



# THE MINERAL VEIN

*Official Newsletter of*

## THE MINERAL SOCIETY OF MANITOBA JANUARY 2016

### Find and Name a New Mineral in 2016

Scientists with the Deep Carbon Observatory hope that will be your fate. They've started the Carbon Mineral Challenge, which is urging professional and amateur mineral collectors to scour the planet for carbon-bearing minerals. Scientists believe carbon minerals evolved over time and 406 varieties have been found so far. New ones have been popping up at a rate of about four a year since 2010, but scientists estimate there are at least 145 yet to be discovered. "They could be hiding in any corner of the world," says challenge leader Daniel Hummer. "A good way to put it is that we're crowd-sourcing mineralogical research." Want to get in on the action? Scientists offer a few tips: The minerals are probably colorless, poorly crystallized or powdery, a form of carbonate, and may disappear and reappear in time with events like rainfall.



The Poudrette Quarry in Mont-St-Hilaire , Quebec.

They may also be found at a few key sites including Canada's Poudrette Quarry, Kukisvumchorr Mountain in Russia, and Clara Mine in Germany, where other carbon minerals have been discovered. Have access to a rock collection? That'll work, too, since there could be "minerals hiding in drawers right now ... that we don't even know we have," says Hummer. Indeed, "it will be fascinating to see what new and exciting carbon minerals might be lurking in our Smithsonian collection drawers," said a mineral expert at the museum.

A team of 25 scientists will review all promising discoveries over the next four years. Once a mineral passes composition and structure tests using electron microprobe analysis and X-ray crystallography, the lucky discoverer will get to propose a name. The only caveat: You can't name a mineral after yourself.

For more info: <http://mineralchallenge.net>



Graphite core sample. Graphite is a mineral of pure carbon.

## THE MINERAL SOCIETY OF MANITOBA

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*The Mineral Vein* is published monthly from September to June.

**Meetings** are held on the first Wednesday of each month from September to May inclusive at the Manitoba Museum in room P47 on the Planetarium level. They begin at 7:30 PM and feature announcements, an invited speaker and a raffle. Members are encouraged to bring along any new, interesting specimens, or specimens appropriate to the speaker's topic.

**Field Trips** take place from May to September to interesting sites in Manitoba or neighbouring provinces and states.

**Membership:** A single membership is \$15 while a family membership is \$20. Memberships run from October to October.

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### UPCOMING EVENTS

**January 6, 2016:** MSM regular monthly meeting begins at 7:30 p.m. at the Manitoba Museum. This meeting will feature guest speaker **Jim Bamburak**, Geologist, Sedimentary Geoscience section from the Manitoba Geological Survey. He will talk about Walking in William "Strata" Smith's footsteps. William Smith was an English geologist, credited with creating the first nationwide geological map.

**February 3, 2016:** MSM regular monthly meeting begins at 7:30 p.m. at the Manitoba Museum. Speaker to be announced.

**March 2, 2016:** MSM regular monthly meeting begins at 7:30 p.m. at the Manitoba Museum. Speaker to be announced.

**April 6, 2016:** MSM regular monthly meeting begins at 7:30 p.m. at the Manitoba Museum. Speaker to be announced.



Founded in 1971, the Mineral Society of Manitoba is dedicated to promoting the study of minerals, rocks and fossils for their scientific and recreational value.

The Mineral Society of Manitoba hosts monthly meetings covering a variety of mineral related topics. In addition, the Mineral Society organizes summer field trips to collecting localities, and hosts educational exhibits about minerals and fossils.

## CHRISTMAS PARTY SUMMARY

The Annual Christmas Party was held on Sunday December 6<sup>th</sup> at the Canad-Inns Garden City.

The weather was perfect this year and over 30 people attended the event.



A delicious ham roast beef buffet were followed by Tony Smith's Traditional Auction.

\$1,018 was raised at the Christmas Raffle. All proceeds from the auction will go towards the annual Geology Student Prize Award.

A big thank you to all those who came and supported the Mineral Society of Manitoba.

## PRESIDENT'S MESSAGE

I would like to take this opportunity to send you my best wishes for a happy new year 2016 filled with health, happiness and spectacular success.

Your Mineral Society of Manitoba has been busy this year with our monthly meetings featuring several great guest speakers, some exciting field trips across the province and beyond as well as a couple of booth presences at Oak Hammock Marsh and at the Convention Centre where members were engaging with public and share their passion for the mineral world.

May your field trips be rewarding in 2016 and I am looking forward to seeing you at our regular monthly meetings.



## MINERAL OF THE YEAR

A mineral discovered by retired U medical technologist Joe Marty recently received the inaugural Mineral of the Year award for 2014 by the International Mineral Association.

Marty discovered the winning mineral, ophirite, roughly 25 years ago at the Ophir Hill Consolidated mine of Utah. The mine, located in the Ophir district in the Oquirrh Mountains of Utah, closed in 1972 and Marty had received special permission to search for minerals on the fateful day he discovered ophirite.

“The announcement of the selection of ophirite as Mineral of the Year came as a pleasant surprise. My co-authors and I thought that it was a really interesting new mineral, but there are usually over a hundred new minerals described every year. So it is very satisfying to have the international community agree as well and to see that we weren’t alone in our opinion,” said Barbara Nash, a professor for the U’s Department of Geology and Geophysics who determined the mineral’s precise chemical composition.



## The first natural occurrence in history

Ophirite forms orange-brown tablet-shaped crystals up to 1 mm long and is the first known mineral to contain an arrangement of atoms that constitute a derivative of the Keggin structure. The Keggin structure is a form of acid comprised of oxygen, hydrogen and various metals and non-metals.

“Hundreds of synthetic compounds with the Keggin structure have been fabricated by chemists and are used in a wide variety of industrial applications. But this is the first time this structure has been found to occur naturally,” said Nash.

## A discovery 25 years late

Roughly 25 years ago, Marty was on one of his many mineral-hunting adventures looking for a mineral called scheelite. He saw and collected an unusual-looking specimen of scheelite and took it home to look at under the microscope. Unsure of what mineral was present, Marty sent it off for lab analysis. At the time, the lab didn’t possess the capability to detect what mineral was present, so Marty put it away and continued on with mineral collecting.

Decades later after working alongside Kampf, Curator Emeritus of Mineral Sciences for the Natural History Museum of Los Angeles County, on numerous mineral discoveries, Marty remembered the sample of what would later be deemed ophirite and sent it to Kampf for analysis.

“Recognition is always great, but the best part of the journey, by far, has been the friendships I’ve developed with the people I’ve worked with. None of this would have been possible without their help, either,” said Marty.

For Marty, the discovery of ophirite is simply one of the approximately 60 new mineral species he’s discovered or participated in the discovery of. This is a record number for an amateur collector. Marty recently received the 2015 Pinch Medal from the Mineralogical Association of Canada for his significant contributions to the advancement of mineralogy.