
The Rockhound's Bark

The Nova Scotia Mineral and Gem Society Newsletter

March 2005



ABOUT THE SOCIETY

Meetings are held the last Saturday of each month, September-November and January-May, 7:30 - 10:00 p.m. in the auditorium (Lower Level) of the N.S. Museum of Natural History, 1747 Summer St., Halifax. Dues are \$20/year, payable in January of each year.

2004-2005 EXECUTIVE

President:	Ronnie Van Dommelen
Vice President:	Fred Walsh
Secretary:	vacant
Treasurer:	Terry Collett
Bark Editor:	Ken McKenzie
Librarian:	Doug Bowes

SOCIETY'S MAILING ADDRESS

The Nova Scotia Mineral and Gem Society
c/o NS Museum of Natural History
1747 Summer Street, Halifax, N.S., B3H 3A6

NEWSLETTER SUBMISSION DEADLINE

April 23, 2005.

NEXT MEETING

By Ronnie Van Dommelen

Included in this year's programs were talks dealing with crystal growth, fluorescence, and unit cells. A basic understanding of the atoms that make up our minerals is important for all of those topics. This program will talk about atoms with relevance to minerals. What exactly is an atom? How do they bond to form a substance? How can they fluoresce? What is radioactivity? These questions will be explored in a crash science course.

Also this month is the grand re-unveiling of the club library.

MINERAL OF THE MONTH

By Ronnie Van Dommelen

Fluorite is one of the most collected minerals. It commonly forms excellent crystals and good specimens are not uncommon. Still, great and undamaged specimens are highly sought after and can command a high price.

A common mistake is to misspell fluorite as flourite. Make sure your labels are correct!

A bit of trivia: Ordinary silica glass absorbs a lot of deep (shortwave) ultraviolet light, but fluorite does not. Thus fluorite is used to make specialty UV lenses. The next generation of microchips will be imprinted onto silicon using deep ultraviolet light and will use these fluorite lenses to focus the light. Anyone familiar with how easily fluorite can cleave will appreciate how difficult it would be to make such a lens, without breaking it!

Quiz

1. Which of the following colours can fluorite be found in: colourless, blue, green, brown, purple, pink, and/or yellow?
2. The colour of fluorite can change when viewed indoors or outdoors. (T/F)
3. Fluorite is commonly found in which of the following rock types: limestone, granite, and/or gneiss?
4. Crystals of fluorite are frequently twinned. (T/F)
5. Which one of the following is NOT a use of fluorite: as an abrasive, the manufacturing of hydrofluoric acid, or flux in steelmaking.
6. The effects of ultraviolet light on fluorite (through phosphorescence or any other mechanism) can have effects lasting several minutes or more. (T/F)
7. What is Blue John?
8. Which one of the following shapes would never apply to fluorite: cube, octahedron, hexagonal prism, or tetrahedron.
9. The term fluorescence is named after the mineral fluorite. (T/F)
10. Which of the minerals are frequently associated with fluorite: calcite, galena, topaz, and/or gypsum. (If you can't find a surefire answer in your mineral books, think about where fluorite has been found in Nova Scotia too.)

Remember to bring in the answers to the quiz and a specimen or a photo of a great specimen.

Answer to February quiz:

- 1) anhydrite, 2) T, 3) gyprock, 4) selenite, 5) satin spar, 6) soft, 7) flexible, 8) sedimentary, 9) T, 10) F

MINERAL SPOTLIGHT

By Ronnie Van Dommelen

The Mineral of the Month focuses on relatively common minerals that are of general interest. Most minerals are too rare to fit into that category, but are still important or interesting in some way. This new feature

(which will appear intermittently) will introduce a mineral that new collectors may be unfamiliar with. I would urge others to contribute to this segment in the future – including the beginners!

For the first mineral spotlight, I have chosen weloganite. This is one of my favourite minerals, in part because it introduced me to the topic of rare minerals. Many minerals are rare because they are formed from an unusual combination of elements or their requirements for formation (e.g. temperature or pressure) are very limited. The chemical formula for weloganite is $\text{Na}_2(\text{Sr,Ca})_3\text{Zr}(\text{CO}_3)_6 \cdot 3\text{H}_2\text{O}$, and finding strontium and zirconium together is uncommon. In fact weloganite is essentially found at only one locality in the whole world; the Francon Quarry on the island of Montreal (it has also been found at the famous Mont St. Hilaire, which is geologically related, but it is rare there). Though the Francon Quarry has been closed and used as a dump for many years, it famous for its weloganite, which was discovered in 1968. Though found nowhere else on earth, it was common at Francon, forming yellow to beige or white-coated crystals. The crystals form prisms that undulate in width and they can look like stubby worms at times. They often are fatter around the waist of the crystal than at the terminations, although some flare out at the termination like a trumpet.



Photo courtesy of Tim Jokela Jr.,
Element51.com

UPCOMING PROGRAMS

By Ronnie Van Dommelen

At a recent executive meeting, the final two programs of the year were decided. For April, Doug Bowes will discuss the use of gravity/density in mineral separation. Gold panning is an excellent example, but there are many others. The native elements will be the minerals of the month. For May, Terry Collett will talk about the chemical stability of mineral specimens. Many minerals, even if they were formed millions of years ago, can degrade in your cabinet over a short period of time. The minerals of the month will be the zeolites stilbite and heulandite.

FEBRUARY MEETING

by Fred Walsh

There were 15 members and guests present at this meeting.

Old business:

Dorothy Roberts motioned to accept the minutes, seconded by Everett Hawkes. Members accepted and the motion was carried.

The current membership list was distributed during meeting.

New business:

Motions from Terry Collett:

- 1) To introduce Junior fees for 16 and under of \$5.00 a year, 1st Bill Harrington, 2nd John Collins, All accepted, motion carried.
- 2) To rename the library 'The Harrington Brock Memorial Library' 1st Terry Collett, 2nd Fred Walsh, all accepted, motion carried.
- 3) To make lifetime members for Bill and Ronnie Plavac; 1st Terry Collett, 2nd Ronnie Van Dommelen, all accepted, motion carried.

Motion to make members of Emeritus. This motion was made by Terry Collett, seconded by Ronnie Van Dommelen.

Gordon Stewart moved that all club newsletters to be archived. Seconded by Terry Collett.

Fred Walsh will find box with archival memories of the club.

Bill Harrington thanked Terry Collett for the great mineral show he put on at his home. The minerals were quite impressive.

Martin Eirisch motioned to have the library named, Ted Harrington Allen Block Library. This was seconded by Dorothy Roberts and Terry Collett.

Meeting adjourned at 8:15 p.m.

FIELD TRIP REPORT

By Ken McKenzie

Terry Collett hosted a very popular open house last month to show off his impressive Nova Scotian mineral collection. Below are some photos from the event.

