THE TELEPHONE CITY CRYSTAL

THE BRANTFORD LAPIDARY & MINERAL SOCIETY INC.

Volume 10, Issue 1

January 2010 Edition

Inside this issue:

Peter Russell and President John Moons exhibits plaque with the names of the four 2009 University of Waterloo scholarship winners

"Ring out the old, ring in the new ; Ring out the false, ring in the true."

Lord Alfred Tennyson

Our new website: www.brantfordlapidarymineral.ca

Our mailing address: 1 Sherwood Drive, Brantford, On N3T 1N3

JANUARY MEETING - January 15, 2010

PROGRAM - PROCESS OF LOST WAX CASTING

SPEAKER - STEPHEN SAVORY

Charms, pendants, and rings are just a few items that can be made using a method called lost wax casting. In this process, a wax (or sometimes plastic) mold is used to create a piece of jewellery.

For the complete process, Stephen Savory from Savory Goldsmithing in St. George will be our guest speaker.

Stephen's specialty is jewellery repair, design and hand-engraving and is located at 30 Main St. St. George

Time: 7:30 pm

Location: Woodman Drive Community Centre

491 Grey St., Brantford, Ont.

Month After Christmas

**Twas the month after Christmas, and all through the house,
Nothing would fit me, not even a blouse.**

**The cookies I'd nibbled, the eggnog I'd taste,
At the holiday parties had gone to my waist.**

**When I got on the scales there arose such a number!
When I walked to the store (less a walk than a lumber).**

**I'd remember the marvellous meals I'd prepared,
The gravies and sauces and beef nicely rared.**

**The wine and rum balls, the bread and the cheese,
And the way I'd never said, "No thank you please."**

**As I dressed in my husband's old shirt,
And prepared once again to battle with dirt.**

**I said to myself, as I only can,
"You can't spend a winter disguised as a man!"**

**So--away with the last of the sour cream dip,
Get rid of the fruit cake, every cracker and dip.**

**Every last bit of food that I like must be banished,
Till all the additional ounces have vanished.**

**I won't have a cookie-not even a lick,
I'll want only to chew on a long celery stick.**

**I won't have hot biscuits, or corn bread, or pie,
I'll munch on a carrot and quietly cry.**

**I'm hungry, I'm lonesome, and life is a bore,
But isn't that what January is for?**

**Unable to giggle, no longer a riot,
Happy New Year to all and to all a good diet!**

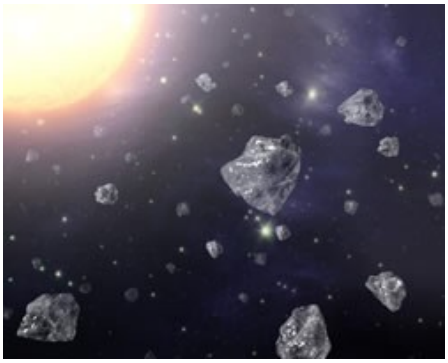
Author unknown

LIFE ON EARTH IS EXPENSIVE, BUT IT DOES INCLUDE A FREE TRIP AROUND THE SUN.

Diamonds in Space

Diamonds in Meteorites Triggered Scientists' Imagination

News Release by NASA and JPL-Caltech - February 2008



Finding diamonds in meteorites made scientists think seriously about how they might occur in space. This artist's concept shows a multitude of diamonds next to a hot star. Image by NASA/JPL-Caltech

Diamonds may be rare on Earth, but surprisingly common in space -- and the super-sensitive infrared eyes of NASA's Spitzer Space Telescope are perfect for scouting them, say scientists at the NASA Ames Research Center in Moffett Field, Calif.

Using computer simulations, researchers have developed a strategy for finding diamonds in space that are only a nanometer (a billionth of a meter) in size. These gems are about 25,000 times smaller than a grain of sand, much too small for an engagement ring. But astronomers believe that these tiny particles could provide valuable insights into how carbon-rich molecules, the basis of life on Earth, develop in the cosmos.

Scientists began to seriously ponder the presence of diamonds in space in the l980s, when studies of meteorites that crashed into Earth revealed lots of tiny nanometer-sized diamonds. Astronomers determined that 3 percent of all carbon found in meteorites came in the form of nanodiamonds. If meteorites are a reflection of the dust content in outer space, calculations show that just a gram of dust and gas in a cosmic cloud could contain as many as 10,000 trillion nanodiamonds.
"The question that we always get asked is, if nanodiamonds are abundant in space, why haven't we seen them more often?" says Charles Bauschlicher of Ames Research Center. They have only been spotted twice. "The truth is, we just didn't know enough about their infrared and electronic properties to detect their fingerprint."

To solve this dilemma, Bauschlicher and his research team used computer software to simulate conditions of the interstellar medium--the space between stars--filled with nanodiamonds. They found that these space diamonds shine brightly at infrared light ranges of 3.4 to 3.5 microns and 6 to 10 microns, where Spitzer is especially sensitive.

Astronomers should be able to see celestial diamonds by looking for their unique "infrared fingerprints." When light from a nearby star zaps a molecule, its bonds stretch, twist and flex, giving off a distinctive colour of infrared light. Like a prism breaking white light into a rainbow, Spitzer's infrared spectrometer instrument breaks up infrared light into its component parts, allowing scientists to see the light signature of each individual molecule.

Team members suspect that more diamonds haven't been spotted in space yet because astronomers have not been looking in the right places with the right instruments. Diamonds are made of tightly bound carbon atoms, so it takes a lot of high-energy ultraviolet light to cause the diamond bonds to bend and move, producing an infrared fingerprint. Thus, the scientists concluded that the best place to see a space diamond's signature shine is right next to a hot star.

Once astronomers figure out where to look for nanodiamonds, another mystery is figuring out how they form in the environment of interstellar space.

"Space diamonds are formed under very different conditions than diamonds are formed on Earth," says Louis Allamandola, also of Ames.

He notes that diamonds on Earth form under immense pressure, deep inside the planet, where temperatures are also very high. However, space diamonds are found in cold molecular clouds where pressures are billions of times lower and temperatures are below minus 240 degrees Celsius (minus 400 degrees Fahrenheit).

"Now that we know where to look for glowing nanodiamonds, infrared telescopes like Spitzer can help us learn more about their life in space," says Allamandola.

Bauschlicher's paper on this topic has been accepted for publication in Astrophysical Journal. Allamandola was a co-author on the paper, along with Yufei Liu, Alessandra Ricca, and Andrew L. Mattioda, also of Ames.

NASA's Jet Propulsion Laboratory, Pasadena, Calif., manages the Spitzer Space Telescope mission for NASA's Science Mission Directorate, Washington. Science operations are conducted at the Spitzer Science Center at the California Institute of Technology, also in Pasadena. Caltech manages JPL for NASA.

Record Hoard Of Ancient Gold Found In Field

12:42pm UK, Thursday September 24, 2009

An unemployed man has unearthed the largest hoard of Anglo-Saxon gold ever found with the help of his metal detector.

Experts are now calculating its value - a process that could take more than a year because of its size.
The find was declared as treasure by coroner Andrew Haigh, which means the cache will be offered for sale after it is valued.
Terry Herbert from Burntwood, Staffordshire, stumbled on the hoard in a private field with his trusty 14-year-old metal detector.
Over five days in July, the 55-year-old dug up a fortune on the farmland near to his home.
More than 1,500 pieces of treasure - including around 5kg of gold and 2.5kg of silver - has now been uncovered.

Archaeologists believe the hoard dates back to the seventh century and may have belonged to Saxon royalty.
Among the riches are warfare paraphernalia, including sword pommel caps and hilt plates, often inlaid with precious stones.
Leslie Webster, former keeper at the British Museum's Department of Prehistory and Europe, said the find would "alter our perceptions of Anglo-Saxon England as radically, if not more so, as the Sutton Hoo discoveries".
"(It is) absolutely the equivalent of finding a new Lindisfarne Gospels or Book of Kells," he said.
Dr Kevin Leahy, national finds adviser from the Portable Antiquities Scheme, added that while the quantity of gold was amazing, the craftsmanship was "consummate".
"Its origins are clearly the very highest-levels of Saxon aristocracy or royalty," he said.
"It belonged to the elite."

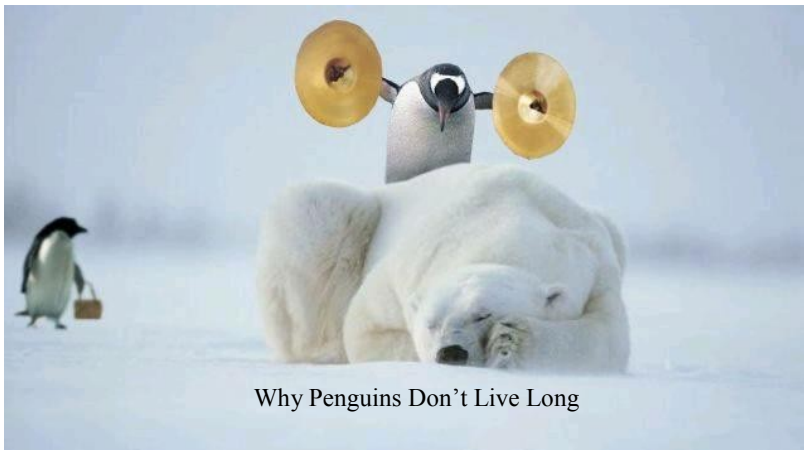
Hoard: 'The Folded Cross' and part of a decorated helmet

The exact location of the find is being kept under wraps.
Unemployed Mr Herbert detected the cache after asking a farmer friend if he could search on his land.
"Imagine you're at home and somebody keeps putting money through your letterbox, that was what it was like," he said.
"I was going to bed and in my sleep I was seeing gold items.
"As soon as I closed my eyes I saw gold patterns, I didn't think it was ever going to end.
"I just kept thinking of what I might find the next day."
Now, both men looked set to reap a huge reward thanks to Mr Herbert's 18-year hobby.
"People laugh at metal detectorists. I've had people go past and go, 'beep beep, he's after pennies'," he said.

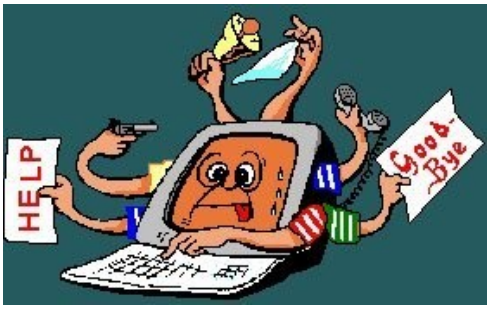
"Well no, we are out there to find this kind of stuff and it is out there.
"People have said it (the hoard) was bigger than Sutton Hoo and one expert said it was like finding Tutankhamen's tomb.
"I just flushed all over when he said that. The hairs on the back of my neck stood up, you just never expect this."
Once a valuation and sale of the hoard have been completed, the market value of the find will go to Mr Herbert and the owner of the farmland where it was discovered.
:: The treasure is being held in secure storage at Birmingham Museum and Art Gallery.

Mr Herbert and pieces he found

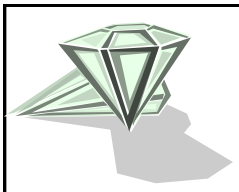
TIPS and HINTS : As a cleaner for lapidary sanding cloth, crepe rubber is excellent. A small thick sheet of crepe rubber held against a sanding cloth, while in motion acts as an eraser to remove the accumulation of debris and expose the abrasive cloth for better work. (SMS Matrix 5?90, Via Breccia 2/99)



Why Penguins Don't Live Long



Your editor is <u>still</u> waiting for your stories, adventures, photos for the newsletter. Email is roger.camp@sympatico.ca



On a recent TV episode of Dragon's Den a potential investment recipient was looking for additional cash for his company. He claimed that he could produce a diamond from 'hair'. Using the idea that hair is carbon and diamonds are carbon under heat and pressure, he claimed that he could produce a diamond from a lock of a loved one's hair. None of the Dragons took the idea seriously and sent him back to the kimberlite board.

MINERAL OF THE MONTH - CALCITE

Crystals of Calcium Carbonate $CaCO_3$ are known as "Calcite". This is a very common and widely-distributed rock-forming mineral. It is a key constituent of limestone and marble. (Pure metamorphosed limestone forms white granular marble, while the presence of other minerals leads to the coloured forms of marble.)

Structures of Calcite Crystals

Calcite crystals are formed according to trigonal crystal symmetry. This system of crystal symmetry consists of one vertical axis of symmetry and three-horizonal axes of symmetry, all of the horizonal axes being of the same length.

Substances that crystallize in the same crystal system (of symmetry) can show considerable differences in shape and macro-structure depending on which crystal form, or combination of forms, develops. The factors which determine which of these applies include the details of the physical conditions under which the particular sample was formed. The crystal forms and combinations of forms in which calcite exists are among the most varied of any mineral. These include tabular; prismatic; acute or obtuse rhombohedral; and scalenohedral.
Other forms of calcite include parallel or fibrous aggregates; granular, stalactitic, or massive aggregates.

Distinguishing Features

Perfect rhombohedral cleavage;

Exhibits phenomenon of double-refraction;

Hardness 3

Dissolves readily (with effervesence) in cold dilute hydrochloric acid

Colours of Calcite Crystals

Calcite Crystals are found in various colours due to the other elements (in addition to calcium, carbon and oxygen) and/or compounds that are present. Pure calcite is either colourless or white, depending on how it was formed. Colours of other forms of calcite include: black, blue, golden, green, grey, orange, peach, pink, purple, red and yellow.

DECEMBER MEETING

Top Left: : Members enjoy a delicious Christmas potluck dinner at our Dec meeting - Middle Left: and Bottom: Crafts and Jewellery on display by our talented members

Right: Plaque with list of recipients of the University of Waterloo scholarship winners

Workshop: Another Trick for Cutting Mexican Jelly Opal

When cutting Mexican opal with transparent or clear (that's most of it!) base colour, cut a high dome on the top side and a moderate dome on the back. The reason is two fold:

1. If you get the top and the bottom domes just right, the light will refract within the stone as it does in a properly cut faceted stone. The effort will be as though light is trapped within the stone and the colour will "glow" in a seemingly bottomless stone. It works great with or without play of colour. Try it!

2. Polishing the back of the opal helps the stone last longer. A polished surface tends to retard water loss from opal over time. A rough surface has many times more actual surface area per given dimension than a polished surface, thus increasing the potential for physical and chemical interaction. (Gates Rockhound Bulletin 02)

When cutting porous rocks under a hardness of 5, soak the material in water for a week or more. You will have no problem with the stone soaking up oil. (Gates Rockhound Bulletin 02)

COMING EVENTS

April 10-11 **Brantford Lapidary & Mineral Society's - 38th Annual Gem and Mineral Show**

Sat. & Sun. 10am-5pm; Admission: Adults -$3, 12 years & under – Free

Paris Fairgrounds, 139 Silver St. Paris, Ont.

Features: One of Canada's Largest Gem and Mineral Shows! Gem, Mineral, Fossil & Stone Dealers, Lapidary Equipment, Supplies, Fine Jewellery, Beads, Demonstrations, Exhibits

Silent Auction - Saturday and Sunday "mine for Gems' Display

Admission: Adults $3, Children 12 and under - Free

Contact: www.lapidarymineral.ca or Bob Parry - roberthalloriginals.com or John Moons 519-752-9756

Apr 30-May 2 **Open House - Robert Hall Originals Pewter Studio and Rock Shop**

Fri., Sat., Sin 10am - 5 pm

138 Sugar Maple Road, St. George, Ontario

Features: Visit Robert Hall Originals for our Annual Spring Open House. Rocks, minerals, gems, beads, lapidary demonstrations & more! Admission: Free

Contact: inquiry@roberthalloriginals.com (519) 448-1236 0r 1-800-360-2813

Website: http://www.roberthalloriginals.com

Apr 30 -May1 **Canadian Micro Mineral Association 47th Annual Symposium**

Brock University, St. Catharines, Ontario

Speakers: To be announced

Contact: Bill Lechner at 416-438-8908 or bill.lechner@rogers.com

Registration form available by request to the above

Join the Brantford Lapidary and Mineral Society, Inc.

Name_____ **Phone**_____

Address_____ **Postal Code**_____

EMail_____

Your interests (Circle): Lapidary, Minerals, Faceting, Fossils, Jewellery, Micromount

Send with $15 single ($18/family) to: Treasurer,

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A NOTE FROM THE PRESIDENT

Now that 2010 has arrived, it is time to reflect on the past year and look forward to the future. Our past year was a good year for our club. The membership numbers are up, the meetings are well attended and our finances look good.

We had a great show in the spring, we participated in the Ancaster show, the Arkona trip was successful with some very interesting finds, our website is up and running, the workshops were expanded to an afternoon session and a few members made interesting trips and came back with lots of stones.

One of the highlights of the year for me, was making Roger Campbell a lifetime member. I have been a member only a few years, but I am ever so grateful for all the great newsletters he puts together every time. Our newsletters are a fantastic tool to stimulate the members.

In 2009 we were also able to make four thousand dollars available for scholarships for students at the University of Waterloo.

As president I like to give a big thank you to everyone on and off the board who did all the work that was done in 2009. We managed to come up with a new board and I am sure we will work together to make it another great year.

This April we will have our annual show in Paris. One of the new features (it is actually old) is that we ask members to show their treasures. It is important that the show is a show and not just a place where you can buy stones. So I will ask every member to see if they have something that they want to show to the visitors.

If you have any other ideas to make the show better and more attractive, then we would like to hear from you. Do not wait until the last moment, because the preparations are in full swing.

As always we are looking for topics for our meetings and for places that the members can visit. Let your imagination work and let the board know about your ideas.

Have a great stone year!

John Moons - President