

CGRG NEWSLETTER NO. 9

(June 1998)

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PRESIDENT'S MESSAGE

CGRG celebrates its fifth birthday this year. Since its founding at the International Association of Geomorphology Congress in Hamilton in 1993, the organization has matured and now provides a strong voice for geomorphology in Canada. We have a stable membership (about 150), with representation in all parts of the Canada and scattered outposts in the U.S. and elsewhere. We are on excellent financial footing (see Secretary-Treasurer's report in this newsletter), which allows us to consider new initiatives to better serve our members (more below).

CGRG was busy during the first half of 1998. In March, it sponsored a special session entitled Little Ice Age Geomorphology in the Canadian Cordillera at the annual meeting of the Western Division of the Canadian Association of Geographers, held at Kwantlen University College, Richmond, B.C. Kudos to Dan Smith for organizing this excellent session. CGRG, together with AQQUA and CANQUA, sponsored a special session on Relative Sea-level Variations and Isostatic Recovery across Canada, from Late Wisconsin to Present Day at the joint meeting of GAC/MAC, APGGQ, IAH, and CGU in Quebec City in May. This superb session was organized by Jean-Claude Dionne (U of Laval) and Yves Michaud (GSC-Quebec). Finally, CGRG hosted a special session on Fluvial Systems and Environmental Change A Canadian Perspective at the Annual Meeting of the Canadian Association of Geographers (CAG), held in Ottawa in June. Joe Desloges, Peter Ashmore, and Greg Brooks were the driving force behind this extraordinary session.

The CAG meeting in Ottawa was also the venue for CGRG's Annual General Meeting, which was attended by about 30 people, 20% of the membership (this is an enviable proportional turnout for any organization). I won't bore you with details, but I'd like to call your attention to a few of the more important decisions that were made at the AGM.

A new executive was installed. Brian Luckman (University of Western Ontario) and Lynda Dredge (GSC) were nominated and unanimously endorsed as incoming Vice President and Secretary-Treasurer, respectively. Tracy Brennand (Simon Fraser University) and Dirk De Boer (University of Saskatchewan) were elected from a slate of six candidates as members-at-large. Chris Burn now becomes Past-President, and I am the new President. The highlight of the AGM was the presentation of CGRG's first J.R. Mackay Award to Tracy Brennand. Dan Smith, chair of the selection committee, made the award to Tracy, citing her outstanding contribution to geomorphology through her paper *Macroforms, Large Bedforms and Rhythmic Sedimentary Sequences in Subglacial Eskers, South-central Ontario: Implications for Esker Genesis and Meltwater Regimes* (Sedimentary Geology, 1994). Tracy delivered a lecture Esker Roads immediately after the AGM. Nominations for the second Mackay Award, which will be presented at the CGRG Annual Meeting in Calgary in August 1999, can be made to Chris Burn, Chair of the Award Committee. Information on the Mackay Award and the nomination procedure are included in this newsletter.

What's coming down the pipe for CGRG? This fall, we hope to sponsor a two-day workshop on Geophysical Techniques in Geomorphic Research at Simon Fraser University's Harbour Centre Campus in Vancouver. The emphasis will be on the application of ground-penetrating radar and high-resolution seismic surveying to geomorphic problems. If you are interested in participating, contact:

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The next CGRG Annual Meeting will be held jointly with CANQUA in Calgary in late August 1999. Derald Smith is Chair of the Organizing Committee, so you can count on this being a meeting to remember. Steve Wolfe (GSC) and Christain Begin (GSC-Quebec) are organizing a CGRG-sponsored session on climate change and extreme events at the Calgary meeting; if you would like to contribute, see the announcement in this newsletter for information. We also welcome additional suggestions for other sessions for CANQUA 99. Further down the road, CGRG will meet with AQQUA in Montreal in 2000, with GAC in Calgary in 2000, with CGU and AGU in Quebec City in 2001, and with CAG in Montreal in 2001.

CGRG encourages its members to hold regional workshops and field trips, a model being the successful 1997 workshop on geophysical techniques organized by Bob Gilbert. To this end, we will consider providing reimbursement for the expenses of key out-of-town co-leader(s) who wish to organize CGRG-sponsored workshops or field trips not connected with conferences. Examples of expenses that will be considered include air, bus, or rail transport to the city where the workshop is being held, hotel, meals, and personal vehicle use. Detailed guidelines can be obtained from me on request. If you have a great idea for a geomorphology workshop or field trip, give me a call.

Many or most CGRG members are subscribers to the CANGEORG listserver, operated out of the University of Victoria by Dan Smith. CANGEORG maintains a bibliography of Canadian geomorphological, Quaternary, and environmental geoscience publications, now numbering over 10,000, which is updated on a regular basis. It also provides timely news about issues of interest to Canadian geomorphologists. If you do not subscribe, but would like to, the instructions for subscribing are contained in this newsletter.

My final comments pertain to publications. We had a lengthy discussion about a CGRG publication policy at the AGM in Ottawa. It was agreed that publications, especially technical manuals and books on geomorphology, are an important way to promote geomorphology and its practice in Canada and to disseminate geomorphological information. There was no consensus, however, about how to proceed. Should we undertake to publish our own manuals and books (perhaps a financially risky proposition for a group as small as ours)? Should we utilize university or commercial publishing houses (costs of publications may be prohibitive)? Or should we rely on web-based information transfer? CGRG's Executive welcomes input from the membership on this issue. It is unlikely that the matter will be resolved in the near future but rather than wait, we have decided to take advantage of two opportunities to support publications of interest to Canadian geomorphologists. The first is a manual on geophysical

techniques used in geomorphic research, prepared by Bob Gilbert and others for the Queen's workshop in September 1997. We are discussing with Bob how CGRG can support publication of this manual, either through a university press or using an independent commercial printer. The second publication is a report on professional registration in Canada prepared by Michael Church for the Canadian Geoscience Council. CGRG hopes to assist with the printing of this report and intends to distribute a copy to each of its members later this year.

Let me close by inviting comments from you. What would you like CGRG to do that we are not doing now? Are we doing anything that you dislike? Any comments on a publication policy? Would you like to organize a regional workshop or a session at a national meeting? You can send your thoughts to me at the GSC (before September 1, 1998) or Earth Sciences at Simon Fraser University (after September 1). One final thing (geez, won't this guy ever shut up!), how about recruiting a new CGRG member?

John Clague

President, Canadian Geomorphology Research Group
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CALL FOR NOMINATIONS FOR 1999 J.ROSS MACKAY AWARD

The J.Ross Mackay Award Committee for 1998/99 seeks nominations for this award, to be presented at the CGRG AGM, next year in Calgary during the CANQUA-CGRG meeting. Committee members are:

- Chris Burn (Past President, CGRG - Chair),
- Jan Aylsworth (GSC Ottawa),
- Mike Bovis (UBC),
- Mary-Louise Byrne (Wilfrid Laurier University),
- Serge Occhietti (UQAM).

The award is to a young scientist, i.e., under 40 years old, for a specific piece of work. Nominations, which must be by two members of CGRG, comprise a letter of nomination, a copy of the cited work, and a brief CV. At the 1998 AGM it was decided that nominations will remain active for the year following nomination, in the event that the nominee is not selected in the first year. Members of the Award Committee should not nominate a candidate.

All members of CGRG are encouraged to participate in the nominations process, and should send their nominations to the Chair of the Committee:

Chris Burn
Department of Geography
Carleton University
1125 Colonel By Drive
Ottawa ON K1S 5B6

Secretary-Treasurer's Report

Membership

As of June 4, 1998, the membership of CGRG stood at 121 which is very close to the number at the same time last year. The membership will likely increase by 20-30 members over the rest of the year, as is usually the case. Of the current members, 14 have joined directly through CGRG, 6 through AQQUA, 32 through CAG and 69 through

GAC. We are still awaiting our membership list from CANQUA; the usual number of members joining through this organization is 5-6. Renewal notices have been sent to members who joined directly with CGRG last year.

1997 Financial statement

CGRG finances for 1997 were again in the black as has been the case every since our inception. Revenue from dues, the Queen s workshop, and interest totaled \$3682.20 against expenses of \$2219.37 from newsletter printing costs, Queen s workshop and administrative costs. The overall surplus is \$1462.83. It should be noted that this year's statement does not include the expense of our IAG membership dues of \$500 US for which we have never been billed, despite our contacting the IAG about this. Normally, this represents an additional significant annual expense. On Jan. 6, 1997, CGRG had assets of \$16 989.25 (\$12 000 of which was in a one month GIC). This rather sizable sum reflects to a large extent the profits from the IAG conference at McMaster University in 1993, which provided seed funds to CGRG.

Membership E-mail addresses

To expediate annoucements 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 annoucements, please send your e-mail address to either ldredge@gsc.nrcan.gc.ca or gbrooks@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.

Greg Brooks

Professional Registration in Ontario - update

Plans for Professional Registration of geoscientists in Ontario were abruptly cancelled last month, after a group calling themselves "E for E" took control of the Professional Engineers Ontario Council. "E for E" are opposed to the incorporation of geoscientists under an amended Professional Engineers Act, and organized themselves sufficiently not only to obtain a majority of seats on the Council, but also to win a ballot of the 62,000 PEO members on this specific issue. 23% of the PEO returned ballots, and of these votes, 61% were against amendment of the Act.

Bill Pearson, President of the Association of Geoscientists of Ontario, did not conceal his disappointment when he wrote to the AGO membership informing us of this development. It is not clear what is the next step, although licensure may soon be required for certain tasks by various bodies in Ontario, such as the Toronto Stock Exchange. This will mean Ontarians will require registration in other jurisdictions to practice in Ontario, a quirk not lost in the considerations.

CGRG will continue to monitor the situation and report to you at regular intervals. We were pleased by the adoption of many of our recommendations by the syllabus committee during the previous discussions. We assume the concluding position of these negotiations will form the basis of the opening position in the next round, whenever that begins.

Chris Burn

CANQUA 1999, University of Calgary, August 23-27, 1999

The next Canadian Quaternary Association meeting will be held jointly with the Canadian Geomorphology Research Group in Calgary, August 23-27, 1999.

Derald Smith (Dept of Geography, University of Calgary) is the organizing committee chair. The change from the recently popular early June scheduling is to allow field trips in the mountains with minimal snow cover. The late August date will hopefully find most people back from the field or INQUA.

We are hopeful the Calgary meeting will be the biggest and best CANQUA yet. Four days of non-concurrent oral and poster sessions will be interrupted by a mid-conference field trip included in your registration fee. Participants will have a choice of spending the day at the Tyrrell Museum and environs, Head-Smashed-In Buffalo Jump, Kicking Horse Pass/Field BC, or the Calgary / Kananaskis region. All groups will return to Calgary in late afternoon for a banquet at the Western Heritage Centre in Cochrane.

Both pre- and post-conference field trips are also planned. The following lists are tentative but will be confirmed prior to circulation of final circular in early 1999.

Pre-conference trips (Aug. 20-22)

- 1 - *Columbia Icefields* (leaders J. Osborn, B. Luckman, D. Smith)
- 2 - *western Palliser Triangle* (leaders D. Lemmen, A. Beaudoin, D. Sauchyn)

Post-conference trips (Aug. 28-29/30)

- 3 - *Crowsnest Pass / Waterton National Park* (leaders L. Jackson and T. Little)
- 4 - *Columbia and Kicking Horse rivers* (leader D. Smith)

Two special sessions are already being organized:

- 1 - *Symposium in honour of Nat Rutter* (organizers P. Bobrowsky, N. Catto, D. Liverman)
- 2 - *Special session on Geomorphic Impacts of Climate and Extreme Climatic Events* (organizers S. Wolfe and C. Begin; see announcement below)

The conference organizers welcome additional suggestions for special sessions, particularly from those willing to be organizers. There will also be a number of general sessions. Complete information will be available in final circular or via the conference web page:

<http://pc56.ss.ucalgary.ca/index.htm>

For more information contact:

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CGRG Special Session at CANQUA 1999
**Geomorphic Impacts of Climate and Extreme Climatic Events: Records,
Processes and Models from the Late Quaternary to the 21st Century**

CANQUA 1999 will be held in Calgary, 23-27 August (see announcement above). As part of this meeting, CGRG is sponsoring a special session entitled:

Geomorphic Impacts of Climate and Extreme Climatic Events: Records, Processes and Models from the Late Quaternary to the 21st Century. 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 Begin, the session will likely involve both oral and poster presentations. If suitable interest warrants, a proposal for a special issue in a national recognized scientific journal will be pursued. If you are interested in presenting and/or preparing a journal paper, please contact Stephen Wolfe, swolfe@gsc.nrcan.gc.ca. Further details regarding abstract deadlines will follow at a later date.

Steve Wolfe and Christain Begin

Second International Symposium on Tillage Translocation & Tillage Erosion
Catholic University of Leuven, Belgium, April 12-16, 1999

Tillage translocation and tillage erosion are rapidly becoming recognized as significant geomorphic processes. Tillage erosion causes tremendous redistribution of soil within complex cultivated landscapes. This form of erosion has been found to be the major cause of severe soil loss in such landscapes. Tillage translocation causes mixing of soil over great distances. Tillage translocation and tillage erosion interact with wind and water erosion.

The major objective of the symposium is to increase the understanding of these processes and their role in the broader context of land degradation in various agricultural environments.

Topics will include: experimental methods; modelling; effects on soil properties and soil quality; the contribution of tillage erosion to land degradation at various temporal and spatial scales; and the interaction between tillage erosion and other geomorphic processes.

The symposium will consist of two to three days of oral and poster presentations and one or two days of excursion in the Belgian Loam Belt where results of studies on land degradation processes will be presented.

Submissions for oral and poster presentations will be accepted until November 30th 1998.

For more information contact:

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David A. Lobb

CGRG Special Session -Fluvial systems and environmental change: a Canadian perspective (June 1998)

There was a fluvial theme to this year's CGRG-sponsored special session at the 1998 CAG meeting, University of Ottawa. Organized by Joe Desloges (U of T), Peter Ashmore (UWO) and Greg Brooks (GSC), fourteen papers were presented, arranged in four sessions, under the general theme of Fluvial systems and environmental change: a Canadian perspective. The papers addressed a wide range of topics focusing on subject matter that literally spanned from coast to coast.

Response of rivers to streamflow and sediment transport dynamics formed the first sub-session which consisted of three papers:

- Mariette Prent (SFU) presented work on the response of dunes and bed elevation to variations in flow measured over a period of many months on the Lillooet River, BC.
- Pascale Biron and co-workers (U of Mont.) summarized the 3-D flow structures for a range of flow conditions at a channel confluence where the tributary and trunk stream had discordant beds.
- A study of the discharge, suspended sediment and solute loads of the Slims River, Yukon Territories, was presented by Michael Sawada and Peter Johnson (U. of O).

The second sub-session Response of rivers to hydrologic change consisted of four papers. Starting things off:

- Peter Ashmore presented a very topical paper co-authored with Michael Church (UBC) on the response of Canadian rivers to changes in streamflow regime imposed by climate change.
- Greg Brooks and Ted Lawrence (GSC) summarizing the geomorphic effects of severe flooding on three Saguenay area rivers highlighting the problems at dams.
- Jim and Tobi Gardner (U of Man.) overviewed the 1997 Red River flood and its post-flood effects on bank stability.
- Daniel Lagarec (U of O) presented work on the influence of Leda clay landslides in controlling the channel morphology of the South Nation River.

The response of rivers to human impacts sub-session consisted of papers by:

- Cathy Conrad (WLU) discussing the regional patterns of suspended sediment loads in the Maritimes.
- Olav Slaymaker (UBC) followed comparing the sediment budgets for the Fraser River, Brantas/Porong River and Po River deltas.
- Katio Nero and AndrŽ Roy (U of Mont.) examined the impacts of land-use on the discharge and suspended sediment transport from two adjacent watersheds in southern Quebec.

- Gillian Foster and Peter Ashmore (UWO) concluded with a paper on the riffle-pool characteristics on semi-alluvial streams in southwestern Ontario.

The final sub-session of the day began:

- Mike Bovis (UBC) summarized work on the effects of coarse woody debris on sediment storage and delivery in steep V-shaped gullies within logged and unlogged areas of coastal British Columbia.
- Keith Tinkler (Brock) followed, overviewing work on the late and post-glacial gorge erosion by rivers along the Niagara Peninsula.
- Joe Desloges (U of T) described his work on the area-age relations of floodplains along several selected Canadian rivers.

The organizers extend thanks to all of the contributors, people who attended the session, and others who helped make it a success. Of particular note was the quality of papers presented by the graduate student participants. Based upon this session, it certainly seems that fluvial geomorphology is alive and well in Canada.

Greg Brooks

Summary report on the AQQUA, CGRG and CANQUA special session at the Quebec 98 meeting

The special session on relative sea levels and glacial isostasy across Canada was a unique event, bringing together a diverse group of geological empiricists and theoreticians to compare notes on the Earth's response to glacial loading and unloading. Under the expert guidance of Jean-Claude Dionne and Yves Michaud, communication barriers were broken and new ideas were forthcoming. The session was structured in order to get an overview from the three oceans bordering the Canadian Coastlines along with the St.-Lawrence Estuary and Hudson Bay. A recurring theme of the session was the evidence for rapid and high amplitude relative sea-level oscillations following the last ice age. The field trip to the spectacular Montmagny section, served to highlight the rapid change concept, with unequivocal evidence for a significant mid-Holocene RSL oscillation of less than 4000 years duration. What are the causes of these short-lived sea level excursions?:

- Rudolph Stea (Nova Scotia Natural Resources) and John Shaw (GSC) presented papers on behalf of many colleagues from the Geological Survey of Canada (Atlantic) highlighting the raised and submerged paleoshorelines in Atlantic Canada. John presented some stunning underwater vistas, made available through the magic of multibeam imaging, showing wave-base truncation of drumlins and moraines.
- Trevor Bell (Memorial University) described a unique and successful experiment using RSL data to predict Holocene archaeological sites in Newfoundland.
- Jean-Claude Dionne induced the complex sea-level history of the St. Lawrence estuary, using an impressive archive of radiocarbon-dated RSL markers.
- Phil Hill (Universite du Quebec) showed how the architecture of delta deposits in Hudson's Bay, undergoing emergence today, could be used to interpret the record of ancient sediments produced during falling sea-levels.
- Michel Allard and others (Universite Laval) describe an evolutionary sequence of a littoral marsh in Manitousnouk Sound, related to post-glacial isostatic rebound and the effect of thermal erosion.
- John England (University of Alberta) dropped the Hammer of Thor and expounded on the relationships of ice thickness and rates of retreat and shoreline tilts in Arctic Canada. Both John and Rudolph Stea pointed out that in their widely separated field areas, the highest raised features are the oldest with rebound occurring under ice (John's restrained rebound). This is a vital point when evaluating emergence as an indication of ice loads, as total uplift is

often underestimated because of this effect. Minimum ice models were in part based on erroneous assumptions of rapid ice retreat and synchronicity of marine limits (isobases).

- Arthur Dyke (GSC) followed up with a short vignette comparing the half-life of isostatic rebound at glacier margins versus divides in Arctic Canada, and demonstrated that uplift rates are much greater near the margin.
- Martin Batterson and David Liverman (Geological Survey of Newfoundland and Labrador) presented stimulating posters on the relative sea-level history of eastern Canada and used the transition from emerged features (zone B) to areas of submergence (zone C) as evidence of a migrating peripheral forebulge. They calculated a forebulge migration rate of 35km/1000 years, and pointed out areas of anomalously rapid emergence in Newfoundland. Compare this rate with the forebulge migration rate of 75 km/1000 years calculated by Barnhardt et al. (Geology-1996) calculated from the offset dated lowstands in Nova Scotia, Maine and Quebec.
- Marek Zreda (University of Arizona) showcased the results of cosmogenic ³⁶Cl dating of raised beaches on Ellesmere Island, and concluded that this new method has a high enough resolution to be comparable with ¹⁴C dating and can be used to date beaches without organic material.
- Vaughn Barrie (Pacific Geoscience Centre) presented empirical data from the Pacific coast to show rapid regression and transgression and a contemporaneous Late-glacial shelf tilt of over 400m. He attributes this tilt to the peripheral forebulge.

The second part of the special session was devoted to modelling of postglacial sea-levels with a wrap-up by Richard Peltier on the global dimensions of glacial isostasy.

- Thomas James presented the results of rebound modelling in Pacific Canada, and discovered that empirical data showing rapid uplift could not be accommodated using mantle viscosities of 10²¹ PA s commonly used in continental ice models. He theorizes that this lower viscosity response may be attributed to a subducting relatively warm, oceanic plate.
- Patrick Wu (University of Calgary) tested power-law versus linear mantle viscosity models against RSL data and found the power-law models wanting.
- Richard Peltier (University of Toronto) described a new and improved high-resolution mantle viscosity model constrained by empirical RSL data and anomalies in the Earth's rotational state. The model was further refined by using the Barbados sea-level record to fix the time-dependant coastline locations.

A question was asked at the end of Richard's talk, by a humble field geologist. Why have the recent global RSL models predicted less and less ice at LGM, whereas new mapping and dating of glacial deposits throughout the peripheral zone of the Laurentide and Appalachian ice sheets, infer more and more ice, equivalent to the maximum model (Denton and Hughes) in some cases? Clearly, the RSL empiricists and theoreticians must find some common ground to compare results. Many of the presentations were from areas peripheral to the major ice sheets, where the peripheral forebulge is predicted to occur. What is the geological representation of the bulge? Is it displayed in shoreline tilts, or as time-transgressive lowstands? What is the height and migration rate of the peripheral forebulge as predicted by the viscosity models? What about secondary bulges implied by post-lowstand, renewed rapid uplift and subsidence in Quebec and maritime Canada? With new multibeam imaging technology, the lowstand shorelines are becoming more obvious, and will lead to a new understanding of the RSL history in these crucial peripheral regions and help to answer some of the thorny questions engendered by this wonderful conference.

Rudolph Stea

The CGRG Internet Bibliography of Canadian Geomorphology

The CGRG internet homepage provides access to the CGRG Internet Bibliography of Canadian Geomorphology database <http://office.geog.uvic.ca/dept/cgrg/cgrg.htm>. Initiated in the fall of 1997, this searchable database presently contains over 10,000 records concerning the practice and application of geomorphology in Canada.

Included within the database are citations related to the fields of aeolian, applied, coastal, fluvial, glacial, hillslope, karst, periglacial, permafrost and offshore geomorphology. In addition, the database includes records describing Canadian Quaternary/Holocene environments and a substantial body of records related to Canadian hydrology.

The CGRG bibliography was designed to be transparently searched over the internet. To search the CGRG Bibliography database, author, keyword and year search are provided. The keyword word search includes all words in the reference, the abstract, and, if any, index terms. A typical author/keyword search results in the appearance of an output file:

Example:

Author : Brennand, T.A.; and Sharpe, D.R.

Date : 1993

Title : Ice-sheet dynamics and subglacial meltwater regime inferred from form and sedimentology of glaciofluvial systems: Victoria Island, District of Franklin, Northwest Territories

Publication : Canadian Journal of Earth Sciences

Issue : 30(5):

Page(s) : 928-944

Abstract : The abstract notation provides a hotlink to a companion abstract file:

On Victoria Island, tunnel channels, eskers, and associated fans and extended deposits together constitute channelized glaciofluvial systems. Flutes and drumlinoid ridges, interpreted as residuals left by erosive, catastrophic, subglacial meltwater sheet flows,

The contents of the bibliography are updated on a weekly basis and benefit from the inclusion of continuing postings on the CGRG list server (cangeorg@uvvm.uvic.ca).

Partial Example:

Recent Publications in Canadian Geomorphology

Cassidy, J.F.; Rogers, G.C.; and Weichert, D.H. 1997. Soil response on the Fraser delta to the M-w=5.1 Duvall, Washington, earthquake. Bulletin of the Seismological Society of America 87(5):1354-1361.

Chague, G.C. ; and Fyfe, W.S. 1997. Effect of permafrost on geochemistry in a Canadian peat plateau bog. Applied Geochemistry 12(4):465-472.

Glenn, M. S.; and Woo, M.-K. 1997. Spring and summer hydrology of a valley-bottom wetland, Ellesmere Island, Northwest Territories, Canada. Wetlands 17(2):321-329.

Hill, R.P. 1997. An assessment of hydrological process and landform change: Slave River Delta, Northwest Territories. Unpublished M.A. thesis. Wilfrid Laurier University, Waterloo.

Hou, Z.; and Fletcher, A.K. 1996. The relations between false gold anomalies, sedimentological processes and landslides in Harris Creek, British Columbia, Canada. Journal of Geochemical Exploration 57(1-3):21-30.

Users accessing the CGRG Internet Bibliography continue to increase in numbers, with more than 3000 recorded within the last eight months. Recognition of the potential value of the bibliography is exemplified by URL links at sites varying from: the Geoscience Information Center; Quaternary Pointer Page; World Wide Web Virtual Library; American Quaternary Association; Canadian Association of Palynologists; Canadian Quaternary Association; Geological Association of Canada; Memorial University of Newfoundland Libraries; Geological Survey of Canada; Provincial Museum of Alberta and the USDA-Agricultural Research Service.

The number of records archived in the CGRG Internet Bibliography will continue expand in the coming months. This expansion will include enhancements to the existing database supported by a grant from the Canadian Geological Foundation. At its May, 1998 meetings in Quebec City, Quebec, the Members and Directors of the Canadian Geological Foundation awarded the CGRG \$1,000 towards the completion of the *Internet Bibliography of Canadian Geomorphology*.

Dan Smith

The CANGEORG Discussion List (CAN-adian GEO-morphology R-earch G-roup)

CANGEORG is an electronic mail distribution list intended for members of the Canadian Geomorphological Research Group (CGRG). The CGRG was founded in 1993 at McMaster University, during the Third International Geomorphological Conference. Its objectives are fostering and promoting the research and application of geomorphology in Canada. Any person who is a member of GAC, CAG, AQQUA, or CANQUA may become a full-voting member of CGRG by application through these associations or those who wish to do so may join the CGRG directly as associate members.

It is anticipated that CANGEORG will enable members the CGRG to place items that are of interest those interested in Canadian geomorphology. Items of interest are likely to include topical issues, job advertisements, conference announcements, notices of specialized course, postgraduate opportunities and funding opportunities.

1) Joining CANGEORG. Members of the CGRG are invited to join CANGEORG by e-mailing the following command to:

listserv@uvvm.uvic.ca

SUBscribe CANGEORG your name e.g., sub cangeorg John Doe

After sending this message to the University of Victoria listserver, a confirmation message will be returned. Included within this message are instructions for replying to messages and how to unsubscribe from the list. 2) Sending messages to CANGEORG for distribution: Members of CANGEORG wishing to distribute a message to members of the list should e-mail it to:

cangeorg@uvvm.uvic.ca

Once received by the University of Victoria listserver, the message will automatically be routed to all members of CANGEORG.

CANGEORG is moderated by Dan Smith
smith@uvvm.uvic.ca