complex infrastructure to detect the electron spin and protect it from being influenced by the outside environment.

But he says diamonds can offer a unique platform for building quantum computers that operate at room temperature.

"All of the things that you would want from a quantum computer have been demonstrated in diamond," says Prawer.

Prawer and colleague Dr Andrew Greentree lay out their argument in favour of diamond-based quantum computing in this week's issue of [*Science*](#).

Tidbits

Don't drive faster than your guardian angel can fly!

Consider the auk;

Becoming extinct because he forgot how to fly, and could only walk.

Consider man, who may well become extinct

Because he forgot how to walk and learned how to fly before he thought. Ogden Nash





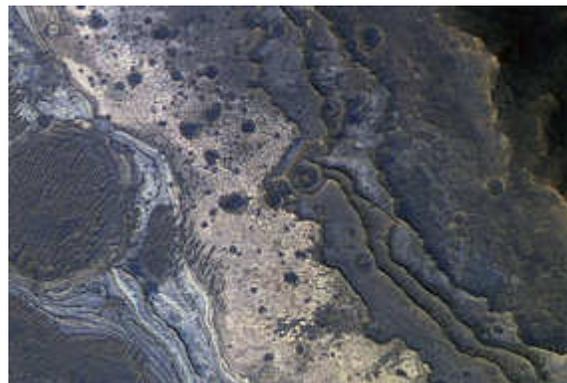
The Telephone City Crystal

The Brantford Lapidary and Mineral Society, Inc.

Opals on Mars reveal planet's wet past

Thursday, 30 October 2008 Irene Klotz
Discovery News

A gem of a find: Martian rocks containing an opal-like material appear in this image as cream-coloured (Source: NASA/JPL-Caltech/Univ. of Ariz.) Opal-like deposits spotted on Mars indicate the planet may have been wet for a billion years longer than previously thought, report US researchers. If confirmed, the findings, by NASA's Mars Reconnaissance Orbiter (MRO), could have significant impacts for whether the planet was suitable to host life.



Dr Scott Murchie of John Hopkins University and colleagues report their discovery of a new category of hydrated minerals on Mars in the current issue of the journal [Geology](#).

"Water may have existed as recently as two billion years ago," says Murchie. "It extends the time range for liquid water on Mars, and the places where it might have supported life." "The silica-based deposits are the third - and most significantly, the youngest - type of water-containing mineral discovered on Mars.

The oldest hydrated materials are clay-like phyllosilicates, which formed more than 3.5 billion years ago when volcanic rocks bathed for long periods of time in water.

Later, hydrated sulfates formed when salty and occasionally acidic water evaporated.

Hydrated silicates, commonly known as opals, formed when liquid water altered materials created by volcanic activity or meteorite impacts on the planet's surface.

They have been found in Gusev Crater by the rover Spirit and by the MRO in the Valles Marineris canyons and other relatively young areas of Mars.

"We see numerous outcrops of opal-like minerals ... around the rim of Valles Marineris and sometimes within the canyon system itself," says research team member Ralph Milliken with NASA's Jet Propulsion Laboratory (JPL) in Pasadena, California.

Water played a key role

Some of the hydrated silica deposits spotted by MRO were mixed with iron sulfates, which formed when long-standing acidic water evaporated. Milliken and his colleagues think the water played a role in the formation of the opals.

"What's important is that the longer liquid water existed on Mars, the longer the window during which Mars may have supported life," says Milliken. (Cont'd on next page)

Also this week, NASA said it is powering down science instruments and heaters on its Phoenix lander, which has been analysing ice and soil samples from the planet's northern polar region.

With the Martian summer in retreat, energy to run the solar-powered chemistry lab is running low.

"If we did nothing, it wouldn't be long before the power needed to operate the spacecraft would exceed the amount of power it generates on a daily basis," says project manager Dr Barry Goldstein of JPL.

"By turning off some heaters and instruments, we can extend the life of the lander by several weeks."



Upcoming Shows -2009

Feb 28 & 29 – Peterborough Gem, Mineral & Fossil Show

Sat. & Sun. – 10am to 5pm ; Admission \$3, children under 12 free
Evinrude Centre, 911 Monaghan Road, Peterborough, Ont.

Minerals, Fossils, Gemstones, Beads, Equipment, Books, Displays, Live & Silent Auctions; Information 705-639-2406; www.rockandfossil.com

April 4 & 5 – Brantford Lapidary & Mineral Society's - 37th Annual Gem and Mineral Show

Sat. & Sun. 10am-5pm; Admission: Adults -\$3, 12 years & under – Free
Paris Fairgrounds, 139 Silver St. Paris, Ont.

Crystals/Minerals/Faceted Gems/Fossils/Equipment/Tools/Beading Supplies
Demonstrations/Jewellery/Pewter Giftware – Free Parking; Hot Lunch Available
Contact: Bill Boone – 519-442-7543, Advertising – Jenny Jones 519-750-0953

June 20 - Niagara Peninsulas: *Geo-Venture* - Gem and Mineral – Show and Sale

Sat. 10am-5pm; Admission by Donation

Rocks & Gems & Minerals & Fossils & Lapidary & Jewellery & Demonstrations
(Rock Cutting & Faceting) Kid's Exhibits; Free Parking, Door Prizes

At the Strawberry Festival Beamsville Ont. Fairgrounds (under the Grandstand)

Info: 905-994-0477 or 905-935-6791; www.ccfms.ca/clubs/npgs

July 17-19 27th Annual Sudbury Gem and Mineral Show

Fri. 5pm – 9pm; Sat. 10-6; Sun. 10-5

Handmade Jewellery, Beads, Fossils, Minerals, Rock Craft, Dealers, Door Prizes,
Demonstrations, Displays, ID Booth, Metal Detecting, Kids Activities

Trading Sat. 11-4; Field Trip, Sun. noon; Charity Barbecue – Sat. & Sun.

Carmichael Arena, Bancroft Drive, Sudbury Ont.

Info: call 705-522-5140 or www.ccfms.ca/Clubs/Sudbury/show.htm

The Bathtub was invented in 1850; the telephone in 1875. If you had lived in 1850, you could have sat in the tub for 25 years before the phone rang.

More Tidbits

- 1. A closed mouth gathers no feet.**
- 2. The mind is like a parachute; it works much better when it's open.**
- 3. If you're living on the edge, make sure you're wearing your seatbelt.**
- 4. There are three ways to get something done: 1-Do it yourself. 2-Hire someone to do it. 3-Forbid your kids to do it.**



The Telephone City Crystal

The Brantford Lapidary and Mineral Society, Inc.

Jasper or Agate: A Simple Distinction (by Dave Olsen)

Jasper and agate are the rocks we hobbyists deal with the most often in pursuit of our goals as lapidaries and collectors. Do we really understand the differences between the two? Often confusion arises when attempting to describe a specimen as either jasper or agate.

Both jasper and agate are composed of extremely fine interlocking quartz crystals called cryptocrystalline quartz. As such, they are both members of the fine-grained quartz family referred to as "chalcedony".

Chalcedony occurs throughout the world in beds, bands, nodules, geodes, botryoidal masses, as a replacement of fossils, wood tissues or often other minerals, and as a cementing material. It is deposited from silica-rich waters, often carrying other mineral impurities.

It is the presence of these mineral impurities which stain the micro-quartz grains to produce the wide variety of coloured patterns, banding effects and inclusions that differentiate the basic "gem" forms of cryptocrystalline quartz—jasper and agate—from ordinary drab chalcedony.

So what is the difference? In general, agate is a transparent to translucent form of chalcedony in which the colouration takes the form of regular bands, rings, clouds, wispy inclusions or distinct groups.

Agate containing straight or concentric bands is referred to as a fortification agate. Moss agate contains wispy or lacy inclusions of colouring materials, often the green mineral chlorite which penetrated cracks in the silica gel matrix prior to hardening. Now they remain as fine picture-like images. Agates are usually named by employing the geological area where it is found with a descriptive adjective, as "Friday Ranch Plume Agate".

Jasper, on the other hand, can be somewhat translucent but is most often opaque. The colouration of jasper is usually much darker than that of agate and is totally random with respect to distribution and pattern.

Finely divided hematite gives the colour to reddish jaspers, and another iron mineral—goethite—is responsible for yellows and browns. Chlorite and nickel minerals contribute to green colouration. As with agate, jasper comes in many colours and displays almost an infinite variety of patterns. Because of these properties, it is an extremely versatile material for cabs, scenic "pictures" to be framed, and other functional and decorative purposes.

It is truly the bread and butter "gem" of our hobby. via The Rock Rattler 12/97



Hidden Treasure

Cubic Zirconia or Diamonds...how can you tell?

1. CZ (cubic zirconia) doesn't have the sharp edges of a diamond.
2. A line drawn on a sheet of paper is visible through a diamond.
3. CZ will be transparent if dropped in water; a diamond will remain visible.
4. Take it to a Jeweler!

from Roc-Tok 2(97 via The Rock Prattle, 5/00 via Rock Rattler 6/00

Vanadinite

Named for *Vana dis*, old Norse for Freyja, the Nordic Goddess of fertility, wealth, and feminine magic, vanadinite is a must-have mineral for every collector. It has lustrous, fiery orange to red, six-sided crystals that cluster together in intriguing formations. Commonly found in combination with barite, limonite, wulfenite, and galena, vanadinite forms in arid regions like Arizona and New Mexico in the United States, Mexico, and Morocco.

Vanadinite is an ore of vanadium, an element that has many industrial applications, and of lead. Most vanadium is used to make ferrovandium and vanadium pentoxide. Ferrovandium is a strong, shock- and corrosion-resistant alloy of iron that's added to steel to increase its strength and to prevent rust. Vanadium pentoxide is a compound that's used to fix dye to fabric, to speed up chemical reactions, and to form superconductive magnets when combined with gallium.

Metaphysically, vanadinite is believed to promote patience, inner clarity, and the conservation of energy and wealth. It can also help you to define goals and bring order to your life.

Vanadinite: $Pb_5(VO_4)_3Cl$, lead chlorovanadate
Color: usually bright red to orange; less commonly gray, brown, or yellow
Habit: typically a hexagonal prism with pinacoid termination (flat basal face); rare crystals have a hexagonal pyramid termination; also found as rounded masses and crusts
Hardness: 3
Luster: vitreous to adamantine
Transparency: crystals are transparent to translucent
Cleavage: none
Fracture: conchoidal
Specific gravity: 6.6+ (very heavy for translucent minerals)
Streak: yellowish-white
Other: index of refraction is 2.39 (typically high for lead minerals); specimens from some localities may darken and lose transparency upon prolonged exposure to light

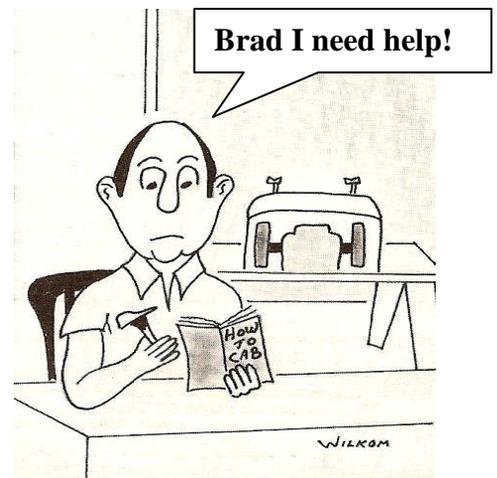


CLUB STUFF

Don't forget our workshop. You don't have to read a manual on cabbing when we have qualified instructors like Brad and Russ to teach the techniques of lapidary. We have numerous grinders, trim saw and a slabbing saw to meet all your needs.

Wed. Evenings 7-9

2009 DUES ARE DUE





The Telephone City Crystal

The Brantford Lapidary and Mineral Society, Inc.

Workshop

How to Number Fossil Specimens (by Forrest Stevens)

One thing I was told to do (and seems to work quite well) for marking specimens is to apply clear nail polish to a small area, let it dry, (doesn't take long) and cover with white-out.

Then you can write a number on the white-out, and cover another layer of nail polish for protection. This process is not as involved as it sounds, works on about any surface, and the label can almost be completely removed with nail polish remover. via The Glacial Drifter

POLISHING CORAL: Gem coral is calcium carbonate, an organic material, and is 3.5 in hardness. It can range in color from white to dark red. Gem coral can be cut and polished on a regular cabochon unit, but you must be careful when dopping since it is heat sensitive. Use only a fine grinding wheel that has been dressed down to a smooth even surface, -and keep plenty of water on the grinding wheels and sanding cloth. Hold the stone against the wheels and sanding cloth with a light pressure. Coral requires a 400 or 600 grit wet sanding cloth for the final sanding. It can be polished on either a hard felt wheel or a leather disk with tin oxide or cerium oxide.

from Labs-N-Cabs 3/96, via Owyhee Gem, 5/01 Via RockCollector 6/01

REPAIRING CRYSTALS

If you are looking for a cement to repair quartz crystals, check the hardware store for a product called Crystal Clear. It is made by DURO and comes in a small red plastic syringe. It has the same refractive index as glass; is crystal clear, and cured with UV light. As it is somewhat thick, only a small amount is needed and the cement dries in a few seconds under bright sunlight or long-wave ultraviolet light. Under a short-wave lamp, it takes longer. On a broken crystal, the repair almost disappears. The package says it can be used to fill holes and to repair glass. It should also be good for repairing many translucent materials, especially those having a refractive index close to quartz.

from Tumbler via Amador Nugget 1/01 via RockCollector 3/01

MY FIVE NEW BOYFRIENDS

I am seeing 5 gentlemen every day. As soon as I wake up, Will Power helps me get out of bed. Then I go see John. Then Charlie Horse comes along, and when he's here, he takes a lot of time and attention. When he leaves, Authur Ritis shows up and stays the rest of the day. He doesn't like to stay in one place very long, so he takes me from joint to joint. After such a busy day, I'm tired and glad to go bed with Ben Gay. What a life! Oh yes, I'm flirting with Al Zymer and think of calling Jack Daniels or Johnny Walker to come and keep me company.

Now remember: life is like a roll of toilet paper – the closer it gets to the end, the faster it goes, so have fun, learn to laugh at yourself, and 'Count your blessings!' by Isabel Redfern

GARNET – January Stone

Noah reportedly used a garnet lantern to illuminate the ark and guide it safely through the darkness of night.

According to legend East Indians rubbed garnet on themselves to obtain glowing qualities. Garnet is said to symbolize happiness and deep enduring friendships and to spark creativity.

Native American tribes believed garnet had medicinal powers. They also used garnet in jewellery and to decorate shields, dream catchers and many other items.

Jewellery from Egypt dating back as far as 3100 B.C. contained garnet stones. It was believed garnet would protect its wearer from enemies and could illuminate the darkness.

Garnet is used to rid the body of negative energy and emotions. It is thought to stimulate the desire and fortitude that it takes to connect to decisions.

It's Finally Here

ROYAL ONTARIO MUSEUM - Toronto

Teck Suite of Galleries: Earth's Treasures

Level 2, Weston Family Wing



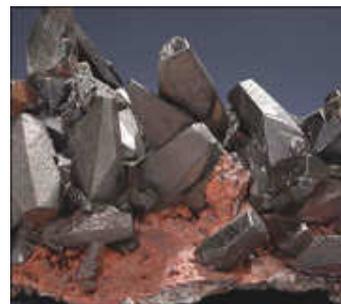
Gallery of Minerals



Gold nugget

Teck Suite of Galleries: Earth's Treasures showcases the Royal Ontario Museum's exceptional specimens of minerals, gems, rocks and meteorites, a collection among the finest in North America. The 6,900 square-foot combined gallery space fills the length of the Weston Family Wing on Level 2 and is divided into the Vale Inco Limited Gallery of Minerals, the Canadian Mining Hall of Fame Gallery and the Gallery of Gems and Gold. The fascinating displays are contextualized and illuminated by over 40 interactive touch stations, compelling video exhibits and engrossing information on Canada's mining industry.

The Vale Inco Limited Gallery of Minerals presents approximately 2,300 minerals, rocks and meteorites, exploring such areas as the classification of minerals, their physical and scientific properties, causes of mineral colour and the geological environments necessary for spectacular mineral growth. This gallery features the ROM's meteorite collection, including a 1.1 kilogram lunar specimen, one of the biggest lunar meteorites on display in the world. The Canadian Mining Hall of Fame Gallery showcases the biographies and personal stories of 130 inductees through a fully bilingual, interactive video wall that explains how mining touches every part of our lives.



Calcite

The Gallery of Gems and Gold presents as its inaugural exhibition *Light & Stone: Gems from the Collection of Michael Scott*. This special exhibition features approximately 200 stunning jewellery pieces, gemstones cut and unset, as well as modern interpretations of gemstones as art. *Light & Stone* is on display for a one-year period and showcases the private gem collection of Michael M. Scott, a collection with few rivals in the world outside of the royal families.

The suite of galleries is named for the mining company Teck Limited, whose generous contribution to the Renaissance ROM campaign was the largest corporate gift in the Museum's history. In addition to the Teck Suite of Galleries: Earth's Treasures, this gift helps create the *Teck Endowed Chair in Mineralogy* and the *Teck Digital Education Module in Earth Sciences*.