

ATLANTIC GEOSCIENCE SOCIETY

NEWSLETTER

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AGS COLLOQUIUM

The Atlantic Geoscience Society Colloquium on Current Research in the Atlantic Region will be held at the Old Orchard Inn, Wolfville, Nova Scotia, on 6th and 7th February, 1998. A full slate of papers and posters will be held on the Friday night and all day Saturday, and will be preceded by a site visit to the College of Geographic Sciences (Lawrencetown) or a short course-workshop on Recent Advances in Dating Methods, in which Peter Reynolds and Keith Taylor will reveal the latest developments from the $^{40}\text{Ar}/^{39}\text{Ar}$ lab at Dalhousie University, and Dorothy Godfrey-Smith will display the wares of thermoluminescence dating. The short course-workshop will be held at Dalhousie University, on 6th February. For any inquiries, please contact Rob Raeside at raeside@acadiu.ca or telephone 902-585-1323.

The Old Orchard Inn

The Old Orchard Inn is conveniently located south of Exit 11 on Highway 101, about 2 km west of Wolfville. A block of rooms has been reserved for participants in the conference - be sure to mention you are booking for the Atlantic Geoscience Society conference, as this will give you lower rates, and will save us money on meeting-room rentals. Rooms in the block will be held only until 23rd January. Typical room rates (per night) are \$65 (single), \$70 (double), +\$8 per additional person, + taxes. Call 1-800-561-8090 or 902-542-5751 for reservations. The Old Orchard Inn provides comfortable accommodation, with an enclosed all-season swimming pool, cross country ski trails, and an outdoor skating rink. A variety of nightly entertainment is featured for your dancing or listening pleasure.

Quaternary Geochronology:

A WORKSHOP on the Theory and Application of Luminescence, Fission Track and Argon Dating Methods. .

The Thermally and Optically Stimulated Luminescence Laboratory at Dalhousie was developed for the study of radiation-dependent luminescence properties of minerals. The laboratory contains the instrumentation needed to carry out the three geochronological techniques based on radiation dosimetry:

1. optical dating, also known as optically stimulated luminescence (OSL)
2. thermoluminescence (TL)
3. electron spin resonance (ESR)

Each of these techniques measures the time since a mineral was last exposed to a "clock-resetting" event. This could be an exposure to sunlight, or to a combination of heat and pressure. Two recent projects of particular relevance to Nova Scotia are:

- i. the study of the two subfossil mastodons discovered at East Milford
- ii. the study of ceramics from the Archaic archaeological site at St. Croix.

The Fission Track Research Laboratory at Dalhousie is equipped to do fission track dating, and fission-track length analysis in apatite. Fission track is a technique suitable for dating certain minerals and natural or man-made glasses of any age provided they contain sufficient uranium. Fission decay of the trace uranium (^{238}U) produces linear damage zones in the solid (fission tracks) that can be made visible by etching, and counted under a microscope to determine geological age. Fission track length analysis of apatite is a tool developed mainly for use by the oil industry. In this Workshop the principles and limitations of fission track dating of apatite and young volcanic glasses will be discussed.

The Argon Isotope Research Laboratory contains instrumentation to measure the isotopic composition of the small amounts of argon gas re-released from single mineral grains. Two argon extraction furnaces are in operation:

- i. a Nd-YAG 'laser probe'
- ii. a Nd-YAG 'laser probe'.

The laser-probe is used in two modes:

- i. to heat small individual grains under an expanded beam
- ii. to heat selected material in a geologic thick section using a tightly-focused beam.

In this Workshop, the application and limitations of this method in the dating of very young rocks (ie. with ages < ca. 300 ka) will be discussed.

Visit to the College of Geographic Sciences, Lawrencetown

On Friday, February 6, the College of Geographic Sciences (CoGS) will hold a special open house for those interested in the geological applications of their work. Presentations will be given on the role of CoGS, and some of the research work done there. Tours will be given, to examine student work in progress and teaching equipment available. A bus will leave from Acadia at 9:45 a.m., stopping at the Old Orchard Inn en route. The visit will run from 10:45 a.m. to 15:30 p.m.; lunch is available in the college cafeteria. The bus will return from CoGS at 15:30 p.m., dropping off people at either the Old Orchard Inn or Acadia campus.

The College of Geographic Sciences is one of the leading institutions in the field of geomatics, specifically the applications of Remote Sensing, Geographic Information Systems (GIS) and Global Positional Systems (GPS). The college offers both diploma programs for students directly out of high school as well as advanced diploma programs for students with university degrees (Remote Sensing and GIS programs). Students enrolled in these post-graduate programs come from a variety of backgrounds including geography, forestry, biology and geology to name a few.

This visit is designed to show students how satellite imagery and computer based mapping techniques in a GIS can be used in the field of geoscience applications. Data from Canada's first Earth observation satellite, RADARSAT, is processed and interpreted in terms of it's geological content by the students. Other aspects of the tour will include map making (cartography) and planning, and the latest surveying techniques.

AWARDS COMMITTEE REPORT TO THE AGS EXECUTIVE AND COUNCIL PROPOSED BY-LAWS CHANGES

Peter Wallace
Georgia Pe-Piper
Mike Parkhill
Reg Wilson

Proposed Change to the By-Laws of the AGS pertaining to the Products and Publications Committees

The following proposed changes to the By-Laws is recommended to allow for the formation of Product and Publication Committees. The Society distributes grant and loan monies and a Products Committee would ensure a fair and equitable process as well as continuity over the years. It would make recommendations to the Executive and Council only, it cannot distribute monies.

The Publications Committee or person would look after marketing and listing of AGS products and their current status. Presently the AGS has 15 special publications and 4 videos. These are currently sold through the treasurer and would change to be sold through the Publications Committee/ person. Again this would allow a more consistent tracking of the current status of publications.

Add Articles 48 & 49 to the By-Laws

48. The Society shall have a Products Committee composed of at least 5 members of good standing to review proposals for loans and/or grants requested of the Society. The review process shall ensure that the proposals include product planning, copyright, royalties, financing, marketing, sales and distribution where necessary as outlined in the Appendix "Duties of Officers and Standing Committees of the AGS". The committee would report directly to the Executive and Council with a recommendation of acceptance or rejection of the proposal.

49. The Society shall have a Publication Committee composed of one or more members of good standing to maintain and market publications of the Society as outlined in the Appendix "Duties of Officers and Standing Committees of the AGS".

AGS Distinguished Scientist - Gesner Medal and AGS Distinguished Service Awards

Add Article 50 to the By-Laws

1. The President shall receive, on an annual basis by December 1st of any year, nominations (see sec. 8) for the Gesner Medal and the Distinguished Service Award.

2. The Vice-President shall appoint a panel of not less than 5 judges to evaluate the nominees for the awards. After the Vice-President appoints the panel, he or she receives the nominations from the President, and mails them to the judges.
3. The Vice-President shall ask the judges if they can impartially judge all the candidates and if not to withdraw their appointment from the process.
4. Judges will rank the candidates in order of preference, and convey their rankings to the Vice-President. The latter will determine the average ranking of each candidate, and the candidate with the highest ranking will receive the award.
5. The papers given to the judges will be returned to the Vice-President after the ranking and will be kept for three years from the date of their first submission. After three years they will be destroyed. All files and nominations are confidential.
6. In the event of a tie vote, the President shall appoint an impartial arbitrator to cast a deciding vote.
7. Nominations are to stand for a 3-year period, after which a candidate must be renominated in order to be reconsidered for an award.
8. A nomination shall include a statement of between 500 - 1,000 words succinctly explaining how the candidate meets the selection criteria and supporting documentation from the nominator and a letter of support from the seconder. The supporting documentation could include items such as:
 - a. Selected bibliography (a complete bibliography including abstracts is not needed)
 - b. Documentation of impact of work
 - c. Supporting letters from referees other than the nominator and the seconder.
9. The nominator and seconder shall be members in good standing of the Atlantic Geoscience Society.
10. Regardless of the number of nominations received no award need necessarily be given in any one year, those nominations can be set aside to the following year. The candidate's 3-year term of eligibility shall be part of this year of no award.
11. Award winners shall be advised in advance of the Annual Meeting, so that arrangements may be made for acceptance of the award.
12. In addition to the award presentation the winners' names and years will be placed on plaques that will be displayed annually at conferences and other appropriate events. The Vice-President will be responsible for the plaques and their display.
13. The criteria for the "Distinguished Scientist Award - Gesner Medal" are as follows:
 - i. award made to a person who has, through their own efforts (maps, publications, memoirs, etc.) developed and promoted the advancement of geoscience in the Atlantic Region in any field of geology
 - ii. the contribution of the person should be of large enough scope to have made an impact beyond the immediate Atlantic Region
 - iii. the person does not have to reside in the Atlantic Region or be a member of the Atlantic Geoscience Society
 - iv. the person must still be alive and active in geoscientific research, although not necessarily full time in the Atlantic Region.
14. The "Distinguished Service Award" shall be given "in recognition of exceptional and altruistic contributions to the Atlantic Geoscience Society over a long period of time". There are no specific criteria other than this.

EXECUTIVE AND COUNCIL NOMINATIONS ATLANTIC GEOSCIENCE SOCIETY 1997 - 1998

The following are the executive and nominated councillors for AGS 1997-1998. Nominations and volunteers will be accepted until the AGS Colloquium and from the floor during the annual general meeting.

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If you or any of your colleagues are not attending the Annual Meeting in Wolfville, it is time to renew AGS memberships. At \$10.00 (professional) and \$5.00 (student) it is still a "great deal". Click here to download a membership form.. Please make cheques payable to the Atlantic Geoscience Society and mail to: Ken Howells, 27 John Cross Drive, Dartmouth, Nova Scotia, B2W 1X1.

TSOP - Halifax'98

Joint Annual Meeting - July 26 - 30, 1998

**The Society for Organic Petrology (TSOP)
Canadian Society for Coal Science and Organic Petrology (CSCOP)**



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