

The Rock Record – April 2007

2007 Executive

President

Kate MacLachlan 787-9059

Vice-President

Bob Troyer 787-2562

Secretary

Megan Opseth 787-4495

Treasurer

Tom Love 787-8639

Business Manager

Nadene Hagen 790-4160

Program Chair

Jennifer Smith 787-9373

Assistant Program Chair

Sean Bosman 787-2646

Past President

Steve Whittaker 787-2577

School Liaison Committee

Melinda Yurkowski 787-0650

Field Trip Committee

John Lake 787-2621

Golf Tournament Committee

Bob Troyer 787-2562

*Please contribute to the SGS
Newsletter*

The SGS Newsletter is produced by the SGS executive. Letters, announcements, notices, comments, photos, news and information about SGS members, etc. are always welcome. Call an executive member or write to us at:

**Saskatchewan
Geological Society
P.O. Box 234
Regina, SK S4P 2Z6**

SGS e-mail address:
info@sgshome.ca

SGS Website:
www.sgshome.ca

All advertising inquiries should be directed to Nadene Hagen

In This Issue

- **Spring Public Lecture Announcement & Abstract**
- **Other Events and Notices – Student Thesis Night (This Week)**
- **Burgess Shale- Synchotron Trip**

Burgess Shale Exhibit and Synchotron Tour

Saturday, April 14th:

Depart from the Subsurface Lab at **9:00**
Tour Burgess Shale Exhibit **12:00 – 1:00**
Lunch **1:00 – 2:00** (location to be decided, bring money or a good friend!)
Light Source Tour **2:30 – 3:30**
Stop for a beer **3:30 – 4:30**
Depart Saskatoon **4:30**

Transportation and entry fees covered by SGS

If you are interested, please contact Jeff Coolican 787- 0651 by **Thursday April 5th**

Thursday April 26th Spring Public Lecture

The Canadian Light Source Synchrotron, the World's Worst Mass Poisoning, and a Saskatchewan Crop Which Might Cure?

Dr. Ingrid J. Pickering
Canada Research Chair in Molecular Environmental Science
Associate Professor
Department of Geological Sciences
University of Saskatchewan

7:30 pm, Thursday April 26th, 2007
Saskatchewan Science Centre
2903 Power House Dr.
SaskTel Max Theatre

Meet the speaker over coffee and donuts after the talk

Thursday April 5th @ 7pm
University Club (U of R)
215 College West Building
Please come and support the
Saskatchewan Geology Departments'
Thesis Students

Beer and Pizza will be served

PUBLIC LECTURE:

APRIL 26TH, 2007

**The Canadian Light Source Synchrotron, the World's Worst Mass
Poisoning, and a Saskatchewan Crop Which Might Cure?**

Dr. Ingrid J. Pickering
Canada Research Chair in Molecular Environmental Science
Associate Professor
Department of Geological Sciences
University of Saskatchewan

Abstract

The Canadian Light Source Synchrotron, Canada's largest science project for 30 years, is located at the University of Saskatchewan. The Canadian Light Source is a large machine for producing X-rays and other sorts of light. This provides experimental tools unique in Canada for scientists to peer inside materials and find out new things about how they work, right down to how the atoms are put together. For example, it allows scientists to design new materials for better electronics, study how to clean up the environment, find out more about diseases and develop better medicines.

This public lecture will focus on arsenic, a poison notorious for centuries, and selenium, a mineral element we all need at trace levels but toxic at elevated levels. It has been known for many decades that a lethal dose of arsenic cancels an equal, and otherwise lethal, dose of selenium. Our synchrotron research has revealed the metabolic reason – a detoxification molecule containing one selenium and one arsenic atom is formed in blood and harmlessly excreted. What appears to be a toxicological triviality may have profound implications. Arsenic in drinking water in Bangladesh and parts of India has been termed the worst mass poisoning in modern history, affecting more people than the total population of Canada. This arsenicosis manifests itself as skin lesions, skin cancers and death. Our hypothesis is that, rather than arsenic poisoning, this is actually selenium deficiency. The evidence for this, and how synchrotron studies will play a pivotal role in an international clinical trial in Bangladesh, will be discussed. Synchrotron studies are also involved in a potential whole food solution to the arsenicosis. Lentils are a staple of the Bangladeshi diet and also an important export crop for Canada and Saskatchewan. Our research is showing that Saskatchewan lentils, grown on our selenium-rich soil, are an excellent source of selenium. Thus, a Canadian crop might possibly provide a solution to the arsenicosis half a world away, and synchrotron studies are key to helping us to solve this major problem.

Ingrid Pickering, PhD

Born in Brighton, UK, Dr. Ingrid Pickering received her BA in Natural Sciences from Cambridge University and studied for her PhD at the Royal Institution of Great Britain in London. After a postdoctoral fellowship at Exxon Research and Engineering in New Jersey, USA she moved to California where she worked for 11 years as a staff scientist at the Stanford Synchrotron Radiation Laboratory. In 2003 she moved to Canada and Saskatchewan. Dr. Pickering is currently the Canada Research Chair in Molecular Environmental Science and Associate Professor in the Department of Geological Sciences, University of Saskatchewan. Her research uses synchrotron light to look at metals in living things in systems of relevance to the environment and health. She is closely involved with the Canadian Light Source Synchrotron, which is located on the campus at the University of Saskatchewan. She recently co-led a successful proposal to build two new beamlines for life science research at the Canadian Light Source.

Dr. Pickering is married to Dr. Graham George, also a synchrotron scientist and Canada Research Chair at the University of Saskatchewan. They live in Saskatoon with their three children, two boys and a girl, who are 10, 8 and 6 years old.

Student Thesis Talk Night:

This event provides an opportunity for undergraduate (and graduate) students in geology at U of R and U of S who are doing an honours thesis the opportunity to present the results of their study to their classmates and other members of the geological community. It would be really great for the students if members of the SGS would come out and support them. This might also provide companies an opportunity to assess potential future employees. The event will take place this coming Thursday at U or R in the Faculty Lounge (see poster above for details).

Photo Contest:

This is your last opportunity to submit entries for the SGS photo contest. We will be accepting entries until April 30th, 2007. Any photo with a Saskatchewan geology or landscape theme is eligible. We are considering turning the winning entries into a 2008 calendar. Please submit your photos through the SGS website.

SGS Merchandise For Sale

Looking for a distinctive gift? How about an SGS golf shirt or beer mug!

Golf Shirts:

M - XXL: \$40

T-Shirts:

M - XXL:	\$15
Beer Mug:	
One size fits all:	\$7.50
Golf Balls:	
Individual:	\$2
Sleeve:	\$6

Time to renew your SGS Membership!!! .

Use the mail in form on the following page, or renew online at www.sgshome.ca and follow the membership links

SGS MEMBERSHIP FORM – 2007

(please provide your e-mail address in the space provided below)

I, _____, wish to renew my/apply for a membership in the
SASKATCHEWAN GEOLOGICAL SOCIETY for 2007.

MY STATUS IS (please check one): ACTIVE (\$25.00) STUDENT (\$5.00)
 ASSOCIATE (\$25.00) LIFETIME (\$350.00)
 AMATEUR (\$10.00)

MY CURRENT MAILING ADDRESS IS: No change from last year
 New address (please print):

Mail to:
Saskatchewan Geological Society
P.O. Box 234
Regina, SK S4P 2Z6

SGS e-mail address:
info@sgshome.ca

e-mail address: _____

Your SGS newsletter will automatically be sent to you by e-mail.

Note that you'll receive it sooner this way than by regular mail.

please check, if you **do not** want to receive the newsletter by e-mail

I am enclosing _____ along with the renewal form.

RECEIPT REQUESTED (please check, if required)

(SIGNATURE)