



NEWSLETTER

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Newsletter Address

Please send submissions and comments to:

Mike Cherry
Dept. of Natural Resources
P.O. Box 698
Halifax, NS B3J 2T9
Tel. (902)-424-8135
Fax: (902)-424-7735
E-mail: cherryme@gov.ns.ca

PRESIDENT'S COLUMN

Joe White
clancy@unb.ca

Greetings to everyone

200 members! In times when organizations such as ours face tremendous pressures to maintain memberships, we have recently achieved our 200th. Demographics notwithstanding, we continue to hold our own, a reflection of the overall efforts of you, the members. A quick perusal of the AGS web page is indicative of the level of geoscience activity in the region – and there will be much more that that is not listed.

The Executive and Council have been considering ways to clarify the processes by which committees are approached and the kinds of services and awards that are available from the Society, with the intent of posting these on the web site. Although business runs smoothly most times, there are occasional instances where requests are made that cannot be met under our terms of operation as a non-profit organization and it behooves us to pre-empt any unnecessary confusion (as opposed to the necessary confusion in which I normally operate).

More details for the 2005 Colloquium in Saint John will soon be available on the AGS web site. Randy Miller has made interesting arrangements in association with the New Brunswick Museum that will provide an opportunity to examine outreach activities as well as new science.

Having already had the fortune to burn out some of the winter from my bones in central British Columbia, I know that many of you have also begun or will be entering into another season of

field study. Enjoy a safe and successful summer. And let us know of any interesting items that arise over the next three months.

AGS NEWS

Atlantic Geology

Sandra Barr
Sandra.Barr@acadiau.ca

Volume 39, Number 1 was mailed to subscribers in early February 2004, about 11 months behind schedule. Volume 39, Number 2 is now at the layout stage. This special issue is a spin-off from the highly successful session at the AGS – NEGSA meeting in March 2003 on "Processes in Felsic Magma Chambers – From Crystallization and Evolution to Emplacement", and is edited by the session convenors, Daniel Lux and David Gibson, assisted by journal editor Sandra Barr. It contains the following papers:

Currie, K.L. Emplacement of the Fogo Island Batholith, Newfoundland.

Feely, M., Coleman, D., Baxter, S., and Miller, B. U-Pb zircon geochronology of the Galway Granite, Connemara, Ireland: implications for the timing of late Caledonian tectonic and magmatic events and for correlation with Acadian plutonism in New England.

Gibson, D., Lux, D.R., and Choate, M.A. Petrography of a "cryptic" mixed magma system – the Mount Waldo granite, coastal Maine.

McLaughlin, K.J., Barr, S.M., Hill, M.D., Thompson, M.D., Ramezani, H., and Reynolds, P.H. The Moosehorn Plutonic Suite, southeastern

Maine and southwestern New Brunswick: age, petrochemistry, and tectonic setting.

Westerman, D.S., Dini, A., Innocenti, F., and Rocchi, S. When and where did hybridization occur? The case of the Monte Capanne Pluton, Italy.

Yang, X-M., Lentz, D., and McCutcheon, S.R. Petrochemical evolution of subvolcanic granitoid intrusions within the Late Devonian Mount Pleasant Caldera, New Brunswick, Canada: comparison of Au versus Sn-W-Mo-polymetallic systems.

We hope to complete Volume 39, Number 3, and Volume 40, Number 1, during the coming summer. The journal will then be only 4 months behind schedule! Anyone want to place any bets on whether or not this can be accomplished? (Editors and production manager not eligible to participate!)

Halifax 2005

Mike Cherry

cherryme@gov.ns.ca



Halifax 2005 is now less than one year away, and the activity level of the Local Organizing Committee, under the leadership of General Chairman Scott Swinden, is steadily increasing. Interest in the conference is high, and all indications point to a very large registration.

A diverse and stimulating technical program has been outlined by Chris White and his sub-committee, which is now working with session convenors to identify invited speakers and to finalize plans for all of the sessions. AGS members should start preparing their abstracts now – details of the technical program are available on the

conference website (see address below).

A highlight of the conference will be celebrations by the Mineralogical Association of Canada on the occasion of its 50th anniversary. Preliminary plans include a special birthday party, an invited lecture by Ian Parsons, President of the International Mineralogical Association, and an exhibit of mineral specimens from Canada's Pinch Collection.

Ian Spooner and his social events subcommittee are working hard to ensure that conference delegates have a good number of diversions from the intense mental stimulation of the technical program. Plans include a meet-and-greet opening social, early morning fun runs, a gala harbour cruise and lobster dinner and a pub crawl. Rumours are that fireworks figure prominently in at least one of these events.

Sandra Barr is chairwoman of the Field Trips subcommittee. Sandra's committee has developed a program that includes 7 pre-conference and 9 post-conference excursions. Details of the trips are available on the conference website.

The website went "live" in May, coincident with the 2004 joint meeting of the Geological Association of Canada and the Mineralogical Association of Canada at Brock University in St. Catharines, Ontario. The website is at www.halifax2005.ca. The website content will be continuously upgraded as more information becomes available, so readers are encouraged to visit it often. In particular, those interested in submitting an abstract will be able to do so in the fall (October – November), and those interested in registering for the meeting can anticipate being able to do so in March 2005.

PROVINCIAL SURVEY NEWS

2004 Field Program of the Geological Surveys Branch, New Brunswick Department of Natural Resources

Reg Wilson

reg.wilson@gnb.ca

This year's field program at the New Brunswick Department of Natural Resources can be grouped into six categories: Bedrock Mapping, Surficial Mapping and Geochemistry, Mineral Deposit Studies, Hydrocarbon Resources, Industrial Minerals, and Coastal Zone Studies.

Bedrock Mapping

In northern New Brunswick, 1:20 000 mapping that was carried out in the Gaspé Belt as part of the recently concluded Appalachian Foreland and Platform NATMAP project will continue in parts of NTS 210/16 and 210/10. John Langton of the Bathurst office will carry out mapping in the Benjamin River and upper Jacquet River areas, which are primarily underlain by volcanic rocks of the Chaleurs and Dalhousie groups. Reg Wilson will be mapping in the Mount McCormack and Nine Mile Brook areas, in an effort to resolve stratigraphic relationships in the upper Chaleurs Group and in the Tobique Group. The relatively unexplored Mount McCormack area is host to a recently-discovered, gabbro-hosted gold occurrence and an enigmatic, rhyolite-hosted, copper-cobalt prospect.

Reg Wilson, in collaboration with Paul Rennick of the GIS section, is undertaking a revision of the venerable 1:250 000 geological map of northern New Brunswick (Plate NR-3). NR-3 has been one of NBGSB's most successful map products, and is an important "first-order" product for the promotion of mineral potential. Since its publication, however, most of the area it encompasses has been remapped, e.g., the stratigraphy of the

Bathurst Camp was revamped during the 1994-99 EXTECH-II project. As the few remaining 1:20 000 sheets are remapped, the new version of NR-3 will be updated by merging the digital files.

In conjunction with this project, staff geophysicist Larry Petrie will be preparing an aeromagnetic anomaly map of the same area by combining newly acquired data, existing NBGSB and GSC data, and digital data released by the private sector.

In southern New Brunswick, Susan Johnson of the Sussex office will be taking a hiatus from new regional mapping to focus on cleaning up the loose ends of previous projects, including map revision and writing. One of these projects, in collaboration with Sandra Barr and Cameron Bartsch of Acadia University, involves a study of the New River Belt, a key component in interpretations of terranes in southern New Brunswick and their correlations with other parts of the Appalachian orogen. The project will include (a) whole-rock chemical analyses of igneous rock samples, (b) interpretation of the tectonic setting in which the rocks in the map area were formed and their metamorphic and deformational history, and (c) comparisons with potentially correlative rock units elsewhere in southern New Brunswick.

Susan and Clint St. Peter will jointly undertake the work necessary to complete the Maritimes Basin NATMAP report for southeastern New Brunswick, including the revision of six 1:50 000 maps. Specific objectives include revision of the stratigraphy of the Horton and Windsor groups to reflect recent advancements in our understanding of lithostratigraphy, writing sections on structural geology and economic geology, and the development of an expanded palynological database.

Surficial Geology and Geochemistry

Mike Parkhill's agenda includes B-horizon soil and till sampling and

Quaternary mapping at selected sites in the Bathurst Mining Camp, in anticipation of expected ground follow-up of targets identified during airborne geophysical surveys flown earlier this year. The sampling program will compare and evaluate some of the new selective leach and extraction methods now available. In addition, Mike will begin a surficial mapping project in the Pointe Verte area, where gold has recently been discovered, to assist in exploration for gold mineralization.

The Fredericton-based Quaternary-Geochemistry section, consisting of Allen Seaman, Toon Pronk, Serge Allard and Rex Boldon, has several projects ready to go, including (a) a till geochemistry and glacial dispersal study in the Hayesville area of central New Brunswick, aimed at evaluating the possible association of gold with Late Devonian granites and known Sn-W mineralization; (b) surficial mapping and till sampling in the Saint John area and along the Saint John River from Gagetown to Evandale; (c) a comprehensive compilation of till geochemical data from southwestern New Brunswick, and (d) till geochemistry plots for southwestern New Brunswick, to supplement the interpretation of the raw till geochemical data and to assist private sector mineral exploration.

Mineral Deposit Studies

Jim Walker will complete investigations initiated last year at the Chester and Gilmore Brook VMS deposits in the Bathurst Mining Camp. This work is intended to elucidate the stratigraphic position of the deposits, and to suggest possible exploration strategies to test for additional mineralization. Jim will also evaluate the potential for iron oxide-copper-gold (IOCG) mineralization in the Benjamin River area, where the Dickie Brook composite intrusion is known to contain significant rare-earth element mineralization in association with magnetite iron formation. This region has not, however, been assessed for its gold potential.

Jim will also participate in a number of UNB – NBGSB collaborations in northern New Brunswick, mainly involving David Lentz and his graduate students. Gaoming Wang will investigate the petrogenesis of the McKenzie Gulch base-metal skarn system (400 000 t @ 1.7% Cu) to document the various styles of Cu-rich mineralization and skarn alteration within the McKenzie Gulch system. Sean McClenaghan will continue his studies of rare-earth-element and selected trace-metal systematics of massive sulphides in the Bathurst Mining Camp. A third student, yet to be identified, will begin an evaluation of the structural and geochemical controls on gold mineralization within the Ordovician Brunswick accretionary complex, known to host epigenetic gold systems generated by late fluid expulsion during exhumation of the accretionary wedge.

Warna Downey of UNB, under the supervision of David Lentz (UNB) and Steve McCutcheon (NBGSB), will continue her study of the volcanic architecture of the Nepisiguit Falls Formation in the Bathurst Mining Camp. This project is designed to examine the environment and modes of emplacement of felsic volcanic rocks associated with several of the most productive deposits in the Camp and their relationship to VMS mineralization.

Kay Thorne will be mainly involved with gold investigations at Clarence Stream and in the Annidale Belt in southern New Brunswick. The goals of the Clarence Stream project include: (a) determining the O and H isotopic signature of the fluids and the S and Pb isotopic signature of the sulphides associated with gold mineralization and (b) Re-Os dating of the sulphides associated with gold mineralization to constrain the age of the mineralization. The latter will be particularly useful in establishing a genetic model for the Clarence Stream deposit. Similar isotopic analyses will also be conducted on occurrences from the Annidale Belt in an attempt to develop a genetic model. A UNB –

NBGSB partnership will allow David Lentz and Kay Thorne to carry out a systematic study of the documented gold occurrences within the Annidale Belt. This research will attempt to establish the characteristics of the Devil Pike, Annidale and other occurrences, and generate an appropriate genetic model to explain their existence.

Hydrocarbon Resources

Adrian Park (UNB) will collaborate with Clint St. Peter on a structural synthesis of faults affecting hydrocarbon-bearing Carboniferous basins in southeastern New Brunswick. The objective of this work is to understand the role of original basin configuration and subsequent structural evolution on reservoir distribution and trap formation, primarily through analysis of two major fault systems in the Albert Mines and Dochester areas, namely the Caledonia - Edgetts Landing – Dochester fault and the Harvey – Hopewell fault.

A project by Clint that is funded by the GSC's Targeted Geoscience Initiative program (TGI 2) will compile the large volume of maturation data from the New Brunswick Carboniferous into a publicly available database (Organic Matter Maturation Database) with an accompanying series of maps. Outputs will include contoured maturation values on 1:250 000 digital maps for all of the Maritimes Basin in New Brunswick and contoured maturation values on 1:50 000 digital maps for southeastern New Brunswick.

Industrial Minerals

Tim Webb will continue a Slate Resource Assessment project that began in 2003. This project will consider the potential for marketable sources of "natural slate" occurring on selected Crown Lands in favourable rock formations in northwestern New Brunswick. Specifically, a regional reconnaissance of potentially favourable bedrock materials from areas dominated by the Temiscouta Forma-

tion, Matapédia Group, and related rock formations will be undertaken.

Other industrial mineral projects include evaluating selected deposits of weathered granite for their feldspar and related mineral potential, and exploring opportunities for the production and export of bedrock aggregate from Crown lands near the port of Belledune in northern New Brunswick.

The Cretaceous silica deposits at Vinegar Hill near Sussex will be the subject of a shallow seismic survey to be conducted by Karl Butler (UNB) and Jim Hunter (GSC). Approximately 3 km of shallow seismic reflection data will be acquired, as well as borehole geophysical logs of electrical conductivity, natural gamma, magnetic susceptibility, gamma - gamma density, temperature and experimental seismic-electric profiling, aimed at identifying permeability and lithology contrasts within the unconsolidated Cretaceous section.

Coastal Zone Studies

Dominique Bérubé, Coastal Zone Geomorphologist for NBGSB, will undertake coastal erosion studies in the Charlo area of northern New Brunswick, where several properties were affected by flooding and coastal erosion due to a severe storm surge last autumn, and at Shemogue in southeastern New Brunswick. The Shemogue study is part of an Environment Canada research project, initiated last year and titled "Impacts of Sea-Level Rise and Climate Change on the Coastal Zone of Southeastern New Brunswick".

NBGSB has already played a major role in this research project by providing photo-interpretation and GIS expertise. In addition to these contributions, Dominique will be involved with long-term beach monitoring, which allows better prediction of the impacts of natural hazards (sea-level rise, storm surges, coastal erosion) and human activities (harbour dredging, beach mining). If weather permits, 10

permanent survey sites (Charlo, Youghall, Grande-Anse, Cedrière, Escuminac, Bouctouche, Parlee, l'Aboiteau, Saints Rest and Anchorage) will be re-surveyed this summer, and 2 other permanent sites will be established, at Miscou and New River.

2004 Field Program of the Geological Services Division, Nova Scotia Department of Natural Resources

Mike Cherry, Bob Boehner and Bob Ryan

cherryme@gov.ns.ca

The 2004 field program of the Geological Services Division comprises a diverse range of activities that are designed to fill gaps in the provincial geoscience knowledge base, assist current activities by the minerals industry in Nova Scotia, and address specific geoscience information needs of government and the private sector.

What might best be described as the flagship project of this year's program will be participation by several Division geologists in a collaborative project to upgrade geoscience knowledge of the St. Marys Basin in northcentral Nova Scotia. This project is being funded in part by Phase 2 of the federal government's Targeted Geoscience Initiative (TGI-2). The project, which will end in March 2005, is intended to stimulate exploration for both hydrocarbons and minerals by producing substantially enhanced geological maps, databases and interpretations of the St. Marys Basin. Major partners in the project are the Geological Survey of Canada and the Nova Scotia Department of Energy. The funding available to the project will also enable participation by students and professors from several Nova Scotia universities. Specific activities by Division staff in the TGI-2 project are outlined below.

Many of the activities described herein represent continuations of projects that operated in 2003-04. The Division plans to complete many of these pro-

jects in 2004-05, and will be undertaking an internal strategic planning exercise during the year to develop priorities for new activities for the coming 5 to 10 years. This planning will complement the development of a new provincial Mineral Development Strategy, which is also slated to occur in 2004-05.

Geological Mapping and Geochemistry Section

Terry Goodwin will continue to investigate geochemical variations in rocks, soils and waters throughout Nova Scotia, including contributing to the TGI-2 project by compiling, interpreting and collecting new samples to assist in characterizing the geochemical signature of the Cobequid – Chedabucto Fault Zone. An investigation of the distribution and morphology of gold grains in tills of the Meguma Terrane will be undertaken to establish templates for comparison with similar successful deposit case histories. Work will continue with Dr. Mike Parsons (Geological Survey of Canada) and co-workers to examine the distribution and behaviour of metals, particularly mercury and arsenic, within and around tailings at past-producing gold districts. This project, which is part of the GSC's "Metals in the Environment" program, is intended to improve our understanding of the movement and ultimate fate of these and other elements in mine tailings.

Rick Horne will work with Chris White to complete maps and reports from the Southwest Nova Bedrock Mapping project (see following paragraph). Rick will also work with Bob Ryan to complete bedrock mapping and map preparation for NTS area 11D/13 as part of the Central Meguma Group project. Rick will contribute to the TGI-2 project by investigating kinematic features in key areas to assist in characterizing the structural geology of the Cobequid – Chedabucto Fault Zone. Finally, Rick will continue his investigations of the structural geology of Nova Scotia's gold deposits, as a contribution to a broader program to evaluate Meguma gold

deposits that also involves Paul Smith and Dan Kontak. Rick plans to continue work on the Dufferin and Mooseland deposits, and possibly the Tangier and Forest Hill deposits. Much of this work is dependent on access to new surface and underground exposures at active industry projects.

Chris White has completed field work for the Southwest Nova Bedrock Mapping project, which will result in 1:50 000 scale bedrock geology maps for all or parts of the twelve NTS areas that underlie Digby, Yarmouth and Shelburne counties. Chris will now extend that work to the northeast by carrying out field work in the Port Mouton (20P/15), Liverpool (21A/02) and Lake Rossignol (21A/03) map areas, as part of a new South Shore project. Chris will also begin a new Science of Aggregate project with Garth Prime to investigate the possibility of developing petrographic criteria that can be used to predict aggregate resource quality and behaviour. These can currently only be determined through more expensive testing.

Rob Naylor will continue detailed mapping and compilation of NTS areas 11E/06 and 07 with Peter Giles (Geological Survey of Canada) as part of the TGI-2 project. This area is currently being explored for iron oxide-copper-gold (IOGC) deposits and includes the Cobequid – Chedabucto Fault System, which forms the major terrane boundary between the Antigonish and Cobequid Highlands to the north and the Meguma Terrane to the south. Our understanding of this complex geology will be enhanced by access to recently processed potential field geophysical data and maps, as well as seismic surveys that were recently undertaken as part of industry exploration for hydrocarbons.

Ralph Stea will undertake a partial field season to complete surficial mapping of the Kennetcook (11E/04) map area as part of the Hants – Colchester Lowlands Surficial Geology project. Ralph will also continue to

work on the Cretaceous Mapping project, which is sponsored in part by the Sable Offshore Energy Project. This year's field work will include investigations of outlier areas near Brierly Brook (Antigonish) and in the Musquodoboit Valley.

Resource Evaluation Section

John Calder will continue his studies of organic deposits and Carboniferous sedimentary basins to provide information in support of exploration and development of coal and hydrocarbon resources, as well as interpretation of new seismic data (NTS 11E/10-15). John will also continue to play a key role in the current initiative to gain recognition of the Joggins fossil cliffs as a UNESCO World Heritage Site (NTS 21H/09).

Garth DeMont will continue to update the mineral occurrence database for Cape Breton Island. Responding to a recent increase in interest for carbonate resources, Garth will spend considerable time enhancing our knowledge of these resources in the Cape Dauphin and Kelleys Cove areas. Maps for the Glen Brook, Glendale, Lamey Brook, Kewstoke and other carbonate deposits will be completed at a 1: 25 000 scale.

Phil Finck will work with Garth DeMont on carbonate resources on Cape Breton Island, and will also spend some time evaluating sand resources on the island, in light of recent expressions of interest in this commodity. In addition, Phil will spend some time in the field to undertake preliminary evaluations of known occurrences of a variety of other industrial mineral commodities.

Dan Kontak will continue his ongoing study of pegmatite-related mineralization in southern Nova Scotia. Dan will use most of his time in the field this year to investigate mineralization associated with the IOGC deposits along the Cobequid – Chedabucto Fault System as part of the TGI 2 St. Marys Basin project (NTS 11F/05, 11E/05 to 08).

Ron Mills will continue to provide assistance to prospectors in the form of consultations, training and property visits. Ron also plans field work to investigate pegmatites and related resources in the northern mainland, as well as a placer deposit in the Tangier Gold District (NTS 11D/15).

George O'Reilly will undertake a compilation of mineral occurrences along the Cobequid – Chedabucto Fault System as part of the TGI 2 project. George will concentrate on intrusions within the suture zone. George will also work with Dan Kontak on mineral deposit studies of IOCG occurrences along the Cobequid – Chedabucto Fault System.

Garth Prime is nearing completion of an investigation of aggregate resources in the Annapolis Valley (NTS areas 21H/01, 02; 21A/12, 14, 15). With completion of this work, Garth will shift his focus to Cape Breton Island, where planned infrastructure development in the coming years will require new sources of aggregate.

Paul Smith will continue work on the Eastern Shore Compilation project in NTS areas 11F/03 – 06 and 11D/10 – 15, for which his responsibility is to compile and write comprehensive reports on selected gold districts. Paul will also work with Terry Goodwin and Mike Parsons (Geological Survey of Canada) on the latter's project to investigate metals in tailings from past-producing gold mines.

2004 Field Program of the Geological Survey of Newfoundland and Labrador

Frank Blackwood

rfb@zeppo.geosurv.gov.nf.ca

Regional Geology Section

Sean O'Brien will spend 2 months mapping stratigraphic sections of the Late Precambrian and Cambrian sedimentary rocks on the Bonavista Peninsula and environs, with the objective of establishing a regional framework for the copper mineral-

ization in these rocks. The field work will be carried out in collaboration with Cornerstone Resources. Further studies of newly discovered Precambrian fossils near Catalina will be undertaken as a subsidiary part of the Bonavista mapping. Sean will also carry out field mapping and related studies of the gold-bearing volcanic and intrusive rocks in and adjoining the Holyrood (1N/6) and St. John's (1N10/15) areas, including new mineralization in the St. John's peninsula. This work will be coordinated with major gold exploration programs being carried out by Rubicon Mineals and IAMgold – Wheaton River. Sean will also provide prospector field support on the Avalon, Bonavista and Burin peninsulas.

Don James and Bruce Ryan plan a two month field program in the Nain Plutonic Suite in the Churchill Province, working with continuous helicopter support. The main goal of this work is to complete mapping of the corridor from Nain to the Quebec border in the northern part of NTS sheet 14D. A field camp will be established on Tasieluk Lake, from which helicopter-positioned ground traverses will be made. The region is underlain by the Nain Plutonic Suite, older intrusive rocks, and the boundary between gneisses of the Nain and Churchill provinces. This geological position makes the area prospective for mineral deposits similar to that at Voisey's Bay, just to the south. This project is being carried out in collaboration with the GSC under Phase 2 of the federal Targeted Geoscience Initiative (TGI).

Ian Knight will spend two months mapping Cambro-Ordovician, carbonate-terrain rocks at 1:50 000 scale in the Phillips Brook, Georges Lake and Harrys River areas of NTS 12B/9 and 16 in western Newfoundland. This work will support exploration for carbonate-hosted base metal deposits and marble, and will provide important information for west Newfoundland oil and gas exploration. Paleontological support will be provided by Doug Boyce. The project will be co-ordinated with TGI projects in the

area that are supervised by Tom Calon and Eliot Burden of Memorial University.

Mineral Deposits Section

Gerry Squires will undertake the third year of a project to study base metal and gold mineralization in central Newfoundland. The first part of the field season will be directed towards completing a synthesis of the base metal mineralization of the Tally Pond belt near Grand Falls. This is an area that may be the site of the province's next base metal mine. The synthesis will be used to promote further exploration in the belt. The second part of the season will continue work on gold mineralization in the Grand Falls – Gander area. This is an area of active exploration that has seen a number of recent grass-roots level gold discoveries. Field work will synthesize knowledge of the new discoveries and develop models to help guide further exploration in the region.

Lawson Dickson will use the field season to investigate the dimension stone potential of the Great Northern Peninsula and the areas of south-eastern Labrador that are accessible from the new highway. Further work will also be conducted on the marble – limestone dimension stone potential of western Newfoundland, and, if time permits, on similar rocks in western Labrador. The objective of this work is to identify new opportunities for dimension stone development in areas of the province that have to date been under-explored for this commodity. Lawson will also provide assistance, as needed, to prospectors and dimension stone producers.

Geochemistry, Geophysics and Terrain Sciences Section

Jerry Ricketts will undertake the second year of a project to examine the road corridor between Red Bay and Cartwright, Labrador. The goal of this work is to identify and map granular aggregate deposits, and assess the volume and quality of these deposits

for use in the construction industry. The opening of the new road has resulted in a steady demand for high-quality aggregate, and it is important to be able to identify the deposits in a timely manner. Work in 2003 focused on the corridor between Red Bay and Mary's Harbour: this year, the work will focus north of Mary's Harbour.

Shirley McQuaig will begin a new project in the Central Mineral Belt in Labrador to systematically sample tills for geochemical analysis. The project area comprises approximately two 1:50 000 sheets within NTS 13K. The density and quality of lake-sediment geochemistry will be upgraded in selected areas. Releases of the geochemical data will highlight areas for follow-up and more detailed sampling by the exploration industry. Surficial mapping will focus on the distribution of surface sediments, their genesis and utility for geochemical sampling, glacial dispersal, and ice-flow history. This project is being carried out in collaboration with the GSC as part of the Targeted Geoscience Initiative.

UNIVERSITY NEWS

Acadia

Sandra Barr
sandra.barr@acadiau.ca

Another academic year has flown past, and an impressive group of 10 newly minted geoscientists and 13 environmental scientists received their B.Sc. degrees at Convocation on May 10th. The end of term this spring was welcomed at Acadia even more than usual because of the faculty strike that made the term rather stressful. Luckily, the strike was resolved after only 13 days of classes had been missed, and hence no changes to the end of term date or the examination schedule were required. It was, however, a challenge for both faculty and students to compress the course material into the shortened time-frame, and I think that the whole campus breathed a collective sigh of relief when the term was successfully concluded.

One of the losses during the strike was the visit of the GAC Robinson Lecture Tour speaker, John Thompson of Teck Cominco. A group of keen students organized their own transportation and made the trip to Dalhousie University to catch Dr. Thompson's excellent talks.

Acadia was well represented at the AGS conference in Moncton in February, where the graduate students did an able job as projectionists under the direction of Ian Spooner. Acadia faculty and students were authors and co-authors of a total of 9 oral and/or poster presentations at the meeting.

We welcomed two new graduate students to the department in January. Tansy O'Connor-Parsons, a graduate of the University of Alberta, joined us from Vancouver where she was working with Anglo American Exploration. Her thesis project with Cliff Stanley is on the lithochemistry of the Golden Mile gold mine in Kalgoorlie, Western Australia. Lori Cook, a Dalhousie University graduate, arrived to begin her project on the cause of a large magnetic anomaly in the off-shore area between Cape Breton Island and Prince Edward Island. She will be jointly supervised by Sandra Barr and research associate Sonya Dehler of GSC Atlantic.

The annual end-of-year Geology Department banquet was held in Wheelock Hall on the Acadia campus. It consisted of a fine meal, the recognition of student award winners, and a "high (or low) lights of the year" power-point presentation compiled by students Jeffrey Bigelow and Nathan Rand. Also presented were the "special awards" to faculty and staff – it is worth a visit to the department to see these documents posted on the winners' office doors. The guest speaker at the banquet was 1971 Acadia geology graduate Jack MacDonald, who gave us an overview of his career that managed to be both hilarious and inspirational.

Although the undergraduate student team organizing the AUGC is

scattered to the four winds and across several continents for the summer, the team left Acadia with preparations well in hand. The conference will be held on 28-30 October (see <http://ace.acadiau.ca/science/geol/augc2004>) and promises to have lots of fun, learning, and geological variety to suit all tastes, including the first an inter-university Geo-Jeopardy competition.

UNB

David Lentz
dlentz@unb.ca

The Department of Geology at UNB is very pleased to graduate Ph.D. student Gordon Osinski, who was supervised by John Spray. "OZ"'s thesis title is "Impacts into sedimentary targets: Constraints from the Haughton and Ries impact structures".

Recently, two Ph.D. candidates won awards for their presentations at local conferences. Pamela Dickinson won the Best Poster award (with Bruce Broster and David Black) at the UNB Graduate Student Association Conference for her poster titled "Geoarchaeological investigations of Holocene climate and human occupation of the Grand Lake Meadows Region, New Brunswick". Barbara Petrunic received the Paul Odense Award in the Materials section for her presentation at the 31st annual meeting of the Microscopical Society of Canada in Wolfville. Barbara's presentation, co-authored by Tom Al, was titled "The Mount Pleasant Tungsten mine: Identification of secondary-mineral precipitates using micro-analytical techniques". Congratulations to both.

Erin Walton (Ph.D. candidate), who is studying Martian meteorites with John Spray, was named one of Canada's "Best and Brightest" by MacLean's Magazine. Erin has received numerous scholarships (from NSERC and Canadian Space Agency) for her cutting-edge research here at UNB. In addition, John Spray has been named one of UNB's University Research Scholars for a two-year period, com-

mencing July 1st, 2004. Check out their research at the Planetary and Space Science Centre's website at <http://www.unb.ca/passc/>.

UNBSJ Geology has been reinvigorated after years of precarious existence by the appointment of Lucy Wilson to a tenure-track position. Lucy hopes to expand and diversify the course offerings (and her own geoarchaeological research!). Student interest is demonstrated by the creation of a new Geology Students' Society, whose activities in the fall term included two field trips and a presentation by Dave Lentz.

An EdGeo workshop for New Brunswick teachers, sponsored by the AGS, Canadian Geological Foundation and the national EdGeo program and put on by UNB and NB DNR - Minerals, is scheduled for July 12th to 14th. It will be held in the Geology Dept. in Fredericton with a field trip on the final day up the Saint John River valley. Also with respect to outreach activities, Dr. Suporn Boonsue (UNB Geology) led a group of NB high school guidance councillors on a tour of our facilities, with demonstrations from several faculty members. This orientation program was arranged through the APEGNB and funded in part by industry.

Last, but definitely not least, we are very proud to announce that Dr. David Keighley (NB DNR-Minerals) will be joining the department in our Sedimentology position as of July 1st. Dave obtained his undergraduate degree at the University of Manchester, United Kingdom. He then spent 5 years in the UK oil industry, including time at Shell, before coming to Canada to complete his Ph.D. under Ron Pickerill at UNB. That was followed by a return to the UK to take a post-doctoral research associate position at the University of Liverpool, sponsored by Shell. Subsequently, he spent the best part of the next four years juggling temporary teaching assignments at Saint Mary's University and Acadia University, with consulting contracts relating to petroleum

exploration programs in southern New Brunswick. Most recently he has been employed as a Hydrocarbon Resources Geologist by the New Brunswick Department of Natural Resources.

OTHER NEWS

New Brunswick Museum

Randy Miller
millerrf@nb.aibn.com

The New Brunswick Museum is beginning a five year research partnership with the University of New Brunswick, Saint John, funded through a SSHRC program called CURA (Community-University Research Alliance). The project, titled "Saint John: An Industrial City in Transition", will examine a wide variety of social and cultural issues related to the Saint John region.

One of the Museum's projects in this program will look at the history of the development of a science culture in Saint John, particularly the Natural History Society of New Brunswick and the geological exploration and research of the Society's members. New Brunswick has a long history in the development of geological sciences in Canada, dating back to the work of Abraham Gesner, the first provincial geologist in New Brunswick. Much of the early work was conducted in Saint John through the work of the Steinhammer Club and the Natural History Society of New Brunswick. Few cities can compare to the Saint John region when it comes to the complex geological diversity seen here. Nor can most cities claim such a long history of geoscience investigation, dating back to the early 1800's. Saint John has attracted an impressive list of scientists to unravel its geological past. It has a history of scientific study and public education unmatched by most Canadian cities its size. By the early 20th century, reports by Princeton geologist B.F. Howell and Geological Survey of Canada geologists A.O. Hayes and F.J. Alcock were built upon 100 years of previous study of Saint John's geology.

The CURA project will also examine the heritage aspect of significant geological sites in Saint John region and develop a risk assessment plan for significant outcrops. An evaluation of the tourism potential of promoting Saint John's geology will follow as this project proceeds.

Readers are invited to visit our geology virtual exhibits – Fossil Shark at <http://www.gnb.ca/0130/Doliodus/Shark.htm> and Minerals Matter at <http://www.gnb.ca/0130/MineralsMatter/index.htm>.

Nova Scotia Museum of Natural History

Deborah Skilliter
skillidm@gov.ns.ca

Joggins Gains "Tentative List" Standing With UNESCO

The famous fossil cliffs of Joggins was one of eleven Canadian sites named recently by the federal government for tentative list standing. This means that Joggins may now be put forward by the federal government to UNESCO as a World Heritage Site nomination. Joggins, nominated as a natural site, is internationally recognized as one of the most important Carboniferous fossil sites in the world. The 315 million-year-old fossils at the site are protected under Nova Scotia's Special Places Protection Act. Many organizations at the municipal, provincial, and federal level have been and will continue to be involved with the UNESCO nomination process.

"Beyond the Last Billion Years" Talk Series

The Atlantic Geoscience Society Talk Series held at the Museum of Natural History has been highly successful, attracting over two thousand people since its inception three years ago. The talk series began as a 'spin-off' to the best-selling book, "The Last Billion Years," and has evolved a more general regional geology theme. The audience has consisted mostly of the general public, but has also

reached many school-aged children, university students, professional geologists, and AGS members. The success of the talk series is due to many factors – an interested public, advertising, a core of volunteer organizers, and the talented speakers who generously donate their time.

The talk series has had, and will continue to have, many benefits for the AGS. It is a forum in which to disseminate the importance of the geosciences to the public, it has functioned as a means to attract members to the AGS and participants in AGS programs such as EdGeo, and it has provided a venue for AGS members to meet outside of the society's annual colloquium.

Speakers are currently being organized for the 2004 - 2005 season, with talks beginning in September.

Summer Events

This summer, the museum will host exhibits on Sable Island and leather-back turtles. The Butterfly Pavilion will open in July. For other events, please go to <http://museum.gov.ns.ca/> and click on "Museum Events."

Fundy Geological Museum

Ken Adams

adamskd@gov.ns.ca

In the October 2003 Newsletter, the Fundy Geological Museum noted that work on the its expansion plans was ongoing. Cantwell and Company, in association with Communication Design Group and Anwyll Fogo Architects, was engaged to prepare a Feasibility Assessment and Business Plan for the Cumberland Regional Economic Development Association and the Board of Directors of the Cumberland Geological Society. Sessions have been held with Museum staff, Board members and key stakeholders, including the Nova Scotia Department of Tourism, Culture and Heritage and the Nova Scotia Museum. At this time, a draft report of the Feasibility Assessment and

preliminary graphics and floor plans for an expanded facility have been prepared. The assessment of the current site resulted in a number of recommendations, including the revitalization of the existing geological and paleontological exhibits, proposed plans for a new Bay of Fundy Discovery Centre gallery, larger collection storage, an enhanced multi-media orientation theatre, a lapidary laboratory, relocation of the gift shop and a larger and flexible programming space. AGS members are invited to visit the museum this summer to view the proposed plans.

Summer Programs and Events

The Museum will offer the following programs and events this summer:

Museum Weekend – June 12 and 13
Mineral and Fossil Day Packages – Tuesday through Sunday in July and August

Dino Daze – July 18
Nova Scotia's Gem and Mineral Show – August 20 through 22

The Museum will also continue its Time Walks on Saturdays throughout July and August. A number of these are part of the "Parks are for People" program and are offered in partnership with the Cape Chignecto and Five Islands provincial parks. Time Walk locations and dates are:

Wasson Bluff Special Place – June 12, August 7 and August 28
Thomas Cove, Economy Falls – July 3
Clark Head – July 10
Spicers Cove, Cape Chignecto Provincial Park – July 11
Wards Falls – July 17
Joggins Fossil Cliffs – July 24
Red Rocks - McGahey Brook, Cape Chignecto Provincial Park – July 25
Economy Falls – July 31
Kirk Hill - Newville Lake – August 14
Nova Scotia Mineral and Gem Show Walks – August 20 through 22
West Bay – August 21
Five Islands Provincial Park – August 22

The Museum is currently hosting two exhibits based on Nova Scotia's fossils. "The Trace Fossil Mystery", created by the Nova Scotia Museum of Natural History, explores how some of Nova Scotia's former inhabitants left clues to their habits and life styles. Don Brown, a taxidermist from Oxford, Nova Scotia, has used his knowledge of modern animals to recreate a series of dinosaur replicas. Museum staff will also be presenting an exhibit on the use of aboiteau and dykes to change habitats along the Bay of Fundy shoreline over the past 400 years.

For additional information contact the Fundy Geological Museum by telephone at 1-902-254-3814, by e-mail at fundygeo@gov.ns.ca or visit "Check Us Out" at <http://fundygeo.museum.gov.ns.ca>.

Nova Scotia Mineral and Gem Show

Mineral and fossil enthusiasts from around the world have known our secret for years. Join us on the third weekend in August for the only show of its kind east of Montreal. Formerly known as the Rock Hound Round-Up, the Nova Scotia Mineral and Gem Show brings together gem, fossil and mineral enthusiasts to participate in a weekend of walks, talks, demonstrations, exhibits and opportunities to purchase lapidary, craft and beading supplies.

Museum Laboratory

Preparation of several prosauropod specimens continues to be carried out in the laboratory. You can follow the progress of this work on the Museum's web site at:

<http://fundygeo.museum.gov.ns.ca>

**GEOLOGICAL ASSOCIATION
OF CANADA, NEWFOUNDLAND
SECTION**

Andy Kerr

akr@zeppo.geosurv.gov.nf.ca

The dates and destination area for the 2004 Fall Field Trip have now been set, so mark your calendars!

The trip will run from Thursday, September 30th to Monday, October 4th. Departure will either be on the afternoon of September 30th, with a stop overnight in central Newfoundland, or on the morning of October 1st. The destination is western White Bay (Sops Arm, Jacksons Arm and Coney Arm and surrounding areas). This is an area of wonderful rugged scenery and fascinating geology, and it has a long history of exploration for gold. It includes one of the first gold mines in Newfoundland and is currently under active exploration for "Carlin-type" gold deposits hosted by sedimentary rocks. The trip will mostly focus upon the Paleozoic stratigraphy and structure, and gold mineralization hosted by both Precambrian and Paleozoic rocks. We hope to also include some interesting sites related to Quaternary history and geological hazards.

The Field Trip is still in the planning stage, and the exact details of itinerary and leaders have yet to be worked out. The cost for the trip has also not yet been set, but we hope to provide this 3-day excursion at an attractive price, hopefully with a discount for Memorial University student participants. The maximum number of participants is about 35 people.

For further information over the summer, check the GAC Newfoundland website <http://gac.esd.mun.ca/nl/nfsection.htm> or contact Andrew Kerr at akr@zeppo.geosurv.gov.nf.ca. Further information will be circulated as it becomes available.

Coming Events

Nova Scotia Mineral and Gem Show. Lion's Recreational Center, Western Ave., Parrsboro, Nova Scotia, August 20 – 22, 2004. For information, visit the Fundy Geological Museum's website at <http://fundygeo.museum.gov.ns.ca>.

GAC Newfoundland Section Fall Field Trip. September 30 – October 4, 2005. For information, see the article on this page.

52nd Atlantic Universities Geological Conference. Acadia University, Wolfville, Nova Scotia, October 28 – 30, 2004. For information, visit the conference website at <http://ace.acadiau.ca/science/geol/augc2004>.

Mining Matters for Nova Scotia 2005. Westin Nova Scotian Hotel, Halifax, Nova Scotia, November 1 – 2, 2004. For information, contact Mike MacDonald at mamacdon@gov.ns.ca.

Review of Activities, Geological Survey of Newfoundland and Labrador, Newfoundland Department of Natural Resources, and Fall Meeting, Newfoundland Branch, CIM. Delta St. John's Hotel, St. John's, Newfoundland, November 4 – 6, 2004. For information, visit the department's website at <http://www.gov.nf.ca/mines&en/geosurvey>.

Review of Activities 2004, Geological Surveys Branch, New Brunswick Department of Natural Resources. Delta Fredericton Hotel, Fredericton, New Brunswick, November 7 – 9, 2004. For information, visit the department's website at <http://www.gnb.ca/0078/minerals/>.

Atlantic Geoscience Society 2005 Colloquium and Annual Meeting. Saint John Trade and Convention Centre and Hilton Hotel, Saint John, New Brunswick, February 4 – 6, 2005. For information, visit the society's website at <http://is.dal.ca/~walla/ags/ags.htm>.

Halifax 2005. Joint meeting of the Geological Association of Canada, Mineralogical Association of Canada, Canadian Society of Petroleum Geologists and Canadian Society of Soil Science. Dalhousie University, Halifax, Nova Scotia, May 15 – 18, 2005. For information, visit the conference website at <http://www.halifax2005.ca>.