



THE MINERAL VEIN

THE MINERAL SOCIETY OF MANITOBA NEWSLETTER

April 2008

The Mineral Society of Manitoba
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2007– 08 EXECUTIVE

President: Jack Bauer
Ph 204 632 6934
Vice President: Marion Foster
Ph 204 775 0625
Secretary: Sherri Henes
Ph 204 275 7883
Treasurer: Evelyn Bauer
Ph 204 632 6934
Field Trip Chairman:
Gary Henes
Ph 204 275 7883
Email: sherriann8@yahoo.ca
Newsletter Editors: Marion Foster & Marjorie Turton
Ph 204 775 0625
1199 Valour Rd., R3E 2W6
Email: 2mandm@mts.net
Past President Jack Bauer
Ph 204 632 6934
Members at Large:
Tony Smith
Ph 204 489 23081
Chris Lammers
204 488 0087
Yvonne Searle
204 663 6637
George Green 204 489 8495

Object and purpose of the Mineral Society of Manitoba:

“The object and purpose of Society shall be to establish and to conduct a non-profit, educational organization to promote, to enjoy, and to develop the study and practices of the various phases of mineralogy and related earth sciences.”

The above is an excerpt of our constitution. Constitutions tend to be dry reading but they always contain interesting bits of information. Copies of the constitution will be available for picking up at our next meeting.

CLUB MEETINGS

May 7, 2008: Speaker Dr Jim Teller, Dept Geological Sciences, University of Manitoba with topic “Lake Agassiz”.

September 3 Speaker Lori Stewart with topic her research done on Gillies quarry. Lori was a past recipient of a MSM bursary.

Here is a brief biography of JAMES TOBIAS TELLER, Ph.D., PGeo, FGSA, and FGAC

Jim Teller is a Professor in the Department of Geological Sciences at the University of Manitoba, where he teaches glacial geology, sedimentology, paleoclimatology, geolimnology, and Quaternary geology. After receiving his M.Sc. from Ohio State in 1964 he carried out research in Antarctica with the Byrd Polar Research Institute, then spent 2½ years in oil exploration in Louisiana, before returning for his Ph.D. at the University of Cincinnati, which he received in 1970. Jim has concentrated his research activities on the history of Pleistocene glaciation and lakes in Canada, focusing on glacial Lake Agassiz—once the largest lake in Canada—and on the history of remnants of this lake in Manitoba, such as Lake Manitoba, Lake of the Woods, and West Hawk Lake. The role of Lake Agassiz in causing past global change is a major component in his research. He has a mountain in Antarctica named after him, Teller Peak.

Dues are \$15/year (\$20 for families) and are payable at the October meeting or by mail during October.

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 draw.

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, neighboring provinces and states

(Biography of James Teller cont.)

Dr. Teller has won several awards at the University of Manitoba for research and teaching. The Geological Society of Australia awarded him the Stillwell Medal for his research on the paleohydrology of a large lake in Australia, he received the Antarctic Service Medal from the U.S. Congress, and the Geological Association of Canada (Marine Geosciences Division) awarded Jim the Michael J. Keen Medal in 2004 for significant contributions in lacustrine geoscience. Jim's research has included fieldwork on all continents of the world, and has involved the study and interpretation of paleoclimate and paleohydrology from lake records in places such as Africa, the Middle East, U.S., Australia, Tahiti, and Easter Island, as well as Canada. He has published >200 research papers and abstracts, edited 8 books and special issues of journals, and organized 17 meetings and special professional sessions. Jim has received >70 invitations to give lectures about his research in the past decade, and holds office in numerous professional organizations, including 5 years on the Scientific Board of UNESCO-IGCP (as Chair of the Quaternary, Environmental, and Engineering Geosciences Committee and as Rapporteur), Chair of the Canadian National Committee of IGCP, President of the Terrestrial Processes Commission of INQUA, Council member of the Geological Association of Canada, the Canadian National Committees for International Year of Planet Earth and for International Union of Geosciences, Senior Advisor to the international IYPE, and the International Board of IYPE.

His topic "**Glacial Lake Agassiz: catastrophic floods, tsunamis, global change, and Noah's Flood**",

Glacial **Lake Agassiz** was at one time the largest lake in the world, covering a vast region of North

America for 5000 years at the end of the last Ice Age. Its overflow was at times catastrophic, eroding deep canyons and transporting huge boulders in the region around Thunder Bay and Fort McMurray. When its waters reached the ocean, they shut down the Gulf Stream, causing global cooling. The final drainage of Lake Agassiz led to a rapid rise in sea level and shoreline transgression, and stories about a Great Flood at this time may be related.



CLUB NEWS

FIELD TRIP REPORT

Notes provided by Jack Bauer

Stony Mountain, Manitoba

April or May? 2008

Depending on weather and schedule, to be arranged, probably on a weekday. Must be decided at may meeting.

To collect fossils (brachiopods, corals - horn and honeycomb pieces) for the Mineral Society of Manitoba's collector cards

If any member has any smaller coral fossils from this locality, that they do not need, please let us know. Jack Bauer at 632-6934

Gold Trip, the old Sunbeam Mine, Near Star Lake, this trip is subject to pre trip confirmation.

We hope to have a date finalized by our next newsletter publication. June or July 2008?

Here the gold is associated with quartz veins. This is a good locality to study how the rocks change from black volcanic to white gold bearing quartz intrusive. ***This trip is one of the stops on the ED GEO course put on by the U of M in their Geology courses.*** With a little luck, and a good quality metal detector, the possibility of finding VG is good but not guaranteed. I will confirm this trip, after a pre-trip to determine accessibility. We may need a key for a gate and a Park Pass. Eye protection may be necessary for this trip and bring a lunch.

For more information please contact Gary or Sherri Henes at 275-7883 or Jack Bauer at 632-6934.

Red River Floodway Selenites -5 to 15 Days?

Date to be determined, July? This is generally the driest month of the year.

Jack Bauer has been in contact with Daryl Harvey, Vice President of Operations, with the Floodway Authority. Her interest was positive and said she would support us. She will do what she can, to make our field trip happen this year. Daryl is also aware that these Selenite crystals are rare and World Famous.

Before this trip can happen, Daryl Harvey will find out if the Contractors have relinquished control and responsibility to the Floodway authority. We also have hopes the contractors will identify any new out crops. Test holes will have to be dug, to determine if a locality is barren. When the locality is identified we will be given a 1-mile radius. Daryl Harvey reiterated she was very concerned about "Safety." There are inherent risks while collecting. I will explain. When the locality is identified by the tell tale white Gypsum spot. Test holes will then have to be dug. Close scrutiny may identify crushed Selenite crystals. The clay seam is then identified and followed, eventually into the bank. Dry clay from the bottom of Lake Agassiz can be quite solid. But when it gets wet, it can become a safety issue. Rain will NOT be good on this trip. Shoring will have to be used below 6 feet. We may also have to identify the excavation with safety markers. We are there fore hoping, for a dry July. Then we can move ahead to the next step, which may involve a permit. If all goes well this

trip could potentially provide a good PR opportunity for the clubs in Winnipeg.

*Tentative- **the Floodway**- those who are interested in this trip, please contact Mike Mirus at 783-7456, when an opportunity presents itself, you shall called and given details.

Thunder Bay, Ontario June 28 & 29, 2008

Departure from Winnipeg: is scheduled for Friday, June 27, at your convenience.

Meet Brian at 9:00 am, Saturday, June 28, at the Terry Fox Look Out, East side of Thunder Bay, for two days of collecting fun. He will then provide you with the weekend itinerary; a barbeque or dinner is yet to be determined.

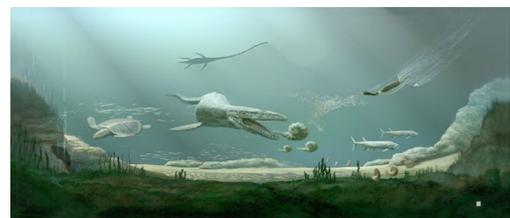
Call the Old Country Motel for reservations @ 1-800-454-7658. Book early and avoid disappointment. The July long weekend will be busy. This trip will surly satisfy the Amethyst collector in you.

Our friends in Thunder Bay have moved closer to their claim. This is hard rock country, so please bring adequate eye protection. ***For more information, contact Brian Bilcowski 233-1270***

Miniota Gravel Pits August 23, 2008

Cretaceous fossils, ironstone concretions, agate and petrified wood. For more information, call Marion & Marjorie 775-0625 after a pre trip. Hopefully the pre trip will be done before the next meeting. Please register with Gary or Sherri Henes at 275-7883

Morden, Manitoba August 16, 2008 Meet at the Canadian Fossils Discovery Center



The previous pictures are artist interpretations of the ancient sea in Manitoba.

Meet at the Canadian Fossils Discovery Centre, at 9:30 a.m. A \$20 fee will cover a guided tour of the museum and the dig.

Take a trip back in time as we explore the ancient seabed of the Cretaceous that once covered Manitoba in search of mosasaur and plesiosaur fossils. The area around Morden is also rich in other minerals such as jarosite and selenite.

For more information, contact Mike Mirus 783-7883

General Information and safety concerns about Field Trips

1. If weather conditions become unfavourable, contact Field trip coordinator
2. Keep in touch, in case of unexpected changes
3. Advise Fieldtrip co-coordinator of any health conditions and concerns, eg. Poor hearing or allergies to bee stings.
4. Register in advance, for the field trips that request it.
5. Contact the field trip coordinator for more information or if your plans unexpectedly change.
6. Some field trips have limited spots available.
7. Be prepared to sign a liability waiver
8. Prior to every “ in the field” portion of the trip please gather to the fieldtrip leader for information and safety concerns for site-specific areas.
9. If you are unfamiliar with the location or directions, please advise the field trip coordinator. We will provide a map or directions. Travel near the front of the line, as there is a less chance of being separated from the group.

Safety equipment, When attending a field trip:

1. Protect yourself, bring and wear safety glasses and safety boots
2. In Hard Rock country, pieces of rock can fly and hit you in the eye, when struck with a heavy hammer.

Things to bring with you:

1. Lunch and drinking water
2. Bug repellent and sunscreen

3. Hammers and chisels
4. Safety glasses, safety boots
5. Field lens or magnifying glass
6. Collecting bags and news paper/towels to protect your find
7. Notebook (to record locations and geological notes)
8. Camera, film, and your sense of adventure
9. Have Fun, be Safe and Good Luck on our 2008 Fieldtrip season.



MSM and WRMC BBQ & SWAP MEET

June 1, 2008, 3:00 pm

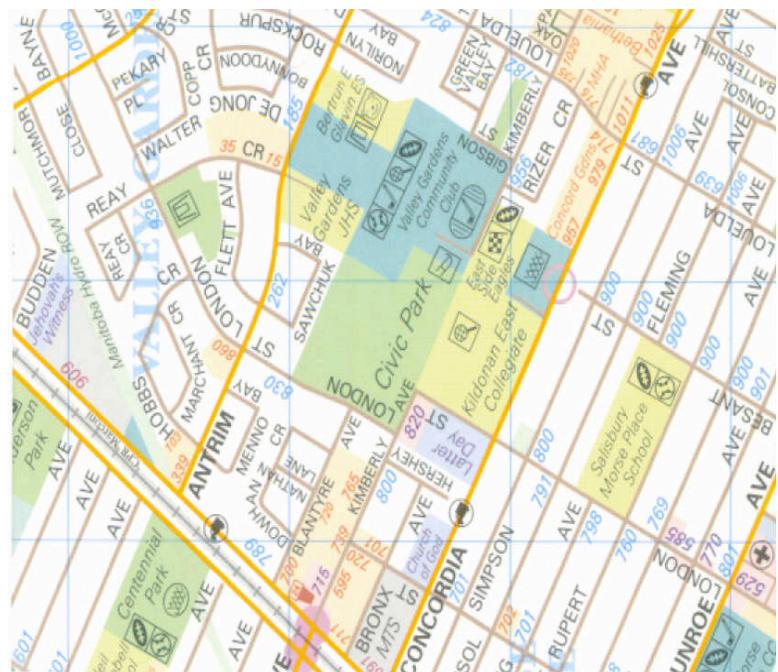
Bring what you can, Minerals, Fossils, Special Creations, Refreshments, Stories, Special Recipe or Treat and your Social Spirit.

Come to the *East Side Eagles Club House, at 909 Concordia Avenue* between the EK Pool and Kildonan East Collegiate.

We will provide, Barbecues, parking, wash room facilities, picnic tables and bleachers, hot dogs, hamburgers, buns, basic condiments, serviettes, cutlery, plates, ice and the space.

Questions? Contact Jack Bauer @ 632-6934.

3. Support your club.



VOLUNTEERS NEEDED

to prepare for and man, our first fundraiser of the year, "Manitoba mining week" May 21/08 at the FORKS..



The children are always eager to make up a glue card of minerals or fossils. This is a great way to introduce children to the geological history of Manitoba.

As you know, the **MSM and WRMC** are trying to work a little more closely together.

The Winnipeg Rock and Mineral Club's next meeting date is May 8 at 7:00 pm at Lions Place, 610 Portage Ave.

Jack and Evelyn Bauer have the pleasure to announce that their daughter is about to married.

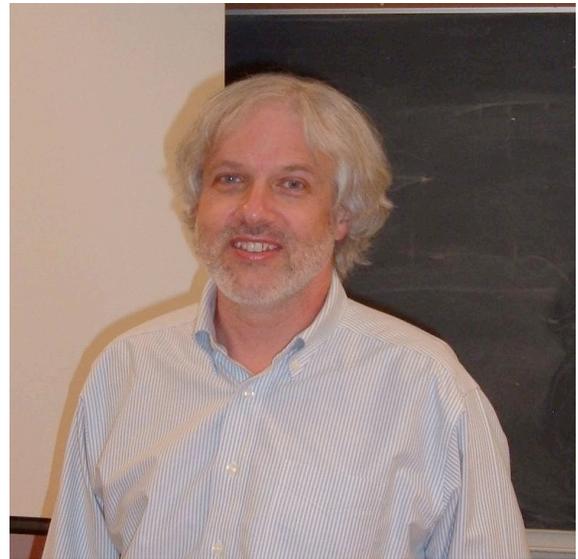
A Wedding Social in honor of Carrie Bauer and Ron Carino
Date: May 09, 2008
Location: North Wood Community Center at 1415 Burrows.
Contact Jack Bauer for Tickets @ 632-6934

CPC-2008

**The 18th Canadian Paleontology Conference
Winnipeg, Manitoba,
September 19th – 21st, 2008**

The Mineral Society Of Manitoba has voted to provide \$500 sponsorship for geological students, to attend this conference.

**April's presentation
Jellyfish Fossils? No Way.**



Dr. Graham Young.

Why no way? Jellyfish seem to have no hard parts. They are like upside down garbage cans made of soft parts with tentacles and that swim around. Usually fossilization is hugely biased toward forms that have skeletons.

Cnidarian medusae (jellyfish), which are very abundant and widespread today, are represented by sporadic occurrences through the fossil record. They are everywhere in our oceans, from the arctic to the equator, in deep or shallow water. Their size are as varied as their dispersal. They can gather in groups so thick that boats cannot be launched and so big that they tear apart fishnets.

Can you imagine a jelly like mass lying at the bottom of the ocean floor or on a beach turning into a fossil? Predators and bacterial enhanced decomposition would make short work of any jellyfish lying there. The possibility of a jellyfish becoming a fossil is 0.00001%

Therefore jellyfish are represented by sporadic occurrences through the fossil record. His study assesses and reviews the fossil record of the

three major medusan groups: scyphozoan medusae (true jellyfish), hydrozoan medusae, and cubozoans (box jellies).

Scyphozoan medusae, the true jellyfish, are exemplified by Moon Jelly to Sea Nettles, and Lion's Mane.



A common species, the lion's mane jellyfish is well known to divers for its painful, but seldom fatal stings; they are toxic and can cause severe burns. Most encounters cause only temporary pain and localized redness.

Only a few species of cubozoans (box jellies) exist and are mainly in warm waters. They are extremely toxic.

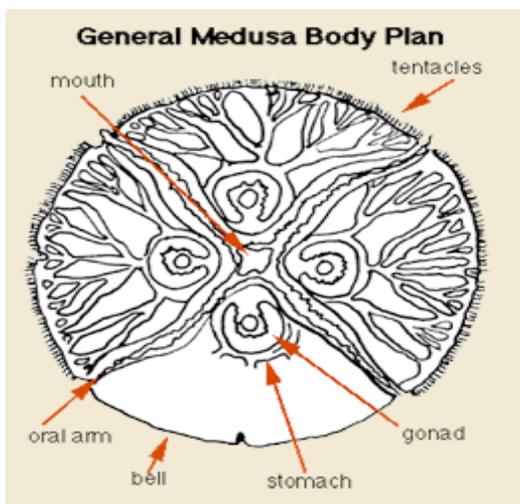
Here he presented the following: (1) outline the key criteria used to recognize and study fossil medusae; (2) apply these criteria to the published record of occurrences; (3) consider the palaeoenvironmental, sedimentological, and taphonomic (preservation) characteristics of medusae-bearing deposits; (4) plot the stratigraphic (geological time) and geographic ranges of the three major groups of medusae; and (5) discuss the taxonomic affinities (relationships) of fossil medusae.

The fossil record

1. Taphonomy (post mortem process) of modern medusae. What occurs when they die.
2. How do we recognize fossil medusae?
3. Occurrence of fossil record.

Dead jellyfish, if right side up with tentacles underneath usually have debris stuck to it.

The body displays a quadratic X structure.



Or a jelly Blob when washed ashore when dead. If washed on beaches when alive, they suck up sand

in trying to swim away. This results in hollows, which gets covered when the tide comes in.

Fossilization of medusae occurred in ancient shorelines, more preserved in tidal flat lagoons rather than the beach.

Recognition Of Fossil

1. Good, if there is evidence of original structure – mouth, eyes, gonads, etc.
2. Evidence of post mortem effects.
3. Appropriate ancient environment.
4. Multiple individuals present.

In rare instances where medusae are well preserved, it is possible to identify body structures comparable to those seen in extant groups. More commonly, sedimentologic and taphonomic criteria must be utilized to distinguish medusae from non-cnidarian medusoid structures. Among the many “medusoids” described in the literature, only a few represent unequivocal medusae. The majority of described specimens are associated with marginal marine depositional environments (such as tidal flat or lagoonal conditions). Rarely, medusae occur in rocks deposited in oxygen-poor deeper-water.

It is not uncommon for inorganic structures and gas holes to be mistakenly identified as jellyfish fossils.

There has been some rare pyritized scyphozoan jellyfish in cert nodules. One such, in cat head cert, was found on a school yard here in Winnipeg

There are only a few jellyfish fossil sites found. Dr Graham Young has found jellyfish fossils here in Manitoba. **These are the first such fossils in Manitoba.**



Dr Graham Young also informed us that no jellyfish fossils have been found since the Jurassic period (199 to 145 million

years ago). Environment changes occurred; different predation, rise in ocean levels, temperature changes, different decomposition enhancers. Something or things changed that prevent jellyfish fossil formation.

Many of the life forms in ancient seas and oceans did not have hard body parts. Therefore researching ancient life forms require greater skills in forensic Taphonomy.