

Voice of the Dinosaur

Newsletter of the Kawartha Rock and Fossil Club

Jan. 2012 ~ Volume 24 ~ Issue 1

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LAST MEETING Dec. 13, 2011

The meeting was chaired by the President Mark Stanley and began with the regular business meeting and committee reports given as applicable. Minutes had been distributed to members earlier via email and snail mail so were accepted without being read at meeting. 1. <u>Treasurer's Report</u> - Report accepted as given. 2. <u>Field Trips' Report</u> - None scheduled for the rest of this year. 3. <u>Show Committee Report</u> - Volunteers will be needed for Show setup

and Show table. More info in body of Newsletter.

<u>Feature Presentation</u> - No presentation was given, but after the meeting was closed, all enjoyed the treats and good company.

Kevin Kidd brought some of his excellent displays of sharks' teeth.

A silent auction was also held.

NEXT MEETING - Jan. 10, 2012 Place - Orientation Centre, Peterborough Zoo

Time - 7:00 pm (AGM)

Agenda - Annual General Meeting to be followed by regular January meeting.

<u>Feature Presentation</u> - Tom Jenkins will speak on his years of underground work at Faraday Mine. This is a meeting <u>not</u> to be missed. Members are encouraged to bring any minerals from Faraday Mine that they might have.

<u>Fossil</u> of the evening - <u>bryozoa</u> - members should have lots of samples of these "moss animals." <u>Mineral</u> of the evening - <u>titanite</u> - bring in those samples.

2012 memberships are due!!!

If you have not paid yet, please do so as soon as possible. Renewal form at back of this Newsletter.

To have a vote at the Annual General Meeting you must be a member in good standing.

If you have paid your membership, please see Brenda Beckett at the meeting to receive your 2012 membership card. If you are not at the January meeting, your membership card will be mailed to you.

<u>RE: KRFC Treasurer</u> ... if you are thinking about taking on this position and you have some questions, please send an e-mail to:

brendabeckett@hotmail.com and I will try to help out!!! Brenda Beckett, KRFC Treasurer

THE ANNUAL GENERAL MEETING - January 10, 2012

At this meeting, which will precede the January regular meeting, elections will be held as stated in the Constitution and Bylaws for Executive positions:

President Vice-President Secretary-Treasurer Field Trip Co-Ordinator Show/Swap Chairperson Newsletter Editor

We <u>must</u> select a new Treasurer as our present Treasurer, Brenda Beckett is retiring from the position. She has served faithfully and well for several years and <u>will not continue in the post after elections are held at the AGM.</u>

As well as Treasurer, we <u>must</u> select a Field Trip Co-Ordinator. No one has held this post for the last year and field trips have been few and far between.

<u>You</u>, as members, are responsible for the success of the Club. <u>Your</u> involvement is invaluable. Come to the AGM meeting on January 10, 2012. Offer to hold an Executive position and vote.

Thank you.

2012 Peterborough Gem, Mineral & Fossil Show

Saturday, March 3 and Sunday, March 4 10:00 am to 5:00 pm each day

This will be our Club's19th Annual Show. It will be located at the Evinrude Centre, 911 Monaghan Road in Peterborough, and features 25 dealers offering Minerals, Fossils, Rocks, Crystals, Faceted stones, Gemstone Jewellery, Stone Beads and much more.

We need your help to make this show a success!

Our ever popular Children's Sand Box will be open both days of the show. We need a very large volume of simple mineral & fossil samples. For those extra specimens that are too good to throw away, but are not good enough to put into your collection, this is a great way to put them into the hands of kids with the hope of sparking an interest in nature. The sand box is a very important part of the show because, for many of the kids, this is their first exposure to collecting rocks. Please bring your donations directly to the show.

The Club Table is located in the Display area. Its purpose is to serve as somewhere people can go to learn about the show and our club. This is our greatest opportunity to tell the public who we are and what we do. We need club members to man this during the show. All you have to do is answer any questions the public may have. If everyone could volunteer for one or two hours each day we can all help. Mark Stanley will have the sign up sheet at the club meeting, or contact him:

Phone: 705-639-2406 Email: mark.stanley@bellnet.ca

Every year we hold our Competitions for the Best Self Collected Mineral & Fossil by a Club Member. These two separate competitions are limited to specimens that were collected in the previous calendar year. The specimen must have been self-collected and you must have been a member when it was collected. Entries are limited to a single mineral specimen and/or a single fossil specimen per member. Your entries must be placed in the display case on the Club Table in the display area by 10:00 am Saturday morning and picked up at 5:00 pm Sunday afternoon. All members are invited to cast your votes for your favourite entries on Saturday morning. If you have collected something in 2011, then you are eligible to enter your favourite piece.

We will again be hosting our Display Cases for minerals, fossils and lapidary. Displays should be attractive and labelled. Everyone is encouraged to fill a display case. If you feel that you only want to show one or two specimens, you are welcome to do so.

Our displays are greatly appreciated and enjoyed by the public and your fellow collectors. We know, from the feedback we have received, that the displays have become a major attraction to other collectors who attend our show.

The club has a limited number of display cases available for our members to use. Please contact Robert Beckett to reserve a display case.

There will be Silent Auctions each day, one auction with specimens suitable for children, and two auctions for adults. We always need mineral and fossil samples suitable for both age groups, but especially for the adult auctions. While the auctions for this year's show are already organized and prepared, we still need donations for future years.

Our club's annual Live Auction will be held Saturday at 4:00 pm. This is open to everyone who would like to sell rocks, lapidary equipment, books and anything else that is involved in our hobby. Please deliver your items to the Live Auction area Saturday morning. The club charges a small commission to sell your items.

While our Promotion Campaign is well underway, we need your help with the placement of our small wire framed signs around the city. Please come to the February meeting prepared to take a few of the signs home with you to be posted in your community one week before the show. They are simple, light weight, easy to erect and very effective. We will have a city map at the meeting to make sure we are organized and that all parts of the city are covered. In the past, these signs have been one of our more successful methods used to promote the show. If everyone takes a few signs it will make it very easy to cover the entire city and neighbouring communities.

Basically, we need everyone to be involved with our show. If you receive this newsletter, attend meetings or take part in our field trips, you are already benefiting from the success of the show. By taking part and helping with the show, you will be giving something back to the club. Thank you.

Bob Beckett, Show Chairman

ITEM of INTEREST Selwyn Meteor

On the evening of December 12, 2011, a meteor was photographed by several video cameras of the University of Western Ontario. The trajectory of this object was believed to have pointed to its landing somewhere in an area just North of Stoney Lake.

Interest is high in the area, and many people are now looking for pieces. These would, probably, appear to be black, shiny pieces of magnetic rock. If anyone does find a piece, it's best to try and not contaminate it any more than it already is, so it should be picked up with a covered hand or clean shovel, etc. and deposited in a new, clean plastic bag.

Anyone finding a piece or pieces should contact Dr. Kimberly Tait at the Royal Ontario Museum.

To find articles on this subject online type "Selwyn meteor" into your search engine.

THE FOSSIL CORNER

Bryozoans By Kevin Kidd

Bryozoans or, "moss animals", are tiny colonial organisms. The individuals within a colony are called *zooids*, and they are housed in a protective housing often made of calcium carbonate or, occasionally, chitin. This "exoskeleton" has tiny pores from which the animal extends it's tentacles to feed, and it's this housing that we find as fossils. The zooids are attached to each other by thin strands of tissue inside the housing. Each colony consists of anywhere between a few and millions of individual zooids, and each colony has several specialized types–some for feeding, some for reproduction, some for defense, some for cleaning etc.

Figure 1 shows three individual zooids, the left one with its feeding tentacles extended, the center with tentacles retracted and the right one brooding

an embryo. Each zooid averages about half a millimeter in length.



Figure 1

The colonies can be one of several types:

<u>Encrusting</u> – Flat colony usually found on a hardground or solid surface (eg. shell or coral). Zooids are only on one side. (Fig 2)



Figure 2

<u>Massive</u> - Dome shaped. Any local fossil collectors should be familiar with *Prasopora*, the common dome shaped bryozoans found in the area, some up to several inches in diameter. Figure 3 and 4 show some of the shape variation in *Prasopora*, Figure 4 also having a couple of crinoid holdfasts attached to it.



Figure 3



Figure 4

Figure 5 is a colony of colonies (this is also the largest fossil in my collection).



<u>Foliaceous</u> or <u>Frondose</u> – upward growing and sheet-like with zooids on both sides. (Fig 6 & 7)

Figure 5



Figure 6



Figure 7





Figure 8

like a net. (Fig 10)

Fenestrate – Having many branches joining and rejoining



Figure 9



Figure 10

There are over 5000 living species, and several times that many known as fossils. Bryozoans are the only phylum of animal with an extensive fossil record that does not appear in Cambrian or late Precambrian rocks. The oldest known are from the early Ordovician. It's plausible that they existed earlier, but were soft-bodied without an exoskeleton, or were not preserved as fossils for some other reason. Bryozoans are very characteristic of Paleozoic rocks as they were quite common in the shallow water habitats that are today dominated by coral.

With the exception of one order within the class Stenolaemate, all bryozoans were severely impacted by the major extinction event at the end of the Permian, 245 million years ago. Cryptostomates disappeared altogether but a few other lineages managed to hang on until the end of the Triassic, about 210 million years ago. Tubuliporate bryozoans have managed to survive until the present, but are no longer dominant. Another class, the Gymnolaemates, are known as fossils from the late Ordovician almost exclusively as distinctive borings in carbonate substrates such as shells. These early species were uncalcified. Calcareous Gymnolaemates didn't appear until the early Cretaceous with very few species. By the end of the Cretaceous, there were over 100 genera of Gymnolaemate. They continued to diversify and today there are over 1000 genera, giving this class the bulk of bryozoan diversity in modern seas.

A collector should be able to find examples from several different genuses without too much trouble at most Ordovician outcrops in the area. The Devonian areas in Ontario also yield a great diversity and examples are, again, easy to collect. I have yet to find any Silurian species, but they must be out there. One problem with bryozoans is finding nice sized examples. Unfortunately, with the exception of the massive and encrusting types, most bryozoans are found as fragmentary pieces due to their delicate

nature. I've learned to take what I can get until a larger specimen comes along. The other big problem is identification. To properly identify a species, it has to be sliced into thin sections and looked at under a microscope. So, you can either nail down the name and have a damaged specimen, or keep a nice specimen intact and make an educated guess at the species. I prefer the latter, so my identifications may be off. If you have other suggestions for my examples, and reasons why, please let me know.

I have no idea what species figure 11 is, but it shows the stem like attachment used to anchor the bryozoan to a hard surface. It is Devonian, from Arkona, Ontario and about the size of a quarter.



Figure 11

Photo credits- Figure 1 – Smithsonian Marine Station at Fort Pierce (<u>www.sms.si.edu</u>) All others - personal collection

The Burgess Shale

This ancient fossilized marine seabed in the Canadian Rockies is a UNESCO World Heritage Site. In conjunction "with Parks Canada, the ROM has created one of the most technologically advanced and accessible virtual museum sites ever produced." This is a really fantastic site. Go to: www.burgess-shale.rom.on.ca

If you do not have a computer, you might be able to access the Web site via your local library computers.

According to the ROM's *let's ROM* for Winter 2011-2012, which lists various exhibits at the ROM for that time period, this museum has led dozens of field explorations and excavations to the Burgess Shale area since 1975. It holds the world's largest collection of specimens from the area, over 150,000 in total.

THE MINERAL CORNER

Titanite By Tracey Hawkins Calcium titanium silicate CaTiSiO

The name Titanite is a result of this minerals' high titanium content and (because of this it) is an ore of titanium. This lightweight, corrosion-resistant metal finds many uses in the aerospace industry and prosthetics. Possessing a fire greater than diamond, titanite is rather soft and brittle and does not wear well. It is, however, an excellent mineral for collections; crystals up to 80 pounds have been found in Ontario and New York. An alternate name for titanite is "sphene." In Greek this translates to "wedge," and is derived from the wedged-shaped crystals. As a test, titanite is practically insoluble in hydrochloric acid.

Identification

* cannot be scratched with a knife

- brittle
- * distinct cleavage in two directions, prismatic
- * curved, conchoidal fracture
- * lustre is resinous to adamantine
- * strongly pleochroic and also double refractive
- * hardness of 5 to 5 1/2
- * specific gravity 3.4 3.5
- * refractive index 1.885 2.05
- density is medium (3.5g/cm³)
- streak is white
- * transparent to opaque
- * monoclinic crystals, usually wedge-shaped, or envelope-shaped, possibly flattened; lamellar, compact; also occurs in massive form
- * crystals may be 2 to 6 inches (10cm) across
- forming larger, more complex crystals when growing free in cavities in gneisses and schists
- * cruciform penetration and contact twins common
- brown and greenish yellow are the most common colours; also occurs in black and gray; yellow titanite is a source of gemstones
- * best cut into brilliants or mixed cuts; usually small in size due to the fact that gems of more than two carats are extremely rare
- * softness makes it unsuitable for use in rings, however it can make beautiful earrings and pendants

Environment

Best developed in metamorphic rocks(including metamorphosed limestones, which are marbles), shists and gneisses. Also common in small crystals in lighter-coloured coarse igneous, plutonic rock, and in some granitic pegmatites. Titanite is also a common accessory mineral in dioritic and gabbroic rocks as well as syenites.

Occurrence

Ontario:

Tory Hill, Monmouth Township, Haliburton County (crystals up to 25cm); Cardiff Uranium Mine, Cardiff Township, Haliburton County; Bancroft area (black to brown, wedge-shaped crystals up to 10cm); Lake Clear, Sebastopol Township, Renfrew County; Cobalt area (green, minute grains); Eganville; Westport. Rest of Canada:

Mont Saint-Hilaire, Québec (light brown to yellow, prismatic crystals up to 2mm); Lake Harbour, Baffin Island, Nunavut (black to yellowish-green, wedge-shaped crystals up to 13cm); Yates Uranium Mine, Huddersfield Township, Pontiac County, Québec; Leslie Lake, Litchfield Township, Pontiac County, Québec.

United States of America

Orange County, New York (gem like crystals); Tilly Foster Mine, Brewster, Putnam County, New York (sharp bright yellow, gem-quality, twinned crystals up to 2 inches across); Rossie and Oxbow, St. Lawrence County, New York (tabular crystals up to 8 inches across); Bridgewater, Pennsylvania; Sussex County, New Jersey; Woburn, Massachusetts (large, chocolate-coloured embedded crystals); Butte and Whitehall, Jefferson County, Montana (gemmy, fine brown translucent crystals up to 1 inch across).

World Localities:

Capelinha, Minas Gerais, and Bahia, Brazil (typically twinned greenish yellow, gemmy crystals); Gilgit, northern Pakistan; Eifel Mountains, Rhineland-palatinate, western Germany; Heidelberg, Germany (brick-hued, envelope-type 5mm crystals); Mount Vesuvius, Naples, southern Italy; Madagascar; India; Val Tavetsch, Switzerland (clear crystals, often coated with chlorite);Kola Peninsula, northern Russia; Avenda, Aust-Agder, Norway; Salzburg, Austria; United Kingdom; Västmanland, Sweden; El Alamo, Baja California Norte, Mexico (large, etched, flat, brown-yellow crystals up to 6 inches across; also vivid green crystals).

References

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THE LIBRARY CORNER New Donation

Stanley Nowicki has kindly donated to our Library an interesting book called *Environmental Geology*, 3rd Edition by Carl W. Montgomery. Our assigned library number for it is #153.

New Publication

Gems and Minerals: Earth Treasures from The Royal Ontario Museum

By <u>Kimberly Tait</u> Firefly Books | November 8, 2011 | Hardcover

A profusely illustrated and remarkably comprehensive guide to nature's most stunning jewels.

Under the right conditions, over millions of years, geological activity can form extremely striking and amazing minerals. Once they have formed, these rare giants can be destroyed by the very forces that created them. Few survive, and even fewer are discovered and collected undamaged. This book is a comprehensive illustrated guide to 260 outstanding examples of gems and minerals from the collection of the Royal Ontario Museum.

When Theophrastus described 16 minerals in his textbook *De lapidibus*, around 300 BCE, he laid the foundation for the science of mineralogy. Advances in the 20th century, particularly the use of X-ray crystallography, now allow the crystal structure of most minerals to be described at the atomic level. The informative introduction of *Gems and Minerals* explains some of this science, providing definitions of many of the book's technical terms. The book then describes each mineral, accompanied by a photograph. The mineral's chemical and physical properties are identified, as well as how it was formed and where it can be found.

Gems and Minerals contains more than 400 photographs and focuses on the beauty of the mineral kingdom. It contains many images of spectacular crystals and gems as well as magnificent manufactured objects made from gold, silver and gemstones. Historical background, the origin of the mineral's name and interesting lesser-known facts complete this guide to a fascinating aspect of the natural world around us.

HardcoverRegular Price \$40.00Online price \$26.40 at Indigo Books

THE EDITOR'S CORNER

In order to make sure this January edition of the *Voice* reaches all member in good time, it is coming to you a bit earlier than usual. The January meeting and Annual General Meeting (AGM) are on January 10 and there is a holiday season between now and then when many members, I am included, are very busy. Please, make it a point to attend the AGM. If you wish the Club to continue, you <u>must</u> participate. However, to vote or hold office, one must be a paid up member.

Paid up membership means a person may attend monthly meetings, participate in field trips, receive copies of the Newsletter, vote and hold office. If you have not yet renewed, a form is attached at the end of this Newsletter. Your renewal should be in no later than Jan. 10, 2012.

My thanks to everyone who took the time to provide content for this issue. Kevin Kidd's article on bryozoans provided most of the information one might need to identify these "moss animals." We have a new writer this month, Tracey Hawkins, who took on the challenge of writing about titanite and produced an informative article. Bob Beckett gave me heads up (no pun intended) on the Selwyn meteor, the Burgess shale info and the new gem and mineral publication.

As always, I encourage members to write articles, bring to my attention items that might be of interest to other members, etc. This Newsletter is yours; I'm only the Editor and want to make sure it is serving the interests of the KRFC members.

May 2012 be a great year for mineral and fossil collectors. Bev Fox, Editor *Voice of the Dinosaur*

COMING EVENTS

2012

| Jan. 10 | KRFC Annual General Meeting followed by regular Jan. meeting | | |
|----------------|---|--|--|
| | Orientation Centre, Peterborough Zoo, 7:00 pm | | |
| Feb. 14 | KRFC regular Feb. meeting | | |
| | Orientation Centre, Peterborough Zoo, 7:00 pm | | |
| Mar. 3 & 4 | 19th Annual Peterborough Gem, Mineral, and Fossil Show. | | |
| | Sat. 10-5, Sun. 10-5. | | |
| | The Evinrude Centre, 911 Monaghan Road, Peterborough, Ontario. | | |
| | Admission: \$3.00 for adults, children 12 or under are free & must be accompanied by an adult. | | |
| | Directions: From Highway 115 at Peterborough, take the Parkway to | | |
| | Lansdowne St., then East 4 blocks to Monaghan Rd., then North 1 | | |
| | block. Or travel West on Highway 7 (Lansdowne St.), into | | |
| | Peterborough, turn right at the 6th traffic light onto Monaghan Rd., | | |
| | then North 1 block. | | |
| | Contact: Robert Beckett at 705 740 4530 or rbeckett@cogeco.ca | | |
| | Website: http://www.rockandfossil.com/ | | |
| Mar 31 & Anr 1 | 40th Annual Brantford Lanidary & Mineral Society Show | | |
| | Sat 10-5 Sun 10-5 Paris Fairgrounds 139 Silver Street Paris ON | | |
| | Features: One of Canada's Largest Gem & Mineral Shows! Gem Mineral | | |
| | Fossil & Stone Dealers Lanidary Equinment Sunnlies | | |
| | Fine lewellery Sunnlies Beads | | |
| | Demonstrations | | |
| | Evhibite | | |
| | Chilipho Silont Auction Saturday & Sunday | | |
| | Sheni Auchon Saluruay & Sunuay 'Mina far Game' Display | | |
| | Mille for Genis Display | | |
| | Aumission: Aduits 55, Unificient 12 and Under - Free | | |
| | Contact: robert@robertnalloriginals.com | | |
| | or John 1900 519-752-9756 | | |

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|---|---|---|---|
| | 2012 Please | MEMBERSHIP Application [] e complete ALL sections and PRINT | or Renewal [] CLEARLY |
| NAME(S): _ | | F. J. | |
| (if a family, list of ADDRESS: | each person's name – par | rent/legal guardian followed by child/ren & ple | ease include the child(ren)'s ages) |
| (City) | | (Province) | (Postal Code) |
| F | Please sign here | · · | |
| P | hone # | Fax # | |
| E | E-Mail | | |
| | Single [] | \$20.00/year Family [|] \$25.00/year |
| | Please sen | d Newsletters by: E-mail [] Fax [|] Snail Mail [] |
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| | Paid by: Chequ | ue [] Cheque # or Cash | []\$ |
| | Date: | Membership Card | Issued [] Mailed [] |
| Club Members who do not rend or CCFMS field t | ships are due in DECE ew before the end of De trips, other Club activitie | MBER at the Annual General Meeting, ecember are dropped from the Membership es and will not receive the KRFC Club Newslo | or as soon after as possible. Member List, will not be able to participate in KRF0 etter. |
| If you do not | want your informatio | n released, please <u>do not</u> complete the | e following section. |
| hereby give List, to be only | my permission to rele y issued to KRFC men | ase my name, telephone number and enders in good standing. | e-mail for inclusion in a KRFC Contact |
| | | | |