

The Rock Record – March 2005

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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:

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All advertising inquiries should be directed to Andre Costa

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Wednesday, March 2nd, 2005

Verdant, Volcanic Vistas on the Island of St. Lucia, West Indies

Charlie Harper

Northern Geological Survey
Saskatchewan Industry and Resources

Lancaster Room, Royal Canadian Legion

Cash Bar: 11:30; Lunch: 11:50

Meeting: 12:15 – 13:00

Members \$7.00, Non-members \$11.00

Contact: Andre Costa 787-9104

By NOON, Wednesday, January 26, 2005

Wednesday, March 23, 2005

T-Rex Excavation, Frenchman Formation, Southwest Saskatchewan

Tim Tokaryk

Royal Saskatchewan Museum Fossil Research Station
Eastend, Saskatchewan

Lancaster Room, Royal Canadian Legion

Cash Bar: 11:30; Lunch: 11:50

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Contact: Andre Costa 787-9104

By NOON, Wednesday, January 26, 2005

Verdant, Volcanic Vistas on the Island of St. Lucia, West Indies

Charlie Harper

Saskatchewan Industry and Resources

The Pitons rise abruptly in Qualibou Caldera beyond the village of Soufriere in SW St. Lucia.



St. Lucia is famous for its lush vegetation, and spectacular, rugged volcanic scenery. It is also renowned by seafaring folk for its wonderful natural harbours and protected bays, with palm tree-lined beaches. St. Lucia is part of the Lesser Antilles volcanic island arc, which marks the eastern end of the Caribbean Sea. It owes its origin to the westward subduction of the Atlantic Plate beneath the Caribbean Plate. The island comprises a series of volcanic centres, the youngest of which occur in the southwest part of the island. The volcanoes are typical composite volcanoes, which like most of the Lesser Antilles volcanoes are subject to violent pyroclastic eruptions

followed by periods of volcanic dome growth and reworking of the pyroclastic deposits. There have been no historical magmatic eruptions on St. Lucia since European settlement began in the 1600's; however, there have been several phreatic (steam) explosions from the Sulphur Springs area, within the Qualibou Caldera. Qualibou is still considered to be active because of the steaming and bubbling Sulphur Springs located near the village of Soufriere. The tumultuous volcanic history of St. Lucia is evident in the land forms and in roadcut and shoreline exposures.

The people's history of St. Lucia has also been tumultuous. Even before Europeans discovered the Caribbean islands, the native Amerindians, the Arawaks, were displaced by the warlike Caribs. The Caribs ferociously defended their island against the Europeans, who were intent on colonizing the island. The French and the British were eventually successful in establishing sugar cane and banana plantations on the island, but they also fought for control of the island, with control changing hands 14 times until the early 1800's when Britain achieved final control. The ruins of a British fort, Fort Rodney on Pigeon Island, and its gun emplacement on top of a small volcanic dome overlooking Rodney Bay, are reminders of those days. St. Lucia has been independent since 1979, and is straining to keep up with the rapid pace of development on the island.

The Fauna from the Tyrannosaurus rex Excavation, Frenchman Formation (Late Maastrichtian), Saskatchewan

**Tim Tokaryk
Royal Saskatchewan Museum Fossil Research Station
Eastend, Saskatchewan**

The popularity of Scotty, the T. rex at one time reached global proportions. The unofficial marquee dinosaur for Saskatchewan is one of the more complete T. rex skeletons known. Yet, Saskatchewan has other fossil resources, not only from the Frenchman Formation from which the T. rex skeleton came, but also from other sediments, spanning much of the latter part of the Cretaceous, and throughout most of the Tertiary. What will follow will be a review of my 20 years collecting from these sediments, highlighting the surprising diversity of our provincial resources. From 'sea monsters' from the shores of Lake Diefenbaker, and along the Carrot River, to giants of the Cretaceous swamps.



T-Rex Tooth



T-Rex dig site.

COMING EVENTS

Wednesday, March 30th, 2005

University of Regina Student Talk Night

Royal Canadian Legion 7:00 – 9:30 PM

Beer and pizza is served up to all who come out to support our up and coming geology students from the University of Regina by giving them an audience for undergraduate or graduate thesis presentations.

Talks are slated from: **Chad Leugner, Aaron Brown, Jason Craven, Russ Walz and Will Clark**

April 14th and 15th, 2005

SGS Annual Public Lecture and School Tour

Steve Ruff of the Mars Space Flight Facility at Arizona State University in Tempe, Arizona will provide a public interest overview of geological insights from NASA's **Mars Rover Program**. Steve will speak to various school audiences on both April 14th and 15th, and provide a public lecture at the Museum auditorium on the evening of the 14th.

Wednesday, April 27th, 2005

Core Workshop, Williston Basin Petroleum Conference

SGS is organizing and hosting a core workshop to follow the Williston Basin Petroleum Conference being held at the SIR Subsurface Laboratory April 24-26, 2005. The workshop will feature informal presentations of cores on various oil producing regions and horizons in the province. Registration for this Workshop is \$75. Details can be found at www.ir.gov.sk.ca: go to

What's New in the Saskatchewan's Oil and Gas Resources page. The html for the Conference is:

<http://www.ir.gov.sk.ca/Default.aspx?DN=4025,3383,3384,2936,Documents>

Thursday, April 28th, 2005

Potash Mine Tour, Colonsay Operation

For those who get up early, this is your event. Free for SGS members, a van will leave Regina at 5:30 or 6 AM for a trip to Mosaic's Colonsay underground Potash mine. The trip is an all-day affair. Details to be provided closer to the event.

The Saskatchewan Geological Society Annual General Meeting and Awards Banquet

Saturday, January 29th, 2005
Hotel Saskatchewan, Regina

Approximately 56 people attended the Annual General Meeting and Awards Banquet for the Saskatchewan Geological Society. Thanks to all participants for their support and interest. D.M. Kent Consulting is especially thanked for generously providing wine with dinner, and Bob Troyer, serving on the SGS Executive in 2005 as Treasurer is thanked for taking minutes.

The transfer of chair was carried out between outgoing President Erik Nickel and incoming President, and past Program Chair, Michael Gunning. Erik will serve on the 2005 Executive as Past President.

Four awards were presented at the event:

Name	Category	Winner
Presidents Award	Best Graduate Student Poster, SIR Open House	Istvan Gyorfi (U of S)
Lazlo Fuzesy Award	Best Undergraduate Poster, SIR Open House	Aaron Brown (U of R)
Robert Milner Award	Top Undergraduate Student, Univ. of Regina	Sarah Ranson
Walter Kupsch Award	Top Undergraduate Student, Univ. of Saskatchewan	Kimberley Halpin

There were three new inductee's into the Geoscience Honour Roll in recognition of their life-long contributions to furthering the understanding of Saskatchewan's geology and natural resources:

- **Henry Sawatzky, P. Geoph.(APEGGA)** **Exploration Geophysics**
- **Jack Mollard, Mollard and Associates** **Remote Sensing**
- **Dr. Roddick Byers, University of Saskatchewan** **Precambrian Research**

The following page includes the citation for Henry Sawatzky. Future editions of the Rock Record will include the citations for the other two award winners.

The night concluded with Erik Nickel giving his parting presidential address, a geological tour of Greece, which was enjoyed by all.

Henry Sawatzky, P. Geoph.(APEGGA)
Saskatchewan Geological Society Geoscience Honour Roll

Henry Sawatzky spent his formative years on a farm near Herschel, Saskatchewan. He left the farm at Herschel to serve in the Canadian Navy Volunteer Reserve in submarine tracking and detection during World War II. Following the end of those hostilities, Henry enrolled in the College of Arts and Science at the University of Saskatchewan, graduating in 1950 with a B.A. in Physics. According to his wife's book "Doodlebugging in Saskatchewan" Henry had developed an interest in the oil business during his university years and upon graduation sought employment with several companies in that industry. He eventually received a call from Petty Geophysical Engineering Company and was offered a position as junior seismologist (junior recorder). Acceptance of this offer made him the only Canadian employed by the company and initiated a four-year nomadic existence for Henry and his family, as they trekked through Saskatchewan from Gravelbourg to Central Butte Southey, Indian head, Swift Current, Fort Qu'Appelle, Carlyle and Shaunavon. The conditions under which Henry and his family lived during that time as described in his wife's book are symptomatic of Saskatchewan's slow recovery from two decades of poor finances brought on by the depression, drought and war years. Henry left Petty in the latter part of 1954 to begin 13 years of employment in the Geophysical and Evaluations Branch of the Saskatchewan Department of Mineral Resources. It was at this time that Henry made most of his significant contributions to geoscience in Saskatchewan. Paramount is his Composite Seismic map. This map dramatically demonstrated the presence of structures in the subsurface of Saskatchewan that were created by the dissolution of Devonian salt deposits and has withstood the test of time. It is as applicable today as it was when it was first released in the late 1950s. However, he did not stop there; Henry and his staff of two other geophysicists, Dave Surjik and Rama Agarwal, and a geologist, Bill Wilson produced several other important subsurface studies that included one on helium prospects in southwestern Saskatchewan and another dealing with the hydrocarbon potential in an area south of Regina. The helium study demonstrated the existence of Precambrian paleotopographic highs in western Saskatchewan, their influence on the overlying strata and their relationship to entrapment of oil and gas. The other study contributed to the methodology for recognition of the timing of salt dissolution, and its influence on hydrocarbon accumulations. Henry left Mineral resources in 1967 to take the position of Chief Geophysicist for Francana Oil and Gas, which at that time was located in Regina. It was during his employment with Francana that he made, what was for him, his most satisfying geoscientific contribution, namely, the discovery of the Viewfield Oilfield in southeastern Saskatchewan. Henry recognized that Viewfield's complex structural and stratigraphic relationships resembled those of an extraterrestrial impact feature. His paper on the Viewfield impact structure brought him international acclaim and won for him the Canadian Society of Geophysicists "Best Paper" award for 1972. Henry confided to me, recently, that he got great pleasure out of being an invited speaker at a meeting of internationally recognized experts in the field of extraterrestrial impact structures in Tuscon, Arizona.

I'm sure you all will agree with me that Henry Sawatzky is a fitting inductee to the Saskatchewan Geological Society's Geoscience Honour Roll.

SGS 1st Annual Curling Funspiel

Saturday,, Feb. 26th, 2005
Tartan Curling Club, Regina

The 1st Annual SGS Curling Funspiel was held Feb. 26th at the Tartan Curling club. A total of 32 people came out and a fun time was had by all. The big 1st place prize was taken home by the "Bioclastic Wackes" (Russ Hodgins, Pam Schwan, Megan Opseth and Tom Love), 2nd place went to the "Tholeiitic Basalts" (Kate MacLachlan, Ken Newman, Rhea and Margot Gunning) and the consolation prize went to the "Spherulitic Rhyolites" (Erik Nickel, Janet Campbell, Mike and Colin Gunning). Ken Newman was awarded a special prize for the best "blooper" when he broke his broom while sweeping and ended up in a heap on the ice. "Blooper" honourable mention went to Janet Campbell for a spectacular fall, which had her airborne for a few seconds. Thanks to everyone who participated and a special thanks to Lynn Kelley, Janet Campbell, Jeff Coolican and Kate MacLachlan for organizing the event.

We hope to get an even bigger crowd out next year for the 2nd Annual Funspiel.

