



THE MINERAL VEIN

Official Newsletter of

THE MINERAL SOCIETY OF MANITOBA

MAY 2017

APRIL MINERAL AUCTION

By Jacques Bourgeois

The April meeting featured our Annual Mineral Auction hosted by none other than the auctioneer extraordinaire Tony Smith.

We had 32 people attending the event featuring the mineral auction. Some of the specimens were quite sought after and some friendly bidding wars helped us raise \$1161.00 in revenue for the Mineral Society. This money will help offset the cost of our outreach programs, field trips, the food for our annual BBQ, meeting expenses, scholarships and specimen purchases.

A big thank you to those who contributed items for the auction as well as those who bought those items and made the evening an fun and successful event.



Some of the items auctioned during the event



Tony Smith, our auctioneer extraordinaire

FIELD TRIP PLANNING 2017

This is just a quick note to let you know that your executive is still busy planning a fun and exciting field trip season for 2017.

Some of the suggested sites for this summer are :
Gillis Quarry – Ordovician fossils

Souris gravel pit – Agates, jasper, petrified wood

Morden Miami area – Cretaceous fossils, selenite

Winnipeg Floodway – Selenite rosettes

Interlake quarries tour (Lily Bay, The Narrows, etc.)

More information to come in the next newsletter.

(Continued on page 3)

Table of Contents

MINERAL AUCTION SUMMARY.....	1
FIELD TRIP PLANNING 2017	1
UPCOMING EVENTS.....	2
OLDEST TRACES OF LIFE FOUND IN QUEBEC.....	3
CANADA 150 - OFFICIAL GEMSTONE.....	4

UPCOMING EVENTS

May 3, 2017: MSM regular monthly meeting begins at 7:30 p.m. at the Manitoba Museum. Our guest speaker this month will be **Jim Bamburak**, Sedimentary Geologist, with the Sedimentary Geoscience section at the Manitoba Geological Survey. He will speak about the geology of Shoulderblade Island.

May 21 to 28, 2017: Manitoba Mining Week

May 27 & 28, 2017: Archaeology, Rocks and Mineral Event at Oak Hammock Marsh in celebration of **Manitoba Mining Week**. Both days from 10 a.m. to 4:30 p.m.

June 3, 2017 : Annual MSM Picnic. Join us for our annual picnic. Location TBA.

September 6, 2017: MSM regular monthly meeting begins at 7:30 p.m. at the Manitoba Museum. Our guest speaker this month will be TBA



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.

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.

OLDEST TRACE OF LIFE ON EARTH FOUND

By Nicole Mortillaro for CBC News

A team of international scientists has found the oldest record of life on Earth in Northern Quebec, dating back at least 3.8 billion years.

Our solar system formed about 4.6 billion years ago. Scientists believe that about 4.3 billion years ago, water already existed on Earth's surface. However, what isn't known is when the earliest life emerged. Recent research has found life at 3.4 billion years and, most recently 3.7 billion years.



Red hematite seen here, which contains tubular microfossils, is evidence of life that existed some four billion years ago.

This amazing discovery was made possible by exploring the Nuvvuagittuq Greenstone Belt in Northern Quebec in rock known as "banded iron formations." These formations existed billions of years ago, a result of organisms reacting with dissolved iron in the water that covered the planet. They appear in rock as red or white layers.

While there is some debate as to whether or not the the age of the rock in the Nuvvuagittuq Greenstone Belt is 3.8 billion years old or 4.3 billion years old, Jonathan O'Neil, assistant professor at the University of Ottawa's Department of Earth and Environmental Sciences, believes it to be on the older side. But even if the rock is younger than that, it would still make their finding the oldest record of life on Earth, by 100 million years.

"It's impressive," O'Neil said. "We now have evidence in rock that I can hold in my hand that we had life already established extremely early on the Earth."

Discoveries such as this one greatly help scientists better understand the early Earth. O'Neil said that scientists had previously theorized that Earth was a truly inhospitable place at this young geological age, a searing, active world with molten lava lakes incapable of supporting any surface water or life. However, O'Neil said that recent research is painting a far different picture.

"Within the last 15, 20 years, we have more and more evidence that that's not the case," he said. "Very quickly after its formation, the Earth became closer to what it is today. We already have evidence of water at the surface of the Earth by about 4.3 billion years ago."



Johnathan O'Neil, assistant professor at the University of Ottawa's Department of Earth and Environmental Sciences, holds a sample of rock taken from the area where he and the research team discovered microfossils of the oldest life forms ever found.

And it's in that water, together with thermal activity below where life began to flourish, first as microorganisms.

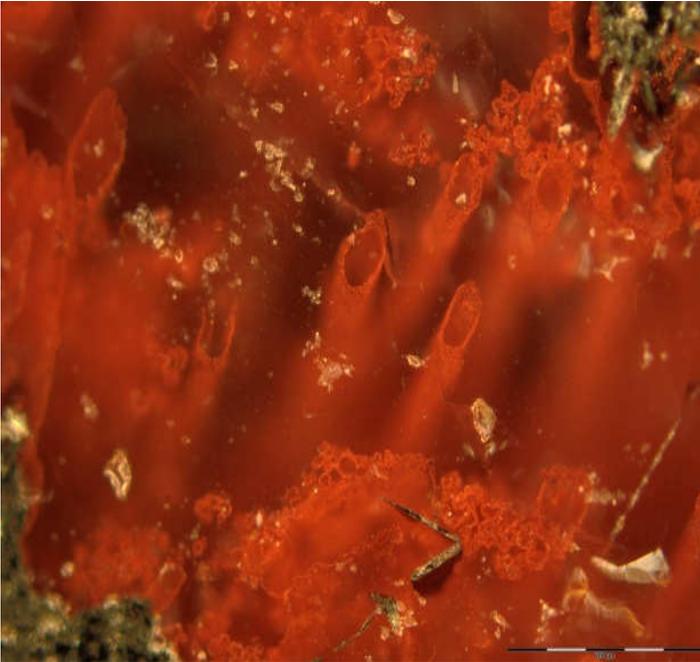
Below the surface water, the ocean crust would have been literally bubbling with activity: with hydrothermal vents, the water heated by volcanic activity.

"There's a lot of hot water circulating through these rocks that are full of elements, full of minerals ... we think this is the ideal environment where life could have started on Earth. You have the perfect conditions for life to start." Today, that process continues in deep parts of our oceans.

(Continued on page 4)

OLDEST TRACES OF LIFE ON EARTH (CONT.)

The rocks found in Quebec, reveal tiny, tubular structures of hematite. Hematite, a type of iron oxide, is one of the most common minerals on Earth.



Haematite tubes from the NSB hydrothermal vent deposits that represent the oldest microfossils and evidence of life on Earth.

These structures could also have been created by temperature and pressure rather than organisms. However, upon closer examination, the research team discovered the structures were similar to those found at thermal vents today. As well, they were found together with other minerals that are found in biological matter.

The researchers hope that this finding could also help in the search for life on other planets.

"These discoveries demonstrate life developed on Earth at a time when Mars and Earth had liquid water at their surfaces, posing exciting questions for extra-terrestrial life," Michael Dodd of University College London and first author of the paper published in Nature said. "Therefore, we expect to find evidence for past life on Mars 4,000 million years ago, or if not, Earth may have been a special exception."

CANADA'S 150 - OFFICIAL GEMSTONE

By: Gil Tucker, Reporter with Global News

A Calgary company is helping people around the world celebrate Canada's 150th birthday – and it wouldn't be happening without the help of an Alberta creature from the age of dinosaurs.



Korite has worked with the federal government to create an official collection of jewelry to mark Canada's 150th birthday celebration during 2017.

All the pieces, things like earrings, bracelets, necklaces, will feature Ammolite, the gemstone version of a prehistoric sea creature called an ammonite.

The squid-like creature lived about 70 million years ago, when what is now southern Alberta was submerged under an ancient sea.

Korite now mines that gem, ammolite, on its site near Lethbridge. It's the only deposit for this rare gemstone in the world.



The government has ordered a maple leaf-shaped lapel pin for Canadian diplomats to give as gifts around the world. The pin is available to the public as well.

Every piece will originate in the company's workshop in southeast Calgary. Every single stone is unique and cut by hand, polished by hand, shaped by hand – this truly is a treasure of Canada."