



ATLANTIC GEOSCIENCE SOCIETY NEWSLETTER

Volume 34, Number 2, April 2005

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The deadline for submissions to the next issue is June 6, 2005. Please send articles or feedback to:

John Shimeld, AGS Newsletter editor
Geological Survey of Canada (Atlantic)
P.O. Box 1006, Dartmouth, NS B2Y 4A2
Tel: (902) 426-6759
John.Shimeld@nr.can.gc.ca

Production of this newsletter is by Nelly Koziel.
Submissions were solicited and compiled by Chris White and Mike MacDonald.

PRESIDENT'S FORUM

The February 2005 AGS colloquium in Saint John was certainly a personal milestone. It marked only the second conference I have ever helped to organize, and its conclusion marked the first time I have ever had the honour and privilege to become 'President' of any society. All of the colloquium events ran smoothly and attracted a large number of attendees and so, by the end of the banquet, my relief at seeing the success of the event left me at a loss for words when it came time for me to give the concluding address. Fortunately, I have this forum to belatedly extend, on behalf of the AGS, my appreciation.

The colloquium was most ably co-organized by Jennifer Bates, Karl Butler, Pam Dickinson, Dave Lentz, Randall Miller, Ian Spooner, Joe White, Lucy Wilson, and Reg Wilson. Sponsorship came from the New Brunswick Museum, New Brunswick Department of Natural Resources, the Vice-President of Research at the University of New Brunswick, and the deans of science at the Saint John and Fredericton campuses of the University of New Brunswick

Posters and talks at the colloquium continue to be of an exceptionally high standard and all of the presenters are to be commended for their time and effort. Again, the student presentations were a highlight, and congratulations go out to everyone who took part, not just the award winners. Also, the work of the judges of the student awards must not be overlooked, for they had to evaluate 26 talks and 13 posters and come up with the winners - probably the most difficult task anyone had over the course of the weekend. Awards for the Distinguished Scientist (Gesner Medal) and Distinguished Service were also presented, this year respectively to John Calder and Ron Pickerill (the citations for both are carried separately in this issue). An acknowledgement must also be extended to the judges of these awards: a slate of very highly distinguished nominees had to be evaluated this year. Finally, to the large number of old and new members of the Society who made the long, or not so long, journey to Saint John, thank you for supporting your society's major event.

The colloquium also marks the time of year when the AGS councillors complete their terms in office. Our gratitude is extended to all. Several councillors have been re-elected for another year on council/executive: Karl Butler (University of New Brunswick - Fredericton), Ken Howells (Industry - Halifax, and treasurer), Sue Johnson (New Brunswick Department of Natural Resources - Fredericton), Andy Kerr (Newfoundland and Labrador Department of Natural Resources - St. John's), Andrew MacRae (Saint Mary's University - Halifax), Steve McCutcheon (New Brunswick Department of Natural Resources - Bathurst, and secretary), Randy Miller (New Brunswick Museum - Saint John), Brendan Murphy (St. Francis Xavier University - Antigonish), Deborah Skilliter (Nova Scotia Museum of Natural History - Halifax), Ian Spooner (Acadia University - Wolfville), Peter Wallace (Dalhousie University - Halifax), Joe White (University of New Brunswick - Fredericton, and past president), and Reg Wilson (New Brunswick Department of Natural Resources - Bathurst). Retiring from council were Jennifer Bates, Dawson Briscoe, Tom Martel, David Mossman, Mike Parkhill, and Alan

Ruffman. Meanwhile, new to council are Fenton Isenor (Cape Breton University - Sydney), Steve King (Industry - Halifax), Mike Parsons (Geological Survey of Canada (Atlantic) - Dartmouth), and Kay Thorne (New Brunswick Department of Natural Resources - Fredericton), while former presidents Rob Raeside (Acadia University - Wolfville) and Chris White (Nova Scotia Department of Natural Resources - Halifax) return for more punishment. Welcome, and welcome back to all.

February also saw a changing of the guard in our 'communications department'. After several years of professionally developing and maintaining the AGS website, Peter Wallace is deserving of a break. Into his 'sizeable shoes' steps Joe MacIntosh (New Brunswick Department of Natural Resources - Fredericton) as webmaster. A similarly major task lies ahead for John Shimeld (Geological Survey of Canada (Atlantic) - Dartmouth) who, with this issue of the newsletter, has taken over as editor from Mike Cherry. Mike has done a wonderful job improving the presentation of the newsletter and its 'electronic' development.

Looking forward, the Halifax 2005 GAC-MAC-CSPG-CSSS Joint Conference is, as I write, just over a month away. With all the hard work that has already been put in, it is sure to be a success and, since the AGS is the host society, the conference cannot help but reflect well on our membership. I urge all AGS members to attend.

Finally, to anyone else who has helped the AGS over the past year, and whom I have forgotten to mention, please accept this word of thanks (and send me an e-mail to the above address so that I can mention you in the next issue!).

Dave Keighley
Keig@unb.ca



AGS conference participants enjoyed many opportunities to discuss the finer points of their science, meet old friends, make new friends, and simply mingle. Photo credit: Sabine Vetter (UNB).

RECENT AWARDS

AGS RUPERT H. MACNEIL AWARD FOR BEST STUDENT PAPER: Nigel Selig

Nigel gave an oral presentation entitled "A history mystery: dendroarchaeological investigations at the Campbell Carriage Factory." His co-authors were A. Robichaud and C. Larouque.

AGS GRAHAM WILLIAMS AWARD FOR BEST STUDENT POSTER: Tansy O'Conner-Parsons

Tansy's poster, co-authored by C. Stanley, was entitled "Downhole trace and major element chemostratigraphic patterns relating to igneous fractionation processes in the Golden Mile Dolerite, Western Australia."

APEGNB BAILEY AWARD: Dr. Arie Ruitenberg



Dr. Arie (Art) Ruitenberg, centre, receives the inaugural Bailey Award of the Association of Professional Engineers and Geoscientists of New Brunswick (APEGNB). Arie, now retired, was the second recipient of the AGS Gesner Medal in 1994 and is still a familiar face at AGS Colloquia. He served as the New Brunswick Department of Natural Resources regional geologist for southern New Brunswick from 1967 to 1994, during which time he was instrumental in development of the Sussex potash deposits, and the Sn-W-Mo-In deposits at Mount Pleasant. Presenting the award at right is Steve McCutcheon of the New Brunswick Geological Surveys Branch (Bathurst), and at left is APEGNB President (now Past-President) Brian Barnes. The newly-established Bailey Award for geoscientists recognizes a high level of professional achievement, combined with service to the geoscience

profession and service to the community. It is named for Dr. L.W. Bailey, professor of chemistry and natural science at UNB for 46 years spanning the 19th and 20th centuries, and one of the pre-eminent geologists and natural scientists of his time. The award was presented at the APEGNB Annual Meeting and banquet held at the Lord Beaverbrook Hotel in Fredericton on February 19th. Photograph is provided courtesy of Melissa Mertz, Communications Director, APEGNB.

Reg Wilson
Reg.Wilson@gov.nb.ca

CITATION FOR THE AGS GESNER MEDAL: Dr. John Calder

For nearly thirty years, John Calder has played a highly influential role in the geoscience community of Atlantic Canada. Not only has he sustained a world-class research program addressing diverse aspects of Atlantic coal geology and paleobotany, but he has also made an exceptional contribution to the public understanding of science at many levels. In addition, he has worked tirelessly to develop the conservation and geotourist potential of many parts of Nova Scotia, exhibiting a rare and commendable degree of commitment to local communities.

John Calder is a home-grown geologist, born in the Springhill region of Nova Scotia, and an Earth Science graduate of Saint Mary's University, Halifax (1976). Following temporary positions with Esso and Kerr-Addison Mines, he joined the Nova Scotia Department of Natural Resources in 1977 to work as a regional coal geologist. Early in his career, he completed a part-time PhD at Dalhousie University, Halifax, graduating in 1991 with a thesis concerning the Late Carboniferous environment and paleoecology of the Springhill Coalfield.

Since his doctoral years, John has risen to become an internationally respected coal geologist and paleobotanist. In 1993, he won a much coveted Research Fellowship at the world-renowned Smithsonian Institute. Subsequently, he has written more than twenty influential papers, and has received many international research awards. Most notably, he is a three-times winner of the Best Paper Award of the Coal Division of the Geological Society of America (1991, 1994 & 2002), of which he has also been President.

However, let us be clear - John is no ivory-tower academic. His drive for scientific excellence is matched only by his passion to communicate science. In an era when governments are questioning resource allocation to the natural sciences, the geoscience community really needs people like John. Whether devoting time to tourists on a beach, giving eloquent public lectures, contributing to popular books such as *The Last Billion Years*, or contributing to radio and TV programs such as CBC's *Land and Sea*, John's impact on the public appreciation of geology (and therefore the need to fund it) is simply incalculable.

John has worked with many graduate and undergraduate students at NSDNR and through his Adjunct status at Dalhousie, and has also taught a popular class in paleobotany at St. Mary's University. He has worked with many amateur fossil collectors over the years, including widely known collectors Don Reid and Brian Hebert at Joggins, encouraging their enthusiastic study and assisting with identifying newly discovered fossils. And he has made a strong contribution to museums in the province. John's drive to 'put back' into local community is, perhaps, best expressed in his drive to gain UNESCO World Heritage Status for the Joggins Fossil Cliffs. In this endeavour, John has contributed great versatility and energy to his work with the local community, whilst winning over provincial and federal politicians. This year saw the first fruits of John's decade-long labour, as Joggins passed its 'first test' and was placed on Canada's national list of candidate UNESCO sites. Many people have also enjoyed his high-quality photographs of geological sites and the more human dimensions of communities in various parts of the world.

We therefore strongly urge you to award John the 2005 Gesner Medal. It would provide much deserved encouragement and recognition for a man who expends much of his energy in the encouragement and development of others.

Dr. Howard J. Falcon-Lang
Howard.Falcon-Lang@bristol.ac.uk

Dr. Martin R. Gibling
MGibling@dal.ca

CITATION FOR THE AGS DISTINGUISHED SERVICE AWARD: Dr. Ron Pickerill

Ron Pickerill, professor of geology at the University of New Brunswick (UNB), has been an ardent proponent of the Atlantic Geoscience Society since the early days of the 1970s. This is not surprising, considering that his mentor was Nick Rast, a visionary who acted on the need for a regional geological society. It did not take Nick long to encourage Ron to serve as an AGS councillor, a role he first assumed in 1976. This was immediately followed by Ron organising the first AGS meeting with the focus of ongoing regional research. The theme of this meeting, held at Mount Allison University in December 1976, was, "Current research in the Maritimes". It was a remarkable success, attracting forty-four papers, even though Christmas was just around the corner.

One of the passions that Ron inherited from Nick Rast was encouraging University of New Brunswick geology students to present papers and posters at AGS annual meetings. This he did through personal example, giving numerous presentations on his research. Over the years the UNB student contingent has been an active element of AGS, thanks to Ron's attendance at every, and I really mean every, meeting.

The above is commendable, but it is not the principle motivation behind this nomination. Rather, it is Ron's enduring legacy as one of the editors of *Atlantic Geology*, the only regional geology journal in Canada. *Atlantic Geology* originated in 1965 as *Maritime Sediments*, the brainchild of Bernie Pelletier. In the early years the mandate was narrowly focussed, so that many potentially significant contributions in hard-rock geology and geophysics found a home elsewhere.

During the seventies, *Maritime Sediments* prospered but the financial and time commitments became too demanding for Bernie. In 1981 he resigned, after almost single-handedly keeping the journal alive for sixteen years. AGS was asked to assume responsibility for the continuing publication of *Maritime Sediments* but Council were agreeable only to being involved on an informal basis.

The new editors, Ron Pickerill and George Pajari, renamed the journal *Maritime Sediments* and *Atlantic Geology*. Importantly, they also introduced a referee system, which encouraged grant-dependent authors to submit manuscripts. Together, Ron and George did an incredible job of keeping the journal alive for five years, with each new year bringing a fresh search for funding. Finally, in 1985 with the resignation of George Pajari, AGS was again asked to take over *Maritime Sediments* and *Atlantic Geology*. This time Council agreed to make it the official journal of the Atlantic Geoscience Society and to accept financial responsibility for its continuing publication. To introduce the new era, the Society appointed three editors, Ron Pickerill, Sandra Barr and Graham Williams.

As an editor, Ron consistently maintained high standards in clarity of style and concise writing. And as a prolific contributing author, he has pioneered a revision of the stratigraphy and palaeontology of the Maritimes Palaeozoic. Some of his ichnology papers, commonly co-authored by one of his many gifted students, have shown an innovative approach and provided a more lucid understanding of palaeoenvironments and sedimentation.

To survive as an editor for almost twenty-five years is an achievement by any standards. When this is coupled with a remarkable improvement in the quality and impact of the contributed papers, it represents an outstanding accomplishment. Ron Pickerill, as one of the three editors of *Atlantic Geology*, can claim such success. And through such dedication, the journal is now the flagship of AGS, with an excellent citation index and an international following. I know of no other small regional geological society in the World that has its own journal. The debt that AGS owes Ron, Sandra and Rob is immeasurable.

Ron has made other important contributions to the Atlantic Geoscience Society, especially as a councillor. In this capacity, he helped to organise several annual meetings over the years. He also made significant contributions to the book, "The Last Billion Years", providing invaluable information and text on the geology of New Brunswick and Arisaig, Nova Scotia.

Because of such contributions, the book has been a riveting success story.

Ron Pickerill is a worthy successor to the previous recipients of the AGS Distinguished Service Award and I trust that the Selection Committee will recognise Ron's services to the Society and to New Brunswick geology.

Graham Williams
GWilliams@nrcan.gc.ca

FINAL PREPARATIONS UNDERWAY FOR HALIFAX 2005

The final preparations are being made for Halifax 2005. Of special note to AGS Newsletter readers is an open forum on Sunday, May 15th, to hear of lessons learned from the recent Indian Ocean tsunami. The forum will feature presentations by an eyewitness; Jim Gorman, the Science Editor for *The New York Times*; Don Forbes, a GSC-Atlantic geologist who visited the disaster, and John Clague, the Canada Research Chair in Natural Hazard Research.

Other public events during the conference include a display of rare minerals from the Pinch Collection of the Canada Museum of Natural History, and public lectures at the Nova Scotia Museum of Natural History on Canada's minerals and fossils.

Mike Cherry
CherryME@gov.ns.ca



Despite having just finished a three-hour meeting with no breaks and only some of Sandra Barr's mints for sustenance, these Halifax 2005 committee members are still smiling! Left to right: Chris White, Rob Raeside, Dave Burton, Andrew MacRae, Scott Swinden, Ian Spooner, Charlie Walls, John Shimeld, Grant Wach, Sandra Barr, Mike Cherry, Mike MacDonald. Absent: Jennifer Bates, Evelyn Inglis, Lisa Kellman, Nan MacDonald, Jennifer Matthews, Lawrence Plug, Patrick Ryall, Peter Wallace. Photo credit: Peter Giles.

THE AGS IS HOSTING ...

GAC-MAC-CSPG-CSSS

HALIFAX 2005

JOINT MEETING

Dalhousie University,
Halifax, Nova Scotia
May 15 - 18, 2005

WWW.HALIFAX2005.CA

Final preparations are underway for Halifax 2005. More than 750 abstracts for poster and oral presentations have been received for a technical program that includes 6 symposia, 30 special sessions and 8 general sessions. This program will be augmented by 16 field trips (7 pre-conference and 9 post-conference), 5 short courses and 1 workshop.

The technical sessions will be supplemented by a rich social program that is based on famous Maritime hospitality. Highlights include a lobster feast, 50th anniversary celebrations of the Mineralogical Association of Canada and accompanying guests tours of historic sites, including picturesque Peggy's Cove.

Please visit the conference website to learn more about the conference. On-line registration at reduced rates is available until May 6.

Website: www.halifax2005.ca
Contact us: hfx2005.gov.ns.ca



Pre-conference Registration
(reduced rates)
closes May 6, 2005

AGS SPONSORS CONTEST WITH PHOTOGRAPHIC GUILD

REGIONAL NEWS AND UPDATES



Philip Giles's image of Lowell Glacier as 2005 winner of the Atlantic Geoscience Society Award.



Wayne Garland's image of Economy cliffs as 2005 winner of The Last Billion Years Award.

Encouraged by the fine images that members of the Photographic Guild of Nova Scotia (PGNS) contributed to *The Last Billion Years*, AGS is sponsoring an annual competition within the Guild for geological images. There are two awards: the AGS Award for the best overall image submitted to the competition, and The Last Billion Years Award for the best Atlantic Canada image. Slides are marked by a panel of three judges, with at least one judge the AGS. Jennifer Bates, Dawson Brisco, John Calder, Andrew MacRae and Deb Skilliter have all judged on behalf of AGS in the past. Please contact me if you would like to judge in future competitions. This year the judges were John William Webb (PGNS –maker of the Last Billion Years frontispiece image of Paddys Island), Markus Albertz (post-doc at Dalhousie and avid black and white photographer) and myself (PGNS/AGS).

Rob Fensome

RFensome@nrcan.gc.ca

2005 FIELD PROGRAM OF THE GEOLOGICAL SURVEYS BRANCH, NEW BRUNSWICK DEPARTMENT OF NATURAL RESOURCES

Geoscience programs at the New Brunswick Department of Natural Resources (Geological Surveys Branch) are grouped into seven categories, namely Bedrock Mapping, Mineral Deposits, Hydrocarbon Resources, Industrial Minerals, Quaternary Geology, Coastal Zone Studies, and GIS/Database Management.

Bedrock Mapping

In southern New Brunswick, Sue Johnson will be conducting bedrock mapping on the southeastern margin of the New Brunswick Platform northwest of Miramichi, an area recently covered by a high-resolution aeromagnetic survey. No detailed geology maps are available for the area; however, it is thought to be underlain by Upper Carboniferous rocks of the Minto Formation. The area shows several positive magnetic features that cannot be explained at present. They may reflect the presence of previously unmapped or shallowly buried basement rocks, which in the nearby Annidale belt are host to several gold occurrences that are the focus of a current metallogenic study by Kay Thorne.

Nancy Van Wagoner (Acadia University) and a Masters student (TBA) will study "The paleo-environment and tectonic setting of Silurian volcanic and sedimentary basins of southwestern New Brunswick: The Letete, Waweig and Quoddy Formations". This project is a continuation of work being conducted in the Passamaquoddy Bay area and has important implications for the setting and potential for precious metal and base metal sulphide deposits in that area.

In northern New Brunswick, Reg Wilson will be mapping to the east of Mount Carleton Provincial Park in order to fill in a hole in detailed map coverage in the northern part of the Tobique Belt. Mapping is expected to elucidate Chaleurs Group-Tobique Group stratigraphy and contact relationships, including a possible unconformity, and the southwestern extension of faults mapped previously. Reg has also been working on an updated version of the 1:250 000 geological map of northern New Brunswick, and along with Paul Rennick of the GIS section, will be preparing the map for display at our annual Review of Activities in November.

Mineral Deposits

Jim Walker will be continuing his studies on base metal sulfide deposits in the Bathurst Mining Camp (BMC), and this year will be looking at the Chester and Nepisiguit A deposits. Chester is the only significant deposit in the Bathurst district that consists mainly of copper, and has been the focus of some very encouraging recent exploration and development. Jim will

also be branching out to the Tobique-Chaleurs belt and evaluating the Nash Creek deposit, hosted by Lower Devonian volcanic rocks. The work of two University of New Brunswick Ph.D. (Economic Geology) candidates is also supported by Geological Surveys Branch: Sabine Vetter is studying gold deposits hosted by Ordovician rocks in the northern BMC and Elmtree Inlier, and Sean McClenaghan is looking at rare-earth elements in volcanic massive sulphide deposits in the BMC.

In southern New Brunswick, Kay Thorne will continue with last year's geochemical study of gold occurrences in the Cambro-Ordovician Annidale Belt. This will involve additional field work with more detailed mapping and documentation of the 26 occurrences. Kay is planning a paper to describe the details of this study, and is also putting the finishing touches on two papers characterizing the Clarence Stream gold deposit.

A team from Acadia University consisting of Sandra Barr, Cliff Stanley, and Jose Texidor-Carlsson (MSc student) will undertake a project entitled "Metallogeny of the Caledonian Highlands, Southern New Brunswick Phase I: Compilation of Data on Known Mineral Occurrences and Litho-geochemistry Pilot Project". This is designed to investigate the potential for Cu-Au porphyry-epithermal mineralized systems similar to those found elsewhere in the Avalon of Atlantic Canada.

The department is also funding a continuing study by David Lentz and Masters candidate Jon Lafontaine from the University of New Brunswick, entitled "Characterization of the Devil Pike Brook occurrence within the Annidale Belt". This project is designed to characterize and model the gold-mineralizing system at Devil Pike Brook, and to compare and contrast it with numerous others that occur throughout the Annidale Belt.

Hydrocarbon Resources

Clint St. Peter will be doing little field work this summer, but his new assistant, Steven Hinds, will be starting a detailed study of the McCully natural gas field and surrounding area. The work will focus on the sedimentology, stratigraphy and structural history of the Albert Formation in the McCully reservoir and in the adjacent Albert strata at surface south of the field.

Adrian Park, under contract from the University of New Brunswick, will be continuing his work, begun in 2004, in the eastern Moncton Subbasin. He will concentrate his efforts in the Indian Mountain deformed zone north and west of Moncton, where he will make an effort to resolve some long-standing problems on the kinematics and timing history of several regional faults that displace the strata of the Albert Formation. Because the Albert hosts a petroleum system, Adrian's work has particular relevance to on-going petroleum exploration in the area.

Industrial Minerals

Field activities of Tim Webb's Industrial Minerals Section will focus on northern New Brunswick. Preliminary work in 2004

suggested a significant potential for the export of aggregates from bedrock sources situated very near the Port of Belledune. Sampling and laboratory testing will be undertaken to demonstrate whether the material will satisfy a wide range of construction industry standards for high quality aggregate. Reconnaissance studies in northern New Brunswick are to be carried out to expand the province's database of potential stone resources such as slate and flagstone. Other work in northern New Brunswick will involve characterization studies on several weathered granite deposits.

In southwestern New Brunswick, a comprehensive geotechnical assessment of a large granular aggregate resource extending from Lake Utopia east to the Pocologan area will be undertaken to address potential development in light of evolving export opportunities and future domestic demand for high quality aggregate.

Quaternary Geology

Toon Pronk, Serge Allard and Rex Boldon are continuing surficial mapping in southern New Brunswick, and hope to complete the Saint John map area (21 G/8) this summer. They are presently compiling surficial material maps and a database for the Caledonia Highlands. The maps contain landforms, texture, lithology, etc. and the database will be a compilation of field observations, laboratory analysis, and geochemical data. Upon completion, these will be released later this spring and the same work will be carried out for southwestern New Brunswick.

Al Seaman will be conducting a till geochemistry sampling project in the western half of the Napadogan (NTS 21 J/07) map area. Sampling will be based on our standard 2 km sample grid (1 sample/4 sq.km.). This area lies between granite-related mineral occurrences to the west (Sisson Brook W-Cu) and north (Burnt Hill W-Be-F-Mo-Sn), and is underlain by similar rock units.

Mike Parkhill will continue his Quaternary mapping and till sampling project in the Bathurst-Pointe Verte area. The project provides geochemical data for mineral exploration, and geotechnical analyses of the till for both land use applications and for potential export at the Port of Belledune.

Coastal Zone Studies

Dominique Bérubé will undertake a digital photogrammetry study to document the coastal erosion rates at Cocagne Harbour in southeastern New Brunswick. This study is part of a three year, \$ 2.5 million research project managed by Environment Canada and carried out by coastal experts from over a dozen government and academic groups. The goal of the project is to measure the impacts of climate change and sea-level rise on the southeast coast of New Brunswick. This information will help with planning for future human usage along the coast, as well as management of wildlife and plant habitat in the coastal zone. In addition to the above, Dominique will be involved with long-term beach monitoring, which allows better prediction of the impacts of natural hazards and human activities, and is necessary for making informed decisions

about beach mining or beach nourishment activities inside sensitive but balanced sediment cells. The New Brunswick Beach Monitoring Network now includes twelve permanent survey sites and the objective for 2005 is to survey each of these using a real-time differential GPS system.

GIS and Database Management

Paul Rennick and the GIS section have a number of projects underway, including linking an updated lexicon of New Brunswick stratigraphy to our new website after translation has been completed; going live with the PARIS (Publication and Assessment Report Information System) publications database; standardizing and creating internet access to various other geoscience databases; establishing a graphic interface with CARST (Claim and Assessment Report Search Tool); and implementing an interactive tool for querying online geological maps. John Langton will be kept busy adding content to the new Minerals Division web-site, and compiling a provincial drill-hole database, which will link to the CARST and PARIS on-line datasets.

Reg Wilson
Reg.Wilson@gnb.ca

FUNDY GEOLOGICAL MUSEUM

While the winter season has been very quiet, we had a successful March Break with overall site visitation increasing 50% over last year's event. Part of the program included eight students who participated in the work ongoing in the laboratory on our prosauropod dinosaur material. This resulted in media coverage including CBC radio and television. The fossil material collected during Prosauropod Dinosaur Dig 2004 continues to be prepared in the Museum's Laboratory. This work is being carried out by museum staff and volunteers and can be followed on the Project Prosauropod website at <http://museum.gov.ns.ca/fgm/lab/lab.html>.

Our overnight school programs for April-June are completely booked up, although there are still dates available for the Day Trips. Details of programming activities for this summer, including our Time Travel Curatorial Walks, are posted on the museum's website at <http://fundygeo.museum.gov.ns.ca> or call 1-866-856-DINO. We have been able to re-offer our Elderhostel Geological Safari program and our June session will have over 20 participants.

Staff members and volunteers continue to work on preparations for the 40th Anniversary of the Nova Scotia Gem and Mineral Show, widely known as Rockhound Roundup. This year's event will be dedicated to Marilyn Smith, former Education Officer with the Museum and Chair of the Rockhound Roundup for many years, who passed away in November. There have been many changes over the years, and a number of familiar faces are no longer with us. If you would like to share your memories of past shows or have any

memorabilia (pins, posters, photographs) please contact Carol Corbett, Coordinator of the 2005 show.

Ken Adams
AdamsKD@gov.ns.ca

ACADIA UNIVERSITY

It has been a busy and productive term at Acadia! January began with the interview process for a new faculty member to replace Dr. Barry Cameron, who retires at the end of June. We are pleased to report that Dr. Peir Pufahl will be joining us during the summer to take up the position. Peir did his undergraduate degree and MSc at Lakehead University, and his PhD at UBC, the latter on Upper Cretaceous phosphorites in Jordan. He will come to Acadia from Queen's University, where he has been doing post-doctoral research with Dr. Noel James on cool-water carbonates in Australia. You will no doubt hear much more about Peir in subsequent newsletters!

A large group of faculty and students attended the 31st Atlantic Geoscience Society conference on current research in the Maritime Provinces. Among the 20 participating members, 10 posters and oral presentations were made, and the Graham Williams award for the best poster was won by graduate student, Tansy O'Connor-Parsons. Her poster entitled "Downhole trace and major element chemostratigraphic patterns relating to igneous fractionation processes in the Golden Mile Dolerite, Western Australia" was based on her MSc thesis research, supervised by Dr. Cliff Stanley and supported by a research grant from Kalgoorlie Consolidated Gold Mines. At the closing banquet, the Atlantic Geoscience Society invited Acadia to host the next conference in February 2006.

During the mid-term break, Joshua Goss, a fourth year student in Geology, participated in a field school investigating the geology and petroleum industry of Trinidad offered by Dr. Grant Wach of Dalhousie University. Funding was obtained by Grant from the Department of the Environment specifically to allow students from several Nova Scotian universities to participate in energy-related training opportunities outside of the province.

Sandra Barr received word that she will be inducted into the New Brunswick Sports Hall of Fame in June. In a previous life, Sandra was a Canadian record holder in the high jump, and competed in the Pan-American Games in Brazil. She was also a star basketball player in high school and during her undergraduate years at UNB. Her Hall of Fame induction is for both basketball and track and field.

The annual end-of-year Geology Department banquet was held in Wheelock Hall on the Acadia campus on April 3rd. It consisted of an excellent meal, the recognition of student award winners, a "high (and low) lights of the year" power-

point presentation by 4th year student Nathan Rand, and a tongue-in-cheek look at unsuccessful candidates (ranging from Dr. Hook to Dr. Sue to Dr. Seuss) for the faculty position in Geology at Acadia, prepared by the undergraduate student representative on the selection committee, Jeffrey Bigelow. The guest speaker at the banquet was Dr. Richard Haworth, who has recently retired with his wife Wilma to the Wolfville area. He presented entertaining insights into his varied career from physics student to marine geophysicist through to Chief Geophysicist for the British Geological Survey and then Assistant Deputy Minister for Natural Resources Canada. I think that we agree with his nephew - he likely was a spy!

Sandra Barr
Sandra.Barr@acadiau.ca

SAINT MARY'S UNIVERSITY

The D. Hope Simpson Geology Society of SMU had a great field trip this February, looking at the geology of northwest Mexico. The trip was led by Alberto Orozco, a Ph.D. student of Jarda Dostal. The department is now getting ready for another exciting summer dedicated to research.

Randolph Corney has been involved with the purchase of a research grade polarizing microscope and a digital imaging system for a Canadian International Development Agency (CIDA) project in Mongolia (Education for Environmental Transition: Mining in Mongolia). In June, he will be travelling to the Mongolian University of Science and Technology (MUST) to setup the system and to give a workshop on Digital Imaging in Polarizing Microscopy.

Jarda Dostal has several students in the finishing stages of their graduate theses: Tony Barresi (M.Sc. candidate), Renée-Luce Simard (Ph.D. candidate) and Alberto Orozco (Ph.D. candidate). This summer, he will be supervising the graduate research of James Suma-Momoh (a commonwealth scholar from the University of Sierra Leone) on komatiites of the Archean Abitibi Belt of northern Quebec; and of Ahmed Ahmed (B.Sc. SMU) on the porphyry copper deposits of the Gobi Desert in Mongolia. Jarda will also spend two weeks as a visiting scientist at the Mongolian University of Science and Technology, along with Randy Corney, Pierre Jutras and Victor Owen.

Georgia Pe-Piper will be supervising the graduate research of Kathleen Gould (B.Sc. SMU and recent recipient of the ESRI Canada Student Scholarship Award) on the diagenesis of Cretaceous sedimentary rocks of the Sable Basin of offshore Nova Scotia; of Nikolaos Tsoukalas (B.Sc., University of Patras, Greece) on the geodynamic evolution of the Late Miocene igneous rocks of Kos (Greece); and of Sankar Manalilkada (M.Sc., Indian School of Mines) on Carboniferous mafic magmatism and tectonics in the Cobequid Highlands of Nova Scotia. Another of Georgia's graduate students, Curtis McCall (B.Sc. SMU), will be defending his

thesis this summer. Georgia will spend two weeks in China as a visiting scientist at the University of Nanjing. Georgia was also involved, along with Pierre Jutras, in efforts to acquire the means to combine cathodoluminescence with SEM analysis at SMU. The equipment has been acquired and should be in function early this summer.

Victor Owen will be supervising the undergraduate research of Katy Irwin on the geochemistry of some 19th Century American glass; and of Adree Delazzer on the potential use of some Nova Scotian metagabbro as a source of aggregate. Victor also continues to investigate Proterozoic crystalline rocks from Newfoundland, and the geochemistry of archeological ceramics and glass.

Pierre Jutras will be supervising the graduate research of Jason McLeod (B.Sc., SMU) on the paleogeographic and tectonostratigraphic evolution of the Cumberland Basin of New Brunswick and Nova Scotia during the late Mississippian; and co-supervising that of Adam MacDonald (B.Sc., SMU and recent recipient of the CSPG Student Scholarship Award) on the Cenozoic seismic stratigraphy of the Weymouth area on the Scotian Slope of offshore Nova Scotia (in collaboration with David Piper of the GSC Atlantic). Pierre will also supervise the undergraduate research of Matthew Leforte on a Middle Ordovician paleosol developed on banded rhyolite of the Dunn Point Formation near Arisaig, Nova Scotia.

Andrew MacRae will be supervising the B.Sc. research of Brent LaPierre on seismic stratigraphy and salt mobility in the Abenaki Subbasin of offshore Nova Scotia. This summer, Andrew will continue his work on the Upper Cretaceous-Cenozoic Banquereau Formation with John Shimeld and Rob Fensome (GSC Atlantic), and on the Lower Cretaceous sedimentology, palynology and macrofauna of the Scotian Margin. He is also co-author of the next electronic edition of the Index of Fossil Dinoflagellates, *Dinoflag2*, which will be released with colleagues Graham Williams and Rob Fensome (GSC Atlantic).

Pierre Jutras
Jutras_Pierre@yahoo.ca

GEOLOGICAL SURVEY OF CANADA (ATLANTIC)

Scientists at the GSC-Atlantic are actively involved in many projects on the east coast and along the Arctic margins. Many are addressing east coast ocean management and resource issues, including offshore geohazards, surficial geology and benthic habitat mapping, sedimentary basin studies and hydrocarbon assessments. Other active fields of study include coastal erosion and stability assessments, metals in the environment and associated risks, and northern resource development, with a focus on the northern Labrador margin

through to Lancaster Sound. Efforts to reformat the extensive data holdings of the survey are also ongoing, with improved data accessibility already noticeable. More information on these and other GSC current activities and research projects can be found at: http://gsc.nrcan.gc.ca/index_e.php.

Here are highlights from a few recent activities:

Tsunami Investigation

GSC-Atlantic scientists Don Forbes and John Shaw, and GSC-Pacific colleague Vaughn Barrie, travelled to the Seychelles Islands as part of the Canada-UNESCO response to the tsunami of December 26, 2004. Other scientific staff, including Gavin Manson (GSC-A), worked on data prior to and following the field survey. The Canada-UNESCO Indian Ocean Tsunami Expedition was part of an international scientific effort that was launched to document the tsunami and its effects. The team spent approximately 2 ½ weeks, from mid-January to early February 2005, on the islands of Mahé and Praslin in the Republic of Seychelles. The study was undertaken to document the timing, elevation, and effects of the tsunami waves on the two largest granitic islands of the Seychelles archipelago, which is located in the western Indian Ocean north-northeast of Madagascar off the East African coast.

The tsunami investigation involved the collection of eyewitness accounts and documentary evidence, and field surveying of tsunami run-up and inundation at representative sites along the coasts of Mahé and Praslin. One of the many interesting results is that damage from the tsunami waves was confined to the granitic islands of the northern Seychelles. These islands sit on a broad, shallow-water continental shelf that appears to have refracted the tsunami waves, allowing them to approach the islands from several directions. The coral atolls, which comprise the southern part of the archipelago, escaped damage. Investigators believe the deep water surrounding the atolls resulted in minimal shoaling and amplification of the long wavelength and low-amplitude tsunami waves.

More information on the fieldwork, GPS data processing, and results of the investigation can be found at: <http://ioc.unesco.org/iosurveys/seychelles/seyl1.htm>

Law of the Sea

Canada ratified the International Convention on the Law of the Sea (UNCLOS) in November 2003, and has until 2013 to prepare a submission to the United Nations Commission on Limits of the Continental Shelf to extend its sovereign rights beyond the 200 nautical mile limit. These rights include powers over mineral and biological resources on and below the seabed and jurisdiction in matters related to environment and conservation. GSC scientists are heavily involved in efforts to collect hydrographic and marine geoscience data to support this future claim.

The Lomonosov Ridge, in the Arctic Ocean, provides an opportunity for Canada to extend its territory a distance of 350

nautical miles or further, if it can be established that the ridge is a natural prolongation of Canadian territory. An experiment (LORITA) is planned for spring of 2006 to collect bathymetry, seismic and gravity data in the area to establish the affinity of the ridge. The survey is being jointly organized by Canada and Denmark (Greenland), as both countries have a potential claim on the ridge. More information can be obtained from Ruth Jackson (rujacks@nrcan.gc.ca), who is planning and leading the Canadian component of the survey.

Geology of Canada

Rob Fensome and Graham Williams, together with colleagues John Clague, Simon Hanmer, Godfrey Nowlan and Bob Turner, are proposing to develop a popular geology book on Canada. The book, like the popular Maritime geology book *The Last Billion Years*, is aimed at a non-specialist audience. Individual chapters will focus on the different regions and aspects of Canadian geology, with authors drawn from the extensive geologic community. A special session will be held at the upcoming GAC/MAC conference in Halifax with invited speakers focussing on the Canadian perspective and contributions to many geological subdisciplines.

Changing faces

Recent retirements include Arthur Jackson, Gordon Fader, Austin Boyce and Dave Heffler.

New post-doctoral fellows are: Marcus Albertz (salt tectonic modelling and interpretation; GSC/Dalhousie University joint project), Alan Orpin (sediment transport and deposition processes), and Efthymios Tripanas (upper Cenozoic sedimentation in Orphan Basin).

Sonya Dehler

SDehler@nrcan.gc.ca

UPCOMING EVENTS

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| May 15-18 | GAC/MAC/CSSS/CSPG joint annual conference, Halifax (www.halifax2005.ca) |
| August 15-17 | Nova Scotia EdGEO Workshop for teachers, Parrsboro (jbates@nrcan.gc.ca) |
| August | New Brunswick EdGEO Workshop for teachers, |
| October | Atlantic Universities Geological Conference, Memorial University, St. John's |
| February | 32 nd Atlantic Geoscience Society Colloquium, Old Orchard Inn, Wolfville |