



ATLANTIC GEOSCIENCE SOCIETY

NEWSLETTER

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PRESIDENT'S FORUM

Reg Wilson

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My first column as AGS President follows closely on the exceptionally successful joint meeting of AGS and the Northeastern Section of the Geological Society of America. Close to 700 registrants (all of whom are now AGS members!) were treated to a wide variety of technical sessions that forced participants into some difficult choices indeed. I found that my choices were very well attended and featured many excellent presentations. The numerous talks describing geoscience research in New England were a refreshing (and sometimes provocative) complement to our usual Atlantic Canadian focus. Student participation, always an important part of AGS Colloquia/Symposia, included 165 oral and poster presentations, all of which earned a complimentary copy of the Society's flagship publication, *The Last Billion Years*. *The Last Billion Years* drew a lot of attention at the conference, and sales of the book and other AGS publications were brisk at the AGS booth.

This year's winners of the Gesner Medal and Distinguished Service Award, Georgia Pe-Piper and Bob Grantham, respectively, were announced at the Saturday banquet. The citations for these awards are printed elsewhere in this issue. Of special note was the banquet appearance of the Society's only Life Member, Dr. Laing Ferguson. Laing has been unable to attend the last several Colloquia because of illness, so we were doubly pleased that he was able to return to the fold. Guest speaker Steve Blasco of GSC Atlantic deliv-

ered a highly entertaining after-dinner presentation describing his thrills and chills aboard a Russian submersible while exploring the remains of HMS Titanic. All told, the Halifax meeting was an excellent showcase for AGS, and the members of the Organizing Committee, co-chaired by Marcos Zentilli and David Scott, are to be congratulated for their outstanding achievement. Plans for next year's meeting, which will be held in Moncton, are already afoot: watch future issues of the Newsletter for information as it becomes available.

The new AGS Council and Executive took office at the Annual General Meeting on Thursday, March 27. For at least the next two years, the Executive will move to New Brunswick, where we hope to sustain the momentum created by the Society's recent successes. In addition to me, the new Executive consists of Murray Gingras (Vice-President), Jennifer Bates (Past-President), Ken Howells (Treasurer) and Steve McCutcheon (Secretary). Councillors include Tom Al, Linda Ham, Sue Johnson, Dave Keighley, Andy Kerr, Andrew MacRae, Tom Martel, Randy Miller, Dave Mossman, Brendan Murphy, Mike Parkhill, Alan Ruffman, Deborah Skilliter, Ian Spooner, and Peter Wallace.

I would like to thank the outgoing councillors – Jarda Dostal, Clint St. Peter, Paul Durling, Dick Wardle, Tim Webster, and especially Peter Giles, who has been Secretary for the past several years, for their services to AGS. A special note of thanks goes to Jennifer Bates, who has weathered a very busy year as President, and successfully navigated AGS through

the preparations for the AGS-NEGSA meeting.

It is a great honour for me to assume the Presidency of our Society, and rather humbling when I think of some of the illustrious former holders of this office. I have been a member of AGS from its early days – the first meeting I remember attending for certain was at Wolfville in January 1976, although I must have been at the January 1974 meeting in Fredericton as I was working there at the time. It is therefore somewhat gratifying to reflect on the growth of AGS into the dynamic society we see today. The fun never stops at AGS! Upcoming events include the June 2003 CANQUA meeting and the May 2005 GAC – MAC – CSPG conference (both in Halifax). Other activities that we can look forward to this year include an EdGEO Workshop planned for Fredericton in August (organized by Murray Gingras and David Lentz), and publication of the new edition of the Nova Scotia Geological Highway Map.

After a bitter winter (at least in New Brunswick) and a very hesitant spring that finally shows signs of unlocking the deep freeze, I'm sure that many of you, like me, are eagerly anticipating the coming field season. If your experiences are like mine, you should have a few tales to tell. I'll conclude this column by encouraging you to share your stories with readers of this Newsletter, in what should be an entertaining new feature. Write a brief account of your more riveting encounters with nature, the up-close and personal contacts with wildlife, the eccentric people you meet in unexpected places, the curious, the bizarre or the wonderful, and forward them to the Editor.

Addendum: As this issue goes to press, I have learned that Murray Gingras, our incoming Vice-President, is leaving the Maritimes for a position at the University of Alberta. Good luck, Murray – we will miss your enthusiastic contributions to the AGS. Fortunately, Joe White of UNB has

agreed to step into the role of Vice President and his appointment has been ratified by AGS Council.

AGS NEWS

Report on the 2003 Annual General Meeting

Peter Giles, Secretary
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The 2003 Annual General Meeting of the Atlantic Geoscience Society was held on Thursday, March 27, in the Lunenburg Room at the Westin Nova Scotian Hotel in Halifax. The agenda of the meeting, which was well attended by members of the outgoing and incoming Councils and by other members of the Society, featured annual reports from the 2002-03 Executive and the Society's committees. Highlights of those reports are presented here.

Outgoing president Jennifer Bates opened the business meeting with a summary of the Society's activities in 2002-03. In her remarks, Jennifer thanked those who had provided their time and efforts to ensuring the continued success of the Society.

Graham Williams reported on behalf of the Education Committee. Among many achievements, Graham reported on a successful 2002 EdGEO workshop in Digby and plans for 2003 workshops in both Nova Scotia and New Brunswick. *The Last Billion Years* continues to set records, including being named the outstanding publication in 2002 by the Association of Earth Science Editors, a North America-wide group. On tap for 2003 are advertising and distribution of the new poster *The Evolving Maritimes*, the Fundy Basin Poster Project (reported on elsewhere in this issue), a continued effort on EarthNet, and the two EdGEO workshops.

Graham also reported on behalf of the Video Committee. This group will focus its efforts in 2003 on production of the video *A Gateway to Canada: Anatomy of the Halifax Harbour*.

Some of the funds needed to complete this project are in place, but considerable work remains to identify more funding. The Committee has decided not to proceed with the planned video *The Mineral Wealth of Atlantic Canada* because of a perceived limited market for the product. A Xerox copy will be made available to any interested party.

Jennifer Bates, chair of the Nova Scotia EdGEO workshop committee, reported in detail on the successful 2002 event, held in Digby. EdGEO 2003 will be held at the Fundy Geological Museum on August 25 and 26.

Jarda Dostal reported on the activities of the APICS Earth Science Committee. In 2002-03, the Committee arranged speaking tours to Maritime universities by two Dalhousie University researchers – John Gosse and Tim Fedak. The Committee was also a major sponsor of the 52nd Atlantic Universities Geological Conference, held at UNB in late October.

Sandra Barr reported on behalf of her co-editors – Ron Pickerill and Rob Fensome – on *Atlantic Geology*. Three issues of the journal were mailed in 2002-03. Issue 1 of Volume 38 should be distributed in April 2003, and Issues 2 and 3 of the same volume will be combined to save production time. The editors have dealt with changes engendered by switching to a new printing company and are optimistic that this change will help them 'catch up' to the planned production schedule. Sandra reported that the journal is financially stable.

Ken Howells reported for the Products Committee, which evaluates and assesses all proposals for Society products, particularly those that request AGS funding. In 2002-03, the Committee reviewed and approved proposals for the Fundy Basin poster and Halifax Harbour video projects. It is currently reviewing a proposal for the new Nova Scotia Geological Highway Map

In his role as Treasurer, Ken also

presented the Society's financial statements for the year ending December 31, 2002. Highlights of this report included: a small increase in membership, a considerable decrease in publication revenue, and a small profit from the 2002 Symposium. Overall, the Society's finances for 2002 are satisfactory.

The Northeastern Section, Geological Society of America and Atlantic Geoscience Society Joint Meeting: A Personal Perspective

Graham Williams

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My first thought when I saw the crowded registration area in the Westin Hotel was that this was not the usual AGS gathering. The big attraction was the first joint meeting of the Northeastern Section of the Geological Society of America and the Atlantic Geoscience Society.

It was Thursday, 27th April and, as usual, my attempt at pre-registration had met with dismal failure. So I was queuing up to pay the astronomical registration fee of \$115 US (unfortunately that was before the steep climb of our dollar). For this fee I received the privilege of attending the three day meeting, a program but no abstracts, and as much coffee as I could drink (at designated times).

Registration was not my introduction to this meeting. I played a minor role on the local organizing committee, ably chaired by Marcos Zentilli and David Scott. This committee had been planning and meeting for more than two years and, as with all such meetings, trepidation and problems multiplied as opening day approached. One of our major concerns was cancellations because of the war with Iraq but, luckily, this was insignificant.

Organizing the technical program was daunting. Through the skill and foresight of the Technical Program Chairs – Sandra Barr, David Piper,



AGS and GAS luminaries at the 2003 Joint Meeting. Left to right: Paul Karabinos (GSA), Tony Naldrett (GSA), Jennifer Bates (AGS), Sandra Barr (AGS), David Scott (AGS), Stephen Pollock (GSA), Reg Wilson (AGS), Marcos Zentilli (AGS).

Matt Salisbury and Martin Gibling – all fell into place. The results were impressive, with five or six concurrent sessions throughout plus an imposing count of more than 50 posters each day.

The technical sessions were divided into five symposia and 12 theme sessions. One session – Undergraduate Research in the Geological Sciences – comprised posters only. The symposia and other sessions included both oral and poster presentations. Symposia topics were: Eastern North America Mesozoic – Cenozoic Margins and Their Hydrocarbon Potential; New Developments in Understanding of the Avalon Terrane from the Southern Appalachians to Newfoundland; Regional Hydrogeological Studies in Northeastern America; Metals in the Environment; and Evolution of the East Laurentian Continental Margin, Eastern USA – Canada: From Late Proterozoic Rifting to Devonian Collisions.

Other theme sessions besides Undergraduate Research were: Metallogeny of the Northern Appalachian Orogen; Ichnology and Biofacies: Innovations and Applications; Late Glacial – Early Holocene Climate and High Resolution Records of Climate Change from Lakes; Paleozoic Arcs in the Northern Appalachian Orogen and their Accretionary History; Processes in Felsic Magma Chambers – From Crystallization and Evolution to Emplacement; Energy Resources of the Paleozoic; Geological Impacts of Extreme Events on Land and Sea (Storms, Floods, Climate Variability, Tsunamis); Late Pleistocene Mastodon Environments of the Northeastern US and Adjacent Canada; Communicating the Critical Relevance of Earth Science; Mesozoic Basalts, Sills and Feeder Dykes; and Crustal Structure of the Atlantic Margin and Northern Appalachian Orogen. That's impressive coverage by any standards.

How does one navigate six concurrent sessions and fifty posters each day?

The answer is very carefully, especially when five sessions were at the Westin and one (often the one I wanted to attend) was at Pier 21. Fortunately, the weather cooperated, apart from Thursday morning, when the shuttle bus service was a godsend.

As one person, I can comment on only a small percentage of the technical sessions but those I attended were excellent. My focus on Thursday was the session "Eastern North America Mesozoic – Cenozoic Margins and Their Hydrocarbon Potential", chaired by Paul Olsen and John Hogg. Initially, the presentations highlighted the Triassic – Jurassic rift basins on both sides of the Atlantic, and covered both potential source and reservoir rocks. The latter part of the morning session was devoted to recent studies of the Scotian Margin and the deep-water plays, which have been little explored. The concluding paper, by Luba Jansa, reviewed the global carbon reservoir and how this was reflected in the western Tethys during the Cretaceous.

In the afternoon the Scotian Margin was again centre-stage, although Chris Jauer changed the focus to the eastern Grand Banks.

Friday morning saw me enter into unknown territory when I alternated between the two sessions, Metals in the Environment and Late Pleistocene Mastodon Environments. In the first Mastodon paper, Bob Grantham described the Milford finds and the associated flora and fauna. Two amazing aspects are that some of the mastodon dung still retains an odour and the red fossil spruce cones, upon drying, opened and shed their seeds. Most of the following presentations dealt with the Hyde Park mastodon and other finds, all in New York State. The Hyde Park specimen is an adult male, essentially complete, and has been radiocarbon dated as 11,480 BP. Metals in the Environment had some intriguing subjects, including metal-rich mine tailings – both onshore and offshore – and metal levels in Halifax and Sydney harbours.

On Friday afternoon, the second part of Energy Resources of the Paleozoic drew attention to the heightened interest in hydrocarbon exploration in the Maritimes Basin. Much of the motivation stems from the discoveries in the McCully Gas field near Sussex, New Brunswick. According to Paul Durling and Tom Martel, the gas in place is conservatively estimated as 500 bcf, which makes it the largest onshore gas discovery in eastern Canada. This in large part explains the upsurge in exploration and drilling in New Brunswick.

Saturday, I played truant by attending Communicating the Critical Relevance of Earth Science. Chaired by Jennifer Bates, Linda Ham and Ann Marie Ryan, the session ran from 8.15 a.m. until 5 p.m. and was intended primarily for school teachers. One of the concerns of the organizers was how to attract teachers to a geological meeting on a cold March Saturday (technically spring but really winter). Through some sophisticated marketing, 44 of these brave souls were persuaded to attend. Of these, about 40 were still there at 5 p.m. to collect their professional evaluation certificates.

The day was a revelation, not because of the subjects but the manner in which the speakers presented their information. It is not really fair to call them speakers – most were performers and used various interactive techniques to appeal to the audience. A good example was Kathy Silverstein, who cajoled some teachers into demonstrating the difference between P and S waves. Her human earthquake waves really got the message across and were a lot of fun. Following this, Deborah Skilliter led us through the history of a fossil, from death to discovery, in a practical demonstration. And we all got to keep our fossils afterwards.

An enjoyable morning was followed by an equally entertaining afternoon. At everyone's most vulnerable time, after lunch, we did the timeline. This not only got people on their feet but

demonstrated a different way of presenting evolution. Other speakers highlighted teacher workshops, Canada's oldest dinosaur (that isn't me) and the art of photography in geology. The last was a relaxing way to end a strenuous but rewarding day.

How did teachers react? Several said it was the most enjoyable session they had attended and all liked the format. One major help was the generosity of AGS and GSA in waiving the registration fee for teachers. But it's still amazing that so many turned up and sat or stood, as occasion demanded, the whole day.

What were other memorable aspects of the meeting? The presence of such a large contingent of GSA geologists added a new dimension to the range of topics. How else would I have heard about the Hyde Park mastodon? And the additional expertise was a revelation. AGS meetings are always good, but this was a novel experience.

I was extremely impressed with the quality of the posters, especially the 164 submitted by students. Gone are the days when each poster was like a jigsaw puzzle that had to be carefully crafted by hand. Now, with digital technology and drafting packages, they are rolled out to be instantly available.

Advancing technology was also a feature of the oral presentations, most of which relied on PowerPoint. Almost invariably the "slides" were good, although too many words are creeping back into fashion. What impressed me most was the skill of the students who supervised the projection equipment. They were superb. Much of the credit for this faultless assistance was due to Peter Wallace and Charlie Walls, who provided the trained personnel.

The facilities for the technical presentations were excellent, although some rooms could not adequately accommodate the crowds. This was especially true of the Lunenburg Room, where a centrally located (and



Laing Ferguson, Life Member of AGS and first recipient of the Distinguished Service Award, reliving old times with Sandra Barr, 1995 Gesner Medal recipient, during the banquet and awards ceremony.

very large) pillar often meant performing contortions to view the speaker or screen. But other locations, such as Pier 21, compensated for the few shortcomings.

A pleasant surprise for AGS was the success of the Society's booth. This was staffed throughout the meeting, with someone always available to give advice or sell a publication. There were numerous favourable comments on the quality of the publications and videos, with sales being brisk on all three days. For example, the Society sold 22 copies of *The Last Billion Years* and 33 copies of the poster, *The Evolving Maritimes*.

Extracurricular activities played an important part in the success of the Conference. On the Wednesday, Barrie Clarke ran a highly successful field trip to view spectacular aspects of the eastern contact of the South Mountain Batholith. The trip concluded with supper at Peggy's Cove.

On Wednesday evening, Paul Olsen gave the talk, "Mass Extinctions,

Asteroid Impacts and Giant Volcanic Eruptions: The Beginning and End of the Dinosaurs". This was held at the Nova Scotia Museum of Natural History, which explains why some registrants missed it, but it drew a full house. Much of Paul's story relating to the Triassic – Jurassic boundary extinction event focussed on Five Islands. As Paul explained, it is amazing how mass extinctions, major volcanic episodes and asteroid impacts are interrelated. It has to be more than coincidence.

The AGS Annual General Meeting featured a buffet luncheon and was held in the Lunenburg Room. All the speakers were remarkably upbeat, not surprising when you consider the state of health of the Society. The outgoing president, Jennifer Bates, reviewed the 2002-03 program, starting with the successful symposium in Antigonish and concluding with the need to communicate our science to others in the community. Then followed the reports by various committee chairs. I find it impressive that the Society's program for this annual meeting con-

tained the reports of four committees, plus *Atlantic Geology's* Editorial Report and the APICS Earth Science Committee. An impressive aspect of recent annual meetings is the quality and comprehensiveness of the Annual Report. For this, I would like to thank Mike Parkhill and his helpers. I find the report a useful reference document, especially when checking AGS statistics. Peter Wallace should also be thanked for arranging the printing of this issue.

Other successful events included the Conventional Drillcore Display Workshop and the Lithosphere to Basin Short Course. The Workshop, held all day Wednesday in the Burnside laboratory of the Canada – Nova Scotia Offshore Petroleum Board, included several speakers. The team of David Brown, Grant Wach, Andrew MacRae and Mary Jean Verrall showcased stratigraphic successions and reservoir facies from onshore Nova Scotia and the Scotian Margin, using conventional cores. Although I did not attend, several registrants with whom I spoke were delighted with the day. On Sunday, Djordje Grujic and his cohorts presented From Lithosphere to Basin: Numerical and Analogue Modelling of Basin Evolution. Other presenters were Chris Beaumont, Glen Stockmal, Ritske Huismans, Susanne Buiters, Lykke Gemmer, Steve Ings, Marcus Zentilli and Alexander Grist. It was a good way to end the formal program.

Perhaps the highlight of the Conference was the Saturday evening banquet, held in the Commonwealth A Room. The meal was surprisingly good when I consider the catering at some conventions I have attended. And the speaker, Steve Blasco, was superb. In his inimitable style, Steve described his dives to the wreck of the Titanic and some of the dramatic discoveries, including new findings on deep-sea life and sedimentation. The talk generated an amazing number of questions, most intelligent but the occasional one facetious. One of the nicest surprises was seeing Laing and Joyce Ferguson after so many years. It



Steve Blasco (right) is thanked by Gordon Fader for his after-dinner presentation at the closing banquet of the AGS – NE GSA joint meeting.

was a pleasure to discover that Laing's sense of humour is still thriving.

An important aspect of the evening was the presentation of awards. Georgia Pe-Piper, winner of the Gesner Medal, was unable to attend. Pierre Jutras accepted the Medal on her behalf. Bob Grantham received the Distinguished Service Award. I would like to congratulate Georgia and Bob for winning these well-deserved recognitions.

By any yardstick, I consider the conference a major success. About 650 attended, an incredible number for March, and more than usually attend the Northeastern Section GSA annual meeting. I think all would agree that they received full value for their registration. Much of the thanks goes to the staff of the Westin Hotel and Pier 21, who were, at all times, courteous and helpful. But the main vote of thanks is to the Local Organizing Committee, which consisted of: Marcos Zentilli, David Scott, Sandra Barr, Jane Barrett, Jennifer Bates, David Brown, Thomas Duffett, Martin Gibling, Djordje Grujic, Linda Ham,

Andrew Henry, John Hogg, Mike MacDonald, David Piper, Alan Ruffman, Pat Ryall, Matthew Salisbury, Brian Todd, Danika van Proosdij, Grant Wach, Peter Wallace, Charles Walls and Graham Williams. All we have to do now is persuade this Committee to run the next joint meeting.

AGS Awards for 2003

Distinguished Scientist Award (Gesner Medal)

The Gesner Medal is awarded to a person who has developed and promoted the advancement of geoscience in the Atlantic region through his or her own effort (*i.e.* publications, maps, memoirs, etc.). Dr. Georgia Pe-Piper of St. Mary's University is the 2003 recipient.

The following citation was read to the banquet by Graham Williams:

Ladies and Gentlemen, I have the honour of reading the citation for this year's winner of the Atlantic Geosci-

ence Society's Gesner Medal, Georgia Pe-Piper

Georgia Pe-Piper has an enviable record of accomplishments as a geological researcher, teacher and innovator and as a role model for equality. Georgia's enduring fascination with igneous rocks started in her native Greece and extended to Cambridge University, where she received her Ph.D. in 1971. Returning to Greece, she rapidly established an international reputation for her studies on volcanic rocks, before moving to Saint Mary's University in 1981.

Since becoming a Maritimer, Georgia has contributed to many facets of Atlantic Canada geology. She is the leading expert on the igneous rocks of offshore Nova Scotia and Newfoundland. With Luba Jansa, she defined the Meguma terrane offshore, the Jurassic and Cretaceous volcanic sequences and the first submarine impact crater, Montagnais.

In 1983, Georgia began her studies of the Cobequid Highlands. She and her spouse – I believe his name is David Piper – and others have evaluated the Neoproterozoic to Jurassic geology of this structurally complicated region and identified Neoproterozoic back arc volcanism, late Paleozoic plume-related volcanism and the emplacement processes of shear-zone granites. Other successes of the Cobequid project are the 15 completed honours theses and the new 1:10,000 maps.

But Georgia's interests are not constrained to onshore Nova Scotia or the Scotian Shelf. She is the leading authority on the igneous rocks of Greece. Reflecting this is the recent publication by Georgia and David of a book on the igneous geology of that country.

Research prowess is only one of Georgia's many talents. As a role model in the community, she has had a dramatic impact. She was the first woman chair of a geology department in Canada – kudos to Georgia and to Saint Mary's – and has been a power-

ful and eloquent advocate of women's role in geology. She was recently the president of the Nova Scotia Institute of Science, has been widely involved in evaluation of the university program in Greece, and managed, during all the above, to stay active in AGS.

In conclusion, Georgia Piper is a worthy addition to the distinguished list of Gesner Medal recipients. Now she can place it on the mantlepiece next to David's medal. I regret that Georgia is not here to receive the medal in person – apparently she is enduring the rigours of a Greek spring – but am delighted that Pierre Jutras is accepting it on her behalf.

Distinguished Service Award

The Distinguished Service Award is given in recognition of exceptional and altruistic contributions to the Atlantic Geoscience Society over a long period of time. This year's recipient is Bob Grantham.

The citation for Bob's award was read by Graham Williams:

Ladies and Gentlemen, it is an honour to read the citation for this year's recipient of the AGS Distinguished Service Award, Bob Grantham

To me and many others, Bob Grantham is Mr. Fossil Nova Scotia, and this in no way refers to his age but to his consummate knowledge of Nova Scotia geology. Bob has been a member of the Atlantic Geoscience Society since the 1970s and was one of the earliest proponents of outreach activities, long before any of us knew the meaning of that term. With Howard Donohoe and Jonathan Bujak, Bob was responsible for producing the first edition of the Nova Scotia Geological Highway Map in 1980. The phenomenal success of this map led to the second, enhanced version published in 1989, under the chairmanship of Howard Donohoe and Bob. Often second editions are a disappointment but this map, together with a slightly revised edition, has been more successful than the original. Indeed it is now a collect-



Bob Grantham (left) receiving the 2003 Distinguished Service Award from Graham Williams (centre) and AGS President, Reg Wilson.

or's item, having been sold out for almost two years.

Bob was also active in the 1980s as an AGS Councillor and in 1995 was persuaded to serve on the EdGEO Workshop Committee. Subsequently, he played a prominent role as presenter, banquet speaker and one of the field trip leaders at six EdGEO Workshops.

Another important role was as a member of *The Last Billion Years* Book Committee. In this capacity, Bob provided invaluable information on the geology of Nova Scotia, and access to the Nova Scotia Museum's 35mm slide collection, which was largely compiled by him. Take my word, you don't look through those slides in a few minutes.

As curator of geology at the Nova Scotia Museum of Natural History for many years, Bob shared his knowledge and enthusiasm with hundreds of people, including me. Today, as Director of the innovative Johnson Geoscience Centre in Saint John's, he is becoming a major spokesman for

geology in that province. And an added plus is that Bob has Martha to help him make the sales pitches. What a team and what a loss to Nova Scotia but we'll get both of them back one day.

For his numerous significant contributions to the Atlantic Geoscience Society, I would like to present the Society's Distinguished Service Award to Bob Grantham.

Fundy Basin Poster Project

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The aim of this project is to produce an attractive educational poster that portrays the story of the Fundy Basin. (The "Fundy Basin" refers to the early Mesozoic half-graben in which the various Triassic – Jurassic formations that outcrop around the Bay of Fundy were deposited: it therefore doesn't involve Paleozoic or Quaternary aspects.) Although most outcrops of Fundy Basin rocks are in Nova Scotia,

several areas also exist in New Brunswick (St Martins, Grand Manan, etc.), so it is important that the project covers both provinces. The project is being steered by an *ad hoc* subcommittee, co-ordinated by Ken Adams and Rob Fensome, of the AGS Education Committee. Other members are Dave Brown, Tim Fedak, Kathy Goodwin, Andrew MacRae, Randy Miller, Paul Olsen, Georgia Pe-Piper, Deborah Skilliter, John Wade and Graham Williams.

Our original intent was to acquire a

series of paintings, which New Brunswick artist Judi Penannen has agreed to do. Judi is no stranger to geological art. As many AGS members are aware, her art provides the backdrops of geological displays at the New Brunswick Museum and adorns the pages of *The Last Billion Years*. However, when we started submitting funding applications, we realized that the project needed a focus beyond the paintings – and so the poster idea was born. The current idea is to have a single “multi-event” painting (analogous with “*The Evolving Maritimes*”

watercolour featured on the cover of *The Last Billion Years*) that will dominate the poster, plus four “satellite” paintings that support or echo aspects of this main image.

Paintings and poster will focus on the Triassic – Jurassic landscapes, events, paleoenvironments, animals and plants. Our current vision for the paintings was “hammered out” at a meeting of the subcommittee in late March. It was agreed that the main painting should portray a sense of time, feature both (but distinguish)



Photograph copyright Wayne Garland

2003 AGS – Photographic Guild of Nova Scotia Geology and Photography Competition

This year's winning photograph in the annual AGS – Photographic Guild of Nova Scotia Geology and Photography Competition is this image of the North Mountain Basalt and the Blomidon Formation. The Triassic Jurassic boundary is in the lighter-coloured material beneath the basalt. The photograph was taken at Five Islands Provincial Park by Wayne Garland. The 2003 competition attracted 26 entries from Guild members. The judges were Rob Fensome (as member of both PGNS and AGS), Deborah Skilliter (AGS) and John William Webb (PGNS).

Triassic and Jurassic elements, and present the possibility of a dual-natured catastrophe – the North Mountain eruptions and the Manicouagan impact event.

Current ideas for the “satellite” paintings (which we are sure will evolve, so to speak) include:

i) an image that is representative of the Wolfville Formation, incorporating the animals based on the latest exciting vertebrate finds by Eric Leighton and Tim Fedak at Carrs Brook and George Hrynewich and Burntcoat Head, as well as old favourites such as the incredibly long-necked *Tanystropheus*. At the meeting, Paul Olsen showed a picture of two *tanystrophei* “necking” – something similar in the painting would certainly spice things up. The landscape would be well vegetated (by Mesozoic standards – no grass!) and

should include such features as braided streams and alluvial fans.

ii) an image representative of the Blomidon Formation, incorporating an arid landscape with sand dune, playa and sand flat elements and gamboling *Coelophysis*.

iii) an image showing fissure eruptions with lava fountains to represent the North Mountain Basalt and the Central Atlantic Magmatic Province – the most widespread “mantle belch” yet known.

iv) an image representative of McCoy Brook “times”, showing a landscape dominated by solidified flows, lahars, sand dunes, dammed up lakes, siliceous springs, stromatolites and elements of the exciting Wasson Bluff fauna – tuatara-like reptiles, sabretoothed crocodylomorphs, prosauropod dinosaurs and other exciting beasts.

So far we have garnered \$6,000 for the project – \$3,000 from the Atlantic Geoscience Society and \$3,000 from the Canadian Geological Foundation. We are actively seeking another \$3,000 to make the project fully viable. The plan is to get artist and experts together this summer and the paintings finished by the end of the year. We hope to have the poster ready for distribution in the summer of 2004. The paintings (and copyright) will belong to the Atlantic Geoscience Society and will be on display at the Fundy Geological Museum. Other museums would have access to the images for their displays, and the images will be generally available for non-profit outreach purposes. Paintings, poster and other spin-offs we hope will provide an attractive educational resource that can be enjoyed for years to come.

2003-04 Executive and Council of the Atlantic Geoscience Society

Executive

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UNIVERSITY NEWS

Acadia

Sandra Barr

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Graduate and undergraduate students and faculty from the Department of Geology participated in the joint meeting of the Northeastern Section of the Geological Society of America and AGS in Halifax.

The end-of-term departmental banquet, held again this year at the Old Orchard Inn in early April, was attended by about 45 students and faculty. After an excellent dinner, Kirk Woodman (an Acadia geology graduate from 1985) both informed and entertained us with an excellent presentation on his work on a gold property in Niger. Students who had won various awards and scholarships were given the opportunity to stand in front for photographs (example above right) and a congratulatory round of applause. Then the students took over and presented their own unique awards to deserving faculty, as well as an entertaining presentation encompassing some of the highlights (and low lights!) of the year's activities. A new addition to the banquet this year was a "Hollywood look-alike" presentation by second year student Jeffrey Bigelow, in which faculty members were shown to have an uncanny physical resemblance to some well known Hollywood stars.

Darin Wasylik, a third year Geology honours student from Kamloops, BC, was selected by the Canadian Society of Petroleum Geologists to participate on the Student-Industry Field Trip. He will travel to Calgary in May to join undergraduate students from other Canadian universities in a two-week overview of the oil and gas industry.

In the annual competition for funds from the Acadia University Teaching Innovation and Improvement Fund, the Geology Department (in collaboration with Physics) was successful in acquiring 70 Wacom tablets to use in courses and field school.



Beaming award winners from the 2002-03 academic year at the annual end of term banquet at Acadia University.

M.Sc. theses were completed by Kirsten McLaughlin (*The Moosehorn Igneous Complex of New Brunswick and Maine: Petrology, geochemistry, and tectonic setting*; Supervisor Sandra Barr) and Kimberly Wahl (*An assessment of landslide potential in Cape Breton Highlands National Park: a GIS approach*; Supervisors Ian Spooner and David Colville of COGS-AGRG).

B.Sc. Honours theses were completed by Christine Brown (*Heavy mineral mobility and sand bar dynamics in the Shubenacadie River, Nova Scotia*; Supervisor Cliff Stanley), John King (*Occurrence and distribution of PGE and base metals in a bornite-rich vein, Sudbury, Ontario*; Supervisors Sandra Barr and Catharine Farrow of INCO), Natalie MacLean (*Petrology and tectonic setting of the Wedgeport Pluton, southwestern Nova Scotia*; Supervisor Sandra Barr), Kathleen Martin (*Lake sediment records, Canoran Lake, Halifax County, Nova Scotia*; Supervisor Ian Spooner), Amy Tizzard (*Structural geology and basement – cover relations in the southeastern Cape Breton Highlands*; Supervisor Robert Raeside), and Colin Zwicker (*Magnetic expression and sedimentary layering of heavy mineral-bearing sand bars, Shubenacadie River, Nova Scotia*; Supervisor Cliff

Stanley).

Two new graduate students joined the department in January, 2003. Robin Black, a graduate of the University of Victoria, will be working with Sandra Barr on the pre-Mesozoic geology of Grand Manan Island. Cheryl Reid, a graduate of Saint Mary's University, will be working with Rob Raeside to unravel regional and contact metamorphic effects adjacent to the western margin of the Barrington Passage Pluton in southwestern Nova Scotia.

The annual field trip to the Shelburne-Yarmouth area for the third year geology class was held on April 17-18, led by Alan Macdonald and Sandra Barr. A good time was had by all, in spite of the frigid weather! As we kept saying, at least it was sunny! At the time this submission was prepared, we are in the final stages of the examination period, and are gearing up for the second-year students' field school, beginning April 24th. Beyond that, we are looking ahead to a busy summer involving numerous honours and graduate students and various student research assistants working in the department and on various field projects.

St. Mary's

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The end of another academic year is fast approaching and to celebrate that fact, the end-of the year departmental banquet was held in early April. The banquet was attended by about 50 students, staff and faculty and featured a talk given by the first graduate of the department, Gordon Fader, from the Geological Survey of Canada, Atlantic. Gordon kept everyone amused with a description of students' life at Saint Mary's in the 1960s.

This year, Saint Mary's and Dalhousie students formed a very active Halifax student chapter of the Society of Economic Geologists. Their activities included an excellent talk by Grant Wach in our department as well as a field trip to a salt mine in Pugwash. The geology club is also looking forward to the upcoming 53rd Atlantic Universities Geological Conference at the end of October, which will be hosted at Saint Mary's.

This year, honours students who are in the process of finishing (or have already finished) their theses are: Dawson Brisco (*Sedimentology of a Pennsylvanian fluvial succession within the Thorburn Member of the Cumberland Group, Stellarton, Nova Scotia*; Supervisors: P. Jutras, R. Naylor from NSDNR), Peter Cooper (*Petrology of Xayacatlan Complex, Central Mexico*; Supervisors: J. Dostal, V. Owen), Jeanine Chubbs (*Environmental hazards at the proposed Weymouth wellsite, Scotian Basin*; Supervisor: G. Pe-Piper), Roger Fitzgerald (*Paleogeography of the Lower Windsor Group in the Musquodoboit Basin, Central Nova Scotia*; Supervisor: P. Jutras), Alberto Orozco (*Petrology and geochemistry of Tertiary lamprophyre dyke swarm of Hermosillo, Sonora, Mexico*; Supervisor: J. Dostal). Janet Shannon (*Lower Cretaceous lithofacies and petrology of Peskowest [A-99] and Dauntless [D-35], Scotian Basin*; Supervisor: G. Pe-Piper), Stewart Yule (*Development of a rapid*

determination for carbon and sulphur in rocks; Supervisor: J. Dostal) and Jennifer Wadden (*Clay of the Cretaceous shales of the wells Thebaud C-74, Alma F-67, Glenelg J-48 and Chebucto K-90 of western Sable Sub-basin*; Supervisor: G. Pe-Piper)

Two of our students, Lila Dolansky and Toni Barresi, were awarded NSERC undergraduate summer scholarships to work in the department under the supervision of Georgia Pe-Piper and Jarda Dostal, respectively. Toni Barresi was also selected by the Canadian Society of Petroleum Geologists to participate in the 2003 Student – Industry Field Trip.

The department has two students enrolled in a new graduate program – M.Sc. in Applied Sciences: Shawna Weir (*Lithostratigraphy and provenance of the Cretaceous rocks of the Orpheus Graben, Scotian Basin*) and Curtis McCall (*The geology of the 1929 Grand Banks landslide*). They are working with Georgia Pe-Piper. We have also a Dalhousie graduate student currently residing in our department, Ph.D. student Renee-Luce Simard, who is working with Jarda Dostal.

Our academic offerings have been modified with the addition of a new faculty member, Andrew MacRae. Andrew is retooling the palaeontology courses and together with Pierre Jutras, a 2001 faculty addition, is revitalizing our soft rock offerings.

As usual, the department relied upon first rate part-time faculty John Calder, Bob Ryan, A.K. Chatterjee, Howard Donohoe, Cecily Honig, Alexandra (Lexie) Arnott, and recently retired Qadeer Siddiqui to bolster our course offerings. Randy Corney ran two web-based courses in introductory geology aimed at arts and commerce students. These courses were oversubscribed, indicating an increasing demand for distance education. Enrolled students were from places as far away as Hong Kong and the United Arab Emirates. Dr.

Dan Kontak from Nova Scotia Department of Natural Resources was appointed an adjunct professor in the department.

All department members have been actively involved in research but for this report the work of only two faculty members is highlighted. Pierre Jutras is currently working on Viséan clastic sediments in New Brunswick that are time-equivalent to marine beds of the Windsor Group in Nova Scotia. Of special interest in this succession is the presence of thick and massive groundwater calcretes, which are genetically associated with the periphery of evaporitic basins. A tectonic model for Maritimes Basin evolution during the Viséan is gradually emerging from facies, provenance and paleogeographic studies of these units. Better control on the whereabouts of the Windsor Sea limits during this time-frame is also thought to emerge from this study.

Over the past year, Victor Owen has focused on the petrology and geochemistry of high-grade metamorphic rocks and historical ceramics and glass. One metamorphic petrology project showed that classical isothermal decompression textures can form in contact metamorphic environments by isobaric heating. Another project interpreted sodic gneisses associated with sapphirine granulite in western Newfoundland as metasedimentary rocks that experienced pre-metamorphic albittization. Analysis of historical porcelain linked the composition of shards from the defunct Brownlow Hill, Liverpool, factory site to earlier wares produced in London, and proposed a time-line for the transfer of this technology across mid-18th century Britain. Similarly, the major element composition of 18th – 19th century pottery from eastern Canadian archaeological sites and potworks was shown to be sufficiently diagnostic that these data hold significant potential in provenance studies.

This year Georgia Pe-Piper is on sabbatical leave. Up to Christmas

Georgia continued to do research in the department and early in the new year, she left with husband David (an adjunct professor in our department) for Greece. This year, she was awarded the Gesner Medal Distinguished Scientist Award by AGS (see citation elsewhere in this issue).

The Regional Geochemical Centre has been running smoothly this past year thanks to David Slauenwhite, who also put together a display booth at the Joint meeting of NE GSA and AGS. The University also financially supported an intern to work in the centre.

GAC – MAC – CSPG 2005

Scott Swinden

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Plans for the 2005 GAC – MAC – CSPG meeting in Halifax are proceeding satisfactorily. The Local Organizing Committee has accomplished most of its priorities for 2002-03 and is well within the GAC – MAC guidelines for activities up to 24 months before the meeting.

As reported in an earlier issue of the Newsletter, membership of the LOC has been completed. An additional member was recently added to act as liaison with the AGS Executive. This member will be appointed by the AGS and is currently Jennifer Bates, AGS past president.

The LOC executive met with John Hogg, President of CSPG, in January. This was a very productive meeting at which Mr. Hogg confirmed CSPG's interest in the meeting. The meeting also discussed CSPG's perspective on technical program, exhibits, social program, and inter-society communications.

Following extended discussions about the theme and feel of the meeting, the LOC has settled on the theme of "Building Bridges – across science, through time, around the world". This theme will be used in the program to encourage multidisciplinary sessions

in which geoscience is brought to bear on issues of widespread importance and in which various disciplines and specialties are brought to bear on a common theme. A logo has been chosen, the centerpiece of which is a stylized bridge. The bridge resembles the two Halifax harbour bridges and is symbolic of the host city, where the skyline and the psyche are dominated by the two bridges linking Halifax and Dartmouth. On another level, the bridge is a metaphor for the opportunity offered by this conference to bring together geoscientists with different interests, and to help bridge the gaps within geoscience, and between geoscience and society.

The LOC has begun to promote the meeting at local scientific meetings, and had a prominent presence at the recent NE GSA – AGS meeting in Halifax. A poster provided the first opportunity to display the new logo and generated considerable interest by attendees, both from the Maritimes and from New England. The website is currently under development and is

expected to be operational this spring with a home page providing links to Halifax and Nova Scotia attractions.

The LOC has begun to identify elements of the technical program and is experiencing good working relationships among the three sponsoring societies. The first program brainstorm was held in April, and resulted in a preliminary list of both symposia and special sessions to be followed up. The LOC is currently doing this with potential organizers and hopes to further refine them at its next meeting in June. The LOC has also been in contact with organizers of the North Atlantic Minerals Symposium (NAMS) and has asked them to consider holding the 2005 Symposium in conjunction with the Halifax meeting. NAMS was a very successful element of the 2001 meeting in St. John's.

Coming Events

Vancouver 2003: GAC – MAC – SEG Joint Meeting. Sheraton Wall Centre Hotel, Vancouver, BC; May 25 – 28, 2003. For information, visit the conference website at <http://132.156.108.210/Vancouver2003/>

116th Annual General Meeting, The Mining Society of Nova Scotia. Liscombe Lodge, Liscombe Mills, NS; June 5 – 6, 2003. For information, visit the Mining Society's website at <http://www.msns.cim.org/>

CANQUA 2003 – Canadian Quaternary Association Meeting. Dalhousie University, Halifax, NS; June 8 – 12, 2003. For information, call Ralph Stea at (902)-424-2528 or visit the conference website at <http://www.gov.ns.ca/meb/canqua/canqua.htm>

Annual Review of Activities, Geological Survey of Newfoundland and Labrador and CIM Newfoundland Section Annual Meeting. Delta Hotel, St. John's, NF; October 29 – November 1, 2003. For information, contact Norm Mercer at (709)-729-6193.

28th Annual Review of Activities, Minerals and Energy Branch, New Brunswick Department of Natural Resources and Energy. Sheraton Hotel, Fredericton, NB; November 3 – 5, 2003. For information, contact Don Carroll at (506)-453-6642.

Mining Matters for Nova Scotia 2003. Westin Nova Scotian Hotel, Halifax, NS; November 19 – 20, 2003. For information, contact Paul Smith at (902)-424-2526.