



NEWSLETTER OF THE CANADIAN GEOMORPHOLOGY RESEARCH GROUP

BULLETIN DU GROUPE CANADIEN DE RECHERCHE EN GEOMORPHOLOGIE

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PRESIDENT'S MESSAGE - MOT DU PRÉSIDENT

It's my pleasure, as President of Canadian Geomorphology Research Group, to report on the state-of-the-nation (that is the state of the CGRG nation, not Canada!). 1998 was a busy year for CGRG. In the last newsletter, I mentioned our accomplishments during the first half of 1998, but let me bring you up-to-date on what's happened since then.

This summer, Canadian Geomorphology Research Group provided a grant of \$1000 to Dr. Dan Smith to improve the CGRG (CANGEORG) listserver, which is operated out of the University of Victoria. This money matched a grant by the Canadian Geological Foundation, allowing Dan to hire someone to expand and add abstracts to the bibliography. The listserver provides information on CGRG activities and maintains a bibliography of Canadian geomorphological, Quaternary, and environmental geoscience publications, which now has over 10,000 entries. More information on the listserver and bibliography are contained in this newsletter. We encourage all CGRG members to subscribe to CANGEORG, since this an effective way of maintaining communication among Canadian geomorphologists.

Many of you will have seen the report by Professor Michael Church on professional registration of earth scientists in Canada. Because of the importance of professional registration to geomorphologists, CGRG was planning to mail a copy of the report to each of its members. Although we can provide you with a

paper copy if you would like one, the report can be accessed on the web. The address and more information are included elsewhere in the newsletter.

CGRG's first publication – a manual on geophysical techniques used in geomorphic research – will be released as a Geological Survey of Canada (GSC) Open File report later this winter or early in the spring. The report is an expanded and improved version of a manual that Bob Gilbert and his colleagues prepared for the CGRG workshop at Queen's University in 1997. CGRG members will be able to obtain the manual at a reduced cost. I will provide details on the listserver when the report is available, but if you would like to have a copy, e-mail Lynda Dredge (CGRG's Secretary-Treasurer) and she will add your name to the list.

Canadian Geomorphology 2000, a collection of papers showcasing recent, international-calibre research by Canadian geomorphologists, is being prepared for publication in a special issue of the journal *Geomorphology*. The papers are being assembled and edited by Olav Slaymaker and me. The issue will be in print by the 2000 GeoCanada meeting in Calgary .

Upcoming activities

CGRG will sponsor a two-day workshop on *Geophysical Techniques in Geomorphic Research* in Vancouver in March 1999. The workshop is being organized by Dr. Michael C. Roberts, Simon Fraser

University. See the announcement in this newsletter for details and registration information.

CGRG will hold its 1999 Annual General Meeting at the CANQUA conference in Calgary in August. Field trips of interest to geomorphologists are being offered to the Rockies and the western Plains. A CGRG- and GSC-sponsored special session, entitled *Geomorphic Response to Climate Variability and Extreme Climate Events: Records, Processes and Models from the Late Quaternary to the 21st Century*, is being organized by Steve Wolfe and Christian Bégin. Details on the meeting, field trips, and special sessions are provided in the flyer accompanying this newsletter, or can be obtained from Don Lemmen, the on-site organizer, by E-mailing to dlemmen@nrcan.gc.ca. We expect to have a strong contingent of CGRG members at this meeting.

Our second J.R. Mackay Award will be made at the CANQUA meeting in Calgary this fall. Nominations are still open – we encourage members to nominate deserving young scientists who have made a significant contribution to geomorphology.

CGRG is also involved in several other approaching meetings, including the CAG Annual Meeting in Lethbridge (June 1999), GeoCanada 2000 in Calgary (May 2000), and AQQUA in Montreal (September 2000, CGRG's Annual General Meeting). We invite members to organize geomorphology sessions and field trips for GeoCanada 2000 and the AQQUA meeting.

I will close, as I did in the June 1998 newsletter, by inviting your comments. The Executive hopes that you feel you're getting value for the \$15 you invest in CGRG each year. Is there something that CGRG is not doing that you would like to see it do? Would you be willing to organize a regional workshop on some aspect of geomorphology? (If so, we can provide some financial support to help you.) Do you have any good ideas for a session at one of our national meetings? (If so, we can be your advocate.)

See you at CANQUA in Calgary!

Mot du président

C'est avec plaisir que je fais mon rapport à la nation (la nation du GCRG et non le Canada). L'année 1998 en fut une bien remplie pour le GCRG. J'ai

énuméré dans la dernière édition du bulletin nos différentes réalisations pour la première moitié de l'année 1998 et j'aimerais faire de même pour la deuxième.

Cet été le GCRG a remis une subvention de 1000\$ au Dr Dan Smith afin qu'il poursuive son bon travail de modérateur au forum de discussion du GCRG (CANGEORG). Ce montant s'ajoute à une autre subvention de 1000\$, octroyée par le "Canadian Geological Foundation", pour l'embauche d'un assistant qui a contribué à la mise à jour de la liste bibliographique du GCRG. Le forum de discussion ainsi que la liste bibliographique sont des outils permettant la promotion de la géomorphologie, du Quaternaire et des géosciences environnementales au Canada. La liste bibliographique compte présentement plus de 10 000 titres et elle est accessible via le site internet du GCRG (de plus amples informations dans ce bulletin). Nous encourageons fortement les membres du GCRG à s'inscrire au CANGEORG puisqu'il permet une diffusion rapide et efficace de messages dans la communauté géomorphologique canadienne.

Plusieurs d'entre vous avez sûrement déjà vu le rapport du Professeur Michael Church sur l'accréditation professionnelle en sciences de la terre au Canada. Compte tenu de l'importance des implications pour les géomorphologues, le GCRG voulait en distribuer une copie à chacun de ses membres, mais comme le texte intégral est disponible sur le web, on vous invite donc à le consulter via internet à l'adresse suivante: <http://www.science.uwaterloo.ca/earth/cgc/church2.html>.

La première publication du GCRG - un manuel sur les techniques géophysiques utilisées en géomorphologie - paraîtra au printemps sous forme de dossier public de la CGC. Le manuel est une version étendue et améliorée du manuel préparé par Bob Gilbert et ses collaborateurs pour la journée technique du GCRG qui a eu lieu à l'Université Queen's en 1997. Un rabais sera accordé aux membres et pour commander, veuillez contacter Lynda Dredge (secrétaire-trésorière) à l'adresse électronique suivante: ldredge@nrcan.gc.ca. Le reste des informations vous sera communiqué bientôt via le forum de discussion CANGEORG.

Canadian Geomorphology 2000, un recueil d'articles présentant des travaux de recherche récents, de

calibre international, effectués par des géomorphologues canadiens, est en préparation et sera publié en tant qu'un numéro spécial de la revue *Geomorphology*. Le travail d'édition est assuré par Olav Slaymaker et moi. Le volume sera envoyé à l'impression suite à la conférence GeoCanada 2000 à Calgary.

Activités à venir

Le GCRG organisera un autre atelier sur les techniques géophysiques en géomorphologie à Vancouver en mars 1999, sous la responsabilité du Dr Michael C. Roberts de l'Université Simon Fraser. Veuillez consulter l'annonce à cet effet dans le bulletin pour obtenir les détails de l'inscription.

Le GCRG tiendra sa rencontre annuelle ainsi que son assemblée générale lors du congrès de la CANQUA à Calgary en août prochain. Pour l'occasion, des excursions dans les Rocheuses et les Prairies de l'Ouest canadien seront offertes aux participants. De plus, une session spéciale intitulée '*Geomorphic Response to Climate Variability and Extreme Climate Events: Records, Processes, and Models from the Late Quaternary to the 21st Century*', sera organisée conjointement par le GCRG et la CGC sous la responsabilité de Steve Wolfe et Christian Bégin. Pour de plus amples informations sur la session spéciale, veuillez consulter l'annonce à cet effet dans le bulletin et pour le congrès en général, veuillez contacter Don

Lemmen à dlemmen@nrcan.gc.ca. Nous souhaitons une forte participation de la part des membres.

Le deuxième récipiendaire du prix J. R. Mackay sera annoncé lors de la conférence de la CANQUA à Calgary. La période de mise en candidature est toujours en cours. Nous encourageons fortement les membres à soumettre la candidature de jeunes chercheurs qui ont apporté une contribution significative à la géomorphologie.

Le GCRG sera aussi impliqué dans plusieurs activités à venir comme : la réunion annuelle de ACG à Lethbridge (juin 1999), GeoCanada 2000 à Calgary (mai 2000) et le congrès de l'AQQUA à Montréal (septembre 2000)(Assemblée générale du GCRG). Encore une fois, nous invitons les membres à participer en grand nombre et à soumettre des propositions de sessions spéciales et d'excursions pour les congrès GeoCanada 2000 et l'AQQUA.

Comme l'an dernier, je termine en vous invitant à nous faire parvenir vos commentaires sur l'une ou l'autre des activités du GCRG. Le comité exécutif espère que vous obtenez un bon retour sur votre abonnement au GCRG. Quelque chose vous incommode? Voulez-vous organiser un événement régional ou une session lors des rencontres nationales? Pourquoi ne pas recruter un nouveau membre?

Au plaisir de vous voir à la CANQUA à Calgary

John J. Clague

SECRETARY-TREASURER'S REPORT

Membership

At the end of December CGRG had 150 members, of which 84 had joined through GAC, 37 were from CAG, 10 joined through CANQUA, 6 through AQQUA, and 23 directly from CGRG. **Renewals are due for 1999, so if you have not registered through an affiliated group, please send in your dues using the form at the end of the newsletter.**

1998 Financial statement

Although expenses exceeded revenues by about \$594 this year, the final bank balance showed a surplus of \$2858.20, due to a positive balance from 1997. Revenues mainly from dues, but also from interest on a GIC, totalled \$2209.83. Expenses related to a

\$1k grant to the listserver/bibliography, the J.R. Mackay award, production of the newsletters, and minor administrative costs were \$2803.71. It should be noted that this year's statement does not include the US\$500 per year fee for affiliation with the IAG for 1997 and 1998, for which we have not yet been billed. On Dec 31, 1998, CGRG held assets of \$17,858.20, of which \$15k was in the form of a GIC. This sum reflects to a large extent the profits from an IAG conference in 1993, which provided seed funds to CGRG. On average, annual revenues and expenses balance out.

Membership E-mail addresses

To expediate announcements and correspondence with our membership, CGRG would like to e-mail the membership occasionally. However, we have only the e-mail addresses of about half of the membership. To avoid missing future CGRG announcements, please send your e-mail address to ldredge@gsc.nrcan.gc.ca. To check whether we have

your e-mail address, see the address label on the envelope that contained this newsletter. If your e-mail address does not appear with your mailing address, we do not have it.

Lynda Dredge

J.ROSS MACKAY AWARD: CALL FOR NOMINATIONS

The J.Ross Mackay Award is the CGRG's principal citation for excellence in geomorphic research. It is awarded annually in recognition of an outstanding contribution by a young geomorphologist. Specific details and the rubrics of the award are available on the CGRG's website (CANGEORG). The 1999 Award will be presented at the joint CANQUA-CGRG meeting, scheduled for Calgary in August. The recipient will be invited to present a lecture to the CGRG at the meeting, as part of the formal programme.

Nominations for the Award should be forwarded to the The J.Ross Mackay Committee Chair, Dr Chris Burn, Department of Geography, Carleton University, Ottawa ON K1S 5B6. Nominations

comprise a letter of recommendation, signed by two (2) members of CGRG, a copy of the cited contribution, and a c.v. of the nominee. Incomplete nominations will be returned to the sender. Email nominations cannot carry signatures, and would therefore be incomplete. The 1998 CGRG AGM decided that nominations would remain current for two (2) years. New nominations must be received by the Committee Chair on or before 15 February 1999.

The 1999 Award Committee is: Chris Burn (Past-President, CGRG; Chair); Jan Aylsworth; Michael Bovis; Mary-Louise Byrne; Serge Occhietti.

Chris Burn

NEW CGRG PUBLICATION: GEOPHYSICAL TECHNIQUES

CGRG's first publication, a "**Handbook of Geophysical Techniques Applicable in Geomorphic Research**", will soon be available as a Geological Survey of Canada Open File Report. The handbook is an expanded version of a document provided to participants at a workshop at Queen's University in the fall of 1997.

The volume comprises an introduction by the compiler, Bob Gilbert, and five chapters summarizing different geophysical techniques: (1) electromagnetic methods (Christophe Hyde and Larry Dyke); (2) land-based shallow seismic methods (Susan Pullan and James Hunter); (3) borehole geophysical logging methods (James Hunter, Marten Douma, and Ron Good); (4) ground penetrating radar (Stephen Robinson and Yves Michaud); and (5) subaquatic acoustic techniques (Robert Gilbert).

The handbook was prepared with geomorphologists in mind – it provides an introduction to geophysical techniques that are useful in research on earth-surface processes and landforms. Further, it was prepared on the premise that many earth scientists have not received formal training in geophysics and so may be unfamiliar with the techniques and instruments that are available to address the questions of their research. For this reason, the contributions focus on first principles and are rich with illustrations and examples of various applications. Information is provided on how to conduct surveys and how to interpret the results. Each technique is relatively easy to learn and inexpensive to use; most are well suited to small field parties operating with limited logistical support.

At the time this newsletter was printed, the price of the handbook had not yet been set by the Geological Survey of Canada. CGRG members, however, will

be able to obtain a copy at a 25% discount. Instructions for ordering the handbook will be

provided in the next newsletter and on CGRG's listserver.

INTERNET RESOURCES OF THE CANADIAN GEOMORPHOLOGY RESEARCH GROUP (CGRG)

Soon after its inception in 1993, the CGRG recognized that the internet provided an important venue for "fostering and promoting the research, teaching and application of geomorphology in Canada". In the ensuing five years the CGRG initiated both an email listserver and a URL homepage. The listserver has proven to be a valuable mechanism for the rapid dissemination of current and topical information to the Canadian geomorphological community. The CGRG homepage was developed to offer global access to a number of resources, including *Recent Publications in Canadian Geomorphology* and the *CGRG Internet Bibliography of Canadian Geomorphology*. The latter resource continues to expand and, thanks to grants from the Canadian Geological Foundation (CGF) and CGRG members, was significantly expanded in late-1998.

A) CANGEORG is the CGRG email listserver. CANGEORG is a moderated listserver that has a membership of ca. 200. While the majority of CANGEORG members have Canadian addresses, CANGEORG postings are received around the globe. CANGEORG is used to post notices of upcoming conferences, job opportunities, CGRG business and awards, as well as for distribution of the internet publication *Recent Publications in Canadian Geomorphology*. Over 100 editions of the latter resource have been distributed over the past three years. CGRG members are encouraged to maintain a CANGEORG subscription and thereby receive updated postings of CGRG activities. Subscription details are available at: <http://office.geog.uvic.ca/dept/cgrg/cangeorg.htm>

B) Recent Publications in Canadian Geomorphology is a core section of the CGRG homepage. The purpose of this page is to provide both a permanent record of the companion CANGEORG posting and to introduce the global internet community to the activities of Canadian geomorphologists. The page also provides access to the publication abstracts. Access to Recent

Publications in Canadian Geomorphology is via: <http://office.geog.uvic.ca/dept/cgrg/list.htm>

C) CGRG Internet Bibliography of Canadian Geomorphology is a searchable database containing over 11,000 records dedicated to identifying publications describing the practice and application of geomorphology in Canada. Recent changes to the bibliography include the development of a more comprehensive search engine and the inclusion of additional publication abstracts. Grants from the CGF and the CGRG were used to hire an undergraduate student who spent approximately 250 hours expanding the abstract component of the bibliography. As a consequence of this opportunity, most geomorphological papers from journals such as the *Canadian Journal of Earth Sciences*, *Geomorphology*, *Quaternary Research*, and *Arctic and Alpine Research* now have an associated abstract. As these abstracts are searchable via the 'keyword', the CGRG Internet Bibliography has become a robust and powerful search engine that has established library links at a growing number of Canadian academic institutions including Brock University, Concordia University, Dalhousie University, Memorial University, Queen's University, Simon Fraser University, University of Alberta, University of British Columbia, University of Guelph, University of Manitoba, University of Ottawa, University of Waterloo, and the University of Victoria (see: <http://office.geog.uvic.ca/dept/cgrg/who.htm>). The bibliography continues to be updated weekly, largely due to the inclusion of the citations that are presented in *Recent Publications in Canadian Geomorphology*. To search the bibliography go to: <http://office.geog.uvic.ca/cgi-bin/cgrg/search.cgi>

Dan Smith

UPDATE ON PROFESSIONAL REGISTRATION: REPORTS FROM THE CANADIAN GEOSCIENCE COUNCIL

“Think globally, learn locally: broadening perspectives of the Earth” is a report written by Michael Church (UBC), a well-known Canadian geomorphologist. Commissioned and published by the Canadian Geoscience Council (CGC), the overall purpose of the report is to examine the possible emerging clash between the prescribed academic credentials of professional registration and the requirements of universities to broadening their curriculums under the “Earth System Science” concept (see the previous CGC report “Future challenges and trends in the geosciences in Canada” by Barnes et al.). The Church report is a detailed, yet reasonably succinct, analysis of the problem. It provides a context to the problem, identifies the various stakeholders, reviews the conflicting demands on the earth science curriculum, provides the “elements of a solution”, and makes general recommendations about what needs to be done and how to do it. The report will interest all Canadian geomorphologists whether in academia, private sector or government. A copy of the report can be viewed at the CGC website and the URL is: <http://www.science.uwaterloo.ca/earth/cgc/church2.h>

[tml](#). There is no downloadable copy *per se*, but a hard copy of each chapter can be printed out directly from the screen.

Directly related to the establishment of professional registration in all provinces, is a second report at the CGC website. This is by the Canadian Geoscience Standards Board and contains *draft recommendations* for knowledge and work experience for the practice of professional geoscience in Canada. The recommendations are intended for use by the constituent associations of the Canadian Council of Professional Geoscientists, i.e., the professional bodies that register qualified persons practising professional geoscience in Canada. Comments on the contents of this draft report are requested by the CGC. CGRG strongly urges anyone or organization with an interest or concern over the academic credentials required for professional registration to read this report and send comments to the CGC. The URL for the report is: <http://www.ccpge.ca/recstandards.htm>.

Greg Brooks

SIMON FRASER WORKSHOP: GEOPHYSICAL TECHNIQUES

CGRG is sponsoring a two-day workshop on “**Geophysical Techniques in Geomorphic Research**”, to be held in Vancouver on March 20th and 21st 1999. The emphasis of the workshop will be on ground-penetrating radar, high-resolution seismic surveying, shallow drilling, and geophysical logging of boreholes.

Saturday, March 20th. The morning session will be a series of talks on techniques and their applications; it will be held at the Harbour Centre Campus of Simon Fraser University. The afternoon session will be field demonstrations of techniques, conducted on the Fraser River delta.

Sunday, March 21st. Field session on the Fraser delta.

Registration:

Register before March 12, 1999

- \$50.00 for CGRG members, \$65.00 for non-members*
- \$25.00 for students who are CGRG members, \$40.00 for student non-members*

*Includes one-year membership in CGRG.

Registration includes instructional materials, coffee, and lunch on Sunday.

To register for the workshop please send a cheque payable to the Canadian Geomorphology Research Group, along with your name, postal and e-mail addresses, telephone and fax numbers, to:

Michael C. Roberts
e-mail: mroberts@sfu.ca

This announcement is posted on CGRG's
website

Enrollment is limited to 25.

NEWS FROM THE INTERNATIONAL ASSOCIATION OF GEOMORPHOLOGISTS

At the Executive meeting in Lisbon (August 30, 1998), it was unanimously agreed that Denise Reed (University of New Orleans; Executive Member without Portfolio) and Bernard Dumas (University of Paris XII; Treasurer) should swap positions. Denise Reed is now therefore the new IAG Treasurer. Delays which have been experienced in invoicing of national groups should now be resolved. Also, at that same Executive meeting, the following sub-committees were established: (A) Expanding the IAG Financial Base (Chair: Denise Reed, UNO); (B) Publication Policy (Chair: Andrew Goudie, Oxford); (C) International Schools of Geomorphology (Chair: Mario Panizza, Modena) and (D) the Constitution (Chair: Albert Pissart, Liege).

2. The IAG Regional Conference was confirmed for July 17-21, 1999 in Rio de Janeiro. Additional information is included as a separate announcement.

3. An IAG Thematic Conference, in conjunction with the IGU Congress in Korea, will be held in

Nanjing in August of 2000. The theme will be Geomorphic Processes in Monsoon Influenced Regions.

4. A number of meetings associated with IAG Working Groups have been confirmed. (A) The Geoarcheology WG will meet in the UK in 1999 and in Spain in 2000. (B) The Volcanic Events WG is basing its work on a website: www.itc.nl/ags/volcanic. (C) The Large Rivers WG has a meeting in China in 1999. (D) DOMODIS (Natural hazards assessment) will hold its third meeting in Romania in the Fall of 1999.

5. Finally, our Publications Officer, Christine Embleton-Hamann, has called for reports on progress of national geomorphological groups. Replies can be sent to christine.embleton-hamann@univie.ac.at

Olav Slaymaker

UPCOMING MEETINGS, CALLS FOR PAPERS

CAG LETHBRIDGE, JUNE 1-5, 1999

The 1999 meeting of the Canadian Association of Geographers (CAG) will be held in Lethbridge, Alberta, from June 1-5. CGRG is sponsoring a field trip entitled 'Natural History of Southern Alberta' immediately before the meeting. This trip will be led by Rene Barendregt, John Dormaar, Don Lemmen, and Dave Sauchyn.

The field trip will provide an overview of the natural history of the dry belt in Palliser's triangle, highlighting paleosols, vegetation, land use, and landforms, especially those of erosional, aeolian, and glacial origin. The first day will focus on surficial features at Etzikom and Red Rock coulees, Pakowski Sand Dunes, Milk River Canyon, and Cypress Hills. The second day will provide an opportunity for lively debate concerning the number, extent, and timing of

continental ice sheets, based on visits to sections at Bow Island, Wolf Island, and the fossil-bearing beds at Medicine Hat. There will also be ample opportunity to hear the latest thinking on the role of glacial outburst floods and deformable beds beneath continental ice sheets in shaping the hummocky terrain that forms much of the Quaternary landscape of this region.

This field trip complements a session of IGCP Project 413 titled "Understanding Future Dryland Changes from Past Dynamics", organized by Dave Sauchyn.

Another field trip of interest to geomorphologists, and which is also being run during the CAG meeting, is "Hummocky Terrain at McGregor

Reservoir, South-Central Alberta” (leaders: Mandy Munro-Stasiuk, Darren Sjogren, John Shaw, and Robert Young).

For further information on the field trips, contact Rene Barendregt (barendregt@uleth.ca) or Mandy Munro-Stasiuk (mandyjms@connect.ab.ca)

John Clague

The first circular for the CAG99 annual meeting in Lethbridge may not have reached you yet. You can access all the information by going to <http://home.uleth.ca/~cag99>.

La premiere circulaire/appel de communications du congres annuel de l'ACG est disponible a <http://home.uleth.ca/~cag99>. J'espere que la version française ne provoque pas trop de hilarite!

See you 1st to 5th June in Lethbridge! Visitez Lethbridge du 1er juin au 5 juin 1999! Nous ferons de notre mieux pour assurer une bonne participation de geographes canadiens française: viens,

Robert Rogerson
Coordinator/coordonnateur
rogerson@uleth.ca

IAG CONFERENCE, RIO, JULY 17-22, 1999

The 1999 IAG Regional Conference on Geomorphology will be held in Rio de Janeiro, July 17-22, 1999. The program features invited plenary lectures from internationally recognised experts, round-tables, paper sessions of selected submitted papers, poster sessions and exhibits. One-day field trips around Rio de Janeiro city and several post-conference trips to a variety of interesting geomorphological sites in Brazil are offered. A special symposium on Gully Erosion will be held jointly with the International Geosphere-Biosphere Programme. The 1999 IAG Regional Conference can also be combined with the meeting of the IGU Commission on Geomorphological Response to Environmental Change in Rio de Janeiro in July 9-16, 1999.

Main Topics, Call for Papers, Proceedings:

The Regional Conference will focus on the following major subjects: Fluvial Geomorphology, Tectonics and Landscape Evolution, Coastal Geomorphology, Soils and Geomorphology, Hillslope Geomorphology including a special Symposium on Gully Erosion, Geomorphology Applied to Environmental Planning and Management, Remote Sensing, Geoprocessing and Geomorphological Research, Karst. Authors are invited to submit abstracts with no more than 250 words, in English, on any of the conference topics. They can be sent by mail or by e-mail as an attached file (Word for Windows). Detailed information about how to prepare the abstract can be requested at iag99@igeo.ufrj.br or in the conference home-page. Abstracts must be received by April 1, 1999 and should be accompanied by a completed Registration Form and payment. The abstracts submitted and

accepted for the conference will be published in a special volume, which all registered delegates will receive upon arrival. The local organisation will make efforts to publish special volumes of geoscientific journals with full papers presented during the conference.

Conference Site:

The conference will take place at Hotel Gloria, Rio de Janeiro. It is an old and attractive building located at Praia do Flamengo, very close to the entrance of Guanabara Bay. All the conference activities will be held in its Convention Centre. Hotel Gloria is located very close to many tourist attractions, like the Sugar Loaf, the Corcovado, and the beaches of Copacabana and Ipanema. The local organising committee has made special arrangements with Hotel Gloria, which resulted in very reasonable rates for the participants. For example, individual daily rates will be US \$ 45.00 for double occupancy, including a buffet breakfast service. In order to guarantee these low rates, we strongly suggest that residence accommodations should be booked well in advance. The Second Circular will bring additional information regarding other hotels close to the conference site.

Scientific field trips:

The Post Conference field trips A1 - A5 will be 2 or 3 days long. B1 - B5 are one-day field trips during the conference. Detailed information about the field trips will be available in the Second Circular.

A1 - Gully development and geomorphic aspects of the Pantanal do Mato Grosso and Chapada dos Guimaraes

A2 - Fluvial geomorphology of the Parana River Basin (including Iguacu Falls and Itaipu Dam)

A3 - Coastal geomorphology of Rio de Janeiro State

A4 - Quaternary landscape evolution and tectonic processes along the Paraiba do Sul River Basin (Sao Paulo and Rio de Janeiro State)

A5 - Soil-landscape relationships along the Rio de Janeiro State

B1 - Hillslope erosion and landslides in Petropolis

B2 - Evolution and environmental impacts of the Guanabara Bay

B3 - Hydrological processes and landsliding in the Tijuca Massif

B4 - Geomorphological processes along the Rio de Janeiro coast

B5 - Structural geomorphology of Rio de Janeiro city

Registration:

Advance registration fees must be received before

April 1, 1999, and are US \$ 200 for delegates and US \$ 100 for students. Regular registration fees after this date will be US \$ 250 for delegates and US \$ 150 for students. The local organising committee will try to provide partial financial support to qualified participants. Preference will be given to delegates from developing countries. A Registration Form including accommodation and field trip booking and information on methods of payment are to be found in the First Circular. If it has not reached you please write to the address below.

Contact: IAG 99 - Regional Conf. on Geomorphology, Departamento de Geografia, UFRJ, Ilha do Fundão, Rio de Janeiro, CEP 21941-590, Brazil. Fax: (+55-21)5983280, e-mail: iag99@igeo.ufrj.br or <http://www.ufrj.br/eventos/iag99>

CANQUA 1999, UNIVERSITY OF CALGARY, AUGUST 23-27, 1999

See the brochure enclosed with this newsletter, which lists programmes, field trips, and registration information. This meeting will be the biggest and best CANQUA yet. Be there!

Special Session: Geomorphic Response to Climate Variability and Extreme Climate Events: Records, Processes and Models from the Late Quaternary to the 21st Century

This session is sponsored by the Canadian Geomorphological Research Group and the Geological Survey of Canada. The session will examine linkages between geomorphic processes and climate, drawing upon examples from the deglacial

and postglacial geologic record, as well as from predictive models identifying geomorphic impacts related to climate and climate change. Impacts of extreme climatic events in the historic record, including flooding, storm surges and landsliding, will also be highlighted. Organized by Stephen Wolfe and Christian Bégin, the session will include both oral and poster presentations. Papers from the session will be published in *Géographie physique et Quaternaire*. Those interested in presenting and/or preparing a journal paper, may contact Stephen Wolfe, swolfe@gsc.nrcan.gc.ca.

Steve Wolfe and Christian Bégin

5TH INT'L CONFERENCE ON GEOMORPHOLOGY, TOKYO, JAPAN, AUG 23-28, 2001

The IAG has issued the first circular and call for papers for this meeting, which will be held at Chuo University. The meeting will include papers, posters, workshops, and excursions. Titles may be submitted

on any topic, but there will be special sessions on topics related to rock control, rapid mass movements, geomorphological significance of active faults, volcanic landforms, humid regions processes, global change response, lake sedimentation, and

anthropogenic transformation of the Earth's surface. Other themes can still be suggested. The proceedings of the conference will be published in the Transactions of the JGU.

Thirteen pre- and post-conference field trips related to conference themes are proposed for Japan, and five others will be held in China and Korea. These range in length from 3 to 10 days.

More details about the field trips, conference sessions, and accommodation are available at the ICG website: <http://www.soc.nacsis.ac.jp/jgu/>. The preliminary registration form, available by E-mail at 5icg@aptech.co.jp should be sent in before 31 May 1999.

CALENDAR

1999

February

February 1-5, **American Society of Limnology and Oceanography (ASLO) 1999 Aquatic Sciences Meeting**, Santa Fe, New Mexico. Information: H.S. Lemay, Registration Coordinator and Meeting Manager, ASLO Business Office, 5400 Bosque Boulevard, Suite 680, Waco, Texas 76710-4446, tel. +1-800-929-ASLO (USA), +1-254-399-9635, fax +1-254-776-3767, e-mail business@aslo.org, website www.aslo.org/santafe99.

February 13-18, **Glacial-Interglacial Sea Level Changes in Four Dimensions: Quaternary Sea Levels, Climate Change & Crustal Dynamics**, Algarve, Portugal. Information: Josip Hendekovic, European Science Foundation, 1 quai Lezay-Marnesia, 67080 Strasbourg Cedex, France, tel. +33-3-88-76-71, fax +33-3-88-36-69-87, e-mail euroesco@esf.org, website <http://www.esf.org/euresco>.

March

March 1-3, **13th International Conference and Workshops on Applied Geologic Remote Sensing: Integrated Solutions for Real-World Problems**, Vancouver, B.C. Information: ERIM Geologic Conferences, Box 134008, Ann Arbor, Michigan 48113-4008, tel. +1-734-9941200, ext. 3234, fax +1-734-994-5123, e-mail wallman@erim.int.com, website <http://www.erim-int.com/CONF/conf.html>.

March 14-17, **Symposium on the Application of Geophysics to Engineering and Environmental Problems**, Oakland, California. Information: SAGEEP, 7632 E. Costilla Ave., Englewood,

April

Colorado 80112, tel. +1-303-771-2000, fax +1-303-843-6232, website <http://www.sageep.com>.

April 10-14, **7th Multidisciplinary Conference on Sinkholes & the Engineering and Environmental Impacts of Karst**, Harrisburg, Pennsylvania. Information: Gayle Herring, P.E. LaMoreaux and Associates, Inc. (PELA), 106 Administration Rd., Oak Ridge, Tennessee 37830, tel. +1-423-483-7483, fax +1-423-483-7639, e-mail pelaor@usit.net, website <http://www.uarkron.edu/geology/karstwaters/7th.html>.

April 19-23, **XXIV General Assembly, European Geophysical Society**, The Hague, Netherlands. Information: EGS Office, Max-Planck-Str. 13, 37191 Kaltenburg-Lindau, Germany, tel. +49-5556-1440, fax +49-5556-4709, e-mail egs@copernicus.org, website <http://www.copernicus.org/EGS/egsga/denhaag99/prg.htm>.

May

2nd Limnogeological Congress. Information: Contact the organizing committee at lenn@univ-brest.fr or lenn@sdt.univ-brest.fr, <http://www-sdt.univ-brest.fr/~lenn>.

May 5-8, **10th Global Warming International Conference (GW10) and Expo**, Mt. Fuji, Japan. Information: GW10, PO Box 5275, Woodridge, Illinois 60517-0275, fax +1-630-910-1561, website www.globalwarming.net.

May 9-13, **Canadian Geophysical Union (CGU) Annual Scientific Meeting**, Banff, Alberta. Information: D. Eaton, CGU Secretariat, Department of Earth Sciences, University of Western Ontario, London, Ontario M6A 5B7, tel. +1-519-661-3190, fax +1-519-661-3198, e-mail deaton@julian.uwo.ca, website www.gp.uwop.ca/cgu/frame.html

May 10-14, **Réunion annuelle de L'AQQUA, dans le cadre du 67e Congrès de l'ACFAS**, Université d'Ottawa, Ottawa, Ontario. Pour information contacter Clément Prévost, clprevos@NRCan.gc.ca et consulter le site Web de l'ACFAS, <http://www.acfas.ca/congres/appel.html> ou celui de l'AQQUA <http://sts.gsc.nrcan.gc.ca/page1/sites/aqqua/bulle.htm>.

May 22-29, **Drainage Basin Dynamics and Morphology**, Jerusalem, Israel. Information: Dr. Marwan Hassan, Department of Geography, Hebrew University of Jerusalem, Mount Scopus, 91905, Israel, tel. +972-2-5883017, fax +972-2-5820549, e-mail mshassan@olive.mscc.huji.ac.

May 24-26, **Water Pollution 99, Modelling, Measuring and Prediction**, Lemnos, Greece. Information: Clare Duggan, Conference Secretariat Water Pollution 99, Wessex Institute of Technology, Ashurst Lodge, Ashurst, Southampton, SO40 7AA, UK, tel. +44-0-1703-293223, fax +44-0-1703-292853, e-mail cduggan@wessex.ac.uk.

May 26-28, **Geological Association of Canada – Mineralogical Association of Canada, Joint Annual Meeting**, Sudbury, Ontario. Information: P. Copper, Department of Earth Sciences, Laurentian University, Sudbury, Ontario P3E 2C6, tel. +1-705-675-1151, ext. 2267, fax +1-705-675-4898, e-mail gacmac99@nickel.laurentian.ca, website www.laurentian.ca/www/geology/gacmac99.htm.

June

June 1-5, **Canadian Association of Geographers Annual Meeting**, Lethbridge, Alberta. Information: e-mail cag99@uleth.ca, website <http://home.uleth.ca/~cag99/>.

June 2-4, **GSA Cordilleran Section Centennial**, Berkeley, California. Information: D. Sloan, Department of Geology and Geophysics, University of California, Berkeley, California 94720, tel. +1-

510-642-3703, fax +1-510-643-9980, e-mail dsloan@socrates.berkeley.edu, website www.geo.berkeley.edu/geology.

June 7-11, **61st Conference of the European Association of Geoscientists and Engineers**, Helsinki, Finland. Information: Meeting Secretariat, EAGE Business Office, Standerdmolen 10, PO Box 59, 3990 DB Houten, Netherlands, tel. +31-30-6354066, fax +31-30-6343534; e-mail eage@eage.nl, website <http://www.eage.nl>.

June 21-24, **4th International Airborne Remote Sensing Conference and Exhibition**, Ottawa, Ontario. Information: ERIM Airborne Conferences, Box 134008, Ann Arbor, Michigan 48113-4008, tel. +1-734-994-1200, ext. 3234, fax +1-734-944-5123, e-mail wallman@erim.int.com, website <http://www.erim-int.com/CONF/conf.html>.

June 21-25, **2nd International Conference on Earthquake Geotechnical Engineering**, Lisbon, Portugal. Information: Pedro S. Seco e Pinto, Laboratorio Nacional de Engenharia Civil, Av. do Brasil, 101, 1799 Lisboa cedex, Portugal, fax +351-1-847-81-87, e-mail SICEGE@Inec.pt.

July

July 17-21, **IAG Regional Conference on Geomorphology**, Rio de Janeiro, Brazil. Information: IAG 99 – Regional Conference on Geomorphology, Departamento de Geografia, UFRJ, Ilha do Fundo, Rio de Janeiro, CEP 21941-590, Brazil, fax +55-21-598320; e-mail iag99@igeo.ufrj.br, website <http://www.ufrj.br/eventos/iag99>.

July 19-30, **International Union of Geodesy and Geophysics**, Birmingham, England. Information: IUGG99, School of Earth Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, UK, fax +44-121-414-4924, e-mail IUGG99@bham.ac.uk.

July 28-August 2, **4th Annual Conference of the International Geological Correlation Programme Project No. 396: Continental Shelves in the Quaternary**, Cape Town, South Africa. Information: Mike Meadows, Department of Environmental and Geographical Science, University of Cape Town, Rondebosch 7701, South

Africa, tel. +27-21-650-2873, fax +27-21-650-3791; e-mail meadows@enviro.uct.ac.za.

August

August 3-11, **XV INQUA Congress: The Environmental Background to Hominid Evolution in Africa**, Durban, South Africa. Information: Dr. D. Margaret Avery, INQUA XV CONGRESS, P.O. Box 61, Cape Town 8000, South Africa, tel.+27-21-243-330, fax +27-21-246-716, e-mail mavery@samuseum.ac.za, website <http://inqua.geoscience.org.za>.

August 9-12, **9th International Conference on Soil Dynamics and Earthquake Engineering (SDEE '99)**, Bergen, Norway. Information: K. Atakan, SDEE '99 LOC, Institute of Solid Earth Physics, University of Bergen, Allegaten 41, 5007 Bergen, Norway, tel. +47-55-583420, fax +47-55-589669, e-mail sdee99@ifjf.uib.no, website www.ifjf.uib.no/sdee99.html.

August 22-27, **Remote Sensing and GIS for Monitoring Soils and Geomorphic Processes to Assist Integrated Development of Mountainous Land**, Kathmandu, Nepal. Information: Mr.Dhruba P. Shrestha, ITC, P.O. Box 6, 7500 AA Enschede, Netherlands; +31 0 53 487 42 64, fax +31 0 53 487 43 99; dhruba@itc.nl or Mr. Pramod Pradhan, ICIMOD, P.O. Box 3226, Kathmandu, Nepal, tel. +977-1-525316, fax +977-1-524509/536747, e-mail pramod@icimod.org.np, website http://www.itcc.nl/~shrestha/RS_symp.

August 23-27, **CANQUA 99**, Calgary, Alberta. Information: Derald Smith, Department of Geography, University of Calgary, Calgary, Alberta T2N 1N4, tel. +1-403-220-6191, fax +1-403-282-6561, e-mail dgsmit@acs.ucalgary.ca.

September

29th Congress, International Association of Hydrologists, Bratislava, Slovakia. Information: Professor L. Melioris, Comenius University, Mylinska Dolina, 84215 Bratislava, Slovakia, tel/fax +42-7-725-446, e-mail podzvody@fns.uniba.sk.

September 5-17, **9th International Conference and Field Workshop on Landslides**, Isle of Wight, Dorset, South Wales, Bristol. Information: R.G.Thomas, 6 The Esplanade, Plymouth PL1 2PJ,

UK., tel. +44-1752-674291, fax +44-1752-233117, e-mail rgthomas@eurobell.co.uk.

September 6-10, **International Conference on Luminescence and Electron Spin Resonance Dating**, Rome, Italy. Information: Organizing Secretariat, e-mail b.fersini@flashnet.it, website <http://www.mater.unimi.it/LED99/>.

September 8-10, **2nd International Symposium on Non-CO2 Greenhouse Gases (NCGG-2): Scientific Understanding, Control, and Implementation**, Noordwijkerhout, Netherlands. Information: J. van Ham, VVM-CLAN, PO Box 6013, NL-2600 JA Delft, Netherlands, tel. +31-15-269-6877, fax +31-15-261-3186, e-mail j.vanham@plant.nl, website www.milieuonline.nl.vvm.

September 12-16, **Mining and the Environment II**, Sudbury, Ontario. Information: Sudbury '99, Centre in Mining and Mineral Exploration Research (CIMMER), Laurentian University, Ramsey Lake Road, Sudbury, Ontario, P3E 2C2, tel. +1-705-673-6572, fax +1-705-673-6508, e-mail cmosher@nickel.laurentian.ca.

September 13-17, **4th International Conference on Modelling of Global Climate Change and Variability**, Hamburg, Germany. Information: L. Dumenil, Conference Coordinator, Max-Planck-Institut für Meteorologie, Bundesstrasse 55, D-20146 Hamburg, Germany, tel. +49-40-41173-310, fax +49-40-41173-366, e-mail mpl-conference@dkrz.de.

September 20-28, **IGU Commission on Land Degradation and Desertification International Meeting: Agriculture, Land Degradation and Desertification**, Perth, Australia. Information: A.Conacher, Department of Geography, University of Western Australia, Nedlands, WA 6907, Australia, tel. +61-0-8-9380-2705, fax +61-0-8-9380-1054; e-mail ajconach@sunny.gis.uwa.edu.au.

September 28-30, **International Symposium on Engineering Geology, Hydrogeology and Natural Disasters, with Emphasis on Asia**, Kathmandu, Nepal.

October

October 24-28, **Geological Society of America Annual Meeting**, Denver, Colorado. Information:

Becky Martin, GSA Meetings Dept., P.O. Box 9140, Boulder, Colorado 80301-9140, tel. +1-303-447-2020, ext. 164, fax +1-303-447-1133, e-mail meetings@geosociety.org, website <http://www.geosociety.org/meetings/index.htm>.

October 30 – November 4, **Soil Science Society of America Annual Meeting**, Salt Lake City, Utah. Information: SSSA, 677 South Segoe Rd., Madison, Wisconsin 53711, tel. +1-608-273-8090, fax +1-608-273-2021, e-mail rbarnes@agronomy.org.

November

November 7-10, **4th USA/CIS Joint Conference on Environmental Hydrology and Hydrogeology**, San Francisco, California. Information: American Institute of Hydrology, 2499 Rice Street, Suite 135, St. Paul, Minnesota 55113-3724, tel. +1-651-484-8169, fax +1-651-484-8357, e-mail aihydro@aol.com, website <http://www.aihydro.org>.

November 21-24, **4th Australian Regolith Conference**, Adelaide, Australia. First announcement and call for papers: <http://leme.anu.edu.au/conference/regolith99.html>.

December

December 13-17, **AGU Fall Meeting**, San Francisco, California. Information: AGU Meetings Department, 2000 Florida Avenue, NW, Washington, DC 20009, tel. +1-202-462-6900, fax +1-202-328-0566, e-mail meetinginfo@kosmos.agu.org, website www.agu.org/meetings.

2000

February

February 17-22, **2000 Annual Meeting of the American Association for the Advancement of Science (AAAS)**, Washington, D.C. Information: Program Committee, AAAS, 1200 New York Avenue, NW, Washington, DC 20005, tel. +1-202-326-6450, fax +1-202-289-4021.

April

April 12-16, **2nd International Symposium on Tillage Translocation & Tillage Erosion**, Leuven, Belgium. Information: David A. Lobb, Land Resources Branch, Department of Agriculture and Rural Development, P.O. Box 6000, Fredericton, New Brunswick E3B 5H1, tel. +1-506-453-2109, fax +1-506-457-7267, e-mail dlobb@gov.nb.ca.

May-June

May 29 – June 2, **GeoCanada 2000**, Calgary, Alberta. Information: Grant Mossop, Geological Survey of Canada, 3303 – 33rd St. N.W., Calgary, Alberta T2L 2A7, tel. +1-403-292-7049, fax +1-403-292-5377, e-mail mossop@gsc.nrcan.gc.ca.

May 29 – June 3, **Canadian Association of Geographers Annual Meeting**, Brock University, St. Catharines, Ontario. Enquiries to Dept Head, Fax 905-688-9020.

May 30 – June 3, **AGU Spring Meeting**, Washington, D.C. Information: AGU Meetings Department, 2000 Florida Avenue, NW, Washington, DC 20009, tel. +1-202-462-6900, fax +1-202-328-0566, e-mail meetinginfo@kosmos.agu.org, website www.agu.org/meetings.

June 18-24, **International Glaciological Society Symposium: Sea Ice and its Interactions with the Ocean, Atmosphere and Biosphere**, Fairbanks, Alaska.

August

August 6-17, **31st International Geological Congress: Geology and Sustainable Development, Challenges for the Third Millennium**, Rio de Janeiro, Brazil. Information: Secretariat Bureau, 31st International Geological Congress, Av. Pasteur, 404, Anexo 31 IGC, Urca, Rio de Janeiro, RJ, CEP 22.290-240, Brazil, tel. +55-21-295-5847, fax +55-21-295-8094, e-mail 31igc@31igc.org.br, website www.31igc.org.

August 14-18, **29th International Geographical Congress**, Seoul, South Korea.

September

AQQUA, Montreal, Québec.

September 17-27, **Karst 2000**, Marmaris, Turkey.

November

November 13-16, **Geological Society of America Annual Meeting**, Reno, Nevada. Information: GSA Meetings, Box 9140, Boulder, Colorado 80301-9140, tel. +1-303-447-2020, fax +1-303-447-1133, e-mail meetings@geosociety.org, website <http://www.geosociety.org/meetings/index.htm>.

CONTRIBUTIONS TO FUTURE CGRG NEWSLETTERS

The CGRG newsletter is published twice annually. As with all such newsletters, its success is directly dependent on the contributions that we receive. CGRG welcomes contributions to future newsletters from any of our members. These should be of interest to the Canadian geomorphology community and could include discussions, commentaries,

reviews of regional or national meetings and field trips, summarizes issues pertinent to geomorphology, and announcements of future meetings and workshops. Please forward your contributions to either:
ldredge@nrcan.gc.ca, or ymichaud@nrcan.gc.ca

CGRG was established in 1993 at the International Association of Geomorphology Congress in Hamilton, Ontario. It provides a strong voice for geomorphology in Canada. Its objectives are to advance the science of geomorphology in Canada by 1) organizing and sponsoring technical sessions, workshops, and field trips, 2) publishing newsletters twice a year, 3) operating a listserver (CANGEORG) which maintains a comprehensive bibliography of Canadian geomorphological, Quaternary, and environmental geoscience publications, 4) supporting publication of technical reports and field guides, 5) presenting the J. Ross Mackay Award in recognition of a significant achievement by a young geomorphologist in Canada, and 6) cooperating with related earth science associations within Canada (GAC, AQQUA, CAG, CANQUA). We encourage all earth scientists with an interest in geomorphology to join CGRG.

CGRG EXECUTIVE 1998

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CANADIAN GEOMORPHOLOGY RESEARCH GROUP

Registration Form

1999

Name: _____

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(FAX) _____

e-mail address: _____

Institution: _____

Annual dues: \$15

New member _____; membership renewal _____ *Please check one*

Please make cheque or money order to the Canadian Geomorphology Research Group

(Photocopy application form as necessary)

Send completed form and cheque to: Lynda Dredge, Secretary-Treasurer CGRG, Geological Survey of Canada, 601 Booth Street, Ottawa, Ontario, K1A 0E8

Receipt required _____:

Canadian Geomorphology Research group (CGRG) acknowledges payment of 1998 annual fees (\$15.00) from:

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